



## H2020 Work Programme

### D2.2 Report on Regional BBEC Business Models and Governance Structures

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This document is the BIOBEC project (contract no. 101023381) corresponding to D2.2 (M12) led by University of Eastern Finland. This report provides a report on the business models and governance structures of the six BBEC pilot cases based on the results from T2.3 regional co-creation workshops.

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## 1. Executive summary

This report responds to the needs of the BIObec project's work package (WP) 2 and specially the tasks 2.3 and 2.4 by providing information on the co-creation processes to specify business models and governance structures of the six regional Bio-Based Education Centres (BBEC). The Business Model Canvas was used as a framework for the co-creation workshops and the related elements were included in the thematic interview to gain a comprehensive picture of the business models and governance structures. A group of each BBEC's key partners were invited to the workshops in order to create profound conversation on the topics. While following the principles of a thematic interview, elements of the Business Model Canvas and Governance were considered in the workshops and reports and BMC templates were prepared as an output to this report.

The six regional BBECs' business models are focused on the quintuple helix model by enhancing the collaboration between education, research, industry, government and society towards bio-based economy and hence they share similarities. First, they involve key partners from education, industry, research, government and society. Key activities include e.g., providing education and related material, connecting actors and maintaining online platform. Expertise and knowledge in bioeconomy, education and students, infrastructure, and connections to different regional, national and European networks are considered as their key resources. The BBECs' value propositions include e.g., providing education and materials regarding bioeconomy, improving students' and employees' competences to support industry's needs, and connecting actors together through versatile networks. Customer relationships range from personal meetings to open collaboration through networks. Social media, events, lessons and web pages are used as channels to distribute information on the BBECs' services. Education organisations, students, companies and their employees, research organisations, public organisations, and policy makers are considered as their customers. Cost structures are based on costs derived from administration, employment activities and platform maintenance. Revenues are gained from the detailed services provided by the BBECs, different subscription or advertisement fees and public and private funding.

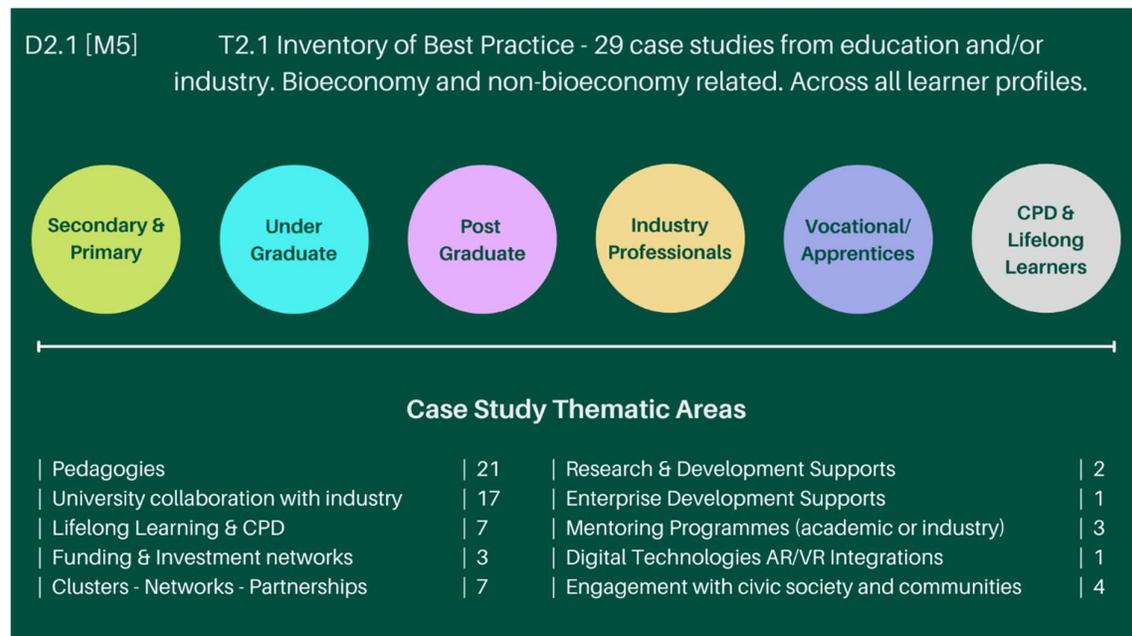
There were also some differences in the BBECs' business models and governance structures, and this is only natural since the BBECs are regional and have different scopes depending on their regional needs and resources. Hence, this report suggests that the key partners should be involved in the future meetings regarding the BBECs' development and implementation, and the business models could be updated based on these discussions. All in all, the business models and governance structures of each BBEC presented in this report were gathered successfully and this work will support the development of the WP3 in the BIObec project.



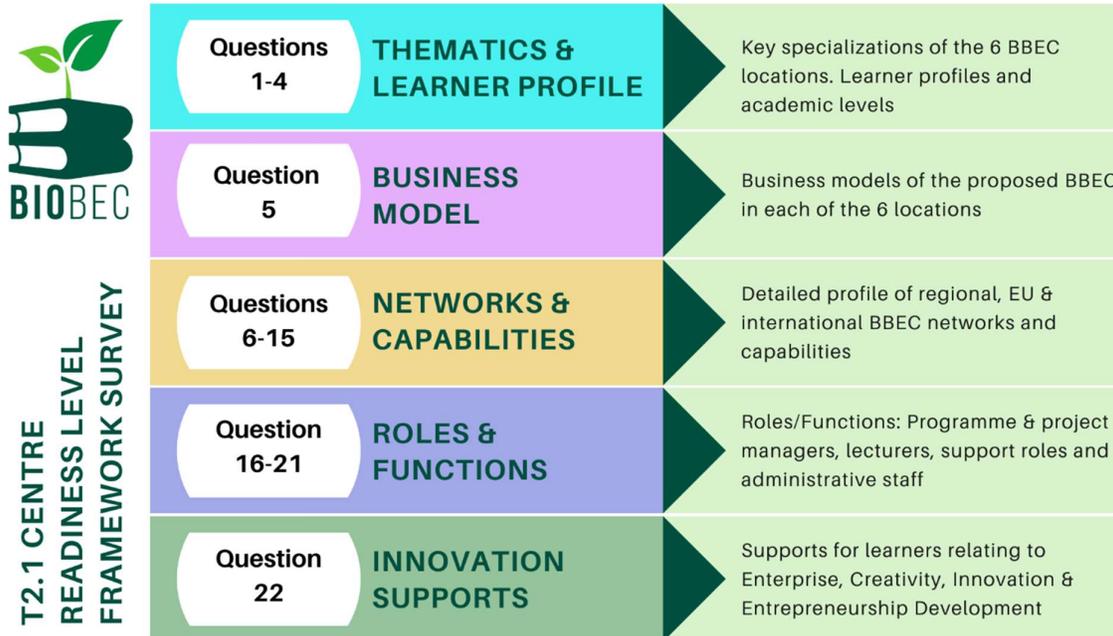
## 2. Introduction

Generally, the aim of the Work Package 2 (WP2), according to the Description of the Action (DoA), is to provide a co-creation process to design and develop the Bio-based Education Centres' (BBEC) operational framework and models that will be further investigated in the project while empirically working on the six pilot cases. Following the indications coming from D2.1 and from the T2.2 results, in the tasks 2.3 and 2.4 a co-creation process based on actors' involvement will be activated to identify the design of each centre followed by the specification of business models in each of the six BBECs. The initial framework executed in the T2.1 as well as the needs, opportunities and expectations for the BBECs gathered in WP1, will function as the conceptual basis of T2.3 and T2.4.

To inform and enhance the design of the initial T2.1 framework an Inventory of Best Practice case studies from education and industry was compiled with reference to both bioeconomy and non-bioeconomy related exemplars. A total of 29 case studies were collected and collated across all learner profiles and spanning 10 thematic areas of interest.



The subsequent T2.1 Centre Readiness Level Framework Survey design was informed by the compilation of the 29 best practice examples collected and further collated in conjunction with inputs from WP1 activities (MTU/IHE). All 19 partners completed a comprehensive report in response to 23 survey questions generating a detailed profile of each BBEC location in relation to their thematic expertise, learner profiles, knowledge & network capabilities, business model, roles & functions and innovation supports as well as their personal commitment in the project. Furthermore, other valuable stakeholders have been involved in the fulfillment of the survey, in order to begin the cooperation with a network of actors both internal and external to the project (Annex 8).



Having conducted this extensive internal analysis of capabilities via the T2.1 Centre Readiness Level Framework Survey, a profile of each regional BBEC was created (Annex 7). Partners were then requested to deliver a detailed Business Model Canvas to position the future development of their BBEC in T2.3. To respond to the aims of T2.3, local co-creation workshops were organised by each of the six regional BBECs: Mediterranean Europe Hub, North-West Europe - Finland, North-West Europe - Denmark, North-West Europe - Ireland, Central - Eastern Europe - Poland and the Czech Republic and Bulgaria, and Central - Eastern Europe - Germany. The aim of the co-creation workshops was to specify the conceptual design of each centre and its potential activities based on the sketches made in T2.2 while ensuring the BBECs development meets local needs, defined in WP1. The focus was on understanding the value created from various points of view of the actors and mapping out the best ways to operationalise and facilitate value creation in evolving operational environment. The different needs and opportunities for networking and cross-country collaborations were highlighted. Using interactive discussions, detailed elements of the Business Model such as activities, key actors and governance models of the BBECs were identified. Another aim of the workshops was to motivate the BBECs key actors to collaborate and to inform them about the project in general while linking the business model to the potential innovation activities and to digital instruments for education. These discussions worked as the basis for T2.4.

The aim of this Deliverable, representing T2.2, T2.3, and T2.4, is to report the activities made in these Tasks, in particular, defining and compiling the business model of each regional BBEC and their governance structure in order to further qualify and describe the activities of each BBEC. The focus is especially on value propositions, core activities, services and collaborations. Using this approach, potential business opportunities and value networks for the development of a successful ecosystem can be identified. To respond to the aim of T2.4, all six BBECs prepared Business Model Canvases and wider analysis on them based on their



workshop discussions which have been considered as the data for this report. The report proceeds in the following order. First, the chosen methods are introduced. Next, in the results part comprehensive picture of the business model canvases is created and more detailed information on the value propositions and services, core activities, collaboration and governance is provided. Finally, results are discussed, and final conclusions are drawn.



## 3. Methods



To respond to the aims of tasks 2.3 and 2.4, co-creation workshops following the principles of thematic interview were organized in the six regional BBECs. The thematic interviews were based on Business Model Canvas (BMC) structure while including ‘Governance’ as an additional element. Data from the interviews was collected as written and/or recorded notes. The collected data was presented in the reporting template including detailed and practical information on the business model elements and the workshop. In addition, a concise and visual template on BMC was annexed to the reporting template.

### 3.1. Business Model Canvas

The concept of BMC was used as the basis of the task 2.3 since it provides a comprehensive structure for planning and developing the BBECs. The BMC consists of nine elements:

- Key Partners,
- Key Activities,
- Key Resources,
- Value Propositions,
- Customer Relationships,
- Channels,
- Customer Segments,
- Cost Structure, and
- Revenue Streams.



The BMC was used as the basis for the discussions in the co-creation workshops and related reporting templates. The ‘Key partners’ element included the description of the key partners and their resources and activities involved in each of the BBEC. The ‘Key activities’ element included the description of key activities executed through each BBEC. The ‘Key resources’ element included the description of the required resources for the success of each BBEC. The ‘Value propositions’ element included the description of the intangible and tangible values provided by the BBECs. The ‘Customer relationships’ element included the description of the various relationships the BBECs will create with their customers. The ‘Channels’ element included the description of the channels used in operating the BBECs. The ‘Customer segments’ element included the description of the different customer groups for which the BBECs will provide services. The ‘Cost structure’ element included the description of the possible costs arisen from the BBECs activities. The ‘Revenue streams’ element included the description of the plausible revenues gained from the provided services by each BBEC. The additional element, ‘Governance’, included the description of the required governance structures for the successful development of the BBECs i.e., different organizational and managerial means and local and global networks related to the BBECs.

### 3.2. Thematic interview

The thematic interview was used as a method for the data collection in the Task 2.3 co-creation workshops. This was considered a suitable method since such a conversational and informal structure of the interview provided an opportunity to discuss the BMC elements of each BBEC conveniently while supporting open conversation and idea generation around the topics. The aforementioned BMC elements were chosen as the discussed themes, and additional support questions were provided for the BBEC leaders in the instructions file (see Annex 1). The workshops were aimed at the key partners of each BBEC in order to keep the discussions focused on the BBECs’ business model and governance development. Since many of the BMC elements were already configured in the earlier tasks of the BIObec project, the BBEC leaders were instructed to fill in the BMC template before the workshops so that emphasis could be put to the elements which were still under configuration. Furthermore, the BBEC leaders were instructed to take down written or recorded notes of the conversation.

Most of the workshops were organised in English while two in the native languages (Denmark and Finland). The number of participants ranged from 8-18 (see Table 1) and they are considered the most important key partners for the BBECs.

*Table 1. Participants in the regional co-creation workshops for each of the six BBEC pilot cases*

<b>Regional BBEC</b>	<b>Number of participants</b>	<b>Organisations / Key partners</b>
<b>BBEC1: Mediterranean Europe Hub</b>	18	University of Bologna (Italy) FVA (Italy) National Research Council (CNR) (Italy) Technological Corporation of Andalusia (CTA) (Spain) Autonomous University of Barcelona (UAB) (Spain) University of Granada (Spain) University of Jaén (Spain) FoodHub (Italy) BiRex (Italy) Andalusian Agency for Knowledge (AAC) (Spain)



		BLC3 Technology and Innovation Campus (Portugal) Cluster SPRING (Italy)
<b>BBEC2: North-West Europe - Finland</b>	9	University of Eastern Finland Business Joensuu Environmental Institute Finland (Syke) Finnish Forest Centre Regional council of North Karelia Karelia University of Applied Sciences
<b>BBEC3: North-West Europe - Denmark</b>	17	Agro Business Park Asmildkloster Vocational Education Business Academy Dania FBCD A/S UN17 Business, Inkubation & Akademi Start-up Green Educations Århus Klimafonden Skive Central Denmark Region Viborg municipality Aarhus Universitet (AU)
<b>BBEC4: North-West Europe - Ireland</b>	10	IBF MTU CBCSW
<b>BBEC5: Central - Eastern Europe - Poland and the Czech Republic</b>	8	Stara Zagora Regional Economic Development Agency Spatium.bg, SME Institute for sustainable transition and development Research Institute of Crops, Moravian Research Institute Chamber of Commerce of the Moravian-Silesian Region Foundation Klaster LifeScience Krakow Jagiellonian University in Cracow, Faculty of Chemistry
<b>BBEC6: Central - Eastern Europe - Germany</b>	13	Bioeconomy Office University of Hohenheim Life-long learning office of UH Students Experimenta (Science Centre) University of Heidelberg BIOPRO



## 4. Results

### 4.1. Business Model Canvases

In this chapter, a summary of the BMC from each regional BBEC is described, including all nine key elements. In general, all BMCs are focused on the triple or quintuple helix model by enhancing the collaboration between education, research, industry, government and society towards bio-based economy.

#### 4.1.1. BBEC1: Mediterranean Europe Hub

The workshop was organized by the University of Bologna and it had a total of 18 participants. BBEC1 involves various different *key partners*: IRWGs, BIObec project partners, the bioeconomy industry and related companies, European Commission, the public administration, different public and private educational and training institutions, technology transfer centres, and non-EU bioeconomy experts and entities.

*Key activities* include e.g., providing education and training services to match current needs, valorizing existing teaching material and providing new and developing students' curriculum to match the needs of the industry.

Their *key resources* include diverse knowledge and expertise, connection to national and international networks, contribution from the industry, and connections to research and universities.

*Value* is created through facilitating better bioeconomy education and training services, responding to the needs of industry in education and training needs, exploiting from the synergies between education and innovation processes while communicating through a wide collaboration.

*Customer relationships* are established based on the customer level and contacted directly or through social media, newsletters and online platforms. Students, industry employees, the industry, research centres, education and training institutions, public administrations and NEETs are considered as the customers of the BBEC.

The *cost structure* of the BBEC consists of administrative costs, employment costs from hired staff and the maintenance of the online platform and communication. *Revenues* are aimed to be gathered from public funds, projects, membership payments and provided services. The BBEC is governed through a virtual centre of which an independent organization is managing while following national structures of governance. For the whole BMC, see Annex 1.

#### 4.1.2. BBEC2: North-West Europe - Finland

The workshop was organized by the University of Eastern Finland and it had a total of 9 participants. The *key partners* of BBEC2 are three educational organisations, a business



development organization, three governmental organisations and a European level research organization.

Their *key activities* include maintaining the open cooperation platform, transferring and creating knowledge, organizing events and linking actors together.

Their *key resources* are diverse knowledge in bioeconomy, international and national students, researchers and research infrastructure, funding and project management.

*Value* is created through providing thesis topics and work opportunities for students, staff for companies, new research topics for researchers, new business potential and innovation, new projects and partners for them, international links and collaboration, and solving sustainability challenges together.

*Customer relationships* are established through co-creation and the open collaboration platform. Social media, direct contact, different events and the online platform are used for reaching the customers. Educational institutes, students, research institutes, researchers, companies within bioeconomy, business development organisations, regional actors and global political actors are considered their customer segments.

The *cost structure* of the BBEC consists of the platform maintenance and development costs including employment costs. *Revenues* are aimed to be gathered from the services provided by the actors involved in the BBEC and also, subscription and advertisement revenues are possibly gained. The BBEC2 is governed through a steering committee or advisory board and coordinated by a university or business development organization while following the North Karelian, Finnish and European Union bioeconomy strategies. For the whole BMC, see Annex 2.

#### **4.1.3. BBEC3: North-West Europe - Denmark**

The workshop was organized by Food and Bio Cluster Denmark, and it had a total of 17 participants. The *key partners* of BBEC3 include several educational institutes, the Central Denmark Region, Viborg Municipality, business development organisations, a biocluster, industrial actors and potentially the ministry of children and education.

The *key activities* include organizing hackathons and courses and study visits, providing onsite and online education, and building of political relevance.

*Key resources* include existing bio-based facilities, education on and for businesses and student projects.

*Value* is created through improving competences and skills within bioeconomy, providing a sense of community, anchoring sustainability, providing knowledge, facilities, and innovation environment.

*Customer relationships* are established based on existing partnerships and the industry. Customers are reached through marketing and sales, exchange of practical experiences, different courses and events and online portal. Teachers and students at different educational



levels, farmers, forest owners and gardeners, start-ups and other businesses and their staff, and green NGOs are considered their customers.

The *cost structure* of the BBEC3 consists of the costs for teaching, administration and marketing activities and maintenance of the platform. *Revenues* are aimed to be gathered from own BIObec project money, external funding, taximeter payments and companies' payments for services. The BBEC3 will be governed by a steering group and hired staff. For the whole BMC, see Annex 3.

#### **4.1.4. BBEC4: North-West Europe - Ireland**

The workshop was organized by Munster Technology University and Irish Bioeconomy Foundation and it had a total of 9 participants. The *key partners* of the BBEC4 are several educational institutions, governmental organisations and foundations, business development networks, policy makers and EU-level organisations.

Their *key activities* include providing regional and international, matchmaking, funding and brokerage service, providing world class bioeconomy related programmes, courses and learning pathways, providing research centre activities, events and academic publications, linking partners to EU funding opportunities, engaging with the civic society, and designing and delivering of bioeconomy, environment and sustainability education.

Their *key resources* are the digital platform, academic and project management supports, industry and education liaison, a programme manager, physical location for in person events and national activities, link to residential, accommodation providers, angel investor network, EU-level and regional funding expertise and links to extra-curricular activities via extensive partner network.

*Value* is created through providing a new innovative approach to education and learning pathways and a single point of entry to BBEC4, providing accreditation and career progression via multi-level learning pathways, presenting bespoke suite of services for industry, government, and civic society, providing international, European, and regional connections and networks, providing competitive advantage via centre reputation and expertise, providing adaptable and dynamic agile approach, providing experts in tech-innovation via technology gateways, providing enterprise accelerator and support network for entrepreneurs, providing industry and business focused alumni and expertise, providing mentoring and coaching services and programmes, providing integrated virtual or augmented reality spaces and technology, supporting industry and job creation, providing access to European grants or applications and strengthening consortium building.

*Customer relationships* are established through a client centred approach to communication and dissemination strategy, viewing clients as co-creation partners, continuous feedback loop with clients, community, and networks, symbiotic relationship ensuring agility of response to skills needs, membership access capability across clusters and networks, expert speaker panels responding to BBEC4 community needs, a knowledge hub and central location connecting stakeholders across the quintuple helix. Customers are reached through different events, blogs and vlogs, customer case-studies, university channels, social media channels, entrepreneur support agencies, course contributions and programmatic advisory channels.



Government departments, industry including pharma, agri-food, marine, textile and their employers, innovation hubs, local government, community groups, NGOs, state agencies, media, education institutions and students, the society, researchers and corporations are considered as their customer segments.

The *cost structure* of the BBEC consists of maintaining the digital platform, staff, marketing and external consultancy costs. *Revenues* are aimed to be gathered from internal funding, advertisements, professional Continuous Professional Development courses and workshops, innovation sprints and design thinking workshops, consultancy services, short residential courses with extra-curricular activities and higher education authority and Springboard Education Funds. For the whole BMC, see Annex 4.

#### **4.1.5. BBEC5: Central - Eastern Europe (Poland, Czech Republic and Bulgaria)**

The workshop was organized by Pro Civis and it had a total of 8 participants. The *key partners* in BBEC5 are categorized under five groups: academia, research institutes, government, NGOs and industry.

*Key activities* include supporting the exchange of knowledge between science, academia, industry, and other actors, providing information about bioeconomy related education and training providers, providing tools, materials, and expertise, supporting international mobility of students and science staff, consulting by creating project consortiums and applications for funds, and organizing different events.

Their *key resources* include diverse knowledge, platforms and cooperation schemes created during other projects, experienced staff, R&D infrastructures, access to funding, project management, consulting, and initiatives on VET.

*Value* is created through providing knowledge on bioeconomy, responding to industry's educational needs, boosting cooperation, matching partners for joint projects and developing regional infrastructure for bioeconomy.

*Customer relationships* are established through an open cooperation platform while case-based relationships are favored based on the specific needs and requirements. They are reached directly and through social media and website and other platforms and networks. Bioeconomy companies, research and education institutes, business development organisations, regional public administrations, global political actors, clusters, networks and associations, private investors are considered as their customers.

The *cost structure* of the BBEC consists of administrative costs for maintaining the platform, marketing, employment costs, communication costs and legislative costs. *Revenues* are aimed to be gathered from the services provided, external funding, membership fees, contract payments and contribution from partners and members. The BBEC is governed through a steering group, advisory board, and members while an internal operating regulation is followed. For the whole BMC, see Annex 5

#### **4.1.6. BBEC6: Central - Eastern Europe - Germany**



The workshop was organized by the University of Hohenheim and it had a total of 13 participants. The *key partners* of BBEC6 are three different universities, governmental institutions, European level actors, industrial actor, training institutions, and some other actors.

*Key activities* include identification and mapping of knowledge while managing the network; creating framework for bioeconomy-related curricula adaptation and creation; creating framework for consultancy work; identification and mapping of existing courses; creating educational material and formats; creating and maintaining a homepage; initiating collaborations; distribution and exhibition of bioeconomy-related material; and finding funding alternatives.

Their *key resources* include coordination of the group, office space, knowledge and expertise from the network, advisory board, website offering information and education, dissemination of materials. Value is created through connecting experts to solve bioeconomy issues and establishing actor networks for future collaborations to solve complex circular & sustainable challenges, consulting for adapting and implementing new courses on bioeconomy education and consulting to implement the circular sustainable bioeconomy, updating training so professionals can act in an emerging future-oriented and sustainable fields, exchanging knowledge-based advisory and mutual (for solving concrete problems and define the vision of a sustainable future) and inspiring and engaging elements for society in the sustainability transition to the bioeconomy.

*Customer relationships* are established through personal contact, active networking, disseminating personalized materials and passive connections via website. Customers are reached through public relations, homepage, newsletter, events, teaching and direct contact. Educational and research institutions, various industry actors, professionals, policy actors and societal actors are considered as their customers.

The *cost structure* of the BBEC6 consists of the office infrastructure, website, coordination group salary and employment, events and marketing costs. *Revenues* are aimed to be gathered from other projects, consulting and advisory services and external funds from e.g., ministries. The BBEC is governed possibly through an association, non-profit organization, or university-led spin-off with the help from an advisory board representing several stakeholders. For the whole BMC, see Annex 6.

## 4.2. Value propositions and provided services

The *value proposition* element in the BMC describes the various services through which the BBEC creates value to its customers. The six regional BBECs create value through several means to respond to the needs of the stakeholders while contributing to the transition towards a circular bio-based economy.

### 4.2.1. BBEC1: Mediterranean Europe Hub

The Mediterranean BBEC promotes the development of a circular bioeconomy in Mediterranean areas by facilitating the delivery of better bioeconomy education and training services related to the bioeconomy. The BBEC tries to fill the gap of individual needs of industry



not covered by other educational institutes. While primarily aiming at contributing to the industry, it exploits synergies between education, innovation processes, communication, and awareness raising through a wide collaboration.

#### **4.2.2. BBEC2: North-West Europe - Finland**

Through the Finnish BBEC students gain relevant thesis topics and research topics from the industry and companies while supporting companies' development. Through the BBEC students gain employment and trainee opportunities from companies. Teachers from different organisations and education levels share knowledge and take part in each-others' teaching. Researchers gain new research topics from businesses and simultaneously new business potential and innovation might emerge while leading to new start-ups. Companies employ new staff from students and researchers. Through the BBEC2 new projects emerge where researchers, students and businesses are collaborating. The BBEC2 will help local companies to connect with international networks and international students to connect with local companies and hence new partners are gained for different projects. Finally, sustainability challenges are solved together with actors from education institutions, research groups and businesses and the BBEC2's contribution to sustainable development is increased.

#### **4.2.3. BBEC3: North-West Europe - Denmark**

A prerequisite for value propositions is a mapping of existing educational offers – from primary school to PhD. The value depends on the customer and will be transcribed into specific courses or education. The BBEC3 improves competences and skills within bioeconomy: production, sourcing, whole value chains, all levels of education fitting in the 'value chain of education'. It provides an overview of related educational offers – many have 'green or sustainability' as part of their goals, we should differentiate ourselves. It will focus on 'acting competences' for changes of e.g., farm management in green direction, practical challenges in need of several competences and provides an access to public and private facilities for visits and storytelling. It creates a sense of community, networks across organizations while bridging between traditional scientific silos and provides advisory board training, knowledge sharing from informal to high blueprint level, embedded cross-silo and cross institutional knowledge and system thinking on biobased reality. The BBEC3 anchors sustainability in SDGs so that businesses are prepared to use SDGs to adapt for the future. It maintains a knowledge bank, innovation environment and spirit while using existing facilities, such as national parks, GreenLab, and biorefinery plants. Themes such as GHG emissions, biodiversity, sustainable materials, sustainable businesses and more are represented in the BBEC3. Finally, customers pay for a course diploma while the learning outcomes are the students' responsibility.

#### **4.2.4. BBEC4: North-West Europe - Ireland**

The Irish BBEC will provide accreditation and career progression via multi-level learning pathways. It will provide information on jobs and how to apply them as well as introduce potential employees to the organisation they are applying for. The BBEC4 will contribute to education through a single point of entry to Bioeconomy Centre of Excellence while providing education through webinars, short courses, post-graduate diplomas, and BSc, MSc, PhD courses focused on bioeconomy. Hence a new innovative approach to education and learning pathways is supported and next generation leadership is developed.



The BBEC4 will provide valuable information on Irish and EU grants and how to apply for them to increase success chances. It will introduce organisations to each other to encourage consortium building for future collaborative projects. It enhances international, European, and regional connections and networks while introducing stakeholders to relevant organisations from around Europe leveraging the BBEC4 networks and developing new value chains. It adopts a dynamic agile approach through which a competitive advantage via centre reputation and expertise is provided and suite of services for industry, government, and civic society are bespoken.

The BBEC4 enhances expertise in tech-innovation via technology gateways, enterprise accelerator and support network for entrepreneurs and industry and business focused alumni and expertise. It also provides mentoring and coaching services and programmes, integrated virtual and augmented reality spaces and technology as well as national and international site visits.

#### **4.2.5. BBEC5: Central - Eastern Europe (Poland, the Czech Republic and Bulgaria)**

The Central Eastern Europe BBEC will be involved in awareness raising activities and dissemination of basic knowledge about bioeconomy. The BBEC5 will work closely with the stakeholders from the industry and academia to anticipate industry needs in the field of training which will lead to more flexible education offer provided by experience trainers with practical skills. It will boost and strengthen cooperation between stakeholders by providing knowledge about bioeconomy, exchange of good practices, networks of partners. It will cooperate with vocational education and training providers in order to support the certification of knowledge and competences in the field of bioeconomy. Experts cooperating with BBEC5 could provide expertise in the field of bioeconomy (bioeconomy specializations, which are connected to the region) to various stakeholders. BBEC5 would also support obtaining external funds, partner matching for joint projects and technology transfer.

#### **4.2.6. BBEC6: Central - Eastern Europe - Germany**

The German BBEC6 connects bioeconomy-related experts in the region so that they are able to know who is working on which topic for future collaborations to solve complex circular, bioeconomy, and sustainability challenges. Companies in the region can access consulting services for the transformation and implementation of a circular sustainable bioeconomy through the BBEC6. They also can obtain training for their employees in bioeconomy-related specific topics that are relevant for them. In addition, professionals can access a relevant, updated and practice-oriented training offer so they can act in an emerging future-oriented and sustainable field. Through the BBEC6, educational institutions of different levels can obtain consulting services for adapting and implementing new courses, modules, training related to bioeconomy. The policy actors can obtain knowledge-based advisory and mutual exchange e.g., for solving concrete problems and define the vision of a sustainable future. Finally, societal actors become aware of the need and possible solutions for a transition to a sustainable bioeconomy through inspiration and engagement elements and activities.



## 4.3. Core activities

*Core activities* can be considered as the most crucial actions for the successful implementation of a business model. The core activities of the six BBECs especially relate to coordinating the collaboration between educational, research and industry actors through organizing events, providing teaching materials and maintaining platforms and webpages.

### 4.3.1. BBEC1: Mediterranean Europe Hub

According to the business model, the key activities of the Mediterranean BBEC includes matching demand and supply of training and education service by brokerage and matchmaking activities. These activities are restricted to member institutions and open to potential trainees. In principle, the BBEC does not deliver training, except for online courses while not overlapping with training institutions or with the activities by partners institutions. The key activities also include creation of common teaching materials or valorization of existing ones through e.g., networking and translation. These materials can be shared with teachers or can be the starting point for training the teachers from different educational levels. In addition, the BBEC1 promotes bioeconomy education across different levels from primary education to lifelong learning. This is executed for example through group activities at different education levels to promote problem solving, industry engagement and bioeconomy. The BBEC1 will re-allocate or improve students' curriculums in compliance with the industry requirements providing the right courses and/or programs while identifying priorities, skill profiles, education, and training needs for the future bioeconomy.

The BBEC1 aims to facilitate internships with the industry partners to reinforce the collaboration between industry and academia including on-the-job training and internships for improving CVs. It will function as a hub of regional educational providers and advisors or consultants to facilitate the creation of networks between main stakeholders through e.g., workshops, webinars, seminars. Finally, the BBEC1 promotes awareness of the bioeconomy and its role in the EU.

### 4.3.2. BBEC2: North-West Europe - Finland

According to the business model, The Finnish BBEC's, known as GreenHub, key activity is to coordinate an open collaboration platform. This means that the BBEC2 transfers knowledge between various actors such as education organisations, students, companies and researchers, and increases collaboration between them. On the platform different actors' knowledge and knowhow and contact information are presented and this way actors can connect to each other depending on needed services or knowledge. Hence, all activities of the BBEC2 occur in practice through the platform. This means that students gain possibilities to work in local companies and execute thesis work with them. International students become linked to the local network by working or executing their traineeships in companies. Simultaneously, local companies can gain access to international networks and local knowledge by working with the students. In addition, the BBEC2 enhances teachers' collaboration so that teachers from different education organisations share knowledge through joint meetings and take part in teaching in each other's organisations. Local companies collaborate with research institutes so that Research to Business processes are enhanced.



Similarly, researchers gain topical information and new research topics from the business field. Finally, the BBEC2 organises events and creates conversation through blogposts on topical issues in bioeconomy.

#### **4.3.3. BBEC3: North-West Europe - Denmark**

According to the business model, the Danish BBEC's key activities include organization of hackathons where a group of youngsters is challenged to solve a bioeconomy related problem over a weekend and case competitions will be used for the young students. The BBEC3 promotes marketing and sales activities to increase visibility and connect to SMEs. It provides folk-high-school courses for citizens to cross silos and institutions. It organizes study visits to facilities in Denmark while connecting other BBECs to these. It also organizes short courses from one to seven days based on specific themes. In the key activities focus is on value chains and value chain-based holistic education. The BBEC3 will develop a biobased business model (People-Plant-Profit business model canvas) and combine electronic, hybrid and physical learning. The BBEC3 could contribute to TV formats or create a documentary regarding bioeconomy to create visibility. Finally, the BBEC3 will build political relevance through its networks and partners.

#### **4.3.4. BBEC4: North-West Europe - Ireland**

According to the business model, the Irish BBEC will provide a one-stop-shop on all things related to Ireland's bioeconomy at local, national and international scale through information regarding European projects, education, industry and business networks and civic society. It will contribute to regional, national and international funding matchmaking. It will promote regional, national and international research activities and publications and contribute to European projects through organizing events and providing information on European events such as pitching networking and finance events throughout Europe. It will maintain a project library of past EU funded projects and outcomes while providing access to resources and documents. It will also maintain a list of available grants that are linked to the sectors e.g., grants available for alternative proteins. Information will be provided on public and private finance including Irish and EU funding and how to apply for the grants as well as hints and tips for applying to each grant. It will also identify partners for future projects and scholarships in consortiums.

The BBEC4 will contribute to education through public engagement i.e., civic society engagement, collaboration and change making activities, webinars introducing relevant topics such as bioeconomy, BIObec project, BBEC4, overview of IBF and MTU, different courses and programmes by design and delivery of bioeconomy, environment & sustainability education, and hackathons focused on third-level students or researchers active in bioeconomy. The BBEC4 will function as a matchmaking platform focused on bioeconomy jobs in Ireland for employees and employers to seek jobs and post opportunities. The BBEC4 will support network development through knowledge exchange by taking part in knowledge exchange visits to other countries which may include visits to other BBECs, biobased facilities and third-level institutions.

#### **4.3.5. BBEC5: Central - Eastern Europe (Poland, the Czech Republic and Bulgaria)**



According to the business model, the Central Eastern European BBEC's key activities include supporting the exchange of knowledge between science and academia, industry and other actors. It provides information about education and training providers with valuable offer in the field of bioeconomy and e.g., tools, didactical materials, contents and expertise in the field of bioeconomy. It supports international mobility of students and science staff in the field of bioeconomy by providing information about internships and other possibilities of cooperation. It also provides consulting services regarding creating project consortiums, application for external funds. Finally, the BBEC5 organizes events, conferences and workshops in the field of bioeconomy.

#### **4.3.6. BBEC6: Central - Eastern Europe - Germany**

According to the business model, the German BBEC's key activities include identifying and mapping the knowledge in the region i.e., the experts to build and actively manage the network. The BBEC6 co-creates a framework for bioeconomy-related curricula adaptation and creation and another framework for the consultancy work to industry with the support of the key partners. It identifies and maps existing bioeconomy-related courses and co-creates innovative educational material and formats. The BBEC6 creates and maintains the homepage and initiates collaborations, distribution, and exhibition of bioeconomy-related material. Finally, the German BBEC identifies funding possibilities with the ministries and through European funds and applies for them.

## **4.4. Collaboration**

The six regional BBECs collaborate with several actors in regional, national and European levels. The *key partners* of each BBEC are more closely involved in the development and coordination of the BBECs while customers and other stakeholders are important for delivering the value created through the BBECs.

#### **4.4.1. BBEC1: Mediterranean Europe Hub**

The Mediterranean BBEC is actively collaborating with several actors. IRWGs can give different contributions following their field of activity and expertise, BIObec partners including UNIBO, CTA, UAB, FVA, CNR with the role of coordinators of activities and providers of their main expertise and furthermore they can indicate the educational and training offer that they know, the industry including e.g., private companies and SMEs, European Commission, both as strategy indicator and as grantee, local, regional, national and international public administration providing legal status and adapting the BBEC1 to norms and laws and they can be involved also in allowing an update on lifelong learning and VET, public and private education and training institutions to provide material, skilled and qualified teachers or trainers, technology transfer centers to link the industry needs with the education and training institutions and the BBEC1, and finally non-EU bioeconomy experts and entities to enlarge students' perspective.



In addition, the BBEC collaborates with its customers such as students, workers that need to reallocate their curriculum, industry, research centres, academia, education and training institutions, schools and each level with its own activities, public administration and NEETs.

#### **4.4.2. BBEC2: North-West Europe - Finland**

The Finnish BBEC collaborates actively with its key actors of which three are educational institutions, the University of Eastern Finland, Karelia University of Applied Sciences and Riveria vocational school. In addition, other key actors in the BBEC are Business Joensuu a business development incubator and three governmental organisations: Natural Resources Institute Finland (Luke), Finnish Environment Institute (Syke) and Finnish Forest Centre. Finally, European Forest Institute (EFI) connects the BBEC2 to the European research and business development networks regarding forest-based bioeconomy.

In addition to these, the BBEC2 collaborates with its customers such as education organisations and students from different levels, forest-based bioeconomy companies and also companies outside the forest sector including both SMEs and large ones, research institutes, business development organisations, regional actors from North Karelia such as the municipality, and finally global political actors including policy and decision-makers. In addition, the BBEC2 is actively connected to the North Karelian, Finnish and European bioeconomy strategies and to Bioregions Facility network hosted by EFI, BIOBEC network and Forests and Bioresources research community by UEF.

#### **4.4.3. BBEC3: North-West Europe - Denmark**

The Danish BBEC collaborates actively with key educational actors such as Aarhus University including three faculties: Animal Science, Agroecology and Engineering Sciences, Asmildkloster Vocational school for farmers and Jordbrugets Uddannelsescenter (Green Vocational education) in Aarhus. Viborg Municipality, Skive Municipality and Denmark Region are considered important key actors for the BBEC. In addition, UN 17 SDG Business, Klimafonden Skive in the circular bioeconomy, Business Academy Dania, Food & Biocluster, Agro Business Park, SEGES Innovation, Ministry of Higher Education and Science, Ministry of Children and Education and some larger companies are important actors for the BBEC3.

In addition, the BBEC3 collaborates with its customers such as teachers from different levels, students at different levels, farmer and green advisory services, start-up businesses, farmers, foresters and gardeners, bioeconomy related businesses and employers, and green NGOs. Overall, collaborating within the Central Denmark Region and local municipalities is important and connections to similar initiatives such as Region Zealand could be enhanced.

#### **4.4.4. BBEC4: North-West Europe - Ireland**

The Irish BBEC actively collaborates with its key actors including the Munster Technological University (MTU), Irish Bioeconomy Foundation (IBF), EU education partner organisations, third level institutions such as UCD, TCD, UCC, UL, NUIG, TUS, TUD, industry and Corporate actors within national and multinational agri and agri-tech sectors, governmental organizations such as Marine Institute State Institute and the Department of Agriculture, Food & Marine (DAFM), Údarás na Gaeltachta responsible for the economic, social and cultural development



of Irish-speaking regions of Ireland, Nua Na Mara supporting the development of marine start-ups, early-stage companies, and existing businesses, and Enterprise Ireland BiOrbic representing national collaboration of researchers, Bord Iascaigh Mhara (BIM), Local Enterprise Office (LEO), Skillnet, and Solas, Amber Research Centre bringing a multidisciplinary partnership between leading academics in Advanced Materials Science, BioEngineering and Industry, The Rediscovery Centre offering interactive and experiential workshops for primary, secondary, and third level students, EI Technology Gateway Network, InterTradelreland, Connected Hubs Network, and media actors including variety of national press, radio and promotional agencies.

In addition, the BBEC4 collaborates with its customers such as the government departments and local Government, civic society, education institutions from all levels, university students, researchers, jobseekers, hiring organisations, corporations and industry involved in bioeconomy, project-seekers and primary producers. Finally, MTU as one of the main actors connects the BBEC4 to Kerry County Council, regional state agencies and the Circular Bioeconomy South-West (CBCSW) as well as to its own research groups and clusters such as CIRC BIO. IBF as another main actors, connects the BBEC4 to the Midwest region of Ireland and the Tipperary Country Council and to national and international levels through EU-funded projects.

#### **4.4.5. BBEC5: Central - Eastern Europe (Poland, the Czech Republic and Bulgaria)**

The Central Eastern European BBEC actively collaborates with its key actors. From the academia the key actors are Trakia University, Stara Zagora University and Institute for sustainable transition and development in Bulgaria, Agricultural University in Cracow and Warsaw University of Life Sciences (SGGW) in Poland, University of Pannonia in Hungary, Canakkale University and Balikesir University in Turkey, and MENDEL University in Czech Republic. Key research institutions involved are The Educational Research Institute (IBE), Centre for Preclinical Research and Technology, Institute of Environmental Protection, and Macroeconomic Thematic Working Group Bioeconomy Education of the BIOEAST Initiative. Key governmental actors involved are Stara Zagora Municipality, Ministry of Agriculture (CZ), governmental and regional agencies, and regional economic development agency (BG). Key NGOs involved are PRO CIVIS, Bulgarian industrial association (BIA), FORTES (Italy), Phasegrowth (Estonia), BIOEAST HUB (CZ) Association of Research Organisation (CZ), GO-UP business incubator, IDEAM cluster (Ireland), Spatium (BG), and Foundation Klaster Lifescience Kraków. Key actors from the industry representing SMEs are Zemědělský výzkum (ART), Agroconsult Engineering (BG), Emerald European Ventures (IT) and EPRD (PL).

In addition, the BBEC5 collaborates with its customers including both SMEs and large bioeconomy companies, research and educational institutes, customers related to bioeconomy and business development organisations, clusters, networks and associations, private investors and start-ups. Also, customers related to policy and law including regional and national public administration, global political actors and institutions are included.

The BBEC5 collaborates with already established networks developed in other projects such as BIOEAST UP and BIO EAST HUB, BLOOM – Polish HUB, BIOBORD, BioEcon, GO-UP business incubator and AgriEco. The BBEC also connects with national strategies regarding bioeconomy. In Poland there is no National Strategy on Bioeconomy, but it is mentioned in



“The Roadmap for transformation towards a circular economy” developed by Ministry of Entrepreneurship and Technology. The key activities of BBEC5 are also in-line with the tasks of Bioeconomy Development Working Group established in 2020 by Ministry of Entrepreneurship and Technology.

#### **4.4.6. BBEC6: Central - Eastern Europe - Germany**

The German BBEC is collaborating actively with educational actors such as University of Hohenheim (UHOH) including the Life-long learning department and projects in which the university is involved such as BioPartnerBW, Humboldt Reloaded, and BIOBEO. Karlsruhe Institute of Technology (KIT), University of Heidelberg (UH), University of Freiburg (UF), University of Ulm, University of Stuttgart are universities in Baden Württemberg and collaborate with the BBEC6. Their role in the BBEC6 needs still to be defined. In addition, other key actors involved are governmental institutions including state ministries such as Ministry for Food, Rural Areas and Consumer Protection (MLR), Ministry for the Environment, Climate Protection and the Energy Sector (UM) while all implementing the Baden-Württemberg bioeconomy strategy. Other governmental organisations such as BIOPRO and the State agency for agriculture, food and rural areas (LEL) are important actors. The BBEC6 collaborates in European level with the European Bioeconomy University (EBU) and specifically the University of BOKU and AgroParisTech. The Chamber of Commerce (IHK) represents the industry. From training institutions key actors are DEULA and Academie für Landbau Nürtingen. Finally, other important actors for the BBEC6 are Experimenta a science centre focusing on research communication and Bodensee-Stiftung a private environmental and nature conservation organization.

Additionally, the BBEC6 collaborates with its customers such as educational and research institutions, industry actors, professionals including employees and future employees, policy actors and societal actors.

## **4.5. Governance**

As an additional element to the BMC, the *governance* element responds to the needs of the BIOBEC project and supports the successful implementation of the regional BBECs. The implementation of each BBEC requires support and guidance from various actors in different levels and hence e.g., advisory boards or steering groups are planned to be involved in the processes.

#### **4.5.1. BBEC1: Mediterranean Europe Hub**

The Mediterranean BBEC operates as a virtual centre with national section and branches in order to interact with non-English speakers and national institutions. It is its own independent organisation and legal entity from its partner institutions and supports public-private partnerships. The BBEC1 is governed through national branches to guarantee the solution of issues on a country basis.



#### **4.5.2. BBEC2: North-West Europe - Finland**

Currently UEF has been coordinating the BBEC2, an open collaboration platform, however there are now discussions if Business Joensuu, a local business development organisation, will continue with this task in the future. In addition, it was discussed that a changing steering committee should be involved in the BBEC2's development. The steering committee would involve various stakeholders within and outside the forest-based industry while providing expertise and directions for the future development of the BBEC2. Currently anyone can join or leave the BBEC2 and participating is free of charge. If an actor wants to participate in the BBEC2, they will need to provide information on their services and expertise. In the future there is also the possibility of a spin-off BBEC2 meaning that the BBEC2 could become its own legal entity. The BBEC2 is actively connected to the North Karelian and Finnish bioeconomy strategies and Bioregions Facility and BIOBEC networks.

#### **4.5.3. BBEC3: North-West Europe - Denmark**

The Danish BBEC can be seen as an organization with an agile steering board of the stakeholders who invest in the establishment of the BBEC3. In this way the investing stakeholders which are often most interested ones in the BBEC3, have the authority. A formal agreement should be made and terms of reference for the project will be developed. The coordination and administration could be employed by key actors, such as FBCD or Agro Business Park. In this way the BBEC3 can be started as a time-limited project and the content and market for the services can be developed. After a 2-3 years' time, decisions can be made on a more permanent character of the governance. This structure of the BBEC3 will add and combine existing educations and the emerging biobased industry sector and silos while bringing them to the forefront of business incubation and start-up environments. A secretariat could be established where key stakeholders can bring their activities and own funding to the table.

#### **4.5.4. BBEC4: North-West Europe - Ireland**

The Irish BBEC will be coordinated by MTU with the support of IBF. There will be a board consisting of lecturers, researchers, government officials, members of Irish corporates including dairy industry, representatives of primary production. The board members will be decided by IBF and MTU, these people will be invited to join the board and governed by constitution. Stakeholders will be invited to working groups, forums and information sharing sessions arranged by IBF and MTU to allow stakeholders to assist with the decision-making process. Personnel are considered as the BBEC4's key stakeholders.

#### **4.5.5. BBEC5: Central - Eastern Europe (Poland, the Czech Republic and Bulgaria)**

The Central-Eastern European BBEC will be coordinated by a steering group which will gather representatives of each partner organisation of the BBEC. The steering group will create an internal operating regulation which also includes communication channels with the members and customers. An advisory board should be established to communicate with other BBECs. Membership for the BBEC5 will be based on letters of intent signed by the stakeholders willing to participate in the actions which will be taken by the BBEC5. The BBEC5 connects with



national strategies regarding bioeconomy. In Poland there is no national strategy on bioeconomy, but bioeconomy is mentioned in “The roadmap for transformation towards a circular economy” developed by the Ministry of Entrepreneurship and Technology. The key activities of BBEC5 are in line with the tasks of Bioeconomy Development Working Group established in 2020 by the Ministry of Entrepreneurship and Technology. In Czech Republic there is no national strategy on bioeconomy yet either. It is necessary to initiate the BBEC as a bottom-up action, and for this process, related stakeholders could play a substantial role.

#### **4.5.6. BBEC6: Central - Eastern Europe - Germany**

There is yet no fixed idea for the German BBEC’s governance structure, however few options are presented. Firstly, a coordination institution who is legalized either as an association and non-profit organisation or as a spin-off of the university could govern the BBEC6. And second, ideally there is an advisory board with representatives of different types of stakeholders at regional, national and European levels.



## 5. Discussion

To respond to the aims of the T2.3 and T2.4, co-creation workshops were organized by the six regional BBECs through which the design of the business models and governance structures were defined. This work was executed through collaborative efforts by the active partners involved in the BBECs. As a result, six comprehensive BMCs were compiled (see Annexes 1-6) which will advance and support establishing the regional BBECs as while contributing to the next tasks in the BIOBEC project.

The business models of the six regional BBECs share many similarities.

- The active key partners involved in the BBECs represent widely educational organisations, industry, research as well as business development and governmental organisations while all having connections to the bio-based economy.
- Most of the BBECs' key activities relate to maintaining an online platform through which other important activities such as delivery of bio-based education materials, project databases and collaboration information are distributed.
- The value propositions of the six BBECs include enhancing collaboration between education, research, industry and society while advancing the transition towards a bio-based economy.
- The customer relationships established and maintained through the BBECs include both open collaboration as well as more detailed one-on-one relationships.
- All six BBECs use similar channels to reach their customers, key partners and stakeholders: social media, personal contacts, courses and events.
- The cost structures are based on administrative, employment and marketing costs and these are covered with revenues gained from providing consulting and advisory services and subscription and advertisements fees.
- The governance of the BBECs is organized through several means including steering committees, advisory boards and stakeholder involvement while few active key partners are orchestrating the activities.

Naturally there are also some notable differences in the six BBECs' business models.

- It was noticed that the Mediterranean and Irish BBECs includes more key partners than the others. In the case of Mediterranean BBEC, this can be explained with the broader regional scope. Also, the Mediterranean BBEC's key partners were presented more thematically. In the case of the Irish BBEC, the scope is on the whole island and hence more key partners are involved.
- Another remark is that there are different weightings in the quintuple helixes meaning that some of the BBECs' key activities are focused more on educational development of bioeconomy in the region, while others are focusing more on the perspectives of the industry and research.
- It seems that for some regional BBECs the key activities are still in the beginning of planning and the BBECs could benefit from more detailed conversations and meetings with the key partners.
- The key resources of the BBECs vary and especially knowledge on bioeconomy differs depending on the regional natural resource base. Hence, various fields of bioeconomy are presented including forest, agricultural and marine based resources.



- Despite the revenue streams are rather similar, it was noted that the Finnish BBEC aims to function without additional project funding and is thus targeting at the possibility of a spin-off. In addition, German and Irish BBECs key resources include a physical location while others are solely online based.

As a conclusion, it should be noted that since not all key partners were not present in the co-creation workshops, they should be involved in the future discussions to gain a comprehensive view on the business models and related elements. It is also important the six BBECs aim at responding to local needs and consider local resources and hence the business models and governance differ from each other.



## 6. Conclusions

The design of the business model and governance structure of each BBEC was successfully conducted through the co-creation workshops. However, some elements of the business models require further clarification to be conducted under subsequent tasks and as progress is continued. The BBECs have a very clear understanding of their opportunities, risks, resources, and future activities. The governance structures of the BBECs will develop significantly during the following work packages and will use the outputs from WP2 tasks as the firm foundation for supporting the development of the BBECs. Therefore, the business model canvas is a living document which will be updated regularly and collaboratively with the key partners and stakeholders throughout the project so that the key focus remains accurate and responds to the needs of the stakeholders and guides the appropriate governance structures. These updates will be already executed in the WP3 in which each BBEC's business model design will be validated and governance structures, required resources and financial plans as well as learning programs will be specified. All in all, the presented business models provide a profound view to the six regional BBECs and a strong foundation for the next work packages in the BIObec project.

# Annexes

## Annex 1: BBEC1 Business Model Canvas

<b>Business Model Canvas Mediterranean BBEC</b>	
 <p><b>Key partners</b></p> <ul style="list-style-type: none"> <li>• IRWGs</li> <li>• BIObec partners (UNIBO, CTA, FVA, CNR, UAB);</li> <li>• Industry (private companies, SMEs, etc.)</li> <li>• European Commission</li> <li>• Public administration (local/regional, national and international);</li> <li>• ET institutions (public and private);</li> <li>• Technology transfer centres;</li> <li>• Non-EU Bioeconomy experts/entities;</li> </ul>	<p><b>Key activities</b></p> <ul style="list-style-type: none"> <li>• Matching demand and supply of ET service by brokerage and matchmaking activities;</li> <li>• Valorization of existing teaching material first and then creating common teaching materials;</li> <li>• Training the trainers – at different Educational levels;</li> <li>• Identification of priorities, skill profiles, education and training needs;</li> <li>• Re-allocate or improve (ex. internships) students' curriculums in compliance with industry requirements.</li> </ul> <p><b>Key resources</b></p> <ul style="list-style-type: none"> <li>• Different type of knowledge and expertise;</li> <li>• Wide network (national and international);</li> <li>• In-kind contribution from industry;</li> <li>• Strong connection with research and university;</li> <li>• Expertise in communication, awareness raising and stakeholders' engagement.</li> </ul>
<p><b>Value Propositions</b></p> <ul style="list-style-type: none"> <li>• Facilitating the delivery of better bioeconomy education and training services related to the bioeconomy;</li> <li>• Contributing to industry education and training needs;</li> <li>• Exploit synergies between education, innovation processes, communication and awareness rising through a wide collaboration;</li> <li>• The BBEC fill the gap of individual needs of industry not covered by other educational institutes.</li> </ul>	<p><b>Customer relationships</b></p> <ul style="list-style-type: none"> <li>• Establishing relationships according to the type of customer. It is possible to foresee different levels of interaction depending on the customer segment. E.g. three levels:               <ul style="list-style-type: none"> <li>✓ 1. basic, can access all open access material;</li> <li>✓ 2. standard, access paid material;</li> <li>✓ 3. premium, can interact with trainers.</li> </ul> </li> </ul> <p><b>Channels</b></p> <ul style="list-style-type: none"> <li>• Direct contact;</li> <li>• Social media &amp; newsletter;</li> <li>• Online platform.</li> </ul>
<p><b>Customer segments</b></p> <ul style="list-style-type: none"> <li>• Students;</li> <li>• Workers that need to reallocate their curriculum</li> <li>• Industry;</li> <li>• Research centers;</li> <li>• Academia;</li> <li>• ET institutions;</li> <li>• Schools (each level with its own activities);</li> <li>• Public administration;</li> <li>• NEETs;</li> </ul>	<p><b>Cost structure</b></p> <ul style="list-style-type: none"> <li>• Administrative costs;</li> <li>• Administrative staff (salary + lifelong learning);</li> <li>• Personnel (salary + lifelong learning);</li> <li>• Online platform &amp; newsletter.</li> </ul>
<p><b>Revenue streams</b></p> <ul style="list-style-type: none"> <li>• Public funds (<u>initially</u>);</li> <li>• Projects (e.g. Erasmus+)</li> <li>• Members &amp; Students fee;</li> <li>• Fee for services (ex. Micro-credentials recognition);</li> </ul>	<p><b>Governance</b></p> <ul style="list-style-type: none"> <li>• Virtual Centre with national section/branches (in order to interact with non-English speakers and national institutions);</li> <li>• Independent organization (legal entity) from existing (partner) institutions;</li> <li>• Public-private partnership;</li> <li>• Mediterranean governance with national branches.</li> </ul>



This project has received funding from the Bio Based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101023381.

## Annex 2: BBEC2 Business Model Canvas

 <b>Business Model Canvas: Finnish BBEC “GreenHub”</b>				
<b>Key partners</b> <ul style="list-style-type: none"> <li>• UEF                             <ul style="list-style-type: none"> <li>• Researchers, students, knowledge, infra</li> <li>• Education, thesis work, research</li> </ul> </li> <li>• Karelia                             <ul style="list-style-type: none"> <li>• Students, infra, knowledge</li> <li>• Education, thesis work, projects</li> </ul> </li> <li>• Riveria                             <ul style="list-style-type: none"> <li>• Students, infra, knowledge</li> <li>• Education, projects</li> </ul> </li> <li>• Business Joensuu                             <ul style="list-style-type: none"> <li>• Knowledge, funding, connections</li> <li>• Training, counselling, sparring</li> </ul> </li> <li>• Luke                             <ul style="list-style-type: none"> <li>• Researchers, infra, knowledge</li> <li>• Research, projects</li> </ul> </li> <li>• EFI                             <ul style="list-style-type: none"> <li>• Knowledge, international network</li> <li>• Research, outlooks, events</li> </ul> </li> <li>• Syke                             <ul style="list-style-type: none"> <li>• Researchers, infra, knowledge</li> <li>• Research, projects</li> </ul> </li> <li>• Metsäkeskus                             <ul style="list-style-type: none"> <li>• Data, knowledge, national network</li> <li>• Training, projects, forest inventory, counselling</li> </ul> </li> </ul>	<b>Key activities</b> <ul style="list-style-type: none"> <li>• Open cooperation platform coordination</li> <li>• Knowledge transfer and creation</li> <li>• Event organisation</li> <li>• Linking actors together</li> </ul> <b>Key resources</b> <ul style="list-style-type: none"> <li>• Diverse knowledge in bioeconomy</li> <li>• International and national students</li> <li>• Researchers</li> <li>• Research infrastructure</li> <li>• Funding</li> <li>• Project management</li> </ul>	<b>Value Propositions</b> <ul style="list-style-type: none"> <li>• Thesis topics for students</li> <li>• Work opportunities for students</li> <li>• Staff for companies</li> <li>• New research topics for researchers</li> <li>• New business potential &amp; innovation</li> <li>• New projects</li> <li>• International links &amp; collaboration</li> <li>• Partners</li> <li>• Sustainability challenges are solved together</li> </ul>	<b>Customer relationships</b> <ul style="list-style-type: none"> <li>• Co-creation</li> <li>• Open platform</li> </ul>	<b>Customer segments</b> <ul style="list-style-type: none"> <li>• Education institutes</li> <li>• Students</li> <li>• Research institutes</li> <li>• Researchers                             <ul style="list-style-type: none"> <li>• Bioeconomy companies                                     <ul style="list-style-type: none"> <li>• Inside &amp; outside</li> </ul> </li> </ul> </li> <li>• Business development organisations</li> <li>• Regional actors</li> <li>• Global political actors</li> </ul>
<b>Cost structure</b> <ul style="list-style-type: none"> <li>• Platform maintenance and development</li> </ul>		<b>Revenue streams</b> <ul style="list-style-type: none"> <li>• Payments to BBEC for specific services</li> <li>• Subscription(?)</li> <li>• Advertisements(?)</li> </ul>		
<b>Governance</b> <ul style="list-style-type: none"> <li>• Changing steering committee or advisory board</li> <li>• Coordinated by the UEF and in the future Business Joensuu</li> <li>• North Karelian and Finnish bioeconomy strategies</li> <li>• Spin-off in the future?</li> </ul>				

## Annex 3: BBEC3 Business Model Canvas

 <b>Business Model Canvas: Danish BBEC</b>				
<p><b>Key partners</b></p> <ul style="list-style-type: none"> <li>Aarhus University</li> <li>Asmildkloster Vocational school</li> <li>Jordbrugets uddannelses-center (Green Vocational educations)</li> <li>Business Academy Dania</li> <li>Viborg and Skive Municipality</li> <li>Central Denmark region</li> <li>Klimafonden Skive</li> <li>Agro Business Park</li> <li>UN 17 Business centre</li> <li>Food &amp; Biocluster Denmark</li> <li>SEGES</li> <li>Large companies</li> <li>Ministry of Higher Education and Science</li> <li>Ministry of children and Education</li> <li>NGOs?</li> </ul>	<p><b>Key activities</b></p> <ul style="list-style-type: none"> <li>Hackathons –</li> <li>Folk-high-school courses for citizens</li> <li>Study visits to facilities in DK and at other BioBECs</li> <li>Short courses</li> <li>Full educations, Summer schools</li> <li>Valuechain focus</li> <li>People-Plant-Profit BMC)</li> <li>E-learning/hybrid learning</li> <li>Doku-drama-soap</li> <li>build political relevance</li> </ul> <p><b>Key resources</b></p> <ul style="list-style-type: none"> <li>Existing biobased facilities will be made accessible</li> <li>Education on and for businesses</li> <li>Student projects (Bsc, Msc, Phd) with mandatory dissemination</li> <li>NGOs?</li> </ul>	<p><b>Value Propositions</b></p> <ul style="list-style-type: none"> <li>Improved competences and skills within bioeconomy; production, sourcing, whole valuechains,</li> <li>'acting competences' for changes</li> <li>Sense of community,</li> <li>networks across organisations, bridging between traditional silos</li> <li>Sustainability anchored in SDGs.</li> <li>Knowledge bank,</li> <li>innovation environment/spirit, use existing facilities, such as, GreenLab, Cbio biorefinement plants etc.</li> <li>Themes could be many: GHG emissions, biodiversity, sustainable materials, sustainable businesses</li> </ul>	<p><b>Customer relationships</b></p> <ul style="list-style-type: none"> <li>partnerships with existing branch organisations, farmers unions, workers unions, employers' unions, existing advisory services, like Velas.</li> <li>Mandatory 'demand' of biobased education for working in the sector</li> </ul> <p><b>Channels</b></p> <ul style="list-style-type: none"> <li>Marketing, additional sale.</li> <li>Existing groups of exchange of experiences (ERFA) to reach costumers.</li> <li>virtual and hybrid courses can expand the sourcing of costumers, requiring yet other marketing skills.</li> <li>Hackathons could reach you 'competitive/playful' youngsters, a portal with easy overview of the options is a basic prerequisite.</li> </ul>	<p><b>Customer segments</b></p> <ul style="list-style-type: none"> <li>Teachers at different levels (primary, secondary, vocational, business educations etc)</li> <li>Pupils at 'youth educations'/high school level should have access to courses/visits and inspiration about bioeconomy,</li> <li>Farmers/Green advisory services should have courses cross-silos to learn about bioeconomic value chains to inspire the farmers</li> <li>Start ups businesses in Bioeconomy have to eg consider People-Plant-Profit in their Business models</li> <li>Existing farmers/foresters/gardeners learn about bioeconomical opportunities</li> <li>Existing bioeconomic businesses/employers also have to keep ready for the next challenges and innovations</li> <li>Green NGOs as they often work on policy developments and talk to politicians</li> </ul>
<p><b>Cost structure</b></p> <ul style="list-style-type: none"> <li>costs for teachers/course leaders and coordination/administration</li> <li>marketing of the courses/the value proposition via a digital platform ( build and maintain)</li> </ul>		<p><b>Revenue streams</b></p> <ul style="list-style-type: none"> <li>'own money' in developing the BioBec</li> <li>'external funds' as a necessity, from ministries, Private funds, municipalities, etc. for 3 years, thereafter a commercial/semi-commercial platform</li> <li>'taxameter' payments</li> <li>companies paying for life-long learning</li> </ul>		
<p><b>Governance</b></p> <ul style="list-style-type: none"> <li>an organization with a steering board of the stakeholders who invest in the establishment</li> <li>Secretariat/coordination/administration could be employed by FBCE or Agro Business Park</li> <li>add 'missing glue' between existing educations and the emerging biobased industry sector and bring it to the forefront of incubation/start-up environments</li> </ul>				



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## Annex 4: BBEC4 Business Model Canvas

 <b>Business Model Canvas: Irish BBEC</b>				
<b>Key partners</b> <ul style="list-style-type: none"> <li>Munster Technological University (MTU)</li> <li>Irish Bioeconomy Foundation (IBF)</li> <li>Higher Education Institutes</li> <li>HEI Research Centres</li> <li>Science Foundation Ireland</li> <li>Enterprise Ireland Technology Gateway Network</li> <li>Further Education Training Sector</li> <li>Media</li> <li>Department of Agriculture Food &amp; Marine (Policy Makers)</li> <li>EU education partner organisations</li> <li>Enterprise Ireland Accelerator – network and supports for start-ups</li> <li>Innovation Hub Network</li> </ul>	<b>Key activities</b> <ul style="list-style-type: none"> <li>Regional and International, matchmaking, funding and brokerage service</li> <li>World Class bioeconomy related programmes, courses and learning pathways</li> <li>Research centre activities, events and academic publications</li> <li>Linking partners to EU funding opportunities</li> <li>Civic Society engagement, collaboration and change making activities</li> <li>Design and delivery of bioeconomy, environment &amp; sustainability education</li> </ul>	<b>Value Propositions</b> <ul style="list-style-type: none"> <li>A new innovative approach to education and learning pathways</li> <li>Single point of entry to Bioeconomy</li> <li>Centre of Excellence (BBEC)</li> <li>Accreditation and career progression via multi-level learning pathways</li> <li>Bespoke suite of services for industry, government, and civic society</li> <li>International, European, and regional connections &amp; networks</li> <li>Competitive advantage via centre reputation and expertise</li> <li>Adaptable &amp; dynamic agile approach</li> <li>Experts in tech-innovation via technology gateways</li> <li>Enterprise accelerator &amp; support network for entrepreneurs</li> <li>Industry and business focused alumni and expertise</li> <li>Mentoring &amp; coaching services and programmes</li> <li>Integrated VR/AR spaces &amp; technology</li> <li>Industry and Job creation</li> <li>Access to European grants/applications</li> <li>Consortium building</li> </ul>	<b>Customer relationships</b> <ul style="list-style-type: none"> <li>Client centred approach to communication &amp; dissemination strategy</li> <li>Clients viewed as co-creation partners</li> <li>Continuous feedback loop with clients, community, and networks</li> <li>Symbiotic relationship ensuring agility of response to skills needs</li> <li>Membership access capability across Clusters &amp; Networks</li> <li>Expert Speaker Panels responding to BBEC community needs</li> <li>BBEC as knowledge hub and central location connecting stakeholders across the quintuple helix (academia, industry, government, environment, civic society)</li> </ul>	<b>Customer segments</b> <ul style="list-style-type: none"> <li>Government Departments</li> <li>Industry (pharma, agri-food, marine, textile)</li> <li>Employers (C-suite, mid management)</li> <li>Innovation Hubs</li> <li>Local Government</li> <li>Community Groups</li> <li>NGO's</li> <li>State Agencies</li> <li>Media</li> <li>Education institutions (all levels)</li> <li>Students (all levels)</li> <li>Civic Society</li> <li>Researchers</li> <li>Corporations</li> </ul>
<b>Cost structure</b> <ul style="list-style-type: none"> <li>Digital Platform - Wi-Fi Broadband - Direct Staff X3 - Marketing - External consultants</li> </ul>		<b>Revenue streams</b> <ul style="list-style-type: none"> <li>Internal funding</li> <li>Advertisements</li> <li>Professional CPD (Continuous Professional Development) courses &amp; workshops</li> <li>Innovation sprints and design thinking workshops</li> <li>Consultancy Services</li> <li>Short residential courses with extra-curricular activities</li> <li>Higher Education Authority &amp; Springboard Education Funds</li> </ul>		
<b>Governance</b> <ul style="list-style-type: none"> <li>Coordinators- The Irish BBEC will be coordinated by MTU with the support of IBF.</li> <li>Board Members- There will be a board consisting of lecturers, researchers, government officials, members of Irish corporates including dairy industry, representatives of primary production. The board members will be decided by IBF and MTU, these people will be invited to join the board and governed by constitution.</li> <li>BBEC Stakeholders- The Irish BBEC will involve stakeholders by implementing their feedback on the information they require. Stakeholders will be invited to working groups, forums and information sharing sessions arranged by IBF and MTU to allow stakeholders to assist with decision making process.</li> </ul>				



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## Annex 5: BBEC5 Business Model Canvas

 <b>Business Model Canvas: Central-Eastern Europe-East BBEC</b>					
<p><b>Key partners</b></p> <p><b>Academia</b></p> <ul style="list-style-type: none"> <li>• Trakia University, Stara Zagora, BG</li> <li>• Institute for sustainable transition and development (TrU, BG)</li> <li>• Agricultural University in Cracow</li> <li>• Warsaw University of Life Sciences – SGGW</li> <li>• University of Pannonia, HU</li> <li>• Canakkale University, TR</li> <li>• Balikesir University, TR</li> <li>• MENDELU University CZ</li> </ul> <p><b>Research institutes</b></p> <ul style="list-style-type: none"> <li>• The Educational Research Institute (IBE)</li> <li>• Centre for Preclinical Research and Technology</li> <li>• Institute of Environmental Protection</li> <li>• Macroregional Thematic Working Group Bioeconomy</li> <li>• Education of the BIOEAST Initiate</li> </ul>	<p><b>Government</b></p> <ul style="list-style-type: none"> <li>• Stara Zagora Municipality, BG</li> <li>• Ministry of Agriculture CZ</li> <li>• Governmental and regional agencies</li> <li>• Regional economic development agency – BG</li> </ul> <p><b>NGO</b></p> <ul style="list-style-type: none"> <li>• PRO CIVIS</li> <li>• Bulgarian industrial association – BIA, BG</li> <li>• FORTES, IT</li> <li>• Phasegrowth, EE</li> <li>• BIOEAST HUB CZ</li> <li>• Association of Research Organisation CZ</li> <li>• GO-UP business incubator</li> <li>• IDEAM cluster, Ireland</li> <li>• Spatium, BG</li> <li>• Foundation Klaster Lifescience</li> <li>• Kraków</li> </ul> <p><b>SME's / industry</b></p> <ul style="list-style-type: none"> <li>• Zemědělský výzkum (ART)</li> <li>• Agroconsult Engineering, BG</li> <li>• Emerald European Ventures, IT</li> <li>• EPRD PL</li> </ul>	<p><b>Key activities</b></p> <ul style="list-style-type: none"> <li>• Supports the exchange of knowledge between science /academia, industry, other actors</li> <li>• Provides information about education and training providers with valuable offer in the field of Bioeconomy</li> <li>• Information about VET and education providers that certifies skills in bioeconomy</li> <li>• Provides tools, didactical materials, contents, expertise, etc.</li> <li>• Supports international mobility of students and science staff in the field of bioeconomy</li> <li>• Consulting; creating project consortiums, applications for funds</li> <li>• Events, Workshops</li> </ul> <p><b>Key resources</b></p> <ul style="list-style-type: none"> <li>• Knowledge about bioeconomy in the region (valuable partners map, resources, technology, tools, didactical materials etc.)</li> <li>• Network of already existing educational institutions, universities, science institutes</li> <li>• Platforms and cooperation schemes for the stakeholders established during other projects</li> <li>• Experienced staff willing to take part in training courses as lecturers</li> <li>• R&amp;D Infrastructure</li> <li>• Funding</li> <li>• Project management</li> <li>• Consulting</li> <li>• Initiatives on Vocational Training</li> </ul>	<p><b>Value Propositions</b></p> <ul style="list-style-type: none"> <li>• Raising awareness and basic knowledge about bioeconomy</li> <li>• Anticipation of industry needs in the field of training, more flexible education offer, experience trainers with practical skills</li> <li>• Boosting cooperation between stakeholders and already existing institutions: knowledge, exchange of good practices, networks of partners</li> <li>• Expertise in the field of bioeconomy (bioeconomy specializations, which are connected to the region) and external funding</li> <li>• Partners matching for joint projects and technology transfer</li> <li>• Matching bioeconomy start-ups with investors and science</li> <li>• Regional infrastructure development for bioeconomy in transition</li> </ul>	<p><b>Customer relationships</b></p> <ul style="list-style-type: none"> <li>• Open cooperation platform</li> <li>• Project/case-based relationship (not very formal cooperation at the initial stage)</li> <li>• Mapping needs and requirements</li> <li>• Establishing stakeholder groups (not formal) to commit to regular communication and interaction</li> </ul> <p><b>Channels</b></p> <ul style="list-style-type: none"> <li>• Social media</li> <li>• Direct contact</li> <li>• Events/workshops/meetings</li> <li>• Website</li> <li>• Existing platforms. (network of members)</li> <li>• Professional networks and associations</li> </ul>	<p><b>Customer segments</b></p> <ul style="list-style-type: none"> <li>• Bioeconomy companies (SME, large)</li> <li>• Research institutes</li> <li>• Education institutes</li> <li>• Business development organisations</li> <li>• Regional public admin. actors</li> <li>• Global political actors</li> <li>• Clusters, Networks and Associations</li> <li>• Private Investors</li> <li>• Start-ups</li> </ul>
<p><b>Cost structure</b></p> <ul style="list-style-type: none"> <li>• Creating materials for rising awareness actions.</li> <li>• Costs of management and coordination.</li> <li>• Costs of organization of events and workshops</li> <li>• Costs of expertise and consulting.</li> <li>• Platform maintenance and development.</li> <li>• Costs of participation in conferences and events</li> <li>• Costs of communications activities (staff creating content, advertising)</li> <li>• Costs related to legalization and taxes in the case of BBEC becomes a legal entity</li> </ul>		<p><b>Revenue streams</b></p> <ul style="list-style-type: none"> <li>• Payments for BBEC for specific services. (including consultation, advisory)</li> <li>• External funding (national, European)</li> <li>• Membership fee from Members</li> <li>• Contract payments</li> <li>• An in-kind contribution from Partners and members</li> </ul>			
<p><b>Governance</b></p> <ul style="list-style-type: none"> <li>• Steering group: representatives of each Partner from BBEC Central Eastern East Europe</li> <li>• Advisory board to communicate with other BBECs</li> <li>• Memebers – memberships based on letter of intent (stakeholder creating content, providing expertise etc.) or joining after paying membership fee</li> <li>• Creation of Internal Operating Regulation</li> </ul>					



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## Annex 6: BBEC6 Business Model Canvas

 <b>Business Model Canvas: German BBEC</b>				
<p><b>Key partners</b></p> <p>Universities:</p> <ul style="list-style-type: none"> <li>University of Hohenheim</li> <li>KIT</li> <li>University of Heidelberg</li> </ul> <p>Governmental institutions</p> <ul style="list-style-type: none"> <li>UM/ MLR/ MWK</li> <li>BIOPRO</li> <li>LEL</li> </ul> <p>European level:</p> <ul style="list-style-type: none"> <li>EBU (BOKU and APT)</li> </ul> <p>Industry</p> <ul style="list-style-type: none"> <li>IHK</li> </ul> <p>Training</p> <ul style="list-style-type: none"> <li>DEULA</li> <li>Akademie für Landbau</li> </ul> <p>Others:</p> <ul style="list-style-type: none"> <li>Experimenta</li> <li>Partners from BLITZ, BioPartnerBW, Humboldt Reloaded, BioBEO, LLL</li> </ul>	<p><b>Key activities</b></p> <ul style="list-style-type: none"> <li>Identification and mapping of knowledge (experts)/ Managing actively the network</li> <li>Create framework for bioeconomy-related curricula adaptation and creation</li> <li>Create framework for consultancy work</li> <li>Identification and mapping of existing courses/ Creation of educational material/ formats</li> <li>Create and maintain a homepage</li> <li>Initiate collaborations, distribution and exhibition of bioeconomy-related material</li> <li>Find funding alternatives</li> </ul> <p><b>Key resources</b></p> <ul style="list-style-type: none"> <li>Coordination group</li> <li>Office</li> <li>Knowledge and expertise: Network</li> <li>Advisory board</li> <li>Website: information and education platform</li> <li>Dissemination material (videos, social media, informative materials and examples)</li> </ul>	<p><b>Value Propositions</b></p> <ul style="list-style-type: none"> <li>Connect experts to solve bioeconomy issues and establish actor networks for future collaborations to solve complex circular &amp; sustainable challenges</li> <li>Consulting for adapting and implementing new courses on bioeconomy</li> <li>education and consulting to implement the circular sustainable bioeconomy</li> <li>updated training so professionals can act in an emerging future-oriented and sustainable fields</li> <li>knowledge-based advisory and mutual exchange (for solving concrete problems and define the vision of a sustainable future)</li> <li>Inspiration and engagement elements for society in the sustainability transition to the bioeconomy</li> </ul>	<p><b>Customer relationships</b></p> <ul style="list-style-type: none"> <li>Personal contact, active and constant connection through a central office → e-mail</li> <li>Active networking activities and personal contact</li> <li>Open and personal contact</li> <li>Dissemination material personalized for the customer segment (societal actors, professionals, industry...)</li> <li>Passive connections → information on website</li> </ul> <p><b>Channels</b></p> <ul style="list-style-type: none"> <li>Public relations and visibility, homepage, newsletter</li> <li>Networking events, personal contact, project proposals</li> <li>Online and onsite classes, fairs, integration into existing offers + additional ones</li> <li>Public relations and visibility/ Direct and personal contact</li> <li>Events (science festival, TdoT, generally openness), press releases, homepage</li> </ul>	<p><b>Customer segments</b></p> <ul style="list-style-type: none"> <li>Educational and research institutions</li> <li>Industry actors (complete value chain)</li> <li>Professionals (employees/ future employees)</li> <li>policy actors</li> <li>Societal actors</li> </ul>
<p><b>Cost structure</b></p> <ul style="list-style-type: none"> <li>Office infrastructure</li> <li>Website</li> <li>Coordination group salary</li> <li>1-2 permanent positions (scientific coordinator and network manager)</li> <li>Events costs</li> <li>Marketing costs</li> <li>External experts' fees</li> </ul>		<p><b>Revenue streams</b></p> <ul style="list-style-type: none"> <li>Funding from projects</li> <li>Price of the consulting and advisory services</li> <li>External funds from ministries</li> </ul>		
<p><b>Governance</b></p> <p>Options: association/ Non-profit organisation or Spin-off of university</p> <p>Advisory board with representatives of different types of stakeholders</p> <div style="text-align: right;">   <p><small>This project has received funding from the Bio Based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101023381.</small></p> </div>				

Annex 7: Profiles of the six regional BBECs according to WPs 2.1 and 2.2

**BIOBEC**

**WP2 - Design of BBEC operational model through co-creation**

**BBI JU**

**Bio-based Industries Consortium**

This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101017723.



## Aim : Creating EU Bio-Based Education Centres to meet industry needs and to boost the contribution of the bioeconomy to meet societal challenges.



Start date: 01 September 2021  
End date: 29 February 2024  
BBI JU contribution: €1,499,953.69

- | Horizon 2020 - Bio-Based Industry Joint Undertaking
- | Creating 6 interlinked EU Bio-Based Education Centres of excellence (BBECs)
- | Delivery of best practice in bioeconomy education design
- | Blending the key features of a university & digital Innovation hub
- | Support education & training from vocational to masters level
- | Flexible in design to respond to emerging bioeconomy skills and talent needs
- | Multi-level networking between industry & enterprise development agencies
- | Research & Development collaboration with government and academia
- | Enhancing pedagogical creativity & enhanced digitisation
- | Innovative and replicable organisational & business model
- | Engagement with civic society and local communities





# PARTNERS



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## WP2 - Design of BBEC operational model through co-creation

### Overview as per GA:

Based on the opportunities and needs identified in WP1, WP2 will provide a co-creation process to design and develop the BBEC operational framework. A cross cutting activity (T2.1) will provide an initial framework to be rolled out across the consortium partner network (T2.2). These tasks are both informed by and conducted in parallel to WP1 activities.

For each BBEC case, a co-creation process will be activated to identify the specific design of each centre (T2.3) followed by the specification of business model and governance structure for each BBEC case (T2.4).



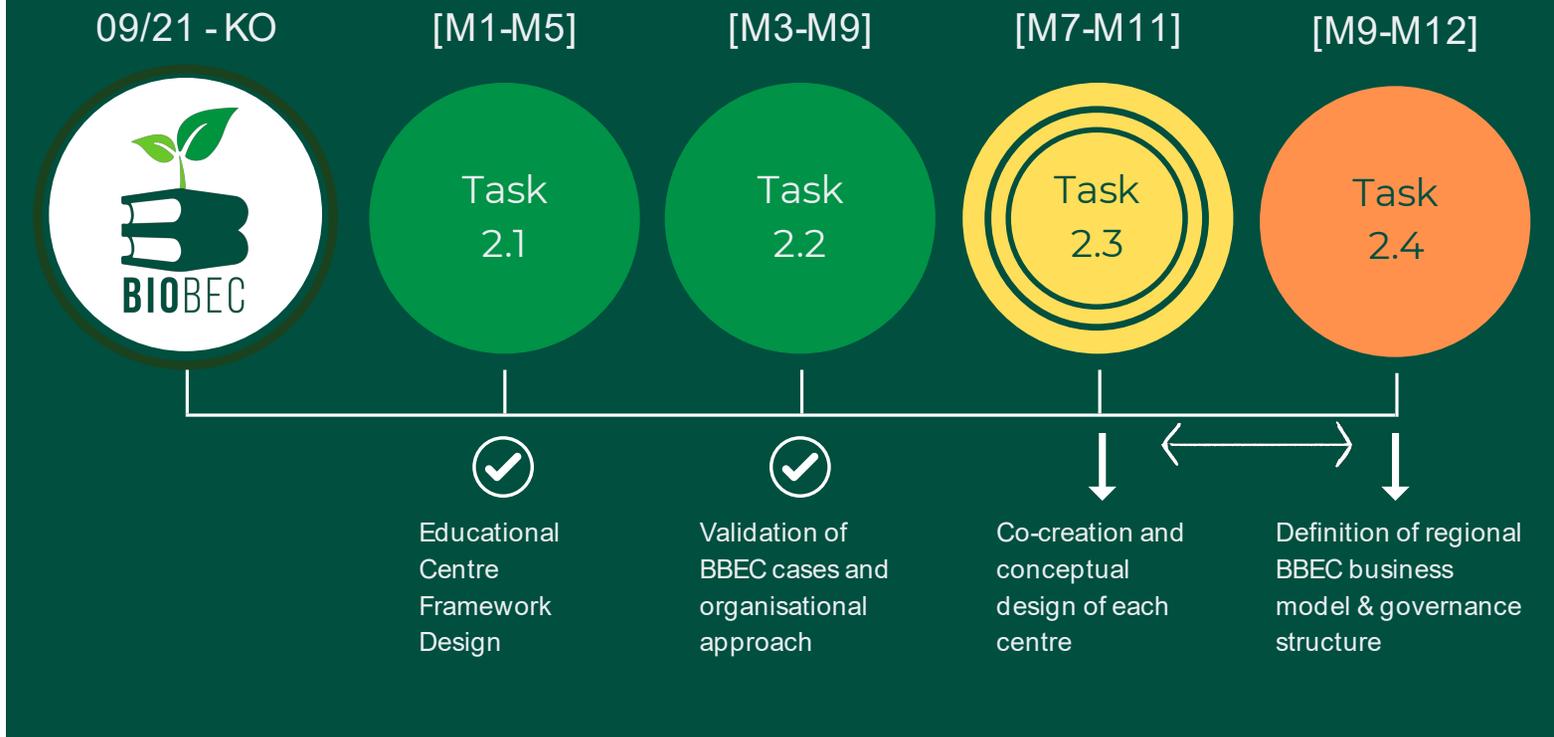
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Consortium



Horizon 2020  
European Union Funding  
for Research & Innovation

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and innovation programme No. 101019181

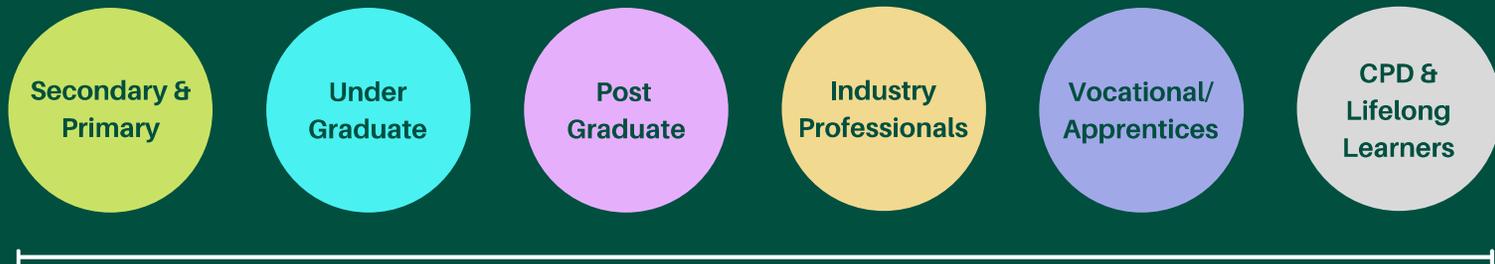
## WP2 - Design of BBEC operational model through co-creation





D2.1 [M5]

T2.1 Inventory of Best Practice - 29 case studies from education and/or industry. Bioeconomy and non-bioeconomy related. Across all learner profiles.



### Case Study Thematic Areas

Pedagogies	21	Research & Development Supports	2
University collaboration with industry	17	Enterprise Development Supports	1
Lifelong Learning & CPD	7	Mentoring Programmes (academic or industry)	3
Funding & Investment networks	3	Digital Technologies AR/VR Integrations	1
Clusters - Networks - Partnerships	7	Engagement with civic society and communities	4

D2.1 [M5]

## T2.1 Centre Readiness Level Framework Survey



The T2.1 survey design was informed by the compilation of the 29 best practice examples collected and further collated in conjunction with inputs from WP1 activities (MTU/IHE).

All 19 partners completed a comprehensive report in response to 22 survey questions generating a detailed profile of each BBEC location in relation to their thematic expertise, learner profiles, knowledge & network capabilities, business model, roles & functions and innovation supports (MTU/UNIBO).



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European Union's Horizon 2020 research  
and innovation programme grant agreement No 101019714



## BIObec website roll out of T2.1 Case Studies (SIE WP5)

**BIOCIRCE** is a collaboration between the universities of Milan, Naples, Turin & Bologna offering professional training modules across locations in biotechnology and science innovation to graduates with a scientific or social science background. Flexibility of course contents and close collaboration with industry create highly valuable bioeconomy focused graduate professionals.

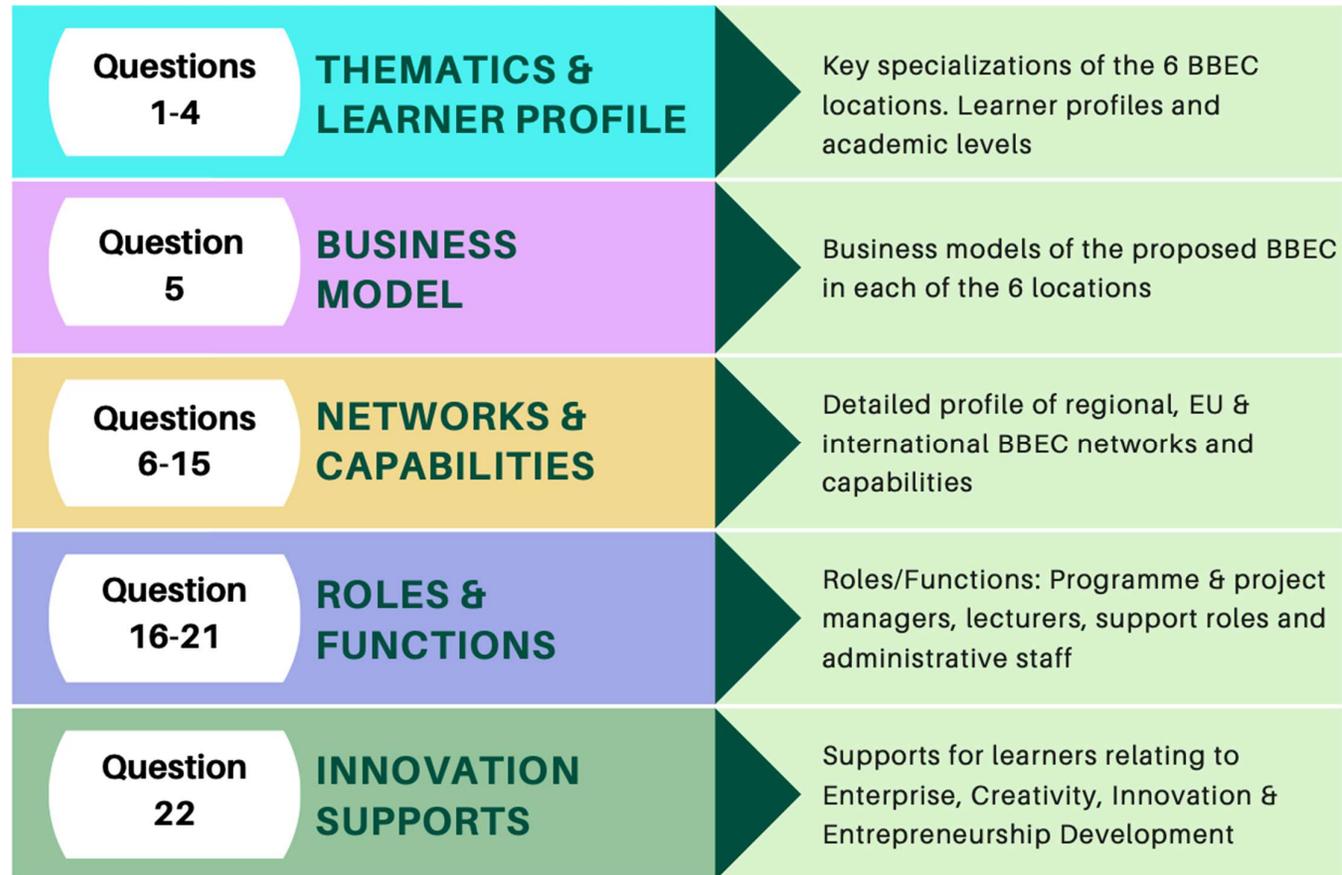
**REEdI** is a ground breaking approach to engineering education in Ireland designed in collaboration with global industry partners and MTU. Incorporating immersive AR/VR technologies, integrating work place and class based experiential learning to create professional engineering graduates with key transversal skills to meet industry needs.

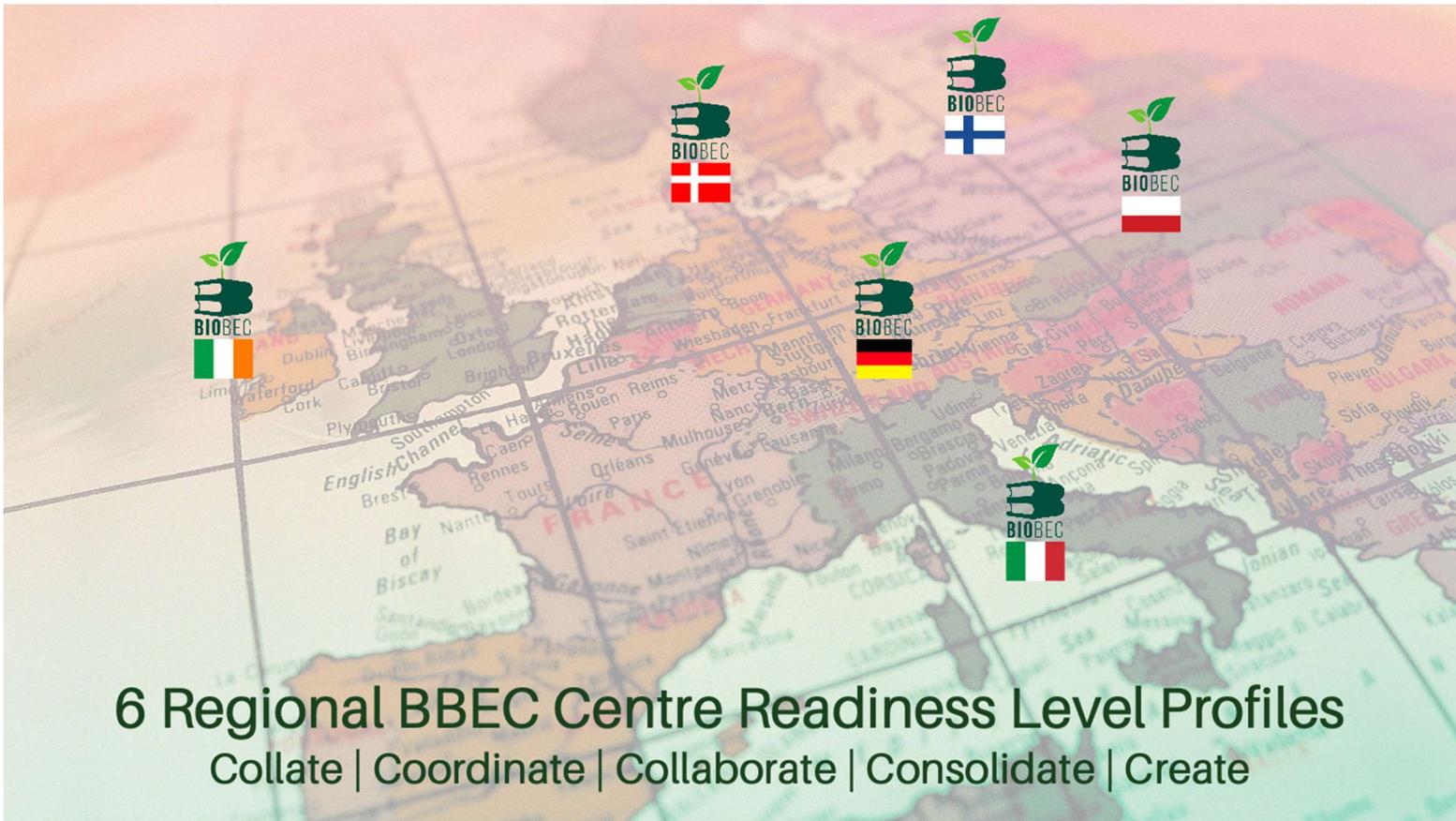
**Transition2BIO** is a Capacity Building Package for regional stakeholders with contents, methodologies, tools and replicable formats. Raising awareness of EU funded projects in the bioeconomy sector through communication and stakeholder engagement with member states and regions.





**T2.1 CENTRE  
READINESS LEVEL  
FRAMEWORK SURVEY**





## 6 Regional BBEC Centre Readiness Level Profiles

Collate | Coordinate | Collaborate | Consolidate | Create



## BBEC Ireland Expertise & Knowledge Capabilities

Biorefining | Agrifood | Marine & Blue Bioeconomy | Sustainable Technologies | Low Carbon Agriculture | Agritech & Big Data | Food Waste | Bioresource Mapping | Short Supply Chain Management | Cascading | Extraction | Bioactivity Validation | New Biobased Product Development | Education & Outreach | Clustering | Enterprise Supports | Regional Development | Funding & Finance | Project Management

Primary  
Secondary

Vocational  
Ed

Under  
Graduate

PostGrad  
Cert & Dip

Masters  
Programme

PhD  
Programme

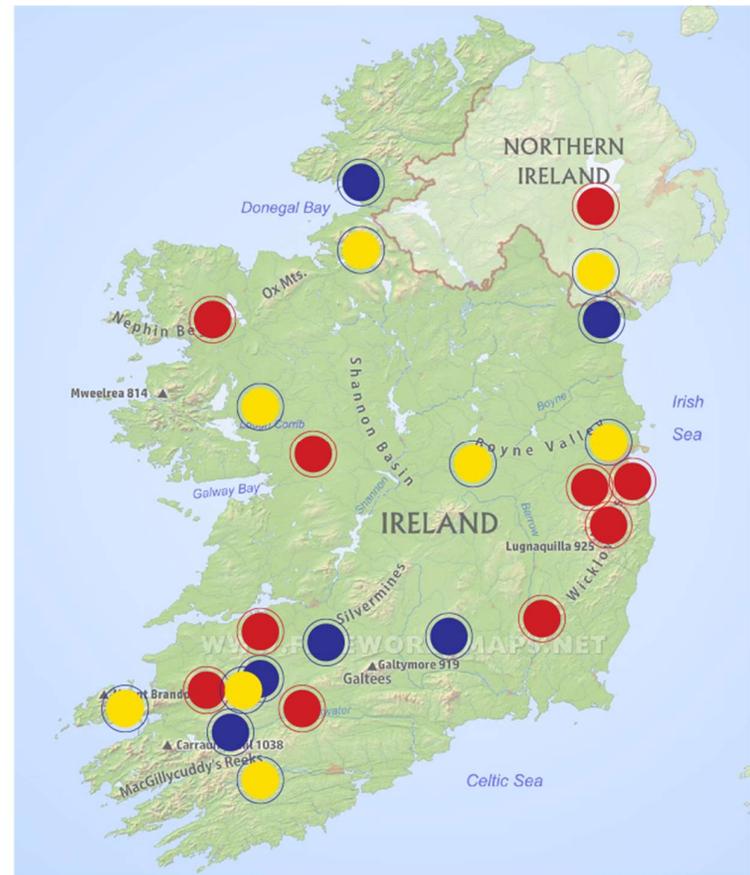
CPD  
Lifelong

Civic  
Society

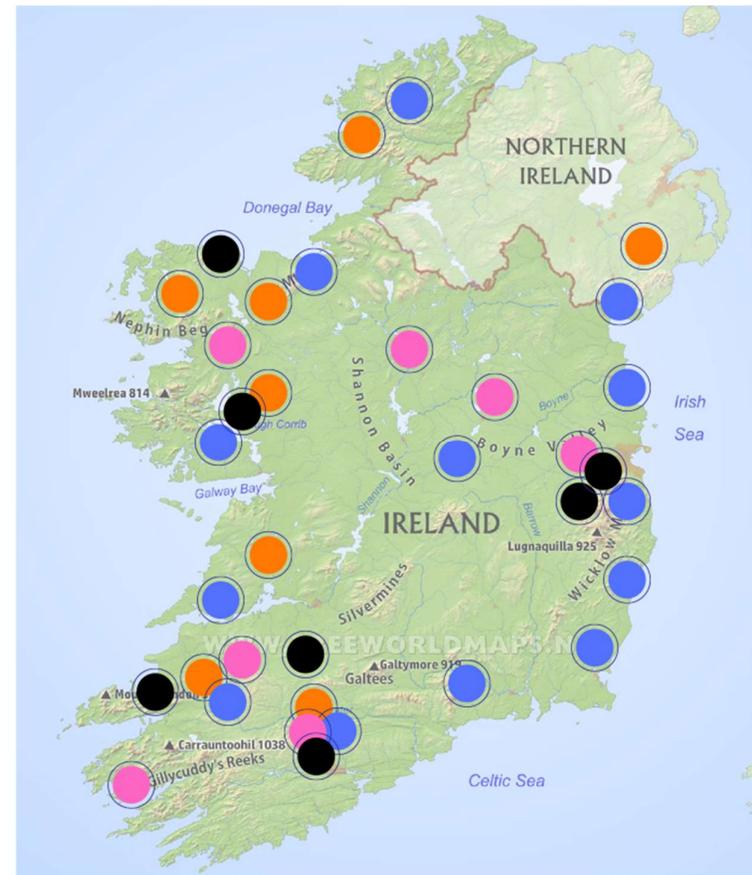
- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings

- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports

- **HIGHER EDUCATION INSTITUTES**  
 MTU & IBF have connections with and access to 21 HEI's via the Higher Education Authority. Additionally MTU has developed long standing and deep partnerships with a significant number of these universities and third level education providers.
  
- **VOCATIONAL**  
 MTU & IBF are linked with the national network of Education & Training Boards Ireland (ETBI). ETBI is the national representative association for the 16 ETBs.
  
- **GOVERNMENT AGENCIES**
  - Dept Enterprise, Trade & Employment
  - Dept Agriculture, Food & Marine
  - Dept Environment, Climate & Communications
  - Local & Regional County Councils
  - Intertrade Ireland
  - Science Foundation Ireland
  - TEAGASC
  - Environmental Protection Agency



- **RESEARCH CENTRES**  
 | BIORBIC | Clean Tech Centre | Shannon ABC | IMaR |  
 16 EI Technology Gateway Network | CONNECT |  
 LERO SFI Software | MAREI SFI Energy Research |  
 NIMBUS | Ryan Institute | QUESTOR Queens Belfast |  
 Dairy Processing Technology Centre
  
- **ENTERPRISE DEVELOPMENT**  
 | Enterprise Ireland | Western Dev Commission |  
 Atlantic Economic Corridor | Local Enterprise Office |  
 Intertrade Ireland | UnáG | NEWKD | SKDP
  
- **CLUSTERS**  
 | CIRCULEIRE | IBEC | Carbery Group | Energy Cork |  
 Marine & Industry Network | Chambers Ireland | EI  
 Cluster Network
  
- **DIGITAL INNOVATION HUBS**  
 | RDI HUB | RUBICON | Microsoft Dreamspace |  
 Portershed | Dogpatch | Guinness Enterprise Centre |  
 Connected Hubs Network



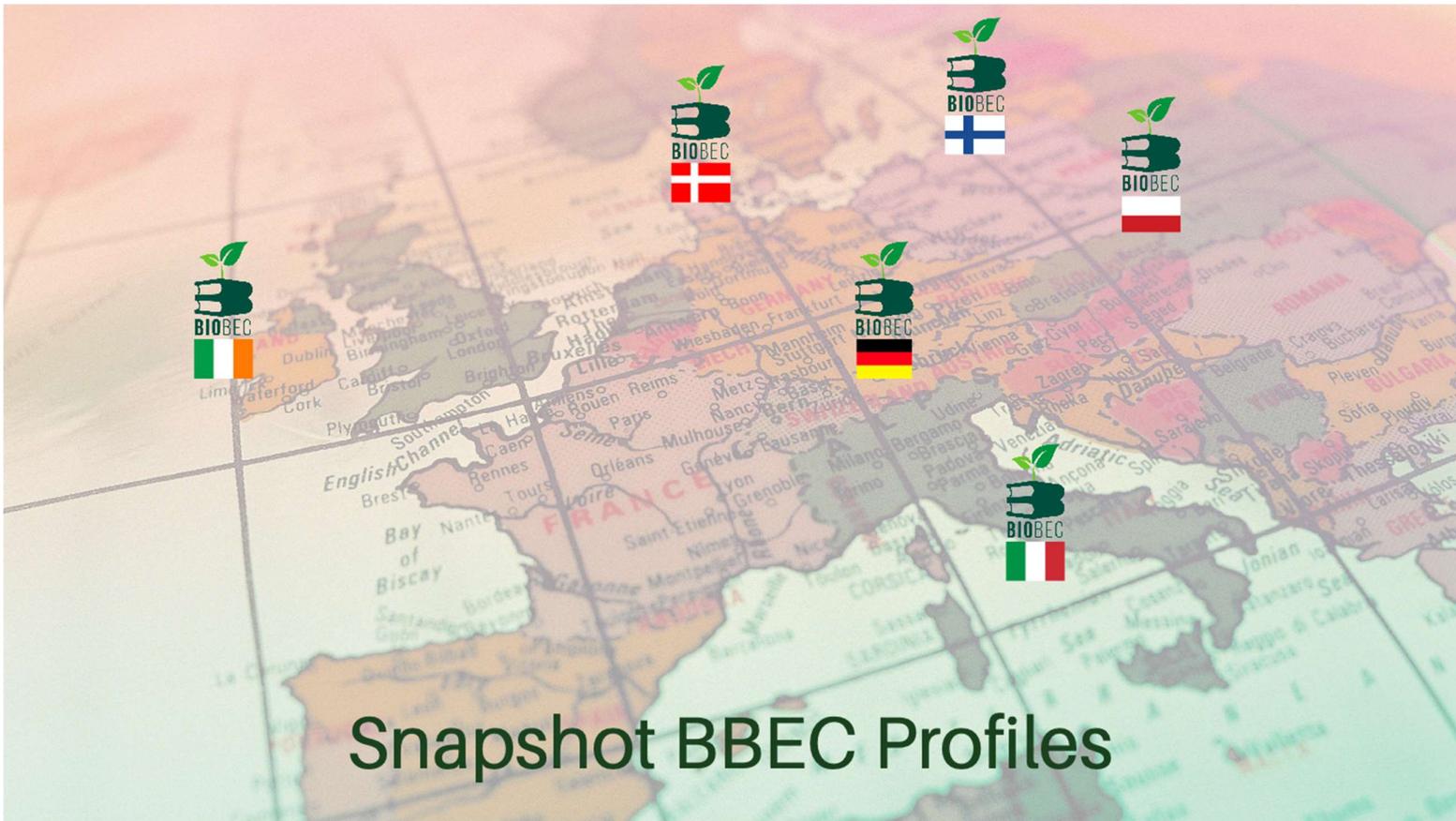


## BSEC Ireland Expected Roles & Functions

**Academic lecturers | Industry liaison | Education & Outreach | Community Manager | Technical Advisory Experts | Mentor Programme Manager | Graduate Programme Manager | Commercialisation Specialist | Programme Accreditation Specialist | Educational Instructional Designer | Lab Instructors | Project Managers | Social Media & Marketing Function | Funding & Finance Specialist | Funding & Grant Officer | Partnerships Manager**

## Support Roles & Functions

**Academic Administration Staff | Recruitment & Applications Manager | Course Co-ordinators | Learning Support Staff | Access Office & Disability Services Staff | Careers Office | Counselling Service | Health Centre | Students Union Representatives | School Liaison | Work Placement Co-ordinator**



# Snapshot BBEC Profiles



## BBEC Denmark Expertise & Knowledge Capabilities

Education VET | Agriculture | Biological & Chemical Engineering | Biorefining Technologies  
Environmental Technologies | Energy & Storage | Food & Bioresource Innovation | Biorefining |  
Forestry Biomass & Marine Resources | Innovation & Incubation |  
Nature Preservation & Restoration |

Primary  
Secondary

Vocational  
Ed

Under  
Graduate

PostGrad  
Cert & Dip

CPD  
Lifelong

Civic  
Society

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Mentors from industry
- Mentors from academia
- Diversity & Inclusion supports



## BBEC Germany Expertise & Knowledge Capabilities

Agriculture | Food - Agricultural Chain | Bioenergy - Agricultural Chain | Biorefinery | Food Security | Ecosystem Services | Sustainable Management of Natural Resources | Climate Systems Education | Forestry and Wood Technology | Social Science | Production of Bio-based Raw Material | Water | Education & Outreach | Natural Sciences | Engineering & Biotechnology | Social & Economic Sciences

Under Graduate

PostGrad Cert & Dip

Masters Programme

PhD Programme

CPD Lifelong

- Networking events
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings

- Site visits to bioeconomy research centres
- Mentors from industry
- Mentors from academia



## BSEC Finland Expertise & Knowledge Capabilities

Education & Research | Agriculture | Ecology | Food Safety | Veterinary Medicine | Agricultural & Regional Economics | Technologies | Forest based Bioeconomy |

Vocational  
Ed

Under  
Graduate

PostGrad  
Cert & Dip

Masters  
Programme

PhD  
Programme

CPD  
Lifelong

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports

- Site visits to bioeconomy research centres
- Site visitors to bioeconomy industry settings
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Diversity & Inclusion supports



## BBEC Italy Expertise & Knowledge Capabilities

Biorefining | Bioeconomy Awareness Raising | Communication | Info-education and Stakeholder Engagement | Education & Outreach | Knowledge Transfer | Chemical Value Chains | Textiles | Citizenship | Energy and Environment | Nature Based Solutions | Forestry & Agrifood | Technology Transfer | Education | Biomass Resources | Renewable Chemicals

Primary  
Secondary

Vocational  
Ed

Under  
Graduate

PostGrad  
Cert & Dip

Masters  
Programme

PhD  
Programme

CPD  
Lifelong

Civic  
Society

- VR/AR technology integration
- Innovation sprints & Design Thinking
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- Site visits to bioeconomy industry settings

- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia



## BBEC Poland Expertise & Knowledge Capabilities

Food Processing | Protein Biophysics | Nanotechnology | Biodegradable Polymers | Particle Analysis | Food | Agriculture | Chemistry | Energy | Circular Economy | Bioeconomy | Regional Development | Environmental Engineering | Geomatics & Power Engineering | Geodesy & Cartography | Renewable Energy Sources | Biorefining | Nanomaterials | Biorefining | Pharmacy & Laboratory Diagnostics | Physiology Neurobiology Oncology | Nephrology | Pharmacology | Gerontology | Medical Chemistry & Cell Biology | Education & Outreach

Primary  
Secondary

Vocational  
Ed

Under  
Graduate

PostGrad  
Cert & Dip

Masters  
Programme

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- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports



### **T2.3 Co-creation and conceptual design of each Centre [M7-M11]**

A local co-creation workshop will be carried out in order to specify the design of each centre and its potential activities as sketched out in task 2.2. Approx 10 key actors should be involved in the workshop. Key actors are those that will significantly contribute to the development of your BBEC. The Business Model Canvas (BMC) will form the basis of the workshop providing a visual representation of the BBEC business model and proposed governance structure.

### **T2.4 Definition of BBEC business model and governance structure at regional level [M9-M12]**

Each BBEC will generate a simplified business model and connected governance structure informed by the T2.3 BMC workshop and participant feedback. This activity will be key to the further identification and mapping of potential business opportunities and developing the value chain of actors in each regional ecosystem.



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and grant agreement No 101017181



**Aim: Creating EU Bio-Based Education Centres to meet industry needs and to boost the contribution of the bioeconomy to meet societal challenges.**



| Academia | Industry | Government | Society | Environment |

## Annex 8 – “Centre Readiness Level Framework Surveys” Collected

### UNIBO

#### 1) Your organisation name, address and location. \*

University of Bologna, Department of Agricultural and Food Science (DISTAL); Viale Fanin, 50, Bologna.

#### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

The University is specialized in agriculture, food, biorefining, biofuels, biomaterials, green entrepreneurship, forestry.

Though there are no bachelor or master degrees on Bioeconomy (and not even a single course with Bioeconomy in the title) the building blocks of the bioeconomy are very prominent at UNIBO in terms of teaching and research (in particular in research being the Bioeconomy the top field in terms of attraction of EU funds)

#### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If “Other” please specify briefly: UNIBO has post-master interuniversity masters, such as BIOCIRCE

#### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

#### 5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If “Other” please specify briefly: Click or tap here to enter text.



6) **Your Network - Specify the geographical reach of your network.** \*

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

UNIBO is involved in a wide network of universities for research and teaching purposes, especially on Bioeconomy topics. Two major networks are:

- European Bioeconomy University (<https://european-bioeconomy-university.eu>).  
European Bioeconomy University (EBU) is an international alliance composed of six leading European Universities in the field of bioeconomy (UNIBO; University of Eastern Finland; University of Hohenheim; AgroParisTech; University of Natural Resources and Life Sciences, Vienna; Wageningen University and Research) that focus on the three essential pillars for the transition to bioeconomy: research, excellent teaching and innovation.
- BIOCIRCE (<https://masterbiocirce.com>). As an interdisciplinary program jointly offered by 4 Universities (University of Bologna, University of Milano-Bicocca, University of Naples Federico II, and University of Turin), by 4 non-academic partners (Intesa Sanpaolo, Novamont SpA, GFBiochemicals SpA, and PTP Science Park di Lodi), and 2 Italian Technological Cluster (Cluster SPRING and Cluster CLAN agrifood) this Master program provides skills and expertise necessary to deal with the full range of issues in this complex field.

8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

This happens mainly through individual teachers being involved in teaching courses.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

Being a public body, we work in strong connection with government department linked to university education and public research. There is also a strong focus on policy-related research at UNIBO, that works in collaboration with Bioeconomy-related directorates to support policy through consultancy, experts and research collaboration. A UNIBO professor led the preparation of the Italian bioeconomy strategy.

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

UNIBO is collaborating with research and innovation centres at different levels from local to EU (and beyond the EU). In particular the national centres CREA (dealing with agriculture and food) and CNR.



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### 11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

UNIBO is connected to a wide network of non-government organisation for research and teaching collaborations. This is particularly relevant in research for dissemination and communication purposes

### 12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

UNIBO has strong collaboration with entities promoting initiatives for start-up and enterprise creation. This is relevant to promote spin off initiatives from staff and student

### 13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

UNIBO is founding member of BI-REX, which act as Digital Innovation Hub at EU level, and is one of the 8 Italian Competence Centers funded by the Italian Ministry of the Economic Development within the Industry 4.0 National Plan and our main focus is on Big Data. BI-REX is born in 2018, has its headquarter in Bologna (Italy) and gathers in partnership 60 players among Universities, Research Centers and Companies of excellence in order to assist businesses, in particular SMEs, through a varied series of services: from consultancy to technology assessment, from design to validation of innovative solutions, from orientation to training, up to the Pilot Plant.

### 14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

Collaboration is active with basically all level and size of industry. Collaboration includes: funding of studies by industry, collaborative research, common exploitation of results, industrial PhDs, internship by students, placement and job finding initiatives, prizes to students, etc.

In order to achieve its impact, UNIBO has developed Framework Agreements with a number of prominent national companies active in the bioeconomy field, such as Novamont, CAVIRO, Hera SpA, Bonifiche Ferraresi, ENI, Intesa San Paolo.

### 15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Collaboration is active with basically all level and size of industry association and networks. Collaboration includes: setting up of research agenda, collaborative research, internship by students, placement and job finding initiatives, prizes to students, etc.

The main collaborations involve regional and national clusters. UNIBO is part of the National Technological Cluster on Agrifood (CLAN) and the National Technological Cluster on Green Chemistry (SPRING), where seat in the Board of Directors, and it is member of the Blue Italian Growth National Technological Cluster (BIG). Furthermore, UNIBO is founding member of the regional cluster Agrifood and Greentech, which mirrors the national cluster at regional level.



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Furthermore, UNIBO is gold core member of EIT Food, affiliate member in the Climate-KIC and core member of the EIT Raw Materials

UNIBO is member of the following international association whose scope is in the field of bioeconomy:

<b>Bio-based Industries Consortium AISBL</b>	<b>BIC</b>	The preparation, set-up and assistance in executing the Biobased Industries Public-Private Partnership
<b>CO2 Value Europe AISBL</b>	<b>CO2</b>	To (a) Promote the development and market deployment of sustainable industrial solutions that convert CO2 into valuable products, in order to contribute to the net reduction of global CO2 emissions and to the diversification of the feedstock base; (b) Provide common means and services to its Members to improve the activities of its Members in particular, and to improve synergies, joint actions and projects between the Members in general; (c) Develop an ambitious and integrated research and innovation vision to develop Carbon Capture and Utilization over the medium/long term, and (d) Stimulate the development of a favourable regulatory framework to facilitate the conversion. (e) To the extent necessary for the purposes above, represent, promote and defend in the Statutes of CO2Value Europe AiSBL [The official text will be in French – English convenience translation for information purposes only] Adopted on xx October 2017 broadest sense of the word the common interests of its Members in particular, and those of the industry stakeholders involved in the conversion of CO2 in general.
<b>European Plant Science Organisation aisbl</b>	<b>EPSO</b>	To increase the visibility, presence, publicity and impact of the European plant science community. To formulate and announce the joint vision of the members of the European plant science community for the future, and to advise on long term strategic decisions of funding agencies on a European and national level to support plant science. To communicate with the academic world, industry and the general public in order to ensure the independent distribution of plant science information and to link European research projects together. To contribute to the sustainable development of agriculture, horticulture, forestry and biodiversity.
<b>European Sustainable Phosphorus Platform</b>	<b>ESPP</b>	To promote, facilitate, contribute to and/or implement phosphorus sustainability in Europe
<b>European Bioplastics e.V.</b>	<b>EUBP</b>	To promote the development, production, marketing and waste management and recovery of bioplastics in order to contribute to sustainable development



European Food Information Council aisbl	EUFIC	To provide multipliers (notably national nutrition/food safety and consumer organisations, healthcare professionals - dietitians, nutritionists, doctors, teachers/educators, nurses, sports practitioners-, patient associations, media, bloggers, influencers) with clear, scientific and directly comprehensible information in order to improve the understanding of the matters related to food and health (including nutrition, quality of food, sustainability and other subjects in connection with food), for the benefit of the general public.
European Marine Research Network	EURO MARINE	To support the identification and initial development of important emerging scientific topics or issues and associated methodologies in marine sciences, as well as to foster new services relevant to the marine scientific community
Farm Animal Breeding & Reproduction Technology Platform	FABRE TP	is active at EU level to foster the research efforts and the implementation of results to maintain Europe's leading role in animal breeding and reproduction, to work closely together with the European Commission to share view on the importance of animal breeding and reproduction for Europe and the research and innovation needs of the sector
FOODFORCE	FOODFORCE	is a network of leading European research provider organisations active in the areas of food, nutrition and health. It recognises that members have broad remits, but share a common interest in multidisciplinary science. <i>FOODforce</i> provides a proactive forum for discussions on delivery of best practice and societal impact and facilitates international aspects of knowledge exchange and innovation, both within and outside the European Union
HEALTHGRAIN Forum	HEALTHGRAIN Forum	To establish and maintain knowledge and technology sharing between academia, industry and public bodies To stimulate and initiate research facilitating the development, processing and marketing of healthy cereal foods To exploit and expand the expertise created in the HEALTHGAIN Integrated Project to increase the awareness, availability and acceptability of healthy cereal foods To be the platform for the creation of a broader grain alliance for better health To communicate cereal issues with EU and global food authorities, policy makers, consumer/health associations and other organization To hold trademarks, IPR, databases or any other possessions To grant licences to trademarks and other IPR owned by the HEALTHGRAIN Forum

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Click or tap here to enter text.



Bio-based Industries Consortium



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17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Not to my knowledge, but we have procedures for participatory (with stakeholders) identification of skills needed and course contents. We also have projects related to exploration of new teaching solutions that also involve analysis of skills (NETGROW, BOOSTEDU, FOEBE, etc.). This activity benefit of dedicated supporting staff.

Program manager vs project manager		
	Program manager	Project manager
<b>Description</b>	Supervises long-term strategies that consist of multiple smaller projects.	Supervises individual projects that meet program objectives.
<b>Focus</b>	Program strategy	Work coordination
<b>Duration</b>	Long-term	Short-term
<b>Tasks</b>	Implement strategies, oversee collaboration, and define success metrics.	Coordinate work, organize projects, and track progress.
<b>Success</b>	Measured by the success of program strategies, ROI, and company-wide objectives.	Measured by the success of individual projects, timelines, and budget compliance.

Figure 1. Program manager vs Project manager - The main differences

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes? (see Fig.1 for further explanations on Programme Manager). Please provide specific examples. \*

Yes have dedicated staff to support the development of collaboration and programs

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes? (see Fig.1 for further explanations on Project Manager). Please provide specific examples. \*

Yes

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Yes, this is UNIBo main business. We engage with all level to some extent, with a focus (core business) with undergraduate, postgraduate, PhD level



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21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Click or tap here to enter text.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

UNIBO is available to:

- Provide contents and teaching staff for education initiatives;
- Link education and training with research;
- Provide links and coordination between university education, vocational training and LLL;
- Collaborate on identifying new and future skill needs and education methods;
- Steer the implementation of BBECs.

## MTU

1) Your organisation name, address and location. \*

Munster Technological University (MTU), Kerry Campus, Co. Kerry, Ireland. MTU is a multi-campus university in the South West of Ireland offering a range of programmes from apprenticeship to postgraduate and postdoctoral level supporting a student cohort of approx. 21,000 and 2,000 staff across its six campuses.

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*



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MTU is actively involved in bioeconomy research both nationally and internationally and is led by the Circular Bioeconomy Research Group (CIRCBIO), a multi-disciplinary team integrating expertise in bioresources, sustainability, green chemistry, biotechnology, low emission agriculture and biorefining.

See below for a full list of specializations:

Biorefining | Agrifood | Marine & Blue Bioeconomy | Sustainable Technologies | Low Carbon Agriculture | Agritech & Big Data | Food Waste | Bioresource Mapping | Short Supply Chain Management | Cascading | Extraction | Bioactivity Validation | New Biobased Product Development | Education & Outreach | Clustering | Enterprise Supports & Regional Development.

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

- 9. Secondary
- 10. Vocational
- 11. Bachelor
- 12. Post graduate cert/Diploma
- 13. Masters
- 14. Ph.D.
- 15. CPD - Continuous Professional Development
- 16. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves: \***

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model): \***

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

- Local
- National
- Regional



European Union

International

### 7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

This response is divided into two sections:

A full list of EUROPEAN & INTERNATIONAL links to Universities and Third Level Institutes are attached in Appendix 1

REGIONAL: There are 21 Higher Education Institutes in Ireland with which MTU has connections with and access to via the Higher Education Authority (See Appendix 1). Additionally MTU has developed long standing and deep partnerships with a significant number of these universities and third level education providers through participation in knowledge exchange activities, programme design & delivery and cross collaboration on a variety of research projects and funding alliances:

[RCSI University of Medicine and Health Sciences](#)

[University College Dublin](#)

[Trinity College Dublin](#)

[University of Limerick](#)

[University College Cork](#)

[Technical University Dublin](#)

[Technical University of the Shannon](#)

[National University of Ireland Galway](#)

[Waterford Institute of Technology](#)

[Queens University Belfast](#)

[Maynooth University](#)

### 8) Your Network - Detail your organisations links with Vocational Education Centres. \*

MTU is linked with the national network of Education & Training Boards Ireland (ETBI). ETBI is the national representative association for the SIXTEEN ETBs, and works to protect, promote and enhance the interests of vocational education and training within the wider education sector and the country at large. Through these networks MTU provides a number of pathways into third level education and training incorporating recognition of prior learning (RPL) and committing to a percentage of reserved spaces to facilitate entry into degree level programmes.

As such MTU provides a dedicated quota of direct access places for graduates of vocational programmes into the second academic year of a wide range of degree level university programmes.

### 9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*



 Bio-based Industries Consortium

 Horizon 2020  
European Union Funding  
for Research & Innovation

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MTU has strategic links with a wide variety of Government Departments, Agencies, and bodies. These networks have developed through national and regional collaborations involving academia, industry, government, society, and environmental considerations provided by a quintuple helix framework model.

[Department of Agriculture, Food & Marine](#)

[Department of Environment, Climate & Communications](#)

[Environmental Protection Agency \(EPA\)](#)

[TEAGASC - Agriculture and Food Development Authority](#)

[Southern Region Waste Authority](#) - The Southern Waste Region comprises the 10 local authority areas covering 42% of the land mass of the country, with a population of over 1.5 million people.

[Local & Regional County Councils](#) under the auspice of the Department of Rural & Community Development) comprising County Councils, City Councils and Regional Assemblies

[Higher Education Authority \(HEA\)](#)

[Department of Enterprise Trade & Employment](#)

[Intertrade Ireland](#) - Intertrade Ireland has been helping small businesses in Ireland and Northern Ireland explore new cross-border markets, develop new products, processes, and services

[Bord Iascaigh Mhara \(BIM\)](#) helps to develop the Irish Seafood Industry by providing technical expertise, business support, funding, training, and promoting responsible environmental practice

[Údarás na Gaeltachta](#) is the regional authority responsible for the economic, social, and cultural development of the Gaeltacht

[Science Foundation Ireland \(SFI\)](#) SFI funds oriented basic and applied research in the areas of science, technology, engineering, and mathematics (STEM). SFI also promotes and supports the study of, education in, and engagement with STEM

#### 10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

[BIOrbic](#) is a world-leading Science Foundation Ireland research centre devoted to the bioeconomy

[Clean Technology Centre](#) is an independent body, whose core remit is to advise and assist business, government, and society towards a more sustainable pattern of consumption and production

[Shannon Applied Biotechnology Centre](#) develop new processes and products from bio-resources providing evidence-based solutions to biotech and life science industries



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[Intelligent Mechatronics and RFID \(IMaR\)](#) providing R&D supports via two strands Intelligent Mechatronics and Radio Frequency Identification & Internet of Things to co-create innovative solutions for industry and enterprise

[Applied Polymer Technologies](#) at the Materials Research Institute of Ireland

Ireland's [Technology Gateway Network](#), Consisting of 16 specialised Gateways and 3 sectoral clusters, the Technology Gateway Network delivers innovation expertise and solutions for Irish industry.

[CONNECT](#) – the Science Foundation Ireland Research Centre for Future Networks and Communications

[LERO](#) is the Science Foundation Ireland Research Centre for Software, Ireland, is a world-leading Science Foundation Ireland research centre

[Agritech Centre of Excellence](#) developing cutting edge learning and development solutions for the AgriTech sector using immersive VR/AR technologies

[MAREI](#) is the SFI Research Centre for Energy, Climate and Marine research and innovation co-ordinated by the Environmental Research Institute (ERI)

[NIMBUS Research Centre](#) is at the forefront of cyber-physical (CPS) and Internet of Things (IoT) research, innovation, and learning

[RYAN INSTITUTE GALWAY](#) focuses on four thematic research areas, namely (1) Marine & Coastal, (2) Energy & Climate Change, (3) Agriculture & Bioeconomy, and (4) Environment & Health

[DPTC: Dairy Processing Technology Centre](#) is an industry–academic collaborative research centre with a research agenda driven by the long-term growth opportunities for the dairy sector

[Food Health Institute](#) a global leader in the scientific discovery that shapes the future of food and health

[NATPRO](#) for Natural Products Research at Trinity College Dublin

[QUESTOR Queens Belfast Centre](#) is an Industry-University collaborative research centre in environmental and sustainable energy research

#### 11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

[Rediscovery Centre](#) is the National Centre for the Circular Economy in Ireland. A creative movement connecting people, ideas, and resources to support greener low-carbon living

[FoodShare](#) is a food justice organization, advocating for the right to food, and working to challenge the systemic barriers that keep people from accessing the food they need to thrive

[Natural Capital Ireland](#) is a not-for-profit organisation leading the conversation on natural capital

[Social Enterprise Ireland](#) champion the social enterprise sector, and our members, representing and promoting our collective voice nationally and internationally



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## 12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

[SKDP](#) fulfils an economic development role, creating sustainable jobs and attracting investment with community, cultural and social development activities in rural areas

[NEWKD](#) is one of 49 local development companies located in Ireland delivering a range of support and development programmes that improve the lives of citizens and the community

[ENTERPRISE IRELAND](#) is the government organisation responsible for the development and growth of Irish enterprises in world markets. We work in partnership with Irish enterprises to help them start, grow, innovate, and win export sales in global markets

[Intertrade Ireland](#) - InterTradeIreland has been helping small businesses in Ireland and Northern Ireland explore new cross-border markets, develop new products, processes, and services

Ireland's [16 TECHNOLOGY GATEWAYS](#) focus on key technology areas, aligned to industry needs in areas such as mobile, polymers, photonics, coatings, industrial design, mechatronics, biotechnology, pharmaceuticals, wireless technologies, and precision engineering. Each centre works in conjunction with industry to aid the research and development of innovative products and services through a dedicated team of full-time researchers and engineers

[LOCAL ENTERPRISE OFFICE NETWORK](#) with 31 dedicated teams across the Local Authority network in Ireland, Local Enterprise Offices offer you a wide range of experience, skills and services for people interested in starting up a new business or growing an established company. Supporting entrepreneurs, early-stage promoters and business looking to expand

[WESTERN DEVELOPMENT COMMISSION](#) advise the government on issues that impact on the Western Region and to promote government policy directed at improving social and economic standards here. It manages the WDC Investment Fund, which provides loans and equity to businesses and local communities in the region

[ATLANTIC ECONOMIC CORRIDOR](#) The AEC taskforce comprises Departments and Public Bodies, Universities / IT Sector, Chambers Group & Business Leaders. The aim is to build and increase collaboration within the AEC that maximises its assets, attracts investment and creates jobs and prosperity in the region

[CONNECTED HUBS](#) is operated by The National Hub Network, a Government of Ireland initiative that provides a vehicle for individual hubs to come together under a shared identity to maximise the economic opportunity of remote working. The National Hub Network has the support of Government, remote working advocacy groups and industry representatives

## 13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*



 Bio-based Industries Consortium



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[IRISH BIOECONOMY NETWORK](#) provides a platform for information-sharing and awareness-raising for a wide range of Irish bioeconomy stakeholders. The Irish Bioeconomy Network is coordinated by the government mandated Bioeconomy Implementation Group, BiOrbic SFI Bioeconomy Research Centre and the Irish Bioeconomy Foundation

[RUBICON INNOVATION CENTRE](#) is an innovation centre for entrepreneurs with a focus on developing Ireland's next generation of start-ups, which have the potential to develop and create employment

[RDI HUB](#) is a state-of-the-art workspace for tech teams and innovators that creates accelerator programmes to help scale and connect entrepreneurs with investors, mentors, pioneering technology, and R&D to accelerate tech innovation

KERRY HUB NETWORK is a collaboration between 14 digital innovation hubs across the Kerry region providing a co-ordinated and consistent suite of supports for start-ups and growing companies. KHN is part of the national Connected Hubs network.

[PORTERSHED](#) is a coworking and collaborative space for technology focused innovation driven enterprises. They focus on supporting companies to build, grow, scale, and innovate – Community – Collaboration - Coworking

[DOGPATCH LABS](#) is a start-up hub, located in the heart of Dublin's Digital Docklands. It's mission is to accelerate the development of Ireland's start-up ecosystem by providing a valuable community that supports business to grow, share knowledge and form connections

[LUDGATE](#) is a not for profit, social enterprise administering funding that enables projects that benefit rural & urban communities to access business supports, accelerator programmes, the research community regional collaboration between business, investors, and training providers

[GUINNESS ENTERPRISE CENTRE](#) is a world-class enterprise centre for ambitious and innovative companies seeking to establish their business in a flexible working environment supported by the best-in-class business support services and access to talent & skills

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \***

Collectively MTU has access to over 750 companies spanning all industry sectors located in Ireland and the United Kingdom, across the EU and internationally.

MTU has the largest bioeconomy network capability in Ireland via collaborations involving academia, industry, government, society and environmental considerations provided by a quintuple helix framework model. This network is further supported via a nationwide network of cluster organisations providing a mechanism to access to training, funding and targeted expertise for specialized areas including the circular and bioeconomy sectors (See Appendix 1)

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \***



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Grounded in the concepts of collaboration and co-competition, industry clustering is recognised as a valuable economic tool for companies, industry sectors, for regional development and for national competitiveness. The [CLUSTER CENTRE](#) has set out to work across the quintuple helix and support Clusters, Networks, Trade Associations, Research Gateways, Policy Makers and Civil Society with Cluster Development (See Appendix 1)

[IRISH BUSINESS & EMPLOYERS CONFEDERATION](#) - IBEC is Ireland's largest lobby and business representative group. Its purpose is to help build a better, sustainable future by influencing, supporting, and delivering for business success

[ENERGY CORK](#) is an industry-driven cluster pursuing coordinated actions to strengthen enterprise and employment within the energy sector in the Cork region

[CARBERY CO-OP CLUSTER](#) a global food and ingredients company and a major employer across eight different countries. Passionate about supporting our local communities and being progressive, innovative, and sustainable

[MARINE IRELAND INDUSTRY NETWORK](#) is made up of a diverse array of companies, state organisations, research groups and third level institutes, working in Ireland's ocean economy

[CHAMBERS IRELAND](#) facilitate the growth and development of the Irish chamber network and enable the chambers in the network to effectively promote the long-term development of their locality on behalf of their members as well as working towards creating a better environment for business by lobbying the Government and other stakeholders on key policy issues

[HEMP CO-OPERATIVE of IRELAND](#) is a registered Cooperative with the aim of creating an infrastructure for farmers and local businesses to develop the hemp industry in Ireland. The Cooperative will support member by providing shared access to resources, equipment, and markets through a national body and local hubs

[CIRCULÉIRE](#) – The National Platform for Circular Manufacturing's mission is to demystify, de-risk, and deliver circular business model innovation by unlocking the value that resides in an Irish circular economy. CIRCULÉIRE is a public-private partnership created by Irish Manufacturing Research and the Department of the Environment, Climate and Communications (DECC), the Environmental Protection Agency (EPA), and EIT Climate-KIC with 25 Founding Industry Members

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \***

Academic lecturers | Industry liaison | Education & Outreach | Community Manager | Technical Advisory Experts | Mentor Programme Manager | Graduate Programme Manager | Commercialisation Specialist | Programme Accreditation Specialist | Educational Instructional Designer | Lab Instructors | Project Managers | Social Media & Marketing Function | Funding & Finance Specialist | Funding & Grant Officer | Partnerships Manager.



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17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

YES – MTU takes a consistent and blended approach towards the development of targeted programme accreditation that embraces industry stakeholder engagement to identify and validate the specific skills needs that each academic project/programme aims to address. This collaboration involves academia, industry, government, society and environmental considerations provided by a quintuple helix framework model.

MTU has a dedicated Lifelong Learning Office that engages extensively with industry and policy stakeholders in the development of new programmes and collaborates extensively with Ireland’s national Regional Skills Forum (as previously described).

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

YES – MTU are involved in multiple EU projects (see image below) and has dedicated Programme Managers assigned to each project who are research staff of the CIRCULAR BIOECONOMY RESEARCH GROUP. Within this group are 12 designated Programme Managers focused on circular and bioeconomy related topics and project collaborations.



## EU Project Partnerships



19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*



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The Programme Managers as outlined in the previous question response are responsible for the management of associated projects within their particular project remit. As such the role of programme/project manager is combined and supported by the supervision of two Directors of the Circular Bioeconomy Research Group and Head of Department at MTU.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

The School of Science, Technology, Engineering and Mathematics (STEM) has 42 academic staff from lecturer to assistant lecturer, senior lecturer and professor. These staff service undergraduate, postgraduate, industry learners and life long learners.

Postdoctoral research staff regularly engage in teaching and training activities. Additionally researchers and programme managers engage in training and outreach activities across the learner profiles.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

MTU provides a suite of services with dedicated Support Staff and Administrative Staff:

Academic Administration Staff | Recruitment & Applications Manager | Course Co-ordinators | Learning Support Staff | Access Office & Disability Services Staff | Careers Office | Counselling Service | Health Centre | Students Union Representatives | School Liaison | Work Placement Co-ordinators

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*



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MTU has recently formed Irelands Knowledge Centre for Carbon and Climate (IKC3) in partnership with UCD and Trinity College Dublin. The Centre will provide graduates and industry professionals with a variety of curated learning pathways, stackable micro-courses, summer schools and micro credentials that create and maintain the flow of talent and relevant skills required by enterprise and civic society. This approach presents the opportunity to deliver innovative scalable solutions for a teaching and learning experience that is both flexible and personalized, promoting the professional development of students, community stakeholders, and those in the workplace to contribute significantly to the transition to a carbon neutral society.

The Circular Bioeconomy Research Group (CIRBIO) was founded in 2019 at Munster Technological University, Kerry Campus. CIRCBIO focuses on strengthening collaboration between education provision, researchers, technology providers, and industry from SMEs to multinationals. Research activities and programme development operate in tandem with the drive towards the transition to a low carbon economy and the development of the bioeconomy. MTU is established as an expert group involved in a multitude of Circular Economy and Bioeconomy related EU projects including [Agrobridges](#), [EfficientFood](#), [BIOSWITCH](#), [COOPID](#), [FarmZeroC](#), [BIObec](#), [INGREEN](#), [Fanbest](#), [BiorefineryGlas](#) and [BIO4Africa](#).

Education and outreach have become a key focus and core activity of the group including the introduction of Ireland's first QQI Level 9 Postgraduate Diploma in Bioeconomy with Business and Level 8 Certificate in Circular Economy enhancing the integration of circular practises and strategies directly into third level education, business and enterprise and civic society. It has also established a first of its kind regional cluster network the [Circular Bioeconomy Cluster South West](#) which supports its members with research and development, project development, project partner identification, talent and skills development, market connections, and funding. These projects and all activities align with the EU Action Plan for a Circular Economy, Ireland's Waste Action Plan for a Circular Economy, Ireland's National Policy Statement on Bioeconomy, the recent Whole of Government Strategy on the Circular Economy and the Climate Action and Low Carbon Development (Amendment) Act 2021,

The CIRCBIO team at MTU has extensive connections with multiple European partner organisations, universities and industry networks to design, develop and deliver best practice bioeconomy education in conjunction with European, national, and regional policy directives. The collaboration on the BIObec Project offers a unique opportunity to develop best practice in bioeconomy education, training and outreach that can leverage the expertise of the six BBEC locations and resulting education centres.

## UHOH

1) Your organisation name, address and location. \*



 Bio-based Industries Consortium



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University of Hohenheim, European Bioeconomy University, Fruwirthstr. 23, D – 70599 Stuttgart

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Agriculture, Food – agricultural chain, Bioenergy – agricultural chain, Biorefinery, Food security, Ecosystem services, Sustainable management of natural resources, Climate system, education, forestry and wood technology, social science, production of bio-based raw materials

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 17. Secondary
- 18. Vocational
- 19. Bachelor
- 20. Post graduate cert/Diploma
- 21. Masters
- 22. Ph.D.
- 23. CPD - Continuous Professional Development
- 24. Other

If “Other” please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If “Other” please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International



### 7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

We are a full University <https://www.uni-hohenheim.de/> and the European Bioeconomy University (EBU) is an alliance of six European Universities strong in Bioeconomy education & research <https://european-bioeconomy-university.eu/>:

- AgroParisTech, France
- University of Bologna, Italy
- University of Natural Resources and Life Sciences (BOKU), Austria
- University of Hohenheim, Germany
- Wageningen University and Research, The Netherlands
- University of Eastern Finland, Finland

BOKU is among others part of following university-networks:

EPICUR – European Partnership for an Innovative Campus Unifying Regions

<https://boku.ac.at/en/epicur/epicur-european-university>

AfricaUniNet: BOKU holds the presidency <https://africa-uninet.at/en/>

ICA – Association for European Life Science Universities <https://www.ica-europe.info/>

ELLS – Euroleague for Life Sciences (5 joint Master programmes, summer schools)

<https://www.euroleague-study.org/en>

### 8) Your Network - Detail your organisations links with Vocational Education Centres. \*

At the University of Hohenheim (UHOH), recently a position for supporting the regional and professional networking for vocational training was installed.

UHOH cooperates with technical agricultural schools in co-education of farmers and undergraduate students and with an Adult Education Centres in the region.

### 9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

UHOH cooperates with the State Ministry of Agriculture and the State Ministry of the Environment in the implementation of the State Strategy for sustainable Bioeconomy, including the membership and chairing of the Bioeconomy Council Baden-Württemberg and the performance of R&D and transfer projects supported by the Ministry for Rural Areas and Consumer Protection Baden- Württemberg (MLR).

BOKU has a strategic cooperation agreement with the Environment Agency Austria (Umweltbundesamt) developing joint projects or events. But BOKU has also close cooperation with the Federal Research and Training Centre for forests, natural hazards and landscape (BFW) and with the Federal Institute of Agricultural Economics, Rural and Mountain Research (BAB).

### 10) Your Network - Detail your networks and collaboration with Research Centres. \*



 Bio-based Industries Consortium



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The European Forestry Institute (EFI) <https://efi.int/> is associated partner of the EBU  
Different project have been implemented with collaboration with Fraunhofer Institute  
<https://www.fraunhofer.de/>

BOKU has several networks in the field of technology transfer:  
WoodKplus – a leading research institution for wood and related renewable raw materials in Europe as interface between business and science <https://www.wood-kplus.at/en>

AIT – Austrian Institute of Technology, Austria’s largest research and technology organisation and international key player <https://www.ait.ac.at/en/>

ACIB – Austrian Centre of industrial biotechnology <https://www.acib.at/>

### 11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

BIOEAST <https://bioeast.eu/> is associated partner of the EBU. The Central-Eastern European Initiative for Knowledge-based Agriculture, Aquaculture and Forestry in the Bioeconomy – BIOEAST – offers a common political commitment and shared strategic research and innovation framework for working towards sustainable bioeconomies in the Central and Eastern European (CEE) countries.

Bodensee-Stiftung <https://www.bodensee-stiftung.org/> is currently involved in the bioeconomy VET project BLITZ.

Kompetenzzentrum Biointelligenz e.V.  
<https://www.biointelligenz.de/category/kompetenzzentrum-biointelligenz/> is an association of Universities and Fraunhofer Institutes from the Stuttgart region that cooperate in research and education on biointelligence.

### 12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

UHOH cooperates with BIOPRO Baden-Württemberg GmbH <https://www.bio-pro.de/en>, the state agency that supports the transformation of the economy and society by focusing on the healthcare industry and a cross-sectoral shift towards a Bioeconomy, working on this in close coordination with ministries, industry and research.

At UHOH there is the “Innovation Greenhouse” <https://inno-greenhouse.uni-hohenheim.de/startseite>, which supports entrepreneurship and the foundation of start-ups, especially in the area of Bioeconomy.

### 13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

At UHOH there is a biorefinery pilot plant, which is part of the experimental station "unterer Lindenhof" <https://konversionstechnologie.uni-hohenheim.de/en/118578/biorefinery-pilot-plant> Here, the integration of the biorefinery concepts into a farm, and especially the coupling to the biogas plant, is demonstrated. The pilot plants provide the necessary data basis for scaling up to technical scale. In addition, product samples can be produced that are useful, for



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example, for a later market launch. It serves the education of undergraduate as well as graduate students and to PhD research projects.

As described in 12), at UHOH we have the “Innovation Greenhouse” <https://innovation-greenhouse.uni-hohenheim.de/startseite> , which supports entrepreneurship and the foundation of start-ups, especially in the area of Bioeconomy.

BOKU established the so-called BOKU:BASE supporting entrepreneurship, young researchers, students, spin-offs etc. <https://boku.ac.at/nachhaltigkeit/sustainable-entrepreneurship/bokubase>

BioBASE – central hub for bioeconomy and circular economy in Austria as a kind of service agency for science, economy, administration and politics. <https://biobase.at/>

#### 14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

European Bioplastics <https://www.european-bioplastics.org/> , the association representing the interests of the thriving bioplastics industry in Europe, is associated partner of the EBU.

Hohenheim is taking part of two projects supported by the Bio-based Industries Joint Undertaking (BBI JU): Grace (Hohenheim as coordinator) and BIObec (Hohenheim as part of the consortium)

#### 15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

UHOH is cooperating with the “Kommunalen Arbeits Filder“. This is an informal alliance between communities and its majors to develop activities, amongst others on Bioeconomy, locally.

Kooperation with “Wirtschaftsförderung Region Stuttgart GmbH” <https://wrs.region-stuttgart.de/> , which is an agency that can be approached by companies, start-ups and communities from the region around Stuttgart for questions around economic development.

Bioökonomie-Cluster Bayern <https://www.bayern-innovativ.de/netzwerke-und-thinknet/uebersicht-material-und-produktion/biooekonomie>

BOKU will develop together with the “Ökosoziales Forum” a “Bioeconomy Cluster Austria” for joint science-based communication and information platform for already existing but also new regional hubs, politicians, governmental institutions, scientist, industry and general public.

#### 16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

The focus of the education activities is

- Education from Bachelor - Master to PhD level
- Linking local – regional – national – EU – International level
- Linking University to practice, farmers, industry and policy

All activities and researchers & educators supporting these activities should be included in the BBEC design framework. But also awareness raising already in schools (beginning at elementary schools) should be taken into consideration providing adequate materials/trainings for teacher (e.g. project BLOOM).



17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

UHOH has a department for the development of University educational formats, managed by a program manager (Dr, Folker Degenring). He recently started a project for supporting the regional and professional networking for vocational training, which is managed by a project manager (Petra Stiewe).

The "Hohenheim Bioeconomy Office" (Program Manager Dr. Sophie Urmetzer): supports Hohenheim's networking activities at the state, federal, and EU levels and carries out projects to further develop bioeconomy teaching and transfer. It currently runs the following projects on Bioeconomy education:

- BioPartnerBW
- BLITZ
- EBU-label, EBU-FOEBE
- ABBEE

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

At UHOH there is the "Innovation Greenhouse" <https://inno-greenhouse.uni-hohenheim.de/startseite>, which supports entrepreneurship and the foundation of start-ups, especially in the area of Bioeconomy.

Department Qualitätsmanagement/ Strategie Lehre, Dr. G. von Uckermann: <https://www.uni-hohenheim.de/qualitaetsmanagement-studium-lehre>

Innovation & Transfer, Dr. Ralph Gäbler (<https://www.uni-hohenheim.de/en/innovation-and-transfer>): The University of Hohenheim's goal is to be a partner for innovation in business and society. The University of Hohenheim's technology transfer offers the following to University scientists:

- An interface between innovation projects and business
- Support an advising for business model development
- Support in the conceptualizing and carrying out events
- Legal advice for questions related to technology transfer

BOKU: BASE: see point 13



Bio-based Industries  
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19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Dr. Evelyn Reinmuth and Dr. Sophie Urmetzer for the development of bioeconomy teaching modules in vocational training. Dr. Evelyn Reinmuth and Juliane Stoye for cooperation between students (and university teaching staff) and bioeconomy enterprises. Lina Mayorga-Duarte for the introduction of a European academic bioeconomy programme (EBU-label).

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

UHOH has an International Master program "Bioeconomy" and (German) Bachelor and Master programs "Biobased Resources and Bioenergy". Furthermore, the Master program "Earths and System" Sciences, "Food systems" and different Bachelor and Master programs in Agricultural Sciences and Food Technology contribute to the Bioeconomy education at Bachelor and Master level. Through involvement in in the Bioeconomy graduate school (BBWForWerts) of Baden-are Württemberg, also PhD students are offered Bioeconomy education.

BOKU: ELLS – Euroleague for Life Sciences (5 joint Master programmes, summer schools) <https://www.euroleague-study.org/en>

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

For the content and the quality of the study programs, the study deans of the three faculties are responsible. Quality management is provided by the central department Quality Management and Strategy, who is also responsible for the regular monitoring according to the provisions of the accreditation. Some of the study programs are organized by programme coordinators.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports



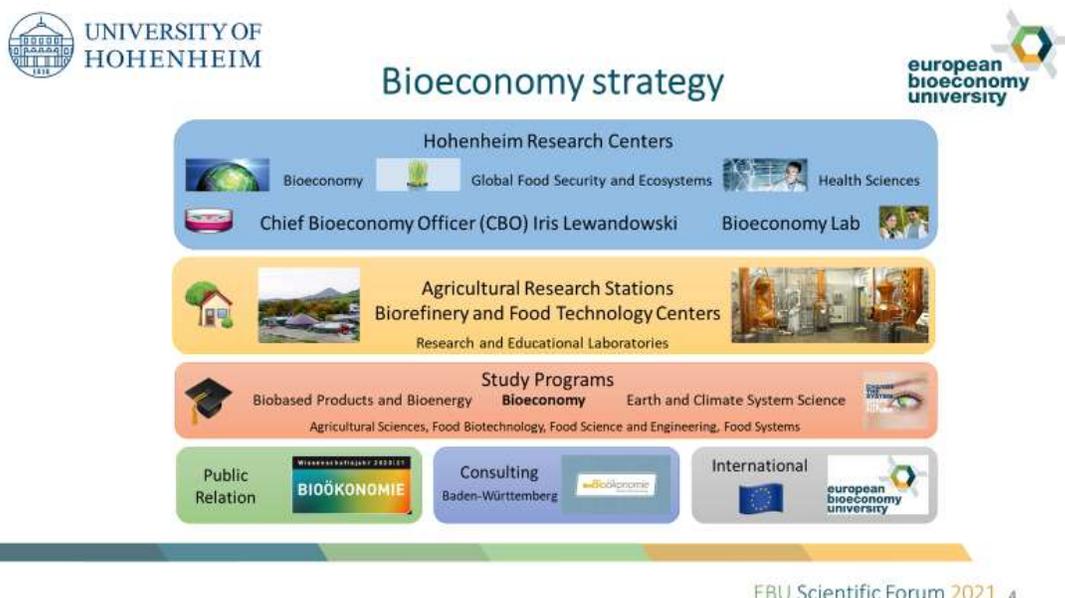
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Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

UHOH has Bioeconomy as the strategic topic for education and research and is actively developing bioeconomy education formats at Bachelor, Master and PhD level. The Chief Bioeconomy Officer (CBO), coordinating the Bioeconomy activities at UHOH, is member of the presidential office. The Bioeconomy strategy of UHOH includes full commitment to develop into a BBEC. Recent efforts have been made to improve the education cooperation with industry and to build capacity for preparing vocational training activities.



For BOKU Bioeconomy is one of the 6 focus points for future development and therefore has set up the Centre for Bioeconomy as a horizontal structure within the BOKU organisation. The Centre is under the supervision of the rector and the vice rector for research. BOKU's Centre for Bioeconomy is eager to enhance the knowledge about Bioeconomy of students as well as related entrepreneurs.

## GREENHUB

1) **Your organisation name, address and location. \***

GreenHub, Location: Eastern Finland

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Green bioeconomy



Bio-based Industries Consortium



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3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 1. Secondary
- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

At the moment UEF coordinates the activities of GreenHub, but the management of it aims to be independent of any organisation. The activities are going to be organized jointly with universities and other institutions.

8) Your Network - Detail your organisations links with Vocational Education Centres. \*

There is one vocational school from the region involved (RIVERIA).



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9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

There is no involvement.

10) Your Network - Detail your networks and collaboration with Research Centres. \*

Yes, there are three research institutes involved:

European Forest institute (EFI)

Natural Resources Institute Finland (LUKE)

Finnish Environment Institute (SYKE)

11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

Not at this moment.

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

Yes, at this moment there is collaboration with Business Joensuu and Regional Council of North Karelia.

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

Not at this moment.

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

At this moment the collaboration with the industry is small, but the aim is to involve them more in the network.

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

GreenHub collaborates with:

Bioregions Facility network (<https://network.bioregions.efi.int/>).

Collaboration with the Finnish Forest Centre (<https://www.metsakeskus.fi/en>).

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

The collaboration platform provided by GreenHub.

The activities carried out to connect education centers, research, and industry.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

There is no dedicated staff in GreenHub.



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18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

There are Programme Managers from the organizations involved in GreenHub that contribute to the current activities.

e.g.: Account manager position (developing the cooperation between the universities and industry), Director of research infrastructure.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

There are different regional ongoing projects (e.g. BIOSCOPE, BIOERKO, Smart East, Wood Joensuu, Unite Flagship) which are supporting activities in GreenHub, thus the managers of these projects are part of GreenHub.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

The partners involved in GreenHub provide lectures for life long learners, undergraduate, postgraduate students, vocational and training education.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

GreenHub is a platform and the activities are carried out by the members.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.



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23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

Through GreenHub we can provide information on platform development to all the BBECs and the actors involved in them.

### CNR ISOF

1) Your organisation name, address and location. \*

CNR-ISOF, Via P. Gobetti 101, Bologna (IT)

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Education & Outreach

Chemical Value Chain

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

Primary Schools

Secondary Schools

Undergraduates

Postgraduates

Life Long Learners

Industry Professionals

Civic Society

5) Type of Centre (Business Model): \*

Public

Private

Public Private Partnership

Network Facilitator

Charity

Other



If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network.** \*

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

Università di Bologna (Italy)  
Montanuniversitat Leoben (AT)  
Riga technical University (Latvia)  
Tallin University (Estonia)  
Nova University Lisbon (Portugal)  
Bicocca University in Milan (Italy)  
University of Banja Luka (Bosnia)  
Aalto University (Finland)  
University of Miskolc (HU)

8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

Click or tap here to enter text.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

ENEA Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (Italy)

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

Stiching Wetsus European Centre for Sustainable Water Technology (Wetsus)  
Vlaamse Instelling voor Technologisch Onderzoek (VITO)  
Bay Zoltan Nonprofit Ltd. For Applied Research (HU)

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

Click or tap here to enter text.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

None.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

None.



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14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

European Association of Mining Industries, Metal Ores & Industrial Minerals (EUROMINES)

ERION

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Click or tap here to enter text.

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Existing function in CNR-ISOF is the national Network involving 25 CNR institute on 10 Italian regions, active in education and dissemination activities towards schools (all levels) aimed to give value to research and link the European challenges to the current curricula developed at school.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

No.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

In our Research Area in Bologna there is a small team of people partially devoted to coordinate education programmes

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Click or tap here to enter text.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

None.



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22) **Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \***

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

CNR-ISOF can contribute to design training activities for teachers from schools, workshops for students and e-learning materials

## CNR STIIMA

1) **Your organisation name, address and location. \***

CNR-STIIMA, corso Pella 16, Biella, Italy

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Textiles

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves: \***



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- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model): \***

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

Politecnico di Torino (Italy)

Università del Piemonte Orientale, Novara (Italy)

Università di Torino (Italy)

Gent University (Belgium)

Università di Bologna (Italy)

Università di Pavia (Italy)

Università di Parma (Italy)

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Città Studi SpA, Biella (Italy)

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

ENEA Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (Italy)

National Science and Technology Development Agency (Thailand)

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

NRC National Research Centre of Egypt



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11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

None.

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

None.

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

None.

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

CNR-STIIMA collaborates with many large and small textile companies mainly at national level.

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

PO.IN.TEX Polo d'Innovazione Tessile (Textile Innovation Cluster), Piedmont Region (Italy)

LGCA Lombardy Green Chemistry Association, Lombardy Region (Italy)

Associazione Tessile e Salute (Italy)

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Existing roles in CNR-STIIMA are researchers involved in R&I activities connected with the use and valorization of bio-based textile fibres, natural dyes and finishing (e.g. antibacterial compounds).

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

No.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No.



20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

None.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

None.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

CNR-STIIMA can contribute to design training, workshops and e-learning related to bio-based materials and processes in textile field.

## FVA

1) Your organisation name, address and location. \*

FVA – New Media Research, viale Gorgia di Leontini 131, Roma, Lazio, Italy

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

All sectors, specialized in bioeconomy awareness raising, communication, info-education and stakeholder engagement.

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary



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- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Large public, policy makers, innovation ecosystem for the bioeconomy

4) **Learner Profile: Select the learner groups that your organisation serves: \***

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model): \***

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

Network with the most relevant academic and private organizations in Europe, dealing with the bioeconomy.

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Links with regional actors in Friuli Venezia Giulia, Lazio, Puglia and Sicily regions.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

Links with Italian Ministry of Education, regional body for innovation in Lazio region.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***



Network with the most relevant research centres in Italy and Europe, dealing with bioeconomy.

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

Collaboration with consumers associations and environmental NGOs.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

Network with BIC, CBE JU.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

Links with Lazio Innova.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

Network with several large, medium and SMEs in the bioeconomy.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

Network with Italian and European clusters.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*

Experts in bioeconomy awareness raising, communication, info-education and stakeholders engagement.

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples.** \*

FVA is the main contact for the European Bioeconomy Network, having a dedicated working group in bioeconomy education. One of the focus is future skills for the bioeconomy.

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

**Please provide specific examples.** \*

This is not our core business.

19) **Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?**

**Please provide specific examples.** \*

We provide this activity only in the context of specific EU funded projects and not part of our core business.



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20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Primary and secondary schools, high school, regional actors. Our activities are mainly related to bioeconomy awareness and communication.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

We are a micro SME and we don't have an infrastructure that could be leveraged for BBECs. We can just provide thematic activities and contents (with particular focus on bioeconomy communication).

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Thanks to our extensive collaborations and networks, we can facilitate the connections among the learners and most of the above mentioned facilities, but we cannot provide them directly.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

Facilitation of connections and networks among different stakeholders in the bioeconomy domain, to support the understanding of present and future needs for bioeconomy education. Organization of thematic workshops to debate the most relevant challenges and opportunities for the bioeconomy education to facilitate the creation of the innovation ecosystem for the bioeconomy. Share our extensive experience in awareness, communication, info-education and stakeholder engagement.

## PRO CIVIS



 Bio-based Industries  
Consortium



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1) Your organisation name, address and location. \*

Foundation for Education and Social Dialogue “Pro Civis”, Szkolna 36A ST, Kielce, Poland

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

The Foundation for Education and Social Dialogue „PRO CIVIS” was established in Kielce, Poland in December 2007. The mission and the aim of the Foundation is to take up, conduct and support the initiatives for social dialogue and development of local and regional societies. The main areas of Foundation’s activities are research & development, entrepreneurship & innovation.

With the growing importance for local, regional and national development of strategies and tendencies such as: circular economy, sustainable development, renewable energy sources, ecological innovation and territorial ecology – since 2011 the Foundation has been concentrating its focus on all these green economy issues.

The Foundation conducts:

- fundamental research, industrial research, experimental development and dissemination of the results of such R&D activities;
- commercialization of the R&D results and knowledge transfer, including: ideation of products, services and processes, prototyping, pre – implementation works, market research, semi – industrial and demonstration technologies, actual production implementation;
- activities supporting entrepreneurship and innovativeness, with the usage of its own human capacity, as well as material and technical means.

In the year 2011 the Foundation has constituted the Institute for Technics, Technology and Management (ITTM), which takes up initiatives for smart and sustainable economic growth. Joining forces with scientists and businesses, the Institute operates in the field of know-how commercialization and market implementation of new technological solutions. The Institute develops and tests new co – creation methods responding to the technical and technological challenges faced by new products, services and processes.

The Foundation for Education and Social Dialogue “PRO CIVIS” is also an associated member of BIC Bio-based Industries Consortium (<https://biconsortium.eu/>), which for the new European financial perspective continues its activities as CBE JU Circular Bio-based Europe Joint Undertaking. The main task of the Consortium is to strengthen and support European bioeconomy, with a particular focus on circular economy. The Consortium consists of the biggest European companies, universities, research centres and non – governmental organisations working for the targets of sustainable development. To contribute to society’s long-term sustainability goals, the Consortium aims to: demonstrate new technologies to fill the gap in value chains and develop business models integrating all economic actors along the value chain.



*This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101023381. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.*

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 9. Secondary
- 10. Vocational
- 11. Bachelor
- 12. Post graduate cert/Diploma
- 13. Masters
- 14. Ph.D.
- 15. CPD - Continuous Professional Development
- 16. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

The Foundation is the Leader of science – business partnership dealing with the cascading extraction of biomass, incl. mechanical, water, alcohol and other chemicals, supercritical CO2 and dry distillation. All the conducted scientific, experimental and innovation works focus on maximizing the economic potential of biomass, at the same time being compatible with the model of waste – free economy (re-use, re-circulate and cradle to cradle systems). Within the partnership there are also training programs for scientists and students, utilising Foundation's



demonstration and semi – industrial lines. Physical and chemical denotement of received fractions is performed by New Chemical Syntheses Institute in Pulawy <http://ins.pulawy.pl/index.php/en/>.

PRO CIVIS has good relations abd network with various Universities, especially in Świętokrzyskie Region: Jan Kochanowski University <https://rekrutacja.ujk.edu.pl/> and Kielce University of Technology <https://international.tu.kielce.pl/main/contact/>.

PRO CIVIS with cooperation with Warsaw University of Life Science SGGW <https://www.sggw.edu.pl/en/> have published a handbook “Agricultural use of waste as a link of the Circular Economy Value Chain – Fertilisers derived from waste and by-products as a source of nutrients for plants and a factor for improving soil fertility”. The handbook presents the concept of a circular economy focused on the natural recycling of waste mineral components, extending the concept of nature resources as an object of management, as well as presenting the EU strategy for the bioeconomy, in particular in relation to fertilising use of waste.

More

info:

<https://www.procivis.org.pl/agricultural-use-of-waste-as-a-link-of-the-circular-economy-value-chain-fertilisers-derived-from-waste-and-by-products-as-a-source-of-nutrients-for-plants-and-a-factor-for-improving-soil-fertility/>

#### 8) Your Network - Detail your organisations links with Vocational Education Centres. \*

PRO CIVIS performed various projects related to support of Vocational Education.

Exaples:

1) “New quality of vocational training as a chance for a better job”

The project in partnership with the County Office in Łosice. Within the project the Foundation cooperated closely with Agricultural Centre for Lifelong Learning in Łosice. The main objective of the project was to increase students’ chances to find a job in their learned profession after graduating from secondary school. Overall, more than 110 young people were supported.

2) “Think globally, act locally” – a civic education program

The project was addressed to high-schoolers from Sandomierz. It involved a series of activities in the field of civic education focused on the issue of migration and its impact on the life of local communities and related issues of multiculturalism and diversity of Polish society.

The project involved:

- Developing a program of workshops for students (a result of joint work of experts and teaching staff).

- Workshops that enabled preparing young people to the implementation of local projects (they were introduced to the project by a migration expert, some classes were conducted using the applied drama method).
- Event summarizing civic projects realized by the high-schoolers (presentation of initiatives, meeting with teachers, local authorities, local NGO activists).



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- Preparation of a summary in the form of e-publication (description of the implemented activities and postulates developed by the participants of the project, recommendations for the future).

Other project: <https://www.procivis.org.pl/europe-to-gain-experience-iii-2/>

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

PRO CIVIS cooperates with Government Bodies and local governments within projects related to promotion of innovation among SME and other entites. PRO CIVIS experts also provide expertise, consultation and support in the field of innovation, bioeconomy etc.

Example:

“Smart specializations” development in Warmian-Masurian Voivodeship

PRO CIVIS with Regional Policy Department of the Marshal’s Office of the Warmian-Masurian Voivodeship, conducted public consultations on smart specializations defined during the update of the “Strategy of socio-economic development of the Warmian-Masurian Voivodeship until 2020”. The result of the Foundation’s work was the creation of a report on the consultations.

The main goal of the aforementioned consultations was to obtain comprehensive information on the competitive and innovative potential of industries defined as intelligent specializations, and preliminary examination of the readiness of companies operating in the area of these industries to invest and further develop.

The result of the consultations was also the formulation of recommendations in the scope of strategic specialization management processes, e.g.:

- constant identification of companies’ development problems and needs,
- providing knowledge on development trends in specializations, including directions of scientific research,
- searching for areas of cooperation between companies within the specialization (e.g. strengthening clusters and cooperation networks),
- searching for areas of cooperation between companies of different specializations (e.g. promotion and development of common products/services),
- searching for areas of international cooperation and inclusion of companies specializing in international value chains.

<https://www.procivis.org.pl/smart-specializations-development-in-warmian-masurian-voivodeship/>

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

The Foundation is the Leader of science – business partnership dealing with the cascading extraction of biomass, incl. mechanical, water, alcohol and other chemicals, supercritical CO<sub>2</sub> and dry distillation. All the conducted scientific, experimental and innovation works focus on maximizing the economic potential of biomass, at the same time being compatible with the



*This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101023381. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.*

model of waste – free economy (re-use, re-circulate and cradle to cradle systems). Within the partnership there are also training programs for scientists and students, utilising Foundation’s demonstration and semi – industrial lines.

The Foundation together with one of its business partners owns an experimental demo scale biorefinery line suitable for the dry distillation process (pyrolysis) of biomass. As a result of the process biomass disintegrates to wood coal (solid fraction), wood gas (gaseous fraction), water distillate and pine tar (liquid fraction). Fractioning of oil substances is conducted by external scientific laboratories and in Foundation’s own laboratory equipped with a modern distillation system (distillation column with impletion) enabling high efficiency, wide spectrum, and high purity of received substances.

In 2018 - 2021 the Foundation actively participated in two partnership projects financed by the Interreg Baltic Sea Region Program, i.e.:

- RDI 2CluB - Rural RDI milieus in transition towards smart Bioeconomy Clusters and Innovation Ecosystems;
- CBB ConnectedByBiobord.

The projects aimed at delivering the modern model of partnership cooperation - regional authorities, research institutions, business entities - within the bioeconomy. As one of the projects’ results a digital platform was designed, creating virtual environment for cooperation in the development of new bioeconomy products and services, was created and implemented. Among others project areas Foundation executed evaluation functions, dealing with issues such as: preparation of evaluation criteria, carrying out evaluation surveys and focus groups interviews, piloting the Biobord platform and testing the developed solutions in the praxis.

### 11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

-

### 12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

-

### 13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

PRO CIVIS performed project:  
“The support of the cooperation between companies and R&D institutions in smart specializations of Warmian-Masurian Voivodeship”

The main objective of the program was to increase the readiness of companies operating on the market in the field of intelligent specializations of Warmia and Mazury to implement innovations (e.g. product, technological, organizational innovations etc.) through services free of charge, such as:



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specialist consulting services,  
training services dedicated to specific needs of the company (domestic and foreign trainers),  
advisory services in every area of the company's everyday activity (experts from the scientific community and industry specialists),  
audit services – assessment of readiness for the implementation of changes,  
services to support the company in implementing changes defined at the audit stage (field experts).

#### 14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

Some types of cooperation were mentioned above.

PRO CIVIS also did support and consultation projects for the Industry.

Example:

The Foundation implemented the project in cooperation with EPRD Office for Economic Policy and Regional Development. A web service platform called "LEM" was created as a part of the project to support companies, scientific entities and business environment institutions. It has a social character and provides entrepreneurs with a number of benefits through innovative solutions available on-line. The aim of the project was to provide high quality services in order to strengthen the innovative potential of enterprises and use it more efficiently.

The project had a nationwide character. A cycle of 60 information meetings was conducted in order to familiarize entrepreneurs from all over the country with the possibilities offered by the platform. Each of the meetings was averagely attended by over 10 representatives of companies from a given region. Within the project a research was conducted among entrepreneurs to illustrate cooperation with public administration and to define innovation development and commercialization of knowledge barriers. The "LEM" platform was popularized by the Polish Agency for Enterprise Development.

#### 15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

PRO CIVIS was a partner in the project "Rural RDI milieus in transition towards smart Bioeconomy Clusters and Innovation Ecosystems". <https://rdi2club.procivis.org.pl/en/about-project/aim-of-the-project/>

The objective of the RDI2CluB project is to use these opportunities to help rural areas of RDI2CluB partners' regions to develop regional innovation systems, inter alia, by creating a digital platform for the transnational cooperation.

The aim of the Project is strengthen the bioeconomy sector, especially in rural areas of five partner regions: Central Finland/Finland, Hedmark/Norway, Świętokrzyskie/Poland, Vidzeme /Latvia, and the Province of Harju/Estonia

#### 16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*



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Please see point 23).

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Yes. Our staff work closely with Universities, Science Institutes and Industry. During various projects and contacts with Partners we have direct insight in the needs for skills and competence gaps.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

-

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes. PRO CIVIS has project managers that have vast experience in coordinating various types of projects.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Yes. We can provide Training Staff in the field of agriculture.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

PRO CIVIS has administration staff supporting the projects, HR and finance.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other



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If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution** - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

Areas where PRO CIVIS can contribute:

- support managing of the future BBEC
- assistance in obtaining external financing
- promoting cooperation within BBEC in industry, scientific entities and stakeholders
- joint R&D and innovation projects in the field of bio-economy, bio-refining, circular economy [PRO CIVIS owns an experimental demonstration line suitable for the dry distillation process (pyrolysis) of biomass]
- PRO CIVIS experts can provide training and courses for industry and other stakeholders
- providing analyzes, expert opinions and feasibility studies for BBEC members
- help in communication between stakeholders

## IHE-DELFT

1) **Your organisation name, address and location.** \*

IHE Delft, the Netherlands

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc)** \*

Biorefining, education and research

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to:** \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves:** \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners



Industry Professionals   
Civic Society

5) **Type of Centre (Business Model): \***

Public   
Private   
Public Private Partnership   
Network Facilitator   
Charity   
Other   
If "Other" please specify briefly: not for profit organization

6) **Your Network - Specify the geographical reach of your network. \***

Local   
National   
Regional   
European Union   
International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

IHE is an educational institution, delivering Masters and affiliated to Dutch university for delivering PhDs

IHE target students are junior/mid-career professionals from all over the world, with a focus on developing countries. As such, IHE has an extensive network worldwide, especially in Africa, Asia and Latin America.

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Click or tap here to enter text.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

IHE is an institution member of the UNESCO family (category 2).

IHE receives funding from the Dutch government in the frame of the Dutch development program.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

In the field of bioeconomy, IHE has collaborations (MSc theses, EU projects) with TNO (NL), CEA and CIRAD (France).

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***

In the field of bioeconomy, IHE has collaborations with African NGO (EU-Africa project).

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \***



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IHE is eligible to funds by RVO and NVO (NL).

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

Click or tap here to enter text.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

In the field of bioeconomy, IHE has collaborations with industry in the frame of EU projects (SME in NL, France, Sweden...).

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

Click or tap here to enter text.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*

IHE is an educational institution and as such, the obvious answer would be lecturers and professors. Note that IHE promotes active learning and innovative course design. All teaching staff have followed the University Teaching Qualification process, in which pedagogical tools are taught for active learning (less lectures, flipping-the-class activities...).

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples.** \*

Click or tap here to enter text.

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

**Please provide specific examples.** \*

A Programme committee, involving academic staff from various backgrounds/career stages, is in charge of the tasks mentioned above.

19) **Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?**

**Please provide specific examples.** \*

An Education bureau is in charge of the tasks mentioned above, as well as dedicated committees (Examination board).

20) **If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc.** \*

The target group is junior/mid-career professionals at MSc level. Some “fresh” students can also be involved in the studies, notably in the frame of joint Erasmus mundus programmes.



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21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Staff is dedicated to the admission process of regular MSc programme, as well as short-courses (3 weeks), and online courses.

Coaches are planned to be implemented for the new batch of students (exact role to be defined!).

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

Lecturing staff, using an active learning pedagogy adapted to junior/mid-career professionals  
Opening to countries outside Europe, especially developing countries in Africa, Asia and Latin America

Opening to connex fields to bioeconomy (Water field) and stakeholders related.

## IBF

1) Your organisation name, address and location. \*

Irish Bioeconomy Foundation (IBF). National Bioeconomy Campus (former Lisheen Mine, Lisheen, Moyne, Co. Tipperary, E41 R622

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Education, outreach, access to finance, project management



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3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 1. Secondary
- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

IBF works with a number of University and Third Level Institutes in Ireland. IBFs members include University College Dublin (UCD)(<https://www.ucd.ie/>), Dublin City University (DCU)(<https://www.dcu.ie/>), Trinity College Dublin (TCD)(<https://www.tcd.ie/>), University College Cork (UCC)(<https://www.ucc.ie/en/>), Munster Technological University (MTU)( <https://www.mtu.ie/>), Technological University Of The Shannon (TUS)(<https://tus.ie/>).

8) Your Network - Detail your organisations links with Vocational Education Centres. \*



IBF do not currently have direct links with Vocational Education Centres

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

IBF have close links with the Irish Government in particular the Department of Agriculture, Forestry and Marine(DAFM)( <https://www.gov.ie/en/>). IBF member includes Tipperary County Council (<https://www.tipperarycoco.ie/>), Coillte (<https://www.coillte.ie/>) and Udaras Na Gaeltachta (<https://udaras.ie/en/>).

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

IBF works in collaboration with a number of research centres including BiOrbic (<https://biorbic.com/>) , Circular Bioeconomy Research Group (CIRC BIO), Shannon ABC (<https://www.shannonabc.ie/>) AMBER (<http://ambercentre.ie/>). Moorepark Technology (MTL)( <https://www.moorepark.ie/>) is an IBF member .

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

None

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

Enterprise Ireland(<https://www.enterprise-ireland.com/en/>), Intertrade Ireland (<https://intertradeireland.com/>), Science Foundation Ireland (<https://www.sfi.ie/>).

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

Questum Clonmel(<https://www.questum.ie/>) and The Cube Port Laois(<https://cubecentre.ie/>).

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

IBFs corporate members include: Glanbia Ingredients(<https://www.glanbia.com/>) , Nutri-Bio(<http://nutri.bio.ie/>) , Commercial Mushroom Producers (CMP)( <https://www.mushrooms.ie/>), Alltech(<https://www.alltech.com/>), ClonBio Group(<https://www.clonbio.com/>).

IBFs SME members include: Premier Green Energy(<https://www.pge.ie/>), Hexafly(<https://hexafly.com/>), Three County Energy Agency(<https://3cea.ie/>), BHSL Hydro(<http://www.bhsl.com/>), NaringTech(<http://www.whey2life.ie/>), KelAda Pharmachem(<https://www.keladapharmachem.com/>),

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

IBF works with a number of European clusters through our European funded projects.

IBF collaborates with a number of clusters based in Ireland including Circular Bioeconomy Cluster South-West (CBCSW)(<https://cbcsw.ie/>) , Agritech Ireland(<https://agritechireland.ie/>), Nua Na Mara (<http://paircnamara.ie/en/nua-na-mara/>), Irish Bioenergy Association (IrBEA).



Commercial Mushroom Producers(CMP)( <https://www.mushrooms.ie/>). IBF in partnership with Small Firms Association (SFA)( <https://www.ibec.ie/sfa>) were key pillars of Irelands bioeconomy summit.

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Lifelong learning. Advocacy. Networking. Bridging R&D to commercialisation. Access to internships in the bioeconomy. Access to finance. Generate synergies between organisations and initiatives.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

No, not at present.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No, IBF does not have dedicated Program Managers. IBF have a CEO and European Ambassador that has similar role with Program Manager.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No, IBF do not. We do have two Project Managers in the organisation working on European funded projects but not dedicated for the coordination of education, innovation and enterprise development programmes.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

No, IBF does not. Although we do not have lecturing staff, IBF are often asked to participate as speakers at events in Ireland and internationally.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

None at present. IBF runs a Future Talents internship program for students and recent graduates in the areas of marketing, finance, outreach and value chain analyst.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events



- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

IBF is Ireland's national cluster and therefore has a large stakeholder network. Our mission is to promote the conversion of Ireland's natural land & sea resources to high value products for the development of a sustainable bioeconomy that is globally competitive and creates local development. As part of the ethos of growing the bioeconomy in Ireland we are fully committed to supporting MTU in delivering Irish BBEC.

## BIOEAST HUB

1) **Your organisation name, address and location. \***

Agriculture Research, Ltd. (ART), BIOEAST HUB CZ

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

ART is focused on agriculture research, composting, biogas techniques; BIOEAST HUB CR is a leader of the TWG Bioeconomy Education and Fresh Water Bioeconomy

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: ART is providing training for farmers, peer review learning, education facilitated by the innovation broker; BIOEAST HUB organises workshops tailored on policy makers, experts and also acts as a national coordinator for the BISK competition

4) **Learner Profile: Select the learner groups that your organisation serves: \***



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- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
  - Private
  - Public Private Partnership
  - Network Facilitator
  - Charity
  - Other
- If "Other" please specify briefly: operation with the support of international projects

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

BIOEAST HUB is a network of research organisation, NGOs, Associations and SMEs

8) Your Network - Detail your organisations links with Vocational Education Centres. \*

Not yet but we would like to use the the BIOBEC project to establish such cooperation

9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

BIOEAST HUB facilitates the inter ministerial group focused on bioeconomy, we are in a direct contact with the Ministry of Agriculture (this Ministry supported the establishment of the very first bioeconomy hub in the BIOEAST macro region). We have also a direct cooperation with the Ministry of Research and Development (very important stakeholder – BIOEAST HUB member is the Association of Research Organisation (AVO) that represents applied research and has its representative in the Governmental Council of R&D), also with the Ministry of Environment (ART is breeding unique Czech bumble bee the only local pollinator, ART has a lot of projects of mixed culture and minor crops for soil cultivation – these are of interest for the Ministry of Environment)

10) Your Network - Detail your networks and collaboration with Research Centres. \*

Yes. ART is coordinating National Competence Centre of Genotyping and Phenotyping that units several research centres established with the support of the ERDF funds).

11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*



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There are a few NGOs in the BIOEAST HUB – Czech Technological Platform Plants for Future (focused on new breeding techniques), AVO, Regional Agriculture Agency ZERA (focused on compost).

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

There are a few SMEs in the BIOEAST HUB – AgriKomp Ltd. (one of the biggest producer of the biogas station in the Czech Republic) Pro Pelety Ltd. (company focused on innovative technologies for pellets).

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

BIOEAST HUB is a member of the network of Agriculture Digi Hubs, a member of BIOEAST HUB – Wireless info is a Agro Digi Hub.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

There are several international projects that ART is developing together with SMEs – focused on composting, biogas, agro techniques.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

BIOEAST HUB is promoting, enhancing the involvement of Clusters (Mechatronic Cluster), Regional Agency (of the Charles Spa Region) to bioeconomy. We are developing project focused on digitalisation and circular economy (Interreg Central and ERASMUS+ with the Mechatronica Cluster), new HE project with the Charles Spa Region (that is focused on the establishment of the regional HUBs)

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*

ART and BIOEAST HUB is ready to support the BBEC centre that is being developed by Polish colleagues and that is focused on the BIOEAST macro region.

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples.** \*

No.

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

**Please provide specific examples.** \*



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BIOEAST HUB member AVO is developing a BE IN project (supported by the Czech Technological Agency) that is developing training materials for SMEs and case examples how to implement bioeconomy innovations.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

BIOEAST HUB established a team of experts that are coordinating the activities focused on education. ART has a technology transfer team that is developing innovation projects.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

In the ERASMUS+ project we will be developing training materials for SMEs focused on circular economy.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Both ART and BIOEAST HUB employee project assistants, communication manager, project managers.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

ART and BIOEAST HUB is ready to support the BBEC centre that is being developed by Polish colleagues and that is focused on the BIOEAST macro region. The BIOEAST Foresight report highlighted the structure problems in the BIOEAST macro region, the lack of human resources in higher education and research i some of the main bottlenecks to accomplish the goals of the



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Green Deal. The Thematic Study focused on Bioeconomy Education that was developed by the BIOEASTsUP project for the BIOEAST Thematic Working Group Bioeconomy Education concluded that the educational programs should reflect the market needs and also the expected development and challenges, that it needs to be more promote the vocational training and lifelong learning. BIOEAST HUB wants to cope with these challenges.

WU

1) **Your organisation name, address and location.** \*

Wageningen University&Research, Droenvondaalsesteeg 1 6708PB Wageningen

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc)** \*

A main thematic pillars at WUR are: Circular agri-food systems, Protein transition, Circular biobased Economy and digital connectivity

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to:** \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves:** \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model):** \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network.** \*

- Local



National   
Regional   
European Union   
International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

Broad in academia, industry and government

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

We are an Education Centre and collaborate with many other Universities

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

We have close collaboration with the Dutch government in particular the ministries of Agriculture, Education and Economic affairs

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

We are a research centre and collaborate with multiple Universities, Industry

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***

We collaborate with different NGO's nationally and Internationally

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \***

We have a start up company incubator on campus

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \***

We have a very large network with Innovation centres, in NL and International

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \***

Extensive collaboration with many Industry, national, International, SMEs and large companies

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \***

See above

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \***

They include research and education such as the MOOC on Circular and Biobased Production but they go beyond and cover the whole bioeconomy

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \***

Yes, this is included in our education programs



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18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes E.g. for all the important thesmes of WUR

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes. E.g. to develop new courses in EU consortia

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

All the ones referred

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

From the ones mentioned: Academic staff, managens, tutors

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

Contributing to identifying sustainable development options for the bioeconomy

FBCD



*This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101023381. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.*

1) Your organisation name, address and location. \*

Food & Biocluster Denmark

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Food and Bioresource innovation, biorefining, but also to certain extent forestry biomass and marine resources. Innovation and Incubation

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: FBCD is not an educational institution, but works closely with educational institutes. However, FBCD makes a lot of 'educational events' focus on businesses, often including Universities etc.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International



7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

FBCD is born to make business and research meet, to cooperate and to innovate. IN this process 'education' in a broad sense is crucial, but traditionally we do not 'educate' rather we make universities and other knowledge institutions share their knowledge with business often in for a created by FBCD. We have 3 Danish Universities in our board.

8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

We have cooperation with Asmildkloster Academy of Agricultural Business and other vocational centres on education of farmers and bioresource managers.

For instance, we have made 'innovation education' for vocational students, playing startup company and getting 'the taste' og innovation – and track talents for businesses.

BBEC should institutionalize this approach

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

NO formal relations, but BioBEC could improve this

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

Many projects where different research centres are involved – EU, national and regional levels – always/mostly with innovations aspects and knowledge transfer between University and businesses

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

Ad. Hoc relations, not formalized

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

We are very active in Enterprise Europe Network and we have large and long term fundings from Ministry of Higher Science and Education and Ministry of Business – together with 13 other clusters in Denmark

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

FBCD runs 3 incubation facilities and is deeply integrated in the Danish innovation system, where <https://digitallead.dk/> is the national cluster/hub on Digital aspects – going across all Innovation networks

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

FBCD has around 350 members – increasing tendency – most are from micro to large businesses, but also research and educational members, industry associations

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*



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FBCD has close cooperation with several industry associations Food & Agriculture, Biogas Industry etc, We have one national cluster and build smaller more focused networks with more specific themes where business and industry meet.

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

FBCD can contribute with innovation/incubation and curricula for vocational and academic students – we can give 'directionality' (sense of purpose) to knowledge obtained at the educational institutions

FBCD can systematize talent spotting for companies

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Not systematically, but that is specifically one of our aims to help companies to spot talents

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?.

Please provide specific examples. \*

We have 3 dedicated incubations facility managers, one at each locality and a coordinated program manager

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Not for education, but yes for innovation – we are > 10 innovation managers

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

no

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

We can support with many practicalities, but no specific persons for this before we have a BioBEC

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks



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- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

Innovation, networking, events, incubation, accelerators, funding of R&D, investor support, site visits, talent spotting

### CTA

1) **Your organisation name, address and location. \***

CORPORACIÓN TECNOLÓGICA DE ANDALUCÍA (CTA) – C/ Albert Einstein s/n 4th floor  
41090 Seville SPAIN

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Cross-sectoral, multidisciplinary, technology transfer

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: CTA IS NOT FOCUSED ON EDUCATION

4) **Learner Profile: Select the learner groups that your organisation serves: \***

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals



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Civic Society

5) **Type of Centre (Business Model): \***

Public

Private

Public Private Partnership

Network Facilitator

Charity

Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

Local

National

Regional

European Union

International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

Regional universities are usual partners in CTA's activities related to technology transfer and industry-academia cooperation. National and international universities are part of CTA's network from its projects activities.

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Although some contacts have been made in the past as part of activities related to EU projects, CTA doesn't work with VET institutions on a regular basis.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

As a PPP, CTA has direct contact channels with all levels of government (national, regional and local) and their agencies. We act as partners, advisors and knowledge providers.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

Wide network with national and international research centers developed through past and current activities in international projects. We provide them consultancy services focused on foster technology and knowledge transference to industry

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***

Although it has grown a bit recently, CTA has had very limited interaction with NGOs. The inclusion of this kind of entities in project consortia, as potential representatives of the society and consumers, has boosted the contact in the recent years.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \***



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CTA collaborates actively with Enterprise Development & Support Agencies as a partner in providing knowledge, R&D and entrepreneurship support services.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

CTA collaborates actively with Innovation Centres and DIHs as a partner, providing knowledge-, R&D-, and entrepreneurship-related support services. CTA is involved in the design and implementation of 2 DIHs at regional level. CTA is involved in the European network of DIHs: DIH2network

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

As a privately-run industrial cluster, CTA's main target audience comprises both member and non-member companies of any size and geographical area, with innovation interests and/or activities in any of CTA's six priority sectors.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

CTA has an extensive collaboration network with Industry Associations, Regional Networks and Clusters linked to its 6 strategical sectors at regional, national and international level due to its activity as cluster and international project partner. CTA is also registered in the European Cluster Collaboration Platform (ECCP), and belongs to EU PP clusters/associations such as CBE or A.SPIRE.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*

Sectorial industry experts, professional innovation managers, industry-academia liaison officers, coordinators of open innovation activities, R&D and innovation communication experts, etc.

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples.** \*

Through the daily activities of our Sectorial Industry Experts and Innovation Consultants, CTA is continuously updated regarding the bioindustry workforce needs and demands.

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

**Please provide specific examples.** \*

YES, CTA's Director of Business Development is the program manager in charge of the coordination of the organization's portfolio of projects and services, and responsible for long-term planning, strategic decision-making, and distribution of resources. Among others, CTA



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projects and services are linked to knowledge and technology transfer, innovation strategy consultancy for SMEs, fundraising support, industry needs identification, open innovation collaboration activities, relationship with and among regional innovation players of the innovation ecosystem, etc.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

YES, Project Managers are in charge of the correct development and execution of each particular project and/or service. This role is covered mainly by CTA's Innovation Consultants, with the support of the organization's Sectorial Industry Experts, in charge of supervising and participating in those activities directly linked to their sectors and/or CTA members.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

CTA provides internship opportunities to postgraduate students on a regular basis.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

CTA's participation in projects and provision of services is supported by two of its units: Financial and Resource Management, and Public Affairs and Communication.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Industry cluster related activities and innovation services consultancy.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*



Liaison with bioindustries and regional research groups, supportive consultancy activities, entrepreneurship-related support, communication activities, and identification of opportunities for dissemination and exploitation of project results.

## AAC

### 1) Your organisation name, address and location. \*

AGENCIA ANDALUZA DEL CONOCIMIENTO, C/ Leonardo Da Vinci, 21. 41092 Sevilla

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Knowledge Transfer

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 1. Secondary
- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Our services are mainly targeted to researchers and R&D staff

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

### 6) Your Network - Specify the geographical reach of your network. \*

- Local
- National



Regional   
European Union   
International

7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

As part of the Andalusian Knowledge System, our organization is in close contact to Research Results Transfer Offices and Research Groups at Andalusian Universities.

8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

N/A

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

Our organization belongs to the Regional Government.

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

As part of the Andalusian Knowledge System, our organization is in close contact to main public and private RTD Centres located in Andalusia

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

In contact with NGOD coordinator and collaboration in project proposals

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

In close collaboration with regional and national Development & Support Agencies such as Agencia Idea (the Andalusian Agency for Innovation and Development) and CDTI (the Spanish Centre for Industrial Technological Development)

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

In close collaboration with Digital Innovation Hubs (Agrotech and AIR Andalusia)

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

Giving innovation support services to regional companies (both large and SMEs). Through our membership to the Enterprise Europe Network we work actively on transnational cooperation with international companies

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

In close collaboration with regional networks and clusters (Circular bioeconomy cluster, Andalusian Agrofood Cooperatives association, Technology Centres and other associations)

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*



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Our organization mission involves the promotion of knowledge transfer and research results, the development and innovation (R+D+I) between the agents of the Andalusian Knowledge System and companies and their participation in international projects:

a) The promotion of the transfer of knowledge and RTD results between the agents of the Andalusian Knowledge System and companies, facilitating collaboration agreements at regional, national and international levels.

b) The promotion of the participation of companies and agents of the Andalusian Knowledge System of international R+D+I programs, with special attention to those promoted by the European Union, providing the necessary advice on the funding instruments.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

We have technical staff with connection's to researchers from Universities and RTD Centres in Andalusia, able to identify potential technology skills requested by companies.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

We have technical staff devoted to give support on specific R&D&I international funding programmes, specially for Horizon Europe Framework Programme.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

We have technical staff devoted to give support on innovation and international knowledge transfer support services to relevant economy sectors (agrofood, environment, ICT, energy,...) under the Enterprise Europe Network (EEN) framework.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

No

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Technology advisors

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking



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- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

Dissemination of project activities to targeted stakeholders both at regional and international level (through our participation at the Enterprise Europe Network). Organization of networking activities, such as matchmaking events at regional/national or international level. Innovation support services to regional RTD Centres, Universities and companies. Help in the search for R+D+I funding. Search for potential technology partners for R&D projects.

### BLC3

1) **Your organisation name, address and location. \***

Association BLC3 – Technology and Innovation Campus, Rua Nossa Senhora da Conceição, N°2, Lagares da Beira, 3405-155 Oliveira do Hospital, Portugal

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Citizenship, Energy and Environment, Nature based Solutions, Forestry and Agrifood (Main Technology Biorefineries).

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other



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If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves:** \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model):** \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network.** \*

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

- University of Coimbra, Coimbra, Portugal
- University of Minho, Braga, Portugal
- University of Aveiro, Aveiro, Portugal
- University of Beira Interior, Covilhã, Portugal
- University of Trás-os-Montes and Alto Douro, Vila Real, Portugal
- School of Technology and Management of Oliveira do Hospital, Oliveira do Hospital, Portugal
- Polytechnic Institute of Coimbra, Coimbra, Portugal
- Polytechnic Institute of Leiria, Leiria, Portugal
- Polytechnic Institute of Castelo Branco, Castelo Branco, Portugal
- Polytechnic Institute of Guarda, Guarda, Portugal
- Polytechnic Institute of Tomar, Tomar, Portugal
- Polytechnic Institute of Viseu, Viseu, Portugal
- Polytechnic Institute of Santarém, Santarém, Portugal
- Polytechnic Institute of Beja, Beja, Portugal
- Católica Lisbon, Lisbon, Portugal



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- NOVA University Lisbon, Lisbon, Portugal- Institute of Catalysis and Petrochemistry, Madrid, Spain
- University of the Basque Country, Biscay, Spain
- University Hassan II, Casablanca, Morocco
- University of Vienna, Vienna, Austria
- University of Pavia, Pavia, Italy
- University of León, León, Spain
- Sorbonne University, Paris, France
- Agricultural University of Athens, Athens, Greece
- Ferhat Abbas-Setif I University, Setif, Algeria
- Eindhoven University of Technology, Eindhoven, The Netherlands
- University of Sfax, Sfax, Tunisia
- University of Bologna, Bologna, Italy

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

- Oliveira do Hospital School Grouping, Oliveira do Hospital, Portugal
- Tábua School Grouping, Tábua, Portugal
- EPTOLIVA. Oliveira do Hospital, Portugal
- Seia School Grouping, Seia, Portugal
- Ciência Viva- National Agency for Scientific and Technological Culture, Lisbon, Portugal

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

- Oliveira do Hospital Municipality, Portugal
- Macedo de Cavaleiros Municipality, Portugal
- Alfândega da Fé Municipality, Portuga
- Ourique Municipality, Portugal
- Tábua Municipality, Portugal
- Seia Municipality, Portugal
- CCDRC- Center Regional Development and Coordination Commission, Portugal
- CCDRN- Northern Regional Development and Coordination Commission, Portugal

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

- NOVA Institute of Chemical And Biological Technology, Lisbon, Portugal;
- Centre BIO: Biorefineries, Biondustries and Bioproducts, Oliveira do Hospital, Portugal
- Department of Biology and Environment of the University of Trás-os-Montes and Alto Douro, Vila Real, Portugal
- School of Agrarian and Veterinary Sciences, Department of Veterinary Sciences of the University of Trás-os-Montes and Alto Douro, Vila real, Portugal



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- Department of Agronomy of the University of Trás-os-Montes and Alto Douro, Vila Real, Portugal
  - Centre for Mechanical Engineering, Materials and Processes (CEMMPRE), University of Coimbra, Coimbra, Portugal
  - School of Business and Economics, Centre for Service Management, Loughborough, United Kingdom
  - Institute for Sustainable Agriculture, Cordoba, Spain
  - Technological Institute of Agriculture of Castilla Y León, Valladolid, Spain
  - CETIM Technological Centre, A Coruña, Spain
  - Centre of Biological Engineering, Braga, Portugal
  - Aveiro Institute of Materials, Aveiro, Portugal
  - iBET – Institute of Experimental Biology and Technology, Oeiras, Portugal
  - INL – International Iberian Nanotechnology Laboratory, Braga, Portugal
  - RAIZ – Forest and Paper Research Institute, Aveiro, Portugal
  - Institute of Organic Chemistry with Centre of Phytochemistry, Sofia, Bulgaria
  - Institute for Research and Technological Development in Construction, Energy, Environment and Sustainability, Coimbra, Portugal
  - Institute for Nature Conservation and Forests, Lisboa, Portugal
  - INRAE – National Research Institute for Agriculture, Food and the Environment, Paris, France
  - Karlsruhe Institute of Technology, Meteorology and Climate Research, Karlsruhe, Germany
- 11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*
- CECOLAB – Collaborative Laboratory Towards Circular Economy, Oliveira do Hospital, Portugal
  - Bio-based Industries Consortium, Brussels, Belgium
  - National Laboratory of Energy and Geology, Amadora, Portugal
  - CoLAB BIOREF – Collaborative Laboratory for Biorefineries, S. Mamaede Infesta, Portugal
  - MORE – Colab Montanhas de Investigação, Bragança, Portugal
  - Innov Plant Protect, Elvas, Portugal
  - Food4Sustainability, Castelo Branco, Portugal
- 12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*
- ANI – National Innovation Agency, Porto, Portugal
- 13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*
- Biocant – Biotechnology Innovation Center, Cantanhede, Portugal
  - Tagus Valley – Technology Park, Abrantes, Portugal
  - Sines Tecnopolo, Sines, Portugal



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- Foodvalley, Wageningen, The Netherlands
- CATAA – Agrifood Technological Centre, Castelo Branco, Portugal
- AIBILI – Association for Innovation and Biomedical Research on Light and Image, Coimbra, Portugal
- SerQ - Forest Innovation and Skills Center, Sertã, Portugal
- CEBAL – Alentejo Biotechnology Center for Agriculture and Agro-Food, Beja, Portugal
- ADEIM – Association for the Development of Teaching and Research in Microbiology
- IPN – Instituto Pedro Nunes, Coimbra, Portugal
- SANJOTEC- Centro Empresarial e Tecnológico, São João da Madeira, Portugal
- PTCentroDiH- Digital Innovation Hub of Centre Region

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \***

- Acqua Fox – Innovation & Engineering Solutions Lda, Guimarães, Portugal
- Aquitex – Acabamentos Químicas Têxteis S.A, Maia, Portugal
- ETSA Group, Loures, Portugal
- Prio Energy, S.A, Ílhavo, Portugal
- Riopete – Textêis, S.A, Vila Nova de Famalicão, Portugal
- TratoLixo – Tratamento de resíduos sólidos E.I.M, Cascais, Portugal
- Francisco Vaz da Costa Marques, Filhos & Ca S.A, Guimarães, Portugal
- AGROLAND S.A, Lisboa, Portugal
- Spartax Chemicals, Lda, Oliveira do Hospital, Portugal
- Granorte – Revestimentos de Cortiça, Lda, Santa Maria da Feira, Portugal
- Plasoeste – Sociedade Transformadora de Plásticos Lda, Mafra, Portugal
- Generis Farmacêutica, S.A, Amadora, Portugal
- Sonae Sierra, Lisboa, Portugal

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \***

- InovCluster, Castelo Branco, Portugal
- Smart Waste Portugal, Leça da Palmeira, Portugal
- Technological Corporation of Andalusia, Seville, Spain
- Food & Bio cluster Denmark, Aarhus, Denmark

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \***

1. Research and technological intensification of excellence, according to the concept of the complete cycle of invention (from the idea to the market);
2. Incubation of ideas and companies;
3. Support for the socio-economic fabric; and



4. Development of the theme of the Bioeconomy and Circular Economy, with a particular focus on the concepts of Biorefineries.

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline'** Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Regarding “Industry Liaison for the Skills & Talent Pipeline” BLC3 is currently developing an innovation and entrepreneurship project: StartUp Zero. This project is focused on the transition to the circular economy that combines the acceleration of circular business models by design for the creation of market value, with consumer empowerment, starting with young people from 3<sup>rd</sup> cycle. Luís Marques (Bachelor degree in Management and Public Administration and a Masters Degree in Entrepreneurship and Business Creation), BLC3 researcher, is exclusively dedicated to the development of the project.

BLC3 also develop LAB-i-DUCA program- Educational R&DT Program (<https://lab-i-duca.blogs.sapo.pt/>).

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

**Please provide specific examples. \***

LAB-i-Duca program – Educational R&TD Program, developed by BLC3, since 2012, focused on sustainable development for children and youth. Using the STEAM educational methodology, it aims to develop a set of activities, projects and crafts that promote scientific literacy in children and youth, as well as their cognitive and entrepreneurial skills and competencies, in order to create an active and relevant citizenship for a more sustainable future.

19) **Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?**

**Please provide specific examples. \***

Both BLC3’s Researchers Diana Farinha (Bachelors Degree in Biology and Masters in Plant Biodiversity and Biotechnology, by the University of Coimbra) and Bárbara Advinha (Bachelor’s Degree in Biotechnology and Masters Degree in Biotechnology (Industrial and Environmental), by the University of Aveiro) are responsible for the management and implementation of the LAB-i-Duca program.

20) **If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \***

BLC3 is developing The Innovation Hub Lavoisier, which aims to create a complete and strong innovation ecosystems and of strong reference at European level in the area of Circular Economy, allowing the development and transfer of knowledge and technology to the market,



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responding to the challenges of Circular Economy, valuing the skills, knowledge, resources and capabilities existing at the BLC3 technology and innovation campus.

21) **Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \***

BLC3 has a Support Centre for Innovative Projects and Ideas to support project management (CAPI), attracting and managing funding and investment, Incubator support services, liaison with the socio-economic fabric and support for intellectual and industrial protection. The Administrative roles within our organization include the board of directors, composed of three executive members. Administration is comprised of four people dedicated exclusively to (1) Project management (2) Human resource management (recruitment) (3) Accounting and (4) Orders.

22) **Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \***

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

The BLC3 Association - Technology and Innovation Campus is a non-profit organization, founded in May 2010 and which began its activities in September 2011. Its members are mostly technical-scientific and it is the first and only entity in Portugal created for the development and industrialization of Biorefineries (2nd and 3rd generation) and Bioeconomy and Circular Economy (won the award for best European project in the area of Circular Economy). The brand BLC3 derives from the name "Lignocellulosic Biomass", the main resource in Portugal, and "3" of 3rd generation Biorefineries, linked to microalgae.

BLC3 develops activities at the level of conception of ideas for the Bioeconomy and Circular Economy, namely: research, scaling up and technological demonstration with focus on



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solutions based on citizenship, territory and nature-based solutions; energy and environment; agrifood and forestry; transfer and valorisation of knowledge; support to the creation and acceleration of Start Ups, establishment of critical mass and young people; industrialisation and Market Level.

It is headquartered in Oliveira do Hospital, with an area of 38,000 m<sup>2</sup>, with a delegation in the “Norte” region. Its main structure is made up of 4 modules directed at the complete cycle of invention (from the birth of ideas to market implementation) consisting of:

- (1) R&TD Centre (main), where ideas and research and technological development activities are developed (it integrates an R&D unit, Centre Bio: Biorefineries, Bioindustries and Bioproducts, with international researchers and evaluated by an international panel of experts);
- (2) CAPI - Support Centre for Innovative Projects and Ideas to support project management, attracting and managing funding and investment, Incubator support services, liaison with the socio-economic fabric and support for intellectual and industrial protection;
- (3) Incubator | BLC3 - Centre for the Incubation of Ideas and Companies; and
- (4) Business Centre - Business Hosting Centre where industrialisation activities are carried out for ideas and companies, comprising an Agro-Food FAB Lab.

## UGR

### 1) Your organisation name, address and location. \*

As a University lecturer, my organisation is Facultad de Educación, Economía y Tecnología de Ceuta. Universidad de Granada C/ Cortadura del Valle, s/n, 51001, Ceuta, Spain. I am also the founding member of a spin-off of the University of Granada called Conecta13 (<https://www.conecta13.com>).

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Education

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If “Other” please specify briefly: Click or tap here to enter text.

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

Primary Schools



Bio-based Industries Consortium



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Secondary Schools   
Undergraduates   
Postgraduates   
Life Long Learners   
Industry Professionals   
Civic Society

5) **Type of Centre (Business Model): \***

Public   
Private   
Public Private Partnership   
Network Facilitator   
Charity   
Other

If "Other" please specify briefly: The University of Granada is public and Conecta13 is private.

6) **Your Network - Specify the geographical reach of your network. \***

Local   
National   
Regional   
European Union   
International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

The University of Granada, and the Faculty of Education, Economics and Technology, have links to many different University & Third Level Institutes.

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

The Faculty of Education, Economics and Technology has links to many different Vocational Education Centres in Ceuta and Andalusia.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

Both my organisation and I myself have links with Governement Departments and Institutions.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

I have collaborated with JRC Sevilla, among other Research Centres.

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***

I have worked with several important Non-Government Organisations in Spain: Fundación Telefónica, Fundación La Caixa, Fundación ProFuturo, FAD, Fundación Daniel y Nina Carasso.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \***

My organisation, Conecta13, is part of the Granada On-Tech Cluster.



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13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

Beyond my teaching and research tasks at the Faculty of Education (Ceuta), I am a founding member of a firm called Conecta13, a spin-off of the University of Granada devoted to innovation and digital transformation.

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

Conecta13 has worked with a wide number of other Industry firms: Samsung, BBVA, CaixaBank, etc.

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Conecta13 is part of the Granada On-Tech Cluster.

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

I do not have enough information about the BBEC design framework to answer this question.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Our CEO at Conecta13, David Álvarez, was Talent Strategy Manager at Consorcio Fernando de los Ríos, responsible for the Guadalinfo Centres, and he plays a similar role at Conecta13.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

This function is performed by our CEO at Conecta13, David Álvarez.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes. Conecta13 has a project manager, Miguel Ángel Ariza.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Our training staff works with postgraduate, industry and life long learners, basically.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*



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At Conecta13 we perform all types of roles and functions related to the design of learning experiences and learning management.

22) **Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \***

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

Click or tap here to enter text.

## UJA

1) **Your organisation name, address and location. \***

University of Jaén, Campus Las Lagunillas, 23071 Jaén, Spain

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Research on biomass resources for renewable chemicals production, education

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.



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4) **Learner Profile: Select the learner groups that your organisation serves:** \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model):** \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network.** \*

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

Research collaborations with multiple universities

8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

None

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

Interaction with Government agencies for project evaluation

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

Research collaborations with multiple research centers

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

None

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

None

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*



None

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

Research collaborations with several national and international companies

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Andalusian Cluster on Circular Bioeconomy

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Industrial doctorates, exchange workers, R&D collaboration

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

No

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes, Research Results Transfer Office at the University

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Postgraduate

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

All of the mentioned

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports



- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

Research training, R&D, network development

### ASMILDKLOSTER

1) **Your organisation name, address and location. \***

Asmildkloster Landbrugsskole, Asmildklostervej 1, DK-8800 Viborg

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Education VET, Agriculture

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Leadership development, Production manager ,Agro Economist

4) **Learner Profile: Select the learner groups that your organisation serves: \***

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society



5) Type of Centre (Business Model): \*

Public

Private

Public Private Partnership

Network Facilitator

Charity

Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

Local

National

Regional

European Union

International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

AU – Foulum – but can be improved

8) Your Network - Detail your organisations links with Vocational Education Centres. \*

Part of union of Danish Agricultural Schools, EUROPEA, Xarxa, VET schools from ERASMUS+ cooperation

9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

Municipality of Viborg, Central Jutland Region, Ministry of education, International EU-office

10) Your Network - Detail your networks and collaboration with Research Centres. \*

Centre of ecological innovation, SEGES, ?

11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

Frej, LU (LandboUngdom), FN17 Business, Danish Farmers Association (National, regional)

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

Business Viborg, Food and Bio Cluster

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

Agro Business Park - Foulum

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

SME Farmers

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Business Viborg, Food and Bio Cluster Denmark, Agro Business Park Viborg, FN17 Business



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16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Development department consisting of project manager and training adviser. Management level with Head of Education and/or headmaster. Relevant specialist teacher with an interest in bioeconomics

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Asmildkloster agricultural school is project manager for "FARMER", where project manager, student counsellor and selected teacher work to identify the skills of future farmers. In addition, the school is co-creator of a centre of vocational excellence, focusing among other themes on content in agricultural education and recruiting professionally competent employees to the agricultural profession. Here again, it is a question of involvement of the development department with project manager and training adviser. In addition, relevant teacher and student counsellor will work on developing the COVE. Asmildkloster agricultural school are cooperating with a local secondary school in developing a Practical secondary school focusing in green transition, here the project manager, headmaster and head of education are involved in the project.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No – we are a Small & Medium size Company (SMC) School – 50 employees

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Partly a national and international project coordinator

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Vocational Education and training, leadership development and continuing education

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

NIL (Nothing in line)

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration



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- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

We can bring (from the secondary school) the new generation and future farmers, students, employees and make knowledge spread, make knowledge work and become real (in farming). We also bring knowledge about future skills and competence needs focusing on green transition from a European perspective through the work of the projects "FARMER" and the upcoming Center of Vocational Excellence of climate smart agriculture.

## AU-BCE

1) **Your organisation name, address and location. \***

Aarhus University, dept. of Biological and Chemical Engineering, Gustav Wieds Vej 10C, Aarhus N, Denmark

2) **Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Within biological and Chemical Engineering: Biorefining Technologies, Environmental Technologies, Energy and Storage

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other



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If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves: \***

Primary Schools

Secondary Schools

Undergraduates

Postgraduates

Life Long Learners

Industry Professionals

Civic Society

5) **Type of Centre (Business Model): \***

Public

Private

Public Private Partnership

Network Facilitator

Charity

Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

Local

National

Regional

European Union

International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

Aarhus University is an internationally ranked university with contact to Danish and other International universities.

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Don't know

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

Ministry of Food, Agriculture and Fisheries

Ministry of Environment

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

SEGES, Danish Agricultural Advisory Service

Technological Institute of Denmark

GreenLab Skive

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***

Biogas Danmark



12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

Agro Business Park, Foulum, 8830 Tjele, Denmark

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

Agro Business Park, Foulum, 8830 Tjele, Denmark

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

Multiple and project based

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Multiple and project based

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Study degree coordinators

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

This is the responsibility of each individual researcher and teacher

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Build up as a normal university with programme managers at the top level and specific study degree managers

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

There is a project manager for each of our educations: B of Engineering in Biotechnology, B of Engineering in Chemistry, BS in Biotechnology Engineering, BS in Chemical Engineering, MS in Biotechnology and Chemical Engineering.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

BS, MS and PhD



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21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

University setup

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

Teaching capacity, research and development facilities.

## VIBOR MUNICIPALITY

1) Your organisation name, address and location. \*

Viborg Municipality, Prinsens Allé 5, 8800 Viborg, Denmark

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Viborg Municipality is not as such specialised en bioeconomy areas.

Viborg Municipality is responsible for permits and inspections within national and EU regulations concerning a multitude of areas such as nature in general and all activities within industry and agriculture. Viborg Municipality is also directly involved in nature preservation and restoration projects. Furthermore Viborg Municipality is actively involved in the green transformation of agriculture in cooperation with other organisations.

Viborg Municipality is responsible for primay and lower secondary schools. Evey year all pupils take part in a thematic week called Grønne Sammen (green together) which focuses on green awareness and includes visits at companies, activities and events.



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Viborg Municipality has created Karriereby Viborg (Career city Viborg). The initiative is focused on dialogue between education centres in Viborg, promoting existing and developing/attracting new educations and making Viborg an attractive place to take and education.

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 17. Secondary
- 18. Vocational
- 19. Bachelor
- 20. Post graduate cert/Diploma
- 21. Masters
- 22. Ph.D.
- 23. CPD - Continuous Professional Development
- 24. Other

If "Other" please specify briefly: We are a local municipality, not delivering academic levels. The municipality is responsible for primary and lower secondary schools for kids and young persons.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: We are a local municipality. The 'business model' is based on taxes. But our organisation is involved in public private partnerships and we also run several networks.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International



7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

Viborg Municipality has a cooperation agreement with Aarhus University which includes focus on specific areas, including bioeconomy and green transition. Furthermore we cooperate on the establishment of new educations to start up at the Aarhus Universitys campus in Foulum – situated within Viborg Municipality.

Viborg Municipality also cooperates with University of Copenhagen regarding a larger regional landscape strategy for the future of a regional river valley (Nørreådal).

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Viborg Municipality has an ongoing and close dialogue and cooperation with the local vocational education centres. These include Mercantec (construction) and Asmildkloster Landbrugsskole (agriculture). The cooperation also includes financial support for specific projects and initiatives.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

As a municipality there is a broad and ongoing connection with government agencies, especially within welfare issues and environmental management. There is also a longterm cooperation with the national investment organisation, Invest in Denmark.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

See answer to question 7.

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***

Viborg Municipality has a very broad cooperation with all sorts of organisations. Within the general bioeconomy area there is several cooperations with various agricultural organisations. A network for the green transition of agriculture has been established. Viborg Municipality is also an active part of FN17 Business centre established with the purpose of promoting the sustainable development goals within companies and entrepreneurs.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \***

Viborg Municipality financially supports and actively cooperates with the local business support organisation, Business Viborg. The cooperation is focused on support for established businesses and entrepreneurs, attracting and creating attractive educations and creating and attractive business environment.

Viborg Municipality also financially supports the regional business support organisation Erhvervshus Midtjylland and the regional EU representation and project office in Bruxelles, Central Denmark EU office.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \***



Viborg Municipality has played the main role in the establishment of three local start up and business growth centres. These are Agro Business Park (bioeconomy focus), Base Business Bjerringbro (various industries) and Arsenalet (animation and visual industry). Arsenalet alongside The Animation Workshop (animation educations) and Viborg Municipalitys active use of animation in communication is the main reasons for appointing Viborg as UNESCO Creative city in 2019.

Viborg Municipality is also an active part of the local Test and development centre for welfare technologies.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \***

Besides the cooperation with Business Viborg, Viborg Municipality also has an ongoing and direct dialogue with many local companies. This includes issues such as access to labor, permits, infrastructure, location etc.

The dialogue with companies on a more regional level also takes place through the organisation Business region Aarhus where industry is included in various ways.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \***

Viborg Municipality has an ongoing cooperation with the local branch of the national industry association, Danish Industry.

Viborg Municipality is a member of Business Region Aarhus, wich is focused on general cooperation and interest representation.

Viborg Municipality is a member of two national clusters – Digital Lead (IT) and Vision Denmark (creative business). Viborg Municipality will become a member of a third national cluster, Fod & Bio Cluster Denmark in the first half of 2022.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \***

See answer under question 23.

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \***

In the labor market area, Viborg Munipality work on an ongoing basis to make inventories of the local labor market and the demand for skills now and in the future. There is a close collaboration with the regional labormarket council, which is one of the eight regional labor market councils that support employment efforts across municipalities in denmark. The Council also coordinates continuing and further education efforts in the region.

In addition, we collaborate in Karriereby Viborg - across youth educations, higher education, business and the municipality's subject areas within Children and young people, employment



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and business development, about which new educations will be able to support the business community's labor needs in the future.

There are currently three main focusareas concerning the future workforce:

One is the lack of skilled workers. Three incitives target this challenge: 1) National target that 30% should choose a vocational education directly after 9th or 10th grade by 2025, 2) Unemployed retraining or being educated within skilled subjects and 3) Schemes to ensure that older skilled workers stay longer in the labor market

The second is about recruiting for higher education outside the big cities. This applies both in relation to existing educations, nationally relocated educations and newly created educations. The existence of higher education offers locally must support a flow in the demand for labor locally - now and in the future.

The third is international labor. Many companies find it difficult to provide the manpower they need. Abroad is therefore an important recruitment channel. To avoid that growth in Denmark is slowed down by a shortage of labor, it must be easy for companies to pick up qualified employees abroad.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

The mentioned areas are not working areas of a municipality in Denmark since these are taken care of by national agencies. But Viborg Municipality is actively involved in the development and establishment of new educations placed locally but with a regional and national reach.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Viborg Municipality has various project managers:

Within the labour market area taking care of cooperation with vocational educations and international labor.

Within Karriereby Viborg taking care of the general cooperation and coordination with educations.

Within business development taking care of initiatives and cooperation towards entrepreneurs and companies.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

No.



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21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Not applicable.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Primary and lower secondary schools are take part in various activities such as innovation courses and site visits at companies.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

First of all agriculture (and bioeconomy) constitutes a very important part of the geography and bussines in Viborg Municipality. 85% of the area is covered by agriculture and Viborg has the highest percentage of the workforce directly or indirectly working with agriculture in the country. Furthermore Viborg is home to the largest agricultural education in Denmark – Asmildkloster Landbrugsskole and leading agricultural research takes place in Foulum. Agriculture is in the 'DNA' of Viborg and the municipality is very interested in contributing to the future of agriculture. Viborg Municipality will be able to contribute to the establishment and running of a Bio Based Education Centre in several ways:

- Contribute to support from national authorities both via own and regional interest representation.
- Contribute to the general organising and setup of the BBEC.
- Contribute with own ressources, including financial.
- Actively engangeing the involvement of relevant businesses and industries.
- Contribute to early awareness among children and young pupils via activities in primary and lower secondary schools.



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- Contribute to links to other parts of the education system.
- Contribute to promotion and marketing of the educational content of BBEC.

## NTUA

### 1) Your organisation name, address and location. \*

THE NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), 9 IROON POLYTECHNEIOY STR, ZOGRAPHOU CAMPUS, ATHENS, GREECE

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

NTUA is a University covering engineering studies and high level research in its 9 schools: (1) Electrical and Computer Engineering, (2) Mechanical Engineering, (3) Chemical Engineering, (4) Rural and Geoinformatics Engineering, (5) Mining and Metallurgical Engineering, (6) Marine Engineering, (7) Architecture, (8) Civil Engineering, (9) Applied Mathematics and Physical Sciences. Almost all schools have subjects related to various areas of Bioeconomy. In addition the Chemical Engineering School particularly, where I belong, specialises in Biotechnology with emphasis in Industrial Biotechnology, Food Technology, Waste treatment, Bio- Energy etc.

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to:\*

1. Secondary
2. Vocational
3. Bachelor X
4. Post graduate cert/Diploma X
5. Masters X
6. Ph.D.X
7. CPD - Continuous Professional Development
8. Other X

If "Other" please specify briefly: Center for Lifelong Education

### 4) Learner Profile: Select the learner groups that your organisation serves:\*

- Primary Schools   
 Secondary Schools   
 Undergraduates X  
 Postgraduates X  
 Life Long Learners X  
 Industry Professionals  
 Civic Society

### 5) Type of Centre (Business Model):\*

- Public X  
 Private



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Public Private Partnership

Network Facilitator

Charity

Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network.\***

Local

National

Regional

European Union

International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

NTUA participates in Erasmus program for the exchange of students

NTUA is member of the International Association for the Exchange of Students for Technical Experience (IAESTE)

NTUA with other 8 Universities established the EULiST (European Universities Linking Society and Technology). The other partners are : Leibniz University Hannover, Brno University of Technology, Slovak University of Technology Bratislava, Lappeenranta University of Technology, Finland, Jonkoping University Sweden, University Rey Juan Carlos, Madrid, Technical University of Vienna, L'Aquila University, Italy

NTUA is participating in the "Open Technologies Alliance" a network of 25 Universities of Greece 2 of Cyprus and 15 Institutes and Research Centers

,

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Click or tap here to enter text.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

NTUA is the founder of the "Energy Competence Center" a cluster of two Universities, 6 big Industries related to Energy, the public organization for Water supply and Waste disposal of the main area of Athens (EYDAP), the Public Transportation Organization (OOSA), two research centers. The center will promote the application of the innovation technologies in relation to energy for the sustainable development of the country

NTUA is member of the "Global Entrepreneurship Monitor" cluster

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

In addition to the above mentioned permanent networks NTUA has numerous collaborations with other Universities at National and International level, Research centers, private companies, Industries, municipalities, regional authorities etc in a very big number of projects funded by the Greek Secretariat for Research and Innovation, European Union, private funds,

etc



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11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

The same as in 10. Also NTUA has close relations with the Greek Industries Association (SEV)

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

The same as in 10

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

The same as in 10

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

As in 10, also there are some relevant networks mentioned previously

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

The same as in 10

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

In order to be more precise I will need some time for more mature discussion with BBEC to finger it out.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

This role is covering by the Academic Staff of the University in addition to their teaching and research activities

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

They are involved in lecturing and teaching of undergraduates, postgraduates and recently life long learners.



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21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

The administrative bodies of the University are the rector the 3 vice rectors, the Senate, the legal support office, the quality assurance unit, the administration staff etc

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

I believe that NTUA has the characteristics to offer to the vision and mission of BBEC. For instance my School of Chemical Engineering – and myself personally - is in discussion with the Greek Industries Association (SEV) for the organization of seminars in areas of interest for the Food Industry, Textile and Leather industry, Wood and Paper Industry, etc, for the people of those Industries interesting to know the role modern technology can play for sustainable, circular and productive processes as well as novel products.

## BI-REX

1) Your organisation name, address and location. \*

Bi-Rex – Big Data and Research Excellence Competence Center, via Paolo Nanni Costa 20, 40133 Bologna (BO)

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

None



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3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 1. Secondary
- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

5 Universities are members of the Bi-Rex Consortium

8) Your Network - Detail your organisations links with Vocational Education Centres. \*

Many vocational and educational center throughout different Italian regions

9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

Italina ministry for Economic Development (MISE)



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10) Your Network - Detail your networks and collaboration with Research Centres. \*

Many research centers throughout different Italian regions

11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

none

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

ART-ER, Rete Alta Tecnologia Emilia Romagna, Entrepreneur Associations, PID network, DIH network

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

Bi-Rex cooperates mainly with the DIH networks present in the Emilia Romagna region, with which many collaborations are already ongoing.

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

26 End User, 20 Technology Service Providers and 7 Supply Chains are part of the Bi-rex Consortium

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

The Network of ART-ER, Rete Alta Tecnologia Emilia Romagna

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Bi-Rex is part of a vast ecosystem, which goes beyond our region and our partners. Within this context, Bi-Rex's role is to transfer skills, technologies, excellence and resources regarding the I4.0 area in order to support collaboration activities, to contribute to the growth of the territory and create expert professionals. In fact, one of our main function is to enhance the skills and the potential of the trainees participating in our training programmes. Furthermore, we issue calls for the realization of innovative and industrial research projects, with the objective of making research and development processes more fluid.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Our HR, through the process of recruiting, actively searches for talents and skills which respond to our needs. Furthermore, we nurture our employees future skills: for example, our Business Developer followed our course on Blockchain.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?



Please provide specific examples. \*

Yes, we have Programme Managers who collaborate with our partners to realize the projects, in order to nurture the relationship already existing and seek continuity. As an example, our Head of Consulting and Training services manages the different training programmes, which are realised also through the collaboration with our partners.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes, we have several Project Managers dedicated to the coordination and organisation of the different activities within the education, innovation and enterprise development programmes; such as the management of financial projects using PM methodologies.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Our lecturing and training programmes involve students with different backgrounds: undergraduate, postgraduate and industry professionals.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

HR and General Administration

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*



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Bi-Rex Competence Center's objective is the promotion of research projects of excellence in the field of Industry 4.0 technologies, with a focus on the Big Data area. Our mission is to support companies in their process of technological innovation, by promoting the adoption of the I4.0 technologies; we also ease the exchange of "best practices" and the Technological Transfer; finally, we seek to strengthen the network involving all players of the I4.0 area, by providing the skills and the resources necessary.

That said, Bi-Rex's commitment aligns with BBECs' goals, for example regarding Big Data for Green Manufacturing: in order to make manufacturing sustainable, integration with Big data digital processing is necessary. This way, it is possible to optimize processes so that waste is reduced, energy savings are maximized and the production cycle becomes more efficient.

## FOODHUB

### 1) Your organisation name, address and location. \*

Food Hub srl Società Benefit, Via Martiri della Libertà 14/C, Cesena (FC), Italy

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Spreading innovation in agrifood sector through disseminatin, education and open-innovation services

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public



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- Private   
Public Private Partnership   
Network Facilitator   
Charity   
Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network.** \*

- Local   
National   
Regional   
European Union   
International

7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

We have a network of over 350 academics from various Italian universities. In particular, we are entering into framework agreements with universities and currently have signed agreements with the Department of Agriculture of the University of Naples Federico II; Department of Agricultural Sciences, Food, Natural Resources and Engineering of the University of Foggia; Department of Agriculture of the Mediterranean University of Reggio Calabria; Department of Agricultural, Food and Environmental Sciences University of Perugia. Finally, we are currently in talks to structure agreements also with other departments of other universities

8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

-

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

We collaborated with EIT Food to promote the Innovator Fellowship programme

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

We collaborated with the CNR for the dissemination of the Spatial3 project and in general several researchers from the CNR and CREA collaborate with us for the production of information content (e.g. articles).

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

Click or tap here to enter text.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

Click or tap here to enter text.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

We are incubated in the business accelerator Cesena Lab, whose managing body is Ser.In.Ar.



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14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

We offered our services to: Chr. Hansen Italia S.p.A; Wenda SRL; Gelinova Group SRL, BSI Group, R-Biopharm Italia Srl, Novabase S.r.l.; Corapack S.R.L., Babbel GmbH, Lab Service Analytica Societa' A Responsabilita' Limitata, Talkwalker S.À R.L., Morgante Srl, Casillo Next Gen Food Societa' A Responsabilita' Limitata, Cerealveneta Srl, Dr. Schaer Ag, Riso Gallo Spa, Eurochef Italia S.P.A., Salumificio San Michele Spa, Neoruralehub srl, Trusticert Srl, Taghleef Industries Societa' Per Azioni, Provitaly Srl, Forapack Srl, Villani S.P.A., Magic Pack S.R.L., Morgante Srl

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Consorzio Italbiotec (Lombardia); we're currently talking with the cluster agrifood of Emilia-Romagna

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

- Events organiser and moderator (managing and moderating dissemination and training events, including also design thinking and idea generation laboratories or workshops)
- Digital marketer (operational management and strategy of promotion and communication activities through digital channels such as social media, newsletters, podcasts and others);
- Web editor (managing relations with experts; studying and defining the editorial calendar; drafting articles, creating multimedia content for dissemination);

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Over the past two years, we have interviewed by telephone about 250 university students and recent graduates who have provided us with a lot of information about the needs and skills they would like to develop. Internally, administrators Fabio and Francesco can handle survey development and administration.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes, our administrators can take care of this activity

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes, our administrators can take care of this activity.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*



Our network of experts is mainly composed of researchers and university professors, who therefore deal with different actors such as those indicated

21) **Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \***

Click or tap here to enter text.

22) **Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \***

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

Food Hub Srl Società Benefit deals with the transfer of innovations in the agri-food sector through three company divisions: Media, Academy and Open Innovation.

The mission is to participate in the growth and innovation of the agri-food sector through a constant and quality contribution.

The vision is to become the point of reference in Italy for agrifood innovation.

The Media area offers to our community of 25.000 italian's stakeholders digital information content such as articles, newsletters, interviews, podcasts, and magazines on agrifood innovation.

With the Academy area, we train community stakeholders through a training portfolio consisting of hundreds of hours of training both live and on demand (workshops, training webinars, courses, focus and schools).

We support research projects for stakeholder engagement and training activities.

The Open Innovation area develops and offers consultancy services to facilitate innovation within organisations.



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In short, we can make our community available to promote the activities of the project and the consortium partners; we are also available to organise and carry out training and workgroup management activities. In addition, we can organise and conduct market surveys on our community.

## KIELCE IAC

### 1) Your organisation name, address and location. \*

Kielce City Hall, Department of Entrepreneurship and Social Communication, Investor Assistance Centre. Address: Rynek 1, 25-303 Kielce. Location: southern Poland.

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Business support

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: We are part of self-government. Our role is to build bridges between the city and entrepreneurs

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.



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6) **Your Network - Specify the geographical reach of your network. \***

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

We are part of self-government. In our work we cooperate on a daily basis with the universities functioning in our City: the Kielce University of Technology, the Jan Kochanowski University and others. We have links with non-governmental organisation related to entrepreneurship and with the Academic Career Office.

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

In Kielce there is one public Vocational Education Centre called CK Technik. It was open only in 2019. From the very beginning we have good relations with them. We help them link with local businesses and tell them what companies expect in terms of labour forces. We get help from them when we need to elaborate some materials for businesses and investors. What is important, Kielce Vocational Education Centre is entirely dependent on the Kielce City hall. It was established by the city and is financed by the city. As part of the same institution, we can cooperate with each other in many fields.

Apart from the public Vocational Education Centre we also have in Kielce a private school dealing with vocational training of youngsters and adults. It is called ZDZ. We hardly cooperate with them, however we can talk to them if it is in favour of the project.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

Our main governmental partner is the Polish Investment and Trade Agency. We have been cooperating with them for around 15 years. They give us guidelines how to attract investors and improve economic attractiveness of the city. They support us in running investment projects. Apart from this we have cooperation with other governmental body. It is the Ministry of Development Funds and Regional Policy and the PPP Department within it. We work out a PPP project in Kielce with them.

Another governmental agency that we have common projects with is the "Starachowice" Special Economic Zone. We sometimes assist each other in investment projects.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

In Kielce a new laboratory centre for the Central Office of Measures will be opened in 3 years time. We have been partly involved in this project and really hope to benefit from future cooperation, for example, by running projects that link research centre and entrepreneurs.



A similar laboratory, but with local impact, has been recently opened at the Kielce University of Technology. It is called CENWIS. We have easy access to them and can develop common actions.

A number of research centres are based in our local companies. We have knowledge of them and we can get in touch with them, if necessary.

We also have links with the Warsaw University of Economic in Warsaw and their researchers. We have various projects with them, but all of them focus on selfgovernment and entrepreneurship support.

Another research organisation we have to do with is the Institute of Urban and Regional Development.

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

Assosiation of Polish Cities, AISEEC

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

Kielce Labour Office; Kielce Technology Park, other organisations are listed in point 15.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

Świętokrzyskie Center of Innovation and Technology Transfer; Kielce Technology Park and the IT Cluster within it.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

We have a broad network of links with local companies, both large and medium enterprises. We cooperate with small, innovative firms and start-ups, too. Some of our partners are foreign capital industries, some of them run locally. The number of our industrial partners is estimated at 250.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

Kielce IT Cluster, Kielce Trade Fair Cluster; Association of Employers in Kielce; Chamber of Craftsmen in Kielce; Staropolska Chamber of Industry and Commerce; Świętokrzyskie Association of Private Employers "Lewiatan"; Business Centre Club, Świętokrzyskie Division;

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*

Networking, supporting businesses, promotional activities, introducing the bio – economy models to the primary and secondary schools.

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples.** \*



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We have the City Labour Office that is dependant on the Kielce City Hall. They have recently opened a Talent Office to help people boost their talents and career in Kielce. We believe they could help us with it.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

-

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

-

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

-

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Spatial planning, urban development, public transport, taxes and fees, education at primary and secondary level, public transport, social care, running registries and issuing certificates and others

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your



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**Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

We are a self-government unit. We are the capital city of the Świętokrzyskie Region in Poland (there are 16 regions altogether). There are 200 thousand people living in the city and 1 million living in the region. The Kielce City hall provides multiple services for local society and businesses. Our unit, Kielce Investor Assistance Centre, is part of Kielce City Hall. We deal mainly with development of local enterprise and economic promotion of the city. In terms of the BIObec project, we can use our experience in building connections with businesses. We can share our knowledge of local economy. We can spread the idea bioeconomy and circular economy locally, especially in schools and in local companies.

### TARGI KIELCE

**1) Your organisation name, address and location. \***

Targi Kielce S.A. ul Zakładowa 1; 25-672 Kielce, Polska

**2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \***

Odnawialne Źródła Energi, Ochrona Środowiska I Gospodarka Odpadami, Leśnictwo, Rolnictwo, Przetwórstwo Tworzyw Sztucznych.

Renewable Energy Sources, Protection of Environment and Waste Management, Forestry, Agriculture, Plastics Processing.

**3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

- 1. Secondary
- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Click or tap here to enter text.

**4) Learner Profile: Select the learner groups that your organisation serves: \***

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society



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5) Type of Centre (Business Model): \*

Public

Private

Public Private Partnership

Network Facilitator

Charity

Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

Local

National

Regional

European Union

International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

Między innymi: Współpraca z Politechniką Świętokrzyską, Uniwersytetem Jana Kochanowskiego w Kielcach, Politechniką Rzeszowską, Politechniką Częstochowską, Politechniką Bydgoską, Uniwersytetem Poznańskim, Uniwersytetem Rzeszowskim.

Cooperation with: Kielce University of Technology, Jan Kochanowski University in Kielce, Rzeszów University of Technology, Częstochowa University of Technology, Bydgoszcz University of Technology, University Poznań, University Rzeszów.

8) Your Network - Detail your organisations links with Vocational Education Centres. \*

Click or tap here to enter text.

9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

Między innymi: Ministerstwo Infrastruktury, Ministerstwo Obrony Narodowej, Ministerstwo Rolnictwa, Ministerstwo Środowiska, Ministerstwo Spraw Wewnętrznych i Administracji, Agencja Restrukturyzacji i Modernizacji Rolnictwa, Narodowy Fundusz Ochrony Środowiska, Wojewódzki Fundusz Ochrony Środowiska, Główny Inspektorat Transportu Drogowego, Komenda Główna Policji, Komenda Główna Państwowej Straży Pożarnej.

Cooperation with: Ministry of Infrastructure, Ministry of National Defense, Ministry of Agriculture, Ministry of the Environment, Ministry of Interior and Administration, Agency for Restructuring and Modernization of Agriculture, National Fund for Environmental Protection, Voivodship Fund for Environmental Protection, General Inspectorate of Road Transport, Police Headquarters, Headquarters of State Fire Service.

10) Your Network - Detail your networks and collaboration with Research Centres. \*

Między innymi: Główny Urząd Miar, Sieć Badawcza Łukasiewicz

Cooperation with: Central Office of Measures, Łukasiewicz Research Network



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11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

Narodowe Centrum Badań i Rozwoju, Polski Związek Piłki Nożnej.

National Research and Development Center, Polish Football Association.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

Między Innymi: Polska Agencja Inwestycji i Handlu, Świętokrzyskie Centrum Innowacji i Transferu Technologii, wiele izb i stowarzyszeń zrzeszających przedsiębiorców.

Cooperation with: Polish Investment and Trade Agency, Świętokrzyskie Center for Innovation and Technology Transfer and many chambers and organisations associating entrepreneurs.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

Click or tap here to enter text.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

Targi Kielce S.A. są firmą świadczącą usługi z zakresu organizacji targów branżowych i wszelkiego rodzaju wydarzeń o charakterze kongresowo konferencyjnym dla firm i przedsiębiorstw skupionych w ramach różnych gałęzi przemysłu o zasięgu lokalnym, krajowym oraz międzynarodowym. Wyżej opisana działalność generuje naturalne kontakty z przedsiębiorstwami, które są naszymi klientami.

Kielce Trade Fairs is a company offering services of organization exhibitions and all kinds of congress and conference events for companies and enterprises gathered within various branches of industry with local, national and international reach. The activities described above generate natural contacts with the companies which are our clients.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

Jako Targi Kielce S.A. jesteśmy członkiem wielu stowarzyszeń i izb branżowych z różnych obszarów gospodarczych np: Izba Gospodarcza Energetyki i Ochrony Środowiska, Izba Gospodarcza Gazownictwa, Polskie Stowarzyszenie Rowerowe, Izba Gospodarcza Komunikacji Miejskiej. Poza tym współpracujemy z klastrami branżowymi np. Klaster Gospodarki Odpadowej I Recyklingu.

As Kielce Trade Fairs we are a member of many organizations and industry chambers from various economic areas, e.g. Chamber of Power Industry and Environmental Protection, Chamber of the Natural Gas Industry, Polish Bicycle Association, Chamber of Commerce of Municipal Communications. In addition, we cooperate with industry clusters, such as the Waste Management and Recycling Cluster.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*



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Targi Kielce S.A. są miejscem w którym w naturalny sposób istnieje możliwość transferu wiedzy naukowej i akademickiej z zakresu Bioedukacji Gospodarczej do odbiorców biznesowych, którzy są klientami Targów Kielce. Podczas organizowanych przez Targi Kielce wydarzeń targowych organizowane są kongresy i konferencje branżowe podczas, których można odpowiedzieć na obecne i przyszłe potrzeby przemysłu w zakresie edukacji gospodarczej opartej na biotechnologii.

Kielce Trade Fairs is a place where there is a natural possibility of transferring scientific and academic knowledge of Economic Bioeducation to business recipients who are the clients of Kielce Trade Fairs. During the fairs are also organize congresses and industry conferences which can be respond to current and future needs of the industry in the area of education based on biotechnology.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Click or tap here to enter text.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Click or tap here to enter text.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Targi Kielce są organizatorem kilkudziesięciu wydarzeń targowych rocznie. Każde wydarzenie jest dużym skomplikowanym projektem, nadzorowanym przez project managerów odpowiedzialnych za organizację przedsięwzięcia począwszy od koncepcji po jego ostateczne wykonanie i rozliczenie.

Kielce Trade Fairs is the organizer of several fair events every year. Each event is a large, complex project, supervised by project managers responsible for the organization the project, from the concept to the final implementation and settlement.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Click or tap here to enter text.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*



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Wykwalifikowany personel administracyjno biurowy oraz doświadczeni projekt managerowie i managerowie programów.

Qualified administrative staff as well as experienced project managers and program managers.

22) **Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \***

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

Targi Kielce S.A. są miejscem spotkań, w którym przedsiębiorcy i przedstawiciele świata biznesu z wielu obszarów gospodarczych spotykają się podczas targów i wydarzeń im towarzyszących. Wydarzenia te mają często charakter konferencji, kongresów, spotkań B2B. Jest to idealny moment aby przekazywać wiedzę naukową i akademicką do szeroko rozumianego środowiska biznesowego i odpowiadać na ich potrzeby w zakresie bioedukacji. To wszystko może odbywać się w formie debat, dyskusji, wykładów, szkoleń, paneli edukacyjnych – są to standardowe formy towarzyszące wydarzeniom targowym odbywającym się w Targach Kielce. Ponadto Targi Kielce dysponują odpowiednią infrastrukturą techniczną w postaci hal wystawienniczych i nowoczesnego centrum kongresowego dedykowanego do organizowania konferencji.

Wydarzenia organizowane w Targach Kielce mają zróżnicowany zasięg geograficzny – począwszy od obszarów lokalnych i regionalnych a skończywszy na wydarzeniach o zasięgach międzynarodowych.

Ponad to Targi Kielce to wykwalifikowani pracownicy o kompetencjach projekt managerów, którzy z powodzeniem mogą prowadzić projekty związane z bioedukacją.

Warte jest też podkreślenie, że jesteśmy miejscem, które już w chwili obecnej skupia przedstawicieli biznesu z zakresu odnawialnych źródeł energii, gospodarki odpadami,



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rolnictwa, leśnictwa oraz przemysły przetwórstwa tworzących sztucznych podczas targów organizowanych w naszym ośrodku wystawienniczym.

Kielce Trade Fairs is a place where entrepreneurs and representatives of the business world can meet during fairs and accompanying events. These events are often conferences, congresses and B2B meetings. This is the perfect moment to transfer scientific and academic knowledge to the broadly understood business environment and respond to their needs in the area of bioeducation. All of these can take the form of debates, discussions, lectures, trainings, educational panels - these are standard forms accompanying trade fair events taking place at Kielce Trade Fairs. Moreover, Kielce Trade Fairs has suitable technical infrastructure such as exhibition halls and a modern congress center dedicated to organizing conferences.

Organized events at Kielce Trade Fairs have a diversified geographical scope - from local and regional areas to international events.

Moreover, we have got qualified and experienced employees with the competences of project managers who can successfully run projects related to bioeducation.

It is also worth emphasizing that we are a place where are already business representatives from the area of renewable energy sources, waste management, agriculture, forestry and the processing industry from the previous fairs organized in our exhibition center.

## IHPP PAS POLAND

1) **Your organization name, address and location.** \*

**Institute of High Pressures Physics Polish Academy of Sciences, Sokołowska 29/37 street, 01142 Warsaw, Poland**

2) **Outline the bioeconomy thematic pillars that your organization specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc)** \*

Our institute is a part of PAN (Polish Academy of Sciences) state-sponsored research institution of higher learning. Within institute we have many laboratories specializing in technologies from solid-state physics (semiconductors, lasers, high-pressure technologies), food processing, protein biophysics to nanostructures for photonics and nanomedicine. Laboratory of Nanostructures (NL-4) – direct BIOBEC initiative applicant specializes mainly in nanotechnologies for medical applications. We synthesize ceramic nanoparticles in green microwave synthesis and combine them with various biopolymeric materials for replacing or regenerating the function of biological systems in medicine. The framework of fully interactive, biocompatible, biodegradable, and non-cytotoxic biological systems is currently a hot topic and widely used in various areas of life. By using natural and synthetic (but biodegradable) polymers we create new bone implants to replace traditional polymeric and metallic materials which are used in bulk due to growing demand from medical specialists and ageing societies.



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Our laboratory recently created world-class facilities for characterization of novel nanoparticles and bioproducts. Currently, we perform analyses according to certified methods e.g. Nanoparticles tracking analysis (NTA) useful in areas such as:

- Particle Analysis in Vaccine Manufacturing and Development
- Optimization of an Emulsion Polymerization Processes and Product Through Nanoparticle Concentration Analysis
- Accurate Protein Aggregation Analysis
- Distribution and Concentration of Exosomes
- Characterization of Sub-Visible Particles in Protein Therapeutic Formulations, and many other bio-applications.

3) **Knowledge Areas - Select the academic levels that your organization targets and delivers services to: \***

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves: \***

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model): \***

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

- Local
- National
- Regional



European Union

International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

The Institute of High Pressure Physics Polish Academy of Sciences (IHPP PAS, Instytut Wysokich Ciśnień PAN) is one of the most prominent scientific research institutes of the Polish Academy of Sciences within the area of high pressures, solid-state physics and nanotechnologies.

The research activities of the scientific staff of the IHPP PAS are undertaken and realized within the framework of international cooperation with recognized scientific centers in Europe and worldwide.

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

Institute of High Pressure Physics PAS launched the training of PhD students almost from the beginning of its existence (1972) as one of the first institutes of the Polish Academy of Sciences. Using the potential of highly qualified academic staff, the Institute has since been playing an important role in specialized third-level education, inviting graduates with a strong motivation for scientific work, determined to make several years of sacrifices to achieve their ambitious scientific goals.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

The Polish Academy of Sciences institutes function as a learned society acting through an elected assembly of leading scholars and research institutions. The Academy has also, operating through its committees, become a major scientific advisory body for the country. Another aspect of the Academy is its coordination and overseeing of numerous (several dozen) research institutes. PAN institutes employ over 2,000 people and are funded by about a third of the Polish government's budget for science.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

IHPP PAS due to high impact of research created within organization is a part of science-business network which brings together leading organizations from the worlds of industry, research, innovation and policy making, both at EU and national levels. Our members meet regularly, in public and in private, to discuss latest developments in R&I policy and practice, including the present and future Framework Programmes. In parallel, through our services, attendance in science meetings and conferences and high-impact reports & white papers, we enable our members to transmit and amplify their messages to an international audience of decision makers.

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***



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Our institute and especially activities of Laboratory of Nanostructures are bridging the gap between science and business partners. We provide services to various non-governmental institutions, mainly industrial partners related to the synthesis and characterization of nanotechnological products.

#### 12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

Laboratory of Nanostructures is currently involved in project (2021 – Voucher for Innovations) from Polish Agency for Enterprise Development (PARP) providing direct services to the medical industrial partner. The Polish Agency for Enterprise Development (PARP) is involved in the implementation of national and international programmes financed from the EU structural funds, state budget and multiannual programmes of the European Commission. As a key authority responsible for creating a business-friendly environment in Poland, PARP contributes to the creation and effective implementation of the state policy related to enterprise, innovation and staff adaptability.

#### 13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

Institute of High Pressure Physics PAS is a part of the Centre for Advanced Materials and Technology (CEZAMAT). It is one of the largest R&D investment projects in high technology in Poland. The project, co-financed by the European Union, established a network of five laboratories equipped with state-of-the-art facilities and the necessary infrastructure. The Centre's laboratories conduct research and development work on new technologies with commercial potential that will help develop Poland's economy and economic success.

#### 14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

Institute of High Pressure Physics PAS is a partner in the scientific research CEPT II consortium together with Medical University of Warsaw (leader) and University of Warsaw. The core of the CEPT II consortium is to increase research activities with the business sector through cooperation with corporations in areas such as nanomedicine, regenerative medicine, medical diagnostics and more.

#### 15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Laboratory of Nanostructures IHPP PAS is a part of ETPN (European Technology Platform for Nanomedicine). ETPN is an initiative led by industry since 2005 and set up together with the European Commission, to address the application of nanotechnology in healthcare. The ETPN is officially recognized as a key element in the European innovation ecosystem and a main bridge between the community and the European Commission to implement Research Framework Programmes.



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In 2015, the ETPN became an independent Association under the French law 1901, with its Secretariat in central Paris, in the campus of the ESPCI (Ecole Supérieure de Physique et Chimie Industrielle de la ville de Paris). The association gathers today more than 125 members from 25 different Member States, covering all stakeholders of Nanomedicine : academia, SMEs, industry, public agencies, representatives from national platforms, European Commission, etc.

The strategic research priorities of the ETP Nanomedicine represent the core fields of interest and activities of the members of the technology platform: Regenerative Medicine and Biomaterials, Nanotherapeutics (including drug delivery), Medical devices including Nanodiagnostics and Imaging.

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

The main role of IHPP PAS which could contribute in BBEC framework is being a think tank of nanotechnologies, bioproducts characterization and nanomedicine in Europe. Our institution as a support to the research in nanomedicine acts for a better understanding of the functioning of the human body at molecular and nanometric level and it can help to intervene better at pre-symptomatic, acute or chronic stage of illnesses, aiming for the final improvement of patients life. Industry has increasing interest in stepping into the area of nanomedicine and the expected market share of final products is growing. In addition to the improved quality of health care, the creation of new jobs can be expected. There again, IHPP PAS strongly acts to make Europe a great place to develop business in science and nanomedicine, offering a unique network of academic labs, hospitals and SMEs covering all the value chain of nanotechnologies applications to healthcare, as illustrated by the European Nanomedicine Map we belong to.

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

As a research institution we have a professional staff involved in managing various regional and European projects. For better understanding of industrial partners we will need more staff qualified in business management in the future.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

No

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?



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Please provide specific examples. \*

No

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Our institute is a part of (Warsaw-4-PhD) Warsaw Doctoral School in Natural and Biomedical Sciences. The school offers interdisciplinary education at postgraduate (PhD level) in 4 scientific disciplines: biology, chemistry, physics, and medicine. Moreover, various laboratories within the IHPP PAS provide the lectures to undergraduate students (Laboratory of Nanostructures – Lectures for University of Warsaw students, Faculty of Physics Interdisciplinary studies on Nanostructures Engineering.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Our institute is composed of Board of Directors, Scientific Council, Administration (including Financial Administration) and Research Groups responsible for the conducting of research and lectures for undergraduate and graduate students.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

In our opinion IHPP PAS activities can contribute in BBEC initiative in the field of novel services for industrial partners from the Bioeconomy sector including new materials design, fabrication and characterization areas. Due to our wide scope of scientific activities we can also provide



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a unique network of academic labs, hospitals and SMEs involved in application of bionanotechnological products.

## EPRD

### 1) Your organisation name, address and location. \*

EPRD Office for Economic Policy and Regional Development Ltd., Szkolna St. 36A, Kielce, POLAND

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

food, agriculture, chemistry, energy, circular economy, bioeconomy, regional development

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

### 6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional



European Union   
International

#### 7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

Cooperation in the implementation of innovative projects for enterprises, analysis and strategic documents, implementation of research and development works. EPRD cooperates with Third Level Institutes that have very important role in the field of education, research and expertise in the bioeconomy sectors.

Few examples:

Warsaw University of Lifescience SGGW <https://www.sggw.edu.pl/en/home/university/>  
AGH University of Science and Technology <https://www.agh.edu.pl/en/#>,  
University of Agriculture in Krakow <https://en.urk.edu.pl/>  
Warsaw University of Technology <https://www.pw.edu.pl/engpw>,  
Poznan Warsaw University of Technology <https://www.put.poznan.pl/en>,  
Lodz University of Technology <https://www.ife.p.lodz.pl/en/lodz-university-technology-tul>

#### 8) Your Network - Detail your organisations links with Vocational Education Centres. \*

Collaboration on creating Sectoral Qualifications Frameworks with The Educational Research Institute <https://www.ibe.edu.pl/index.php/en/>

EPRD has developed Sectoral Qualifications Frameworks which are meant to analyze and describe key qualifications needed in sectors important for bioeconomy: Agriculture, chemistry, waste management, energy.

#### 9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

Performing analysis, strategies, audits, and evaluation. The topics include among others regional development, evaluation of aid programs and funds, evaluation of applications for EU financing. EPRD cooperates also with Government Agencies around the world. One of the key topics are circular economy and Green Deal.

Examples in Poland: Ministry of Regional Development, Ministry of National Education.

Examples outside Poland: European Union Delegation in various countries (examples Azerbaijan, Montenegro, Togo, Bangladesh, Turkey), European Commission, The European Investment Bank, The World Bank and others.

For more information: <https://eprd.pl/en/experience/>

#### 10) Your Network - Detail your networks and collaboration with Research Centres. \*

Cooperation in the implementation of innovative projects for enterprises, analyzes and strategic documents, implementation of research and development works. EPRD established relations with Research Centres that play a key role in Poland in the field of bioeconomy, agriculture, circular economy.



Bio-based Industries  
Consortium



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Few examples:

Łukasiewicz Research Network – New Chemical Syntheses Institute  
<http://ins.pulawy.pl/index.php/en/contact>

The Łukasiewicz Research Network  
<https://lukasiewicz.gov.pl/en/about-us/>

Center for Preclinical Research and Technology  
<https://cept.wum.edu.pl/kontakt/>

The Institute of Environmental Protection – National Research Institute  
<https://ios.edu.pl/en/about-the-institute/>

### 11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

EPRD supports NGO's in obtaining funding for projects. EPRD also cooperates with various NGO's in the field of projects connected to bioeconomy, circular economy and environmental protection.

### 12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

Performing analysis, strategies, audits, and evaluation. The topics include among others regional development, evaluation of aid programs and funds, evaluation of applications for EU financing. One of the key areas of cooperation are Green Deal, bioeconomy, sustainable development, circular economy, innovation.

Examples:

National Fund for Environmental Protection and Water Management  
<https://www.gov.pl/web/nfosigw-en>

Polish Agency for Enterprise Development <https://en.parp.gov.pl/>  
Educational Research Institute <https://www.ibe.edu.pl/index.php/en/>

THE POLISH NATIONAL ENERGY CONSERVATION AGENCY  
<https://kape.gov.pl/about-us>

### 13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

EPRD has vast experience in supporting the process of establishing and development of science and technology parks in Poland and other countries. EPRD has helped with gaining funds and performed feasibility studies for institutions that are the area of collaboration between science and business.

Examples:

Elaboration of a Master Plan for Agri-Industrial Park in Grodno, Belarus



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Functional and Utility Program and feasibility study of the investment called "Holycross Centre of Science and Entertainment in Nowa Słupia" Kielce Technological Park

Drafting a feasibility study for establishment of science and technology park – Macedonia

The multistage formal and legal analysis of the possibility of introducing taxed sales in the Geoeducation Center administered by Geopark Kielce

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \***

EPRD supports Industry with applications for EU funds for innovative projects and investments connected with bioeconomy and circular economy. EPRD also provided many expertise, analysis, feasibility studies which always was connected to environment protection. EPRD worked for SME and large national entities and international corporations. Examples:

BASF <https://www.basf.com/pl/pl.html> One of the biggest chemical companies in the World.

ANWIL (ORLEN GROUP): <https://www.anwil.pl/en/Pages/defaults.aspx>

One of biggest producers of nitrogen fertilizers, ammonium nitrate and CANWIL. The only producer of PVC in Poland. Producer of different chemical products for many branches of industry.

CIECH <https://ciechgroup.com/en/ciech-group/>

An international developing chemical group with a strong position on global markets. It is the second largest manufacturer of sodium carbonate and sodium bicarbonate in the European Union, the largest manufacturer of evaporated salt in Poland, the largest supplier of sodium silicates in Europe, the largest Polish manufacturer of plant protection products, and a leading producer of polyurethane foams in Poland

Fabryki Mebli "FORTE" S.A. <http://ww2.forte.com.pl/en>

FORTE is one of the largest European manufacturers of furniture for self-assembly.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \***

Cooperation with experts from different institutions aimed at the implementation of orders in various sectors of the bioeconomy, water management, agriculture. Support for organizations in obtaining funding for projects.

Few examples:

Association of Engineers and Technicians of the Chemical Industry  
<https://sitpchem.org.pl/>

The LifeScience Krakow Cluster  
<https://lifescience.pl/o-klastrze-lifescience/>

Chamber of Commerce "Polish Waterworks"  
<https://www.igwp.org.pl/>



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<http://www.kigo.pl/o-nas/>

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

In the BBEC design framework should be included following roles and functions:

- establishing connections between science, business and government
- performing feasibility studies for investments in the field of bioeconomy
- cooperation in national and interational projects
- expert support and consulting to different institutions and entities
- obtaining external funding for the development of entitites

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

EPRD has an HR department that identifies the training needs and competency gaps of employees. Organizes trainings and workshops. Conducts recruitment activities.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

-

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

EPRD has a team of specialized project managers. They have extensive experience in coordinating innovative projects aimed at developing innovations, implementing R&D, implementing projects aimed at developing strategic documents and feasibility studies.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

-

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Recruitment and applications managers, administration, IT support

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events



- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

EPRD Office for Economic Policy and Regional Development Ltd. is a consulting company. For over 25 years, we have been using the industry knowledge of over 7,500 experts who work with us on five continents, providing consulting and training services to the public sector, international corporations, SMEs and non-governmental organizations. Our team of high-class specialists is complemented by experienced experts from abroad, as well as renowned professionals – scientists and practitioners. Cooperation with experts from around the world allows us to transfer knowledge and best practices in-between the implemented projects. Our team provides professional support in every phase of the project implementation. We create solutions tailored to your needs that will help in the development of your company.

The future BBEC is in line with our Mission and Philosophy. The bioeconomy and circular economy is the future of Europe. It's a chance to make great economic use of biomaterials and bioresources and to make economy more effective, innovative and environmentally friendly. EPRD is cooperating with every stakeholder that is mentioned in the survey. We have very wide, international network of partners.

EPRD contribution to BBEC:- to establish and facilitate contacts between stakeholders important form bioeconomy to provide experts for feasibility studies, various expertise, analysis, evaluation and audits- project management- preparing applications for external funding- enabling technology transfer between science and industry

EPRD has in-house staff that has vast experience in preparing EU funding projects for innovative investments, complex financial analysis, environment protection issues, agriculture, energy systems and engineering.

## KLASTER LIFESCIENCE

1) **Your organisation name, address and location. \***

\*Fundacja Klaster LifeScience Kraków ul. Bobrzyńskiego 14, 30-348 Kraków



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2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Food, biorefining, nanomaterials, biorefining

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 1. Secondary
- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

The Cluster's members are Universities, such as University of Agriculture, Jagiellonian University, Academy of Mining and Metallurgy etc.

8) Your Network - Detail your organisations links with Vocational Education Centres. \*



Eurokreator SC Rafał Kunaszyk Anna Kunaszyk

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

<https://www.malopolska.pl/>

www.krakow.pl

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

The Cluster collaborates with research centers (such as Sano Science)- we participate in the events / projects, conduct joint activities, consult applications and projects, we disseminate knowledge about their services and laboratories.

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***

Various NGOs belong to our networks. An example of collaboration with NGOs is the Probio Małopolska project, which aims to internationalize SMEs from Małopolska.

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \***

One of the Cluster's members is Małopolska Regional Development Agency which mainly deals with enterprises.

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \***

LifeScience Kraków Cluster is a leader of a HealthGoDigital! EDIH consortium, the proposal was submitted to EC in February 2022. We have also submitted a proposal on EIT Health Hub, as well as two proposals on Excellence Hubs.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \***

The cluster cooperates with a large number of business support organisations, enterprises of various sizes, universities, health care units, research institutes. This network contributes to the conduct of joint projects and services.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \***

We cooperate with national and international clusters and their associations on various projects. We belong to Scanbalt, CEBR and EIT Health networks. In Poland we strongly cooperate with the Medsilesia Cluster and Lublin Medicine Cluster, as well as other Key National Clusters. We are also in touch with the South Poland Cleantech Cluster, that is actively involved in the bioeconomy

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \***

individual approach to everyone, taking into account the needs and benefits of both business and other centers

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \***



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No, but one of Cluster's Members is Exec Mind which deals comprehensively with Talents in Life Science sector.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes, our Managing Director manages such issues as long-term strategies.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes, there will be number of Project Managers, managing projects such as EDIH, Excellence Hubs, EIT Health Hub etc.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

no

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Event organising specialist, administrative specialist, marketing manager

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*



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Assistance in promotion, dissemination of the initiative among our partners and beyond, assistance in finding experts, assistance in establishing an action plan/strategy.

## PS

### 1) Your organisation name, address and location. \*

Politechnika Świętokrzyska Kielce University of Technology, Faculty of Environmental, Geomatic and Energy Engineering al. Tysiąclecia Państwa Polskiego 7, 25-314 Kielce, Poland

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Kielce University of Technology that leads in quality teaching and learning, informed by research and driven by innovation and technology. Our graduates are valued for their strong foundation of practical and theoretical knowledge enabling them to be immediately effective in engineering, managerial or technological positions in relevant businesses and industry. The mission of Kielce Technology University is to educate individuals for professional opportunities in engineering, computer and information sciences, and business. KUT offers high demand educational programs, providing learning that ensures students' career success. Our mission is to produce employable and entrepreneurial graduates who can make an impact in society.

The Faculty of Environmental Engineering, Geomatics and Power Engineering offers three fields of study: environmental engineering, geodesy and cartography, and renewable energy sources.

The University of Technology has a team of specialists in the field of bioeconomy, which carries out development and development works, among others, in the Laboratory of Solid Biomass and Biogas Energy <https://cenwis.tu.kielce.pl/nowy-zielony-lad-energetyczny/> <https://cenwis.tu.kielce.pl/laboratoria/laboratorium-biomasy-stalej-i-energetyki-biogazowej-politechniki-swietokrzyskiej/>

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 25. Secondary
- 26. Vocational
- 27. Bachelor
- 28. Post graduate cert/Diploma
- 29. Masters
- 30. Ph.D.
- 31. CPD - Continuous Professional Development
- 32. Other

If "Other" please specify briefly: Click or tap here to enter text.

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools



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- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

Our partner universities – list of bilateral agreements:

Belarus

[Belarusian State University of Informatics and Radioelectronics](#) – *Беларускі дзяржаўны ўніверсітэт інфарматыкі і радыёэлектронікі*

Brazil

[Universidade Estadual do Centro-Oeste \(UNICENTRO\)](#)

[University of Taquari Valley](#) – *Universidade do Vale do Taquari – UNIVATES*

[University Center of União da Vitória – UNIUV](#) – *Centro Universitário de União da Vitória – UNIUV*

[Pontifical Catholic University of Paraná](#) – *Pontifícia Universidade Católica do Paraná*

[State University of Paraná Campus Paranavaí](#) – *Universidade Estadual do Paraná Campus de Paranavaí*

China

[Nanchang Hangkong University](#) – *南昌航空大学*

[Yantai University](#) – *烟台大学*

Czech Republic

[Technical University of Ostrava](#) – *Vysoká škola báňská – Technická univerzita Ostrava*

India

[Vellore Institute of Technology](#)

Russia

[Moscow State University of Civil Engineering](#) – *Московский государственный строительный университет*

Ukraine

[National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute” \(NTUU KPI\)](#) – *Національний технічний університет України «Київський політехнічний інститут імені Ігоря Сікорського»*



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[G. V. Karpenko Physical-Mechanical Institute of the National Academy of Sciences of Ukraine](#) – *Фізико-механічний інститут імені Г. В. Карпенка НАН України*

[Lviv Polytechnic](#) – *Національний університет «Львівська політехніка»*

[Khmelnytskyi National University](#) – *Хмельницький національний університет*

[Vinnytsia National Technical University](#) – *Вінницький національний технічний університет*

[State Agrarian and Engineering University in Podilia](#) – *Подільський державний аграрно-технічний університет*

[Donetsk National University](#) – *Донецький національний університет імені Василя Стуса*

[Lutsk National Technical University](#) – *Луцький національний технічний університет*

[National University of Water and Environmental Engineering](#) *Національний університет водного господарства та природокористування*

[Kyiv National University of Technologies and Design](#) – *Київський національний університет технологій та дизайну*

[Kharkiv National University of Civil Engineering and Architecture](#) – *Харківський національний університет будівництва та архітектури*

#### 8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

As part of the "Polibus - science on wheels" project, the Kielce University of Technology cooperates with technical education centers.

Within the Polibus, it is possible for classes to participate in several different activities, including:

1. Participation in classes specially dedicated to individual profiles

- webinars
- lectures
- talks
- shows
- classes

both at the Kielce University of Technology and as a guest at the School,

2. Students' participation in events organized by the Kielce University of Technology

- Faculty Days
- Open Day of the Kielce University of Technology and Life Sciences
- Salon of high school graduates
- Class visits to the Kielce University of Technology, at individual faculties of the University.

3. Class visits to the Kielce University of Technology, at individual faculties of the University.

#### 9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

Kielce University of Technology cooperates with government bodies such as:

1. Ministry of Education and Science
2. Ministry of Funds and Regional Policy
3. Ministry of Climate and Environment
4. Ministry of National Defense
5. Ministry of Development and Technology



 Bio-based Industries Consortium

 Horizon 2020  
European Union Funding  
for Research & Innovation

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Kielce University of Technology cooperates with the self-government bodies of the Świętokrzyskie Voivodeship:

1. Kielce City Hall
2. Office of the Marshal

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

The list of cooperating research and academic centres includes those of Austria, Belarus, Belgium, Bulgaria, China, Croatia, the Czech Republic, Denmark, France, Germany, Greece, Holland, Hungary, Ireland, Italy, Portugal, Russia, Romania, Slovakia, Slovenia, Spain, the UK, Ukraine and the USA.

The University researchers can receive academic degrees in many of those institutions and students have a chance to complete part of their first, second or third cycle programme abroad. In addition to being engaged in the implementation of bilateral agreements, the University also takes part in international projects and teaching programmes.

Kielce University of Technology cooperates with many universities and scientific centres in Europe and worldwide in the framework of bilateral agreements. The agreements are related to joint research projects, joint publications of research results, exchange of academic staff and students, including doctoral students, the collaboration for the upgrading of teachers' qualifications geared towards obtaining scientific degrees, the integration with European science, organization of conferences and symposiums.

Belarus

- Belarusian State University of Informatics and Radioelectronics

Brazil

- Universidade Estadual do Centro-Oeste (UNICENTRO)
- University of Taquari Valley
- University Center of União da Vitória – UNIUV
- Pontifical Catholic University of Paraná
- State University of Paraná Campus Paranavaí

China

- Nanchang Hangkong University
- Yantai University

Czech Republic

- Technical University of Ostrava

India

- Vellore Institute of Technology



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## Russia

- Moscow State University of Civil Engineering

## Ukraine

- National Technical University of Ukraine „Igor Sikorsky Kyiv Polytechnic Institute” (NTUU KPI)
- G. V. Karpenko Physical-Mechanical Institute of the National Academy of Sciences of Ukraine
- Lviv Polytechnic
- Khmelnytskyi National University
- Vinnytsia National Technical University
- State Agrarian and Engineering University in Podilia
- Donetsk National University
- Lutsk National Technical University
- National University of Water and Environmental Engineering
- Kyiv National University of Technologies and Design
- Kharkiv National University of Civil Engineering and Architecture

### 11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

Kielce University of Technology cooperates with many non-governmental organizations. As part of the cooperation, projects are implemented in which the Kielce University of Technology is a partner. One of such projects is the IDEA Kielce: SmartCity project.

### 12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

The Kielce University of Technology cooperates with Enterprise Development and Support Agencies at the regional level:

1. Polish Agency for Enterprise Development - PARP
2. Świętokrzyskie Regional Development Office - ŚBRR
3. Staropolska Chamber of Industry and Commerce - SIPH
4. Regional Center for Innovation and Technology Transfer - ŚCITT

### 13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*



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Kielce University of Technology and Faculty of Environmental Engineering, Geomatics and Power Engineering cooperates with innovation centers, among others Regional centre for innovation and technology transfer (ŚCITT).

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \***

Kielce University of Technology cooperates with industry through two centers:

- Scientific and Implementation Center – CENWIS
- Technology Transfer Center

The Kielce University of Technology has created a network of open innovations.

Open innovation network (SOI) is a project dedicated to building a culture of open innovation. It consists in creating and supporting technology transfer transactions to enterprises. The grant recipients (recipients of technology) in the project will be entrepreneurs from the micro and small sectors and medium-sized enterprises.

The forms of direct support for MŚP are: activities of technology brokers animating technology transfer, substantive support as part of advisory services (consisting in the preparation of technology transfer transactions and involvement in its implementation), financial support for the acquisition of the ownership right or license to use the technology.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \***

The Technology Transfer Center is a dynamically developing university-wide unit of the Kielce University of Technology. From the beginning of its existence, it has focused on projects based on cooperation between the world of science and business. As part of the Open Innovation Network (SOI), the Kielce University of Technology cooperates with clusters, regional networks and sectors of various industries.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \***

There is a project management and implementation system at the Kielce University of Technology. Respondingly, organizational units fulfill the designated functions:

- Department of Development of Research Facilities
  - R&D Investment Implementation Section
  - Section for Maintaining the Durability of Implemented Projects
  - Section of the Organization for Cooperation with the Economic Environment
  - Promotion and Information Section
- Technology Transfer Center
- Department of Research and Development Projects
- Department of Scientific Staff Development and International Cooperation



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• Science and Implementation Center – CENWIS

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline'** Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

"Industry liaison for a pipeline of skills and talents" there are appropriate organizational units at the Kielce University of Technology, such as:

1. Department of Development of Research Facilities
  - R&D Investment Implementation Section
  - Section for Maintaining the Durability of Implemented Projects
  - Section of the Organization for Cooperation with the Economic Environment
  - Promotion and Information Section
2. Technology Transfer Center
3. Department of Research and Development Projects
4. Department of Research Staff Development and International Cooperation
5. CENWIS Scientific and Implementation Center

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

Please provide specific examples. \*

At Kielce University of Technology, there are dedicated Program Managers dealing with the implementation and development of educational, innovative and enterprise development programs.

19) **Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?**

Please provide specific examples. \*

At Kielce University of Technology, there are dedicated Program Managers dealing with the implementation and development of educational programs. At each Faculty there are committees for the quality of education, the Scientific Council for the discipline of Environmental Engineering, Mining and Power Engineering and the Faculty Council.

20) **If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \***  
**Faculty of Environmental, Geomatic and Energy Engineering:**

The Faculty offers eight unique programs, spanning a variety of disciplines—all with a focus on making positive change in the world. With academic staff with extensive professional experience in Environment, Geomatics, Energy Engineering Environment Faculty of Environment creates knowledge, nurtures learning and



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promotes action to achieve sustainable futures is developing and implementing the smart solutions needed to address today's most pressing environmental challenges.

The program enables students to obtain detailed and advanced knowledge on various aspects related to:

- Sustainability
- Water and Wastewater Engineering
- Energy Modelling
- Climate Change Adaptation
- Resiliency
- Geomatics
- Geomechanics and materials
- Structures
- Transport
- Health and infrastructure

The Faculty of Environmental Engineering, Geomatics and Power Engineering implements cooperation with the Polish Association of Sanitary Engineers and Technicians, e.g. the industry section of the Main Board of the Main Waste Management Section; there is also the PZliTS Club at the Kielce University of Technology

The employees are members of the Kielce Scientific Society, branch of the Polish Academy of Sciences in Kraków

Employees sit on Competition Committees, e.g. in the Competition for Exhibitors of the International Fair of Environmental Protection and Waste Management EKOTECH, Organizer - Targi Kielce

Students and graduates of the faculty are laureates of competitions, e.g. "Young scientists - Kielce 2020" for an outstanding master's, engineering or bachelor's thesis under the project entitled "Smart city efficiency monitoring system as part of a municipal audit"

Employees are reviewers of foreign and domestic prestigious scientific journals, including those in the field of bioeconomy

Employees review grants for domestic and foreign science funding institutions (e.g. NCN, NCBIR, Unity Through Knowledge Fund Croatia)

Employees have experience in the implementation of national and EU grants:  
<https://tu.kielce.pl/kategoria/projekty-ue/>; <https://tu.kielce.pl/granty-na-komercjalizacja-3/>; <https://tu.kielce.pl/kategoria/projekty-krajowe/>

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*



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The Faculty of Environmental Engineering, Geomatics and Power Engineering offers three fields of study: environmental engineering, geodesy and cartography, and renewable energy sources. The faculty of Environmental Engineering, Geomatics and Power Engineering, and thus the Kielce University of Technology, has the appropriate human resources potential to run new fields of study in the field of bioeconomy.

22) **Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \***

- VR/AR technology integration
- Innovation sprints & Design Thinking
- Networking events
- Enterprise Accelerator Programmes
- Funding & Investment networks
- Research, Development & Innovation supports
- Site visits to bioeconomy industry settings
- Site visits to bioeconomy research centres
- Work based industry placements
- Mentors from industry
- Mentors from academia
- Health & Wellbeing supports
- Diversity & Inclusion supports
- Other

If "Other" please specify briefly: Click or tap here to enter text.

23) **BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \***

The structure of the faculty together with laboratories of a teaching and research nature:

Department of Geotechnics and Waste Management

- Laboratory of Road Materials and Geotechnics II
- Laboratory of Environmental Engineering I
- Laboratory of Hydraulics and Hydrology
- Laboratory of Geotechnics

Department of Geodesy and Geomatics

- Laboratory of Modern Diagnostic Techniques in Environmental Engineering
- Laboratory of Photogrammetry and Remote Sensing

Department of Building Physics and Renewable Energy

- Laboratory of Renewable Energy Sources
- Laboratory of Intelligent Systems
- Laboratory of Heat Regulation, Exchange and Recovery
- Laboratory of Material Structure and Heat Transfer
- Laboratory of Environmental Biology and Microclimate
- Laboratory of Fundamentals of Electrical Engineering



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- Laboratory of Small Wind Turbines
- Fire Safety Laboratory

Department of Sanitary Networks and Installations

- Laboratory of Environmental Engineering III

Department of Water and Wastewater Technology

- Laboratory of Nano- and Ecoengineering
- Laboratory of Environmental Engineering II
- Chemistry Laboratory
- Laboratory of Water and Wastewater Technology
- Laboratory of Sanitary Biology
- Laboratory of Technological Processes Simulators

The department supervises promotion procedures in the following areas:

- awarding of a doctoral degree in the field of engineering and technical sciences in the discipline of environmental engineering, mining and energy (previously environmental engineering) - from May 28, 2012;
- conferring the degree of habilitated doctor in the field of engineering and technical sciences in the discipline of environmental engineering, mining and energy (previously environmental engineering) - from 02.29.2016

The most important directions of scientific research:

- technologies of trenchless construction and renovation of underground infrastructure networks;
- optimization of material and construction solutions in water and sewage systems;
- solar energy storage with the use of phase change substances;
- heat and mass transfer;
- physicochemistry of clays and clay minerals;
- application of DSC scanning calorimetry and NMR nuclear magnetic resonance in research water-ground systems;
- analysis of the temporal variability of atmospheric precipitation;
- analysis of the dynamics of changes in the content of pollutants in rainwater;
- silting of small water reservoirs;
- waste management and utilization;
- biological waste treatment technologies;
- water and sewage management;
- modern technologies of water and wastewater treatment;
- application of the sorption process in engineering and environmental protection;
- phosphorus recovery from sewage sludge;
- obtaining energy from renewable sources;
- room microclimate;



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- construction and installation solutions for building partitions;
- precise satellite positioning in implementation measurements and building staking out;
- modernization of the cadastre in terms of optimization of real estate management;
- real estate appraisal, management and trading;
- application of photogrammetry and remote sensing in environmental quality research.

## SGGW

### 1) Your organisation name, address and location. \*

Warsaw University of Life Sciences – SGGW, ul. Nowoursynowska 166, 02-787 Warsaw, Poland

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Food, feed, fertilizers, forestry, biorefining, education

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 33. Secondary
- 34. Vocational
- 35. Bachelor
- 36. Post graduate cert/Diploma
- 37. Masters
- 38. Ph.D.
- 39. CPD - Continuous Professional Development
- 40. Other

If "Other" please specify briefly: Click or tap here to enter text.

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.



6) **Your Network - Specify the geographical reach of your network.** \*

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes.** \*

Cooperation with University and Third level Institutes includes among others: participation in joint projects, research and innovation, publication of scientific papers, exchange of professors, researchers, and students, internships, organization of scientific conferences.

University of Bonn, University of Helsinki, University of Bologna, Agricultural University of Tirana, Eurasia International University, Azerbaijan State Agricultural University, University of Banja Luka, Shenyang Agricultural University, Ilia State University, IPB University, Shibaura Institute of Technology, University of British Columbia, Universiti Sains Malaysia, Mongolian University of Life Sciences, Lincoln University, Tshwane University of Technology, National Chung Hsing University, National University of Life and Environmental Sciences of Ukraine, Louisiana State University College of Agriculture, University of Warsaw, Warsaw University of Technology, Wroclaw University of Environmental and Life Sciences, Poznan University of Life Sciences, University of Life Sciences in Lublin

8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

Cooperation includes: participation in joint projects, training various stakeholder groups, postgraduate studies.

Agricultural Advisory Center in Brwinów <https://en.cdr.gov.pl/>

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

Cooperation includes: opinions and expertise

Ministry of Agriculture and Rural Development, Ministry of Education and Science, Ministry of Climate and Environment, National Agricultural Support Center, Agency for Restructuring and Modernisation of Agriculture (ARMA)

10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

Cooperation includes: participation in joint projects, training various stakeholder groups, research and innovation, publication of scientific papers, opinions and expertise

National Science Center, National Centre for Research and Development, New Chemical Syntheses Institute, The Institute of Soil Science and Plant Cultivation (IUNG), Crop Research Institute Czech Republic), The Institute of Horticulture - National Research Institute

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*



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Cooperation includes: participation in joint projects, training various stakeholder groups, research and innovation, publication of scientific papers, opinions and expertise  
EPRD Office for Economic Policy and Regional Development, Foundation for Education and Social Dialogue "Pro Civis",

12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*

Cooperation includes: research and innovation  
Polish Agency for Enterprise Development

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

Center for Innovation and Technology Transfer

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

Cooperation includes: participation in joint projects, training various stakeholder groups, research and innovation, publication of scientific papers, opinions and expertise

InnoTech4Life, Grupa Azoty, BPC Singapore Pte Ltd, WOKAS S.A, HanzaVia sp. z o.o., Biogaz Plant Rypin Sp. z o.o., Cornelissen Consulting Services B.V (Holland), Profinutrients, (Holland); NaturalCrop Poland Sp. z o.o., Fundeko Korbel, Krok-Baściuk Sp. j. Warszawa, Bio Alians Sp. z o.o., FDPA, Polska Grupa Biogazowa, National Energy Conservation Agency (NAPE), Bioenergy Project Sp. z o.o. and others.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

Click or tap here to enter text.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*

Research, reports and expert opinions, education, educational materials, dissemination

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples.** \*

Yes, we have a Career Office

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

**Please provide specific examples.** \*

Click or tap here to enter text.



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19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Yes, our staff has experience in project management

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Our staff teaches, trains and conducts courses at all levels, for various stakeholders

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Academic admission staff, recruitment and applications managers, tutors, developing a training program

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

Our organization can provide the educational, social and research base for the project implementation. We can engage academic teachers to conduct courses and training.

## UJK

1) Your organisation name, address and location. \*

Jan Kochanowski University of Kielce ul. Żeromskiego 5 25-369 Kielce

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*



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education&outreach

3) **Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \***

- 41. Secondary
- 42. Vocational
- 43. Bachelor
- 44. Post graduate cert/Diploma
- 45. Masters
- 46. Ph.D.
- 47. CPD - Continuous Professional Development
- 48. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) **Learner Profile: Select the learner groups that your organisation serves: \***

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) **Type of Centre (Business Model): \***

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

- Local
- National
- Regional
- European Union
- International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

cooperation undertaken between UJK and other universities from Poland, Europe and many other countries of the world

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

-



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9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

Ministry of Education and Science, Central Office of Measures, communes, local government authorities of the Świętokrzyskie voivodships

10) Your Network - Detail your networks and collaboration with Research Centres. \*

cooperation undertaken between UJK and other universities from Poland, Europe and many other countries of the world

[REJESTR-UMOW-O-WSPOLPRACY-Z-ZAGRANICA-02-03-2022.pdf \(ujk.edu.pl\)](#)

11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

-

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

cooperation undertaken between UJK and business in Poland

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

-

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

cooperation undertaken between UJK and business in Poland

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

-

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

The Jan Kochanowski University in Kielce, as one of the largest research centers in Poland, is entitled to prepare an opinion on the innovation of technology, within the meaning of Art. 2 point 9 lit. a-e of the Act of 30 April 2010 on the principles of financing science (Journal of Laws No. 96 item 615) - conducting research and development works on a continuous basis..

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

We have program managers and project managers.

Jan Kochanowski University in Kielce, as a Leader, in partnership with: □The Cracow University of Technology Tadeusza Kościuszko with headquarters in Krakow, □the company Geyer & Hosaja Sp. z o.o. based in Partynia, implements the project entitled Reduction of atmospheric



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air pollution as a result of the production of pro-ecological elastomeric materials. The project is co-financed by the European Regional Development Fund under the Intelligent Development Operational Program 2014-2020, under the agreement POIR.04.01.04-00-0131 / 19.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

ATHENA - Implementing gender equality plans to unlock research potential of RPOs and RFOs in Europe  
GENERAL INFORMATION ABOUT THE PROJECT ATHENA is a research and innovation project co-financed by the HORIZON 2020 Program, implemented by employees of the Faculty of Law and Social Sciences of the Jagiellonian University as part of an international consortium consisting of 10 research teams from Spain, Slovenia, Slovakia, Bulgaria, Romania, Italy, Portugal and Poland.

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

The PONCHO project - Internationalization of Latin American peripheral Universities through sustainable integration and inclusive implementation of International Relations Offices, i.e. Internationalization of peripheral universities of Latin America through sustainable integration and inclusion of International Relations Offices, is a project implemented under the Erasmus + program since October 2015 by a consortium international. The consortium consists of 25 partners, mainly from Latin America, who are the main beneficiaries of the planned results of the project. Apart from the countries of South America, the project is implemented by European countries (acting as experts): Spain (which is also the coordinator of the entire project), Portugal, France and Poland. The only partner from Poland is the Jan Kochanowski University in Kielce.

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

- Main research areas:  Macroeconomics and macroeconomic policy  International economics  Risk in business activity  Economics of the public sector  Real and financial investments  Financing of investment projects  Community capital  Behavioral economy,  The knowledge-based economy  Local and regional development  Human capital management  The labor market  Entrepreneurship  Government finance  Finance of enterprises  Banking  Accounting and bookkeeping  Taxes



 Bio-based Industries Consortium



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21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

academic admission, recruitment, classes, courses

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

The Jan Kochanowski University in Kielce, one of the eighteen state classical universities in Poland, is now a dynamically developing and the largest university in the Świętokrzyskie Province. It is an academic institution with a significant and well-established scientific position in the country. Jan Kochanowski University combines tradition with modernity. It refers to the past and rich traditions of the city and the region, and gives impetus to the further development of Kielce as a university city. It co-creates the scientific, cultural, social and economic potential of the Świętokrzyskie region. From the perspective of the last decade, the nature and scope of changes taking place at our University are clearly visible. The contemporary Jan Kochanowski University is a modern university, adapted to the university standards of the 21st century and one of the best equipped universities in Poland in terms of research and teaching facilities. Such a dynamic development of the University has become possible, among others thanks to the structural funds of the European Union and subsidies from the state budget. In the last decade, the University obtained this way of financing nearly PLN 500 million, as a result of which there was a significant expansion of the University Campus. Well-equipped and modern classrooms and specialized laboratories were created, constituting excellent teaching



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facilities and a scientific base for conducting multidirectional research that enable the development of university staff.

## URK

### 1) Your organisation name, address and location. \*

Agricultural University of H. Kołłątaj in Krakow, al. Mickiecza 21, 31-120 Kraków

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Education and outreach

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

### 6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union



International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

CAMPUS DE EXCELENCIA INTERNACIONAL EN AGROALIMENTACION - Spain [https://www.ua.es/investigacion/investiga/cei/campus/22?idioma=en\\_GB](https://www.ua.es/investigacion/investiga/cei/campus/22?idioma=en_GB)

JYVASKYLAN AMMATTIKORKEAKOULU OY - Finland - <https://www.jamk.fi/en>

Cracow University of Economics - Faculty of Commodity Science - <https://inizp.uek.krakow.pl/>

8) Your Network - Detail your organisations links with Vocational Education Centres. \*

School of Environmental Engineering and Melioration in Krakow - <https://zsisim.pl/>

School Complex No. 1 in Olkusz - <https://www.zs1olkusz.edu.pl/>

9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

ZENTRUM FUR SOZIALE INNOVATION GMBH - <https://www.zsi.at/> - lider projektu BLOOM,

WISSENSCHAFTSLADEN BONN EV- <https://www.wilabonn.de/>,

STICHTING WAGENINGEN RESEARCH- Research Organisations, <https://www.wur.nl/en.htm>

10) Your Network - Detail your networks and collaboration with Research Centres. \*

Copernicus Science Center - <https://www.kopernik.org.pl/en>

Institute of Catalysis and Surface Chemistry of the Polish Academy of Sciences in Krakow - <http://www.ik-pan.krakow.pl/>

11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

OTELO EGEN - <https://www.oteloegen.at/> - participant of the BLOOM project

Polish Society of Ecological Engineering - <https://sites.google.com/site/ptiezzq>

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

Klaster Life Science - <https://lifescience.pl/>

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

CleanTech - <https://spcleantech.pl/kontakt/>

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

We don't have

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

Polish Association of Sanitary Technicians and Engineers - <http://pzits.pl/>

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Local farmers and their associations



Bio-based Industries  
Consortium



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17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

We don't have.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Erasmus+; CEEPUS

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

University of Agriculture in Krakow Centre for Technology Transfer <https://ctt.urk.edu.pl/en>

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Click or tap here to enter text.

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

CAREER OFFICE, AGRICULTURAL UNIVERSITY INNOVATION CENTER, EMPLOYEE AND SOCIAL AFFAIRS DEPARTMENT

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events X

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports x

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia x

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your



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Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

1. New Innovation Center (WTZ URK) providing support in the field of food production and processing
2. Establishing special purpose companies and limited liability companies with the participation of the Entrepreneurship Incubator (Innovation Center URK)
3. Contacts with foreign institutions (contact base - BLOOM project) and implementation of joint projects, including Bloera +
4. General university laboratory for basic and industrial research.
5. Support and co-financing from the funds of the Ministry of Science and Higher Education

## UW

1) Your organisation name, address and location. \*

University of Warsaw Krakowskie Przedmieście 26/28 00-927 Warsaw Poland

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Education and redsearch

3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

5) Type of Centre (Business Model): \*

- Public
- Private



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Public Private Partnership

Network Facilitator

Charity

Other

If "Other" please specify briefly: Click or tap here to enter text.

6) **Your Network - Specify the geographical reach of your network. \***

Local

National

Regional

European Union

International

7) **Your Network - Detail your organisations links to University & Third Level Institutes. \***

Member of the 4EU+ Alliance with Charles University (Czech Republic), Heidelberg University (Germany), Sorbonne University (France), University of Copenhagen (Denmark), University of Milan (Italy).

Member of international conferences and associations of universities, to promote higher education and academic collaboration: European University Association (EUA), Network of the Universities from the Capitals of Europe (UNICA).

8) **Your Network - Detail your organisations links with Vocational Education Centres. \***

The University has joint programmes at the Bachelor and Master level to enable studying at Warsaw and at a partner university. In cooperation with universities from France, Belgium, Hungary, Austria, Ukraine, Holand, Iceland, United Kingdom, Sweden, Germany, Italy, Denmark, Portugal, Spain, Nepal, Korea, Kosovo, Israel, Ireland, Slovenia, UW offers 22 joint programmes.

9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \***

The University cooperates with Ministry of Science and Higher Education, National Science Centre and National Centre for Research and Development (c. 1400 ongoing grants). International cooperating entities are: UE framework programmes (Horizon2020, COSME), European Space Agency (ESA), European Cooperation in the Field of Scientific and Technical Research (COST), Humanities in the European Research Area (HERA), European Molecular Biology Organization (EMBO), International Visegrad Fund, Polish-German Science-Foundation, JUSTICE, European Bank for Reconstruction and Development.

10) **Your Network - Detail your networks and collaboration with Research Centres. \***

University of Warsaw is a member of almost 100 international research networks, including: Global Biodiversity Information Facility (GBIF), Global Universities Partnership on Environment and Sustainability (GUPES).

11) **Your Network - Detail your networks and collaboration with Non-Government Organisations. \***



N/A

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

N/A

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

N/A

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

The University has established various business partnerships, for example to find new uses for graphene or to discover new radiopharmaceuticals (radioactive substances used in the diagnosis and treatment of e.g. cancer).

16 spin-off companies were set up at the UW: RDLS, Warsaw Genomics, AmerLab, Spektrino, MIM Solutions, BACTrem, GeoPulse, EIT Food CLC North-East, Matariki Bioscience, CRI, Meteo, Nephrolab Plus, Microanalysis, DDG Bioinformatics, GeoLearning, Project24.

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

N/A

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Academic, training centre/education, R&D

17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

University Technology Transfer Centre acts as a link between industry and innovators.

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Office of Research Administration

Office for International Research and Liaison

University Technology Transfer Centre

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Associated with the projects realized by above mentioned bodies.



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20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Undergraduate, postgraduate, open university education

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Office of Research Administration

Office for International Research and Liaison

University Technology Transfer Centre

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

University education, postgraduate trainings, food analysis, socioeconomic studies/research, higher education cooperation, research collaboration, access to knowledge and infrastructure.

## MUW

1) Your organisation name, address and location. \*

Medical University of Warsaw, Źwirki I Wigury 61, 02091 Warsaw, Poland

2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Faculty of Pharmacy is a part of Medical University of Warsaw, one of the largest medical universities in Poland. We educate students in two main areas: pharmacy and laboratory diagnostics. We also provide education in the field of Toxicology with elements of forensics and Medical Technology Assessment (HTA). As part of the faculty, we also conduct extensive scientific research on the synthesis of new molecules with the expected pharmacological activity, on the development of



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innovative biomaterials for potential use in regenerative medicine or drug carriers, on natural drugs, microbiota in health and diseases, on modern pharmaceutical and biomedical analysis and on biotechnological drugs.

Due to new requirements regarding bioeconomy our scientific groups focus on green chemistry and sustainable production of materials.

What is more, our research focuses on ecotoxicological aspects, i.e. occurrence of drugs and their metabolites in rivers and tap water or impact of microplastics on the environment.

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

1. Secondary
2. Vocational
3. Bachelor
4. Post graduate cert/Diploma
5. Masters
6. Ph.D.
7. CPD - Continuous Professional Development
8. Other

If "Other" please specify briefly: Click or tap here to enter text.

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public
- Private
- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.

### 6) Your Network - Specify the geographical reach of your network. \*

- Local
- National
- Regional
- European Union
- International

### 7) Your Network - Detail your organisations links to University & Third Level Institutes. \*



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The Medical University of Warsaw (MUW) is a modern research centre conducting research in all areas of modern medicine, not only in applied but also basic sciences.

In the pharmaceutical sciences discipline, MUW carries out basic research in the field of synthesis and biosynthesis of new biologically active compounds, as well as the creation of modern pharmaceutical formulations, including biocompatible polymers. Biologically active compounds are analyzed in various matrices, both biological and environmental.

The activities of the research staff of the MUW are realized within the framework of national and international universities and centers e.g. Medical University of Gdańsk, Lublin Medical University, University of Warsaw, Freie Universität Berlin, Helmholtz Zentrum München, Institut of Chemical Physics in Vilnius.

#### 8) **Your Network - Detail your organisations links with Vocational Education Centres.** \*

The Medical University of Warsaw (MUW) is one of the biggest medical university in Poland with 5 clinical teaching hospitals and 5 faculties. Faculty of pharmacy has a long tradition of teaching – we educate pharmacist since 1926. Each year our faculty completes about 200 graduates who supply health care facilitiesm pharmacies, pharmaceutical companies, pharmaceutical industry, diagnostic laboratory, scientific centers and others. Our graduates, due to their very good substantial and practical preparation, are very well assessed by employers. The faculty has an experienced and well-prepared staff. In addition, in students education, it also uses the experience of people working in industry, pharmacies or analytical laboratories.

#### 9) **Your Network - Outline your organisations links with Government Departments/Agencies/Bodies.** \*

As a public medical university, MUW is in close cooperation with the Ministry of Health and Ministry of Science and Education.

Faculty of Pharmacy provides the education in accordance with the standards set out in the Minister's regulation. The Faculty cooperates with the Chief Pharmaceutical Inspector and the President of Drug Registration of Medicinal Products, Medical Device and Biocidal Products. The scientists from our Faculty are members of teams and committees appointed by the Minister of Science and Education and Minister of Health.

#### 10) **Your Network - Detail your networks and collaboration with Research Centres.** \*

Faculty of Pharmacy collaborates with PAS institutes and with National Institut of Drugs. We also collaborate with many of scientific groups from polish pharmaceutical faculties.

#### 11) **Your Network - Detail your networks and collaboration with Non-Government Organisations.** \*

Faculty of Pharmacy collaborates with many of pharmaceutical companies, both in scientific and educational fields.

#### 12) **Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies.** \*



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???

13) **Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs.** \*

Medical University of Warsaw is a leader of CEPT, the center of preclinical research and technology which is the largest biomedical and biotechnological centre in Central and Eastern Europe. Faculty of pharmacy is taking part in this project.

14) **Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME).** \*

Faculty of Pharmacy collaborates with small and leading pharmaceutical companies. The cooperation is based on exchange the know-how, on teaching, providing the implementation PhD thesis. This year, our Faculty is an organizer of the international pharmaceutical conference Accord – “Synergy of interdisciplinary innovations” which connect science and pharmaceutical and biotechnological business.

15) **Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters.** \*

Recently, Faculty of Pharmacy started the cooperation with Infarma – the Employers Union of Innovative Pharmaceutical Companies representing 25 leading pharmaceutical companies engaged in research and development activities and the production of innovative drugs.

16) **Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework.** \*

The Faculty of Pharmacy can support Project Biobec in two main areas: research and education. In the field of research, it would be particularly important to support biotechnology and nanotechnology in the development of new biomedical materials (including biomaterials) and innovative drug forms. We can also share our knowledge in the field of modern pharmaceutical analysis and our experience in the field of the impact of pharmaceuticals on the ecosystem.

In turn, we can also develop programs and conduct education in new direction: pharmaceutical and cosmetic industry based on principles of bioeconomics.

17) **Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples.** \*

No

18) **Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?**

Please provide specific examples. \*

Nie wiem (GNJ)



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19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?.

Please provide specific examples. \*

Nie wiem (GNJ).

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

We educate undergraduate students in two main areas: pharmacy and laboratory diagnostics. We also provide education in the field of Toxicology with elements of forensics and Medical Technology Assessment (HTA).

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Click or tap here to enter text.

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

VR/AR technology integration

Innovation sprints & Design Thinking

Networking events

Enterprise Accelerator Programmes

Funding & Investment networks

Research, Development & Innovation supports

Site visits to bioeconomy industry settings

Site visits to bioeconomy research centres

Work based industry placements

Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

If "Other" please specify briefly: Click or tap here to enter text.

23) BBECs Constitution - Think to all the characteristics of your Institution/Organization (geographical reach, stakeholders involved, thematic area, networks, etc.) and your Vision and Mission. Can you detail the commitment and/or contribution that your Institution/Organization would make to BBECs? \*

The Faculty of Pharmacy can support Project Biobec in two main areas: research and education. In the field of research, it would be particularly important to support biotechnology and nanotechnology in the development of new biomedical materials (including biomaterials) and innovative drug forms. We can also share our knowledge in the field of modern pharmaceutical analysis and our experience in the field of the impact of pharmaceuticals on the ecosystem.



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In turn, we can also develop programs and conduct education in new direction: pharmaceutical and cosmetic industry based on principles of bioeconomics.

## MMRI PAS

### 1) Your organisation name, address and location. \*

Mossakowski Medical Research Institute – Polish Academy of Sciences (MMRI PAS), A. Pawińskiego 5, 02-106 Warsaw, Poland

### 2) Outline the bioeconomy thematic pillars that your organisation specializes in? (e.g. food, marine, forestry, biorefining, education & outreach etc) \*

Institute conducts basic, preclinical and clinical research in the areas of medical biology and clinical medicine, specifically: physiology, neurobiology, oncology, nephrology, pharmacology, gerontology, medical chemistry and cell biology.

### 3) Knowledge Areas - Select the academic levels that your organisation targets and delivers services to: \*

- 1. Secondary
- 2. Vocational
- 3. Bachelor
- 4. Post graduate cert/Diploma
- 5. Masters
- 6. Ph.D.
- 7. CPD - Continuous Professional Development
- 8. Other

If "Other" please specify briefly: Post-doctoral degree, Professor

### 4) Learner Profile: Select the learner groups that your organisation serves: \*

- Primary Schools
- Secondary Schools
- Undergraduates
- Postgraduates
- Life Long Learners
- Industry Professionals
- Civic Society

### 5) Type of Centre (Business Model): \*

- Public
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- Public Private Partnership
- Network Facilitator
- Charity
- Other

If "Other" please specify briefly: Click or tap here to enter text.



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6) Your Network - Specify the geographical reach of your network. \*

- Local   
National   
Regional   
European Union   
International

7) Your Network - Detail your organisations links to University & Third Level Institutes. \*

Ochota Biocentre, Warsaw, Poland  
Center for the Preclinical Research and Technology – CePT,  
Warsaw, Poland

8) Your Network - Detail your organisations links with Vocational Education Centres. \*

Centre for Postgraduate Medical Education, Warsaw, Poland

9) Your Network - Outline your organisations links with Government Departments/Agencies/Bodies. \*

Ministry of Education, Polish Academy of Sciences

10) Your Network - Detail your networks and collaboration with Research Centres. \*

Central Clinical Hospital of the Ministry of Interior and Administration, Independent Public Clinical Hospital W. Orłowskiego, Warsaw, Poland  
Bielański Hospital, Warsaw, Poland

11) Your Network - Detail your networks and collaboration with Non-Government Organisations. \*

Nutricia Foundation, The Alarm Clock Clinic

12) Your Network - Detail your networks and collaboration with Enterprise Development & Support Agencies. \*

Center for the Development of Small and Medium Enterprises (PARP)

13) Your Network - Detail your networks and collaboration with Innovation Centres and/or Digital Hubs. \*

The Polish Association of Centers for Technology Transfer

14) Your Network - Detail your networks and collaboration with Industry (corporate, international, national, regional, large/SME). \*

SME and big corporates - international, national and regional

15) Your Network - Detail your networks and collaboration with Industry Associations, Regional Networks and Clusters. \*

The Polish Association of Centers for Technology Transfer

16) Outline the existing roles and functions within your organisation that you believe should be included in the BBEC design framework. \*

Expert and coach in the field of communication and cooperation between science and business

Transfer of scientific technologies to business:  
commercialization of inventions and novelties  
managing relations with stakeholders in business-science projects  
business-science communication  
business-science business models



17) Role: 'Industry Liaison for the Skills & Talent Pipeline' Do you have dedicated staff within your organisation to identify current and future skills and talent needs? Please provide specific examples. \*

Program manager/ project manager / Executive MBA management

18) Do you have dedicated Programme Managers within your organisation for the delivery & development of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Lack of dedicated programme -

19) Do you have dedicated Project Managers within your organisation responsible for the coordination of education, innovation, enterprise development programmes?

Please provide specific examples. \*

Lack of project managers

20) If you have Lecturing and/or Training Staff, outline the specific types of learners they engage with e.g. undergraduate, postgraduate, industry, life long learners etc. \*

Postgraduates

21) Detail and describe the types of Support roles and Administrative roles within your organization (e.g., academic admission staff, recruitment and applications managers, classes and courses managers, tutors, etc.) \*

Lack of managers

22) Enterprise, Creativity, Innovation & Entrepreneurship Development - Indicate which of the following supports and services that your learners have access to: \*

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Mentors from industry

Mentors from academia

Health & Wellbeing supports

Diversity & Inclusion supports

Other

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\*Institution/Organization would make to BBECs? \*



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Institute can become a significant part of bioscience education center build on the basis of the Ochota Campus, Warsaw, Poland, because of its experience in medical research, preclinical studies and academic background.



 Bio-based Industries  
Consortium



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 **Bio-based Industries**  
Consortium



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