

**Wyciąg z Wniosku Aplikacyjnego
/Extract from the Application Form/****Summary of the Project**

Rural BSR areas have abundant natural resources, but have challenges to reach their full bioeconomy potential due to limited human capital and lack of agglomeration economies. Rural partner regions of RDI2CluB may be called organizationally thin regional innovation systems (RIS) with low levels of firm clustering and a weak endowment with knowledge generation organizations. Due to few actors, regional knowledge exchange is limited and occurs mainly among local actors. SMEs in these regions are mostly in traditional, resource-based industries. Besides the possibilities provided by smart specialization (S3) processes, the regions need extraregional knowledge and networking pipelines to strengthen their competitiveness. In transnational cooperation the partner regions create organizationally thicker and more complete RIS. This transnational cooperation will support a renewal of existing path for business development, and a formation of new regional development paths for higher added value products and knowledge-based jobs and growth.

RDI2CluB aims to develop bioeconomy in rural BSR by increasing capacity of innovation actors to apply S3 approach. RDI2CluB unites the actors in regional and transnational cooperation to (a) build a shared vision on regional bioeconomy performances and potentials, (b) focus joint efforts to the most potential subsectors and interfaces, (c) increase innovation capacity, and (d) promote cross-cluster learning for enhancing innovation and smart bioeconomy businesses. The ultimate aim is to support smart, sustainable and inclusive growth in bioeconomy in rural BSR areas. Target groups are authorities working in S3, RDI institutes and business development bodies. End-users are SMEs in bioeconomy. Civil society, NGOs, consumers etc. are also invited to the process. Main outputs of RDI2CluB include for example (a) Regional Bioeconomy Profiles for five regions to support S3 in rural bioeconomy (b) Operation Model for Innovation management (OMIM) for a transnational hub of four Bioeconomy Clusters/Innovation Ecosystems (BC/BIEs) (c) Open Virtual BSR Biobusiness Hub (OVBH) to manage the hub of BC/BIEs and the OMIM, to support innovation and SME involvement in the hub, to publish the outputs and to secure their durability, and to expand the hub outside the RDI2CluB regions.

Expected results include

- (1) Achieved institutional knowledge of target groups e.g. through transnational piloting of the OMIM and the OVBH to ensure their applicability to support S3 of bioeconomy in different bioregions, and
- (2) Strengthened capacity of four BC/BIEs (in FI, NO, PL, LV) to apply S3 approach for enhancing innovation and sustainable growth of rural bioeconomies.

Further, Estonian innovation actors gain new knowledge for developing S3 of bioeconomy in Estonia and act as a pilot for dissemination of new knowledge developed in the project. The impact of RDI2CluB reaches outside the partner regions to enhance S3 of bioeconomy in rural BSR.

Partnership is based on TRIPLE-HELIX in each partner region: RDI - partner in bioeconomy-related fields, BU - business development body representing SMEs, AU - authority responsible for strategic planning in the region. Each partner has special expertise needed in RDI2CluB and are in key roles in their region in one or more of the following fields: RDI work and entrepreneurship in various bioeconomy subsectors, sustainability issues, innovation management, business development, clustering, S3 planning & implementation, benchmarking, networking and cooperation from regional to transnational level.

PRIVATE SECTOR represented by BU partners is involved in all actions in RDI2CluB, and leads the development of Bioeconomy Clusters/Innovation Ecosystems (WP3) and a group of pilot actions (WP4). Other SME

stakeholders are actively involved in these activities, and some of them (Bitcomp Ltd and Latvian food cluster) support the project also as associated partners.

Bioeconomy is complex and cuts across sectors. The MAIN PARTNERS, 12 organizations come from five different bioeconomy regions (FI, NO, PL, LV, EE). The regions have more or less different strengths and specializations in bioeconomy and they implement bioeconomy and circular economy from their own starting points. The regions are at different stages of S3 work and have different performance levels in bioeconomy. Bioeconomy is identified as one of the S3 priorities in all partner regions and there is a common will to develop bioeconomy. This combination of partnership and bioregions, and all partners' common goal to jointly develop bioeconomy, form excellent base for knowledge exchange, mutual and cross-cluster learning, adopting good practices, and for identification of interfaces that are fruitful for innovation and new business development across BSR area.

In Estonia, the bioeconomy strategy work is done at national level and is delayed. The establishment of the Bioeconomy Competence Center (the planned BU partner) is also delayed. Estonian RDI partner, SEI Tallinn, supported by Estonian Ministry of Rural Affairs as an associated partner, have wide cooperation networks for disseminating the RDI2CluB results. Although Estonia has not 3-helix partnership in RDI2CluB, the knowledge and experience shared and enhanced in the project are valuable for Estonian stakeholders for developing S3 in bioeconomy.

Wageningen Economic Research - WUR (NL) is associated partner that has special expertise on Bio-based Economy with unique data, models and knowledge offering insights and integral advice for policy and decision-making processes. WUR coordinated FP7 project "BERST" that developed the unique tools for smart specialization in bioeconomy. Those tools are exploited in RDI2CluB in WP2. Other associated partners, BSSSC - The Baltic Sea States Subregional Co-operation and Nordic Council of Ministers' Office in Latvia, provide sustainable platform, channels and wide networks for dissemination.

Description of Project Management

For a successful execution of RDI2CluB, an adequate and efficient management structure has been designed to correspond to the size and complexity of the project (12 partners, in heavy interaction with external parties, involved in a 3-yr project reaching from strategic planning to implementation and piloting):

1. According to the lead partner principle of the Programme, the Lead Partner JAMK is responsible of the tasks described in the Programme Manual in Chapter C.2. JAMK appoints (a) a full-time Project Coordinator (PC), who is leading and implementing the WP1 and coordinating and participating in the thematic WPs, and (b) a part-time Communication Manager. The financial project management team of JAMK Administration as well as JAMK's Communication team support the PC.
2. Three decision-making levels are established within the consortium: (a) the Operational Level, where tasks are performed, (b) the Steering Level, and (c) the Coordination Level, where the Lead partner ensures continuous communication between the Programme MA/JS and the project partners.
3. The project's day to day management work is carried out by the PC, the WP leaders, and the Group of Activities (GA) leaders forming Management Support Team (MST) chaired by the PC. These core MST members form the decision-making body and in case of voting, each MST member has one vote. Each WP is led by a different partner from different country, WP2: PP2/FI, WP3: PP6/NO, WP4: PP10/LV. Each WP is divided to two groups of activities, one of which is led by the WP leader, and another by a different partner from different country, GA2.2: PP11/LV, GA3.2: PP1/FI, GA4.1: PP9/PL. Thus, the MST has 7 members representing together all partner countries. The MST meets face-to-face along with other consortium meetings twice a year and in distant meetings once per 1-2 months. When relevant, the MST may also invite

the Communication Manager, JAMK's financial management expert or other experts to participate in the meetings.

4. All partners are represented in the Steering Committee (SC) that meets once a year in tandem with other consortium meetings and is chaired by the Lead Partner. When relevant, external experts may also be invited to visit the meetings. The SC is responsible for monitoring the project implementation, steering the project according to the agreed objectives and strategic guidelines, and making major strategic decisions (in case of voting, each partner has one vote and the Lead Partner has two votes).

5. The SC is supported by Advisory Board to be established in the beginning of the project. The Advisory Board provides advice on the set-up of the project activities, comments on achieved results and evaluates these in terms of quality, policy relevance and applicability to end-users, and advises on dissemination activities, e.g. providing a link to local and international networks. The input of the advisory board will be written down in the minutes of the board meeting with the response by the PC how to take into account the comments made. The written information is introduced and discussed in the MST and the SC. The Advisory Board meets at least once a year in tandem with SC or other consortium meetings and its members are invited to participate in the SC meetings. The Advisory Board members present high-level officials and experts from partner countries, elsewhere in BSR or EU area. The Policy Area Coordinator EUSBSR PA Bioeconomy is also invited to the Board. Some invited members have already accepted the invitation.

6. The Partners are committed to sign a Partnership Agreement with the Lead Partner in order to settle all main issues of the project, the relationship and responsibilities of the partners and the organizational structure of the consortium.

7. Multiplier group of stakeholders is strengthening the impact of RDI2CluB. The group is invited to participate in two transnational face-to-face meetings and may also have distant meetings with the MST.

Work Package 4

Joint piloting in transnational cooperation

Aim of the WP4

The aim of WP4 is to pilot the joint Operation Model for Innovation Management (OMIM) by using and improving the Open Virtual BSR Biobusiness Hub (OVBH), to ensure their applicability to different type of business ideas and innovations in different bioregions. The pilot actions require intensive transnational cooperation and at the same time, they provide to the participants a lot of possibilities for transnational and cross-cluster learning.

The work package is divided to two groups of activities, the first one focusing to piloting the whole OMIM along with the OVBH system, and the second one continuing to test further the OMIM and OVBH with local pilot cases. In piloting, we aim to use agile project management methods, i.e. repeated brief iterations instead of cascade model. For instance, the OVBH could be introduced step by step, so that first one of the partner regions and its BC/BIE give feedback, and after improvements, the updated OVBH would be introduced to the next partner region and its BC/BIE for feed-back, etc. As in any service development, the involvement of end users in product/service development is emphasized in RDI2CluB pilots. The aim is also to ensure that the end-users have commented the requirements of the OVBH in time.

Further, local pilots aim to promote S3 in the regions by focusing to new technologies and models that support innovation and the business development in those bioeconomy related sectors that have been chosen as S3 priorities in each region.

Ultimately, the pilot actions aim to ensure the durability of the OMIM and OVBH by improving their usability and attractiveness for new users in various bioeconomy sectors especially in rural areas and also outside the RD12CluB partner regions.

Action 4.1.

Piloting the Operation Model for Innovation Management by using the Open Virtual BSR Biobusiness Hub

This group includes the following activities:

4.1.1 Defining the criteria for piloting and planning the pilots in transnational cooperation (also as a part of the program in transnational workshop in Poland in M21).

(M18-M30)

4.1.2 Piloting the Operation Model for Innovation Management (OMIM) in the Hub of BC/ BIEs along with the Open Virtual BSR Biobusiness Hub (OVBH). (M22-M36)

The OMIM and the OVBH will be tested with different business ideas to evaluate and improve their usefulness for.

- generating or capturing new business ideas
- sharing the ideas with possible co-operators
- selecting the most promising ideas,
- supporting their development to innovations and new sustainable products and services
- securing IPR
- involving the financiers and investors in the process
- guiding and monitoring the development path of new business idea to innovation, and finally to marketable product or service
- facilitating the SME involvement and the networking and cooperation between innovation actors
- publishing the results achieved and disseminating the relevant information to end-users

4.1.3 Analysing the results from 4.1.2. Evaluation on the usability of the piloted system for enhancing innovation for smart bioeconomy business development and transnational cross-cluster learning of innovation actors and end-users. Documenting the results and writing the report. (M22-M36)

4.1.4 Giving feed-back to WP3 for improving (a) the operation model for innovation management and (2) the virtual environment, and to WP2 for further developing S3.

(M22-M36)

All activities are implemented in intense transnational cooperation and lead to a main output that is used in transnational cooperation. All activities also serve a pilot action purpose. Future users of the piloted systems, target groups and the end-users such as SMEs, are participating in testing of the OMIM and OVBH and in giving feed-back for improving them. Adhering to the open-access principle of the Programme is self-evident in all activities and outputs.

Outputs

Title Improved Operation Model for Innovation Management in Bioeconomy Clusters/Innovation Ecosystems and improved Open Virtual BSR Biobusiness Hub report describing the tested and improved Operation Model for Innovation Management (OMIM) in the hub of four BC/BIEs to support the innovation management in bioeconomy related sectors especially in rural regions. (Delivered in M36)

The tested and improved system: Open Virtual BSR Biobusiness Hub (OVBH) to manage the hub of BC/BIEs and the OMIM in the hub; and a report describing the improved system. (Delivered in M36)

The purpose of the improved OVBH system is to

- (a) support the innovation management, SME involvement, and continuous transnational cooperation and learning of all innovation actors working in bioeconomy related sectors in rural areas
- (b) ensure the durability and finance of the cooperation hub of rural BCs/BIEs beyond the project duration (there will also be signed agreements on OVBH)
- (c) facilitate the expansion and scaling up of the cooperation hub of rural BCs/BIEs outside the partner regions elsewhere in rural BSR where there are target groups and end-users, and maybe nascent or developing bioeconomy clusters or innovation ecosystems (there will also be signed agreements for new members of OVBH)
- (d) publish the results of the pilots (in GoA 4.1 and 4.2), contribute to the dissemination of other outputs such as outputs of WP2 of RDI2CluB, and disseminate the relevant information to end-users.

The output is of a particular transnational value: it will be used in transnational cooperation by the hub of different BC/BIEs. The OVBH will be used first in the RDI2Club partner regions and also after the implementation phase. Later, the piloted and improved OMIM and OVBH are expected to expand outside the partner regions into other rural BSR bioregions and to be used also by other joining BC/BIE members, SMES, target groups, and end-users. Adhering to the open-access principle of the Programme is self-evident for ensuring the wide uptake of the output beyond the project regions and project duration.

Output target groups

The RDI organizations, innovation brokers, business development bodies and clusters working in the bioeconomy related sectors in rural areas, and cooperating in the transnational hub of four participating BC/BIEs, will be the first to implement the improved OMIM and to use the improved OVBH. They will apply this output in their daily practice also after the implementation phase of the project. As to end-users, especially the SMEs in bioeconomy businesses are expected to exploit this output. They will benefit from the improved system that supports the development of their new business ideas to innovations and facilitates the commercialization process, networking and transnational cross-cluster learning. Further, consumers and other civil society representatives will receive information e.g. about new bioeconomy innovations, products, and services through OVBH.

The improved OMIM and OVBH will enable the scaling up of the transnational hub of BC/BIES and at the same time it will ensure the durability and the uptake of the projects outputs beyond the project duration and beyond the project partnership.

This main output will be first used in RDI2Club partner regions. Later, along with dissemination of information about the improved system - through the networks of the RDI2CluB partnership, target groups and end users, through the tailored media used by the target groups and end-users, through bioeconomy related platforms, etc. - and along with expansion /scaling up of the hub of BC/BIEs with affiliation of new members to OVBH, it is expected to be used also elsewhere in rural BSR areas. Especially, the innovation actors and SMEs in rural BSR areas with nascent or developing bioeconomy clusters or innovation ecosystems can benefit from being as a part of the OVBH.

Activity 4.2.

Local pilot cases to ensure applicability of the operation model and OVBH to support S3 of bioeconomy in different bioregions

4.2.1 Joint planning of local pilots (also in trans. workshop). The pilots are identified using the holistic European Innovation Partnership (EIP) approach that will help to transfer the results beyond the local scale. All pilots will create added-value by using local resources. The pilots will be finalized using inputs from WP2 and WP3. (M22-M33)

4.2.2 Pilots with local SMES, in transnational cooperation. Tailoring the open digital System of Insight (output of GoA 3.2) for integrating different pilot cases from participating BC/BIEs for further testing the OMIM in the OVBH. Testing the OVBH step by step: Starting with the 1st local pilot case; based on feedback the OVBH is improved (activity 3.2.5) and tested with the 2nd local pilot, then with the 3rd one, etc. (M23-M36)

Pilot cases (responsible country in parenthesis) are:

- Piloting an open digital contracting System of Insight that enables to SMEs and microenterprises new innovating digital business opportunities and more efficient resource planning with GIS based value chain modeling e.g. for forestry wood acquisition & logistics, air quality monitoring, and for game and other animal population assessment. (FI)
- Testing and evaluating responsible, sustainable business models that maintain and improve the ecological, social and cultural resources at the same time as business increases its market value. The models will maintain cooperation between a network of value chains in forest environment such as timber production, tourism and hunting activity, and production of forest based food. The models will be made open and available in the Virtual BSR Biobusiness Hub. (NO)
- Application of latest drone technologies for accurate and effective evaluation of biomass resources, forest and wild animal population count (LV)
- Use of mobile devices for measuring air quality and integrating them online via Wi-Fi system with database application (e.g. OVBH). Assessing innovative technologies reducing the emissions and elaborating a new model based on quintuple helix for managing innovative solutions. (PL)

Timely feed-back by end-users for the improvements is ensured by close cooperation between activities 3.2.5 and 4.2.2.

4.2.3 Analysing the results from pilots incl. evaluation on (1) their usefulness for developing the OMIM & OVBH and (2) their usability for SME business development & transnational cross-cluster learning. Documenting the results. (M24-M36)

4.2.4 Giving feed-back to WP3 to improve the OMIM & OVBH and to WP2 for further developing S3 of bioeconomy. (M25-M36)

All activities are of a particular transnational relevance. They are implemented in transnational cooperation and are used to scale up the transnational hub of BC/BIEs and the OVBH. The activities serve a pilot action purpose. The future users of the piloted systems, target groups and end-users such as SMEs and citizens, are participating in pilots and giving feed-back. Open access principle is followed in all activities.

Output

This output consists of different outputs from local pilot projects that strengthen 3/4/5 -helix approach with new or improved technologies, methods, models and/or processes.

The outputs are delivered during M31-M36.

The outputs are as follows:

FI: Open digital platform for OVBH that enables integrating different pilot cases from all participating BC/BIES from different countries, e.g. mobile applications of new digital business opportunities, GIS based value chain models, drone applications, etc. (output from piloting the Open digital contracting System of Insight) (FI)

NO: (1) Models that evaluate the ecological and social sustainability of new bioeconomy products/services, (2) Business plans that incorporate ecological, social and economic sustainability and that can incorporate a network of value chains and businesses (outputs from testing and evaluating responsible, sustainable business models)

LV: Concept of a new bioeconomy service and a step-by-step instruction of how it was created (output from environmental resource assessments using the latest drone technology)

PL: (1) Concepts of (i) applying mobile devices (drones) for measuring near ground emissions from rural residential houses' heating by fossils fuel; (ii) changing attitude/behaviour among local rural communities towards air pollution by providing solutions offered by business.

(2) Model based on 5-helix approach for managing innovative solutions to mitigate air pollution.

(outputs from applying mobile devices for measuring air quality and assessing innovative technologies reducing the emissions and elaborating a new 5-helix based model)

All local pilots correspond to S3 priorities for two or more partner regions.

The pilots help to scale up the hub of BC/BIEs and the related OMIM and OVBH.

This output is of a transnational value: the pilots are implemented in transnational cooperation and are used to scale up the transnational hub of BC/BIEs, the OMIM and the OVBH.

Output target groups

The A4.2 partners will involve local authorities, RDI institutes, business development bodies during the pilots to accustom them of their use. Local target groups will be invited to events and informed as how to best implement the outputs. The step-by-step instructions will be freely available online and particularly useful to knowledge intensive companies, environmental regulatory agencies, auditors and planning regions.

The output will be useful to entities creating added-value products from local resources. The precise subgroups of environmental resource management and services that will benefit the most will be clarified in WP2 and WP3, however it is clear that the pilots will include state-of-the-art technologies, thus benefitting R&D, SMEs, ICT clusters, as well as the management and/or assessment of environmental resources, thus benefiting regional authorities, local municipalities and private landowners.

The investments related to the mobile measuring devise (i.e. items 1 and 2 in the section 3.3) will be owned by PP7.

The items will be developed in the regions, where the responsible partners are based. However, the current setup of pilots (to be specified using outputs of WP2 and WP3) and their outputs are based on actions that are relevant and useful – besides to the responsible partner regions – also to the most other partner regions. Further, the outputs can be transferred, at least at the national level (e.g. drone services for wild animal assessment), throughout the BSR programme territory.

The outputs will be made available free of charge on the involved partner websites and in the OVBH. Information on the outputs will be disseminated in project meetings as well as interactions with relevant stakeholders after the project closure. According to open access principle, the outputs will be effectively disseminated to all interested actors also beyond the project partnership and project duration.