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DanuBioValNet

Cross-clustering partnership for boosting eco-innovation by developing a joint bio-based value-added network for the Danube region

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Cluster Tool Box „New Cluster Services to support SMEs in bio-based industries”

Project co-funded by European Union funds (ERDF, IPA).

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- Business Upper Austria OÖ Wirtshaftsagentur Ltd. (Biz-up), Austria, ERDF PP13, for the co-ordination of the activity and the elaboration of chapter 3.4.1;
- BIOPRO Baden-Württemberg, Germany, the Lead Partner, for the elaboration of chapter 3.4.3 and the overall review of the document;
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- Anteja ECG, Slovenia, ERDF PP2, for the elaboration of chapter 3.1.3;
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- Cluster Agentur Baden-Württemberg, ERDF PP1, Germany, for the elaboration of chapters 3.2.3 and 3.4.4;
- Innovation Centre of the Faculty of Mechanical Engineering (ICME), IPA Pp1, Serbia, for the elaboration of chapter 3.5.1.

Disclaimer

For further information about the DanuBioValNet project, you will find a short description in the document. To learn more and to download additional resources please refer to the project website

http://www.interreg-danube.eu/approved-projects/DanuBioValNet.

Information is provided without assuming any legal responsibility for correctness or completeness. The data presented in the report are based on the information given by the project partners.

LIST OF ABBREVIATIONS

ABC	Association of Business Clusters (Bulgaria)
B2C	Business to Cluster
BBI JU	Bio-based Industry Joint Undertaking
BFC	Bulgarian Furniture Cluster
Biz-up	Bussines Upper Austria - OÖ Wirtschaftsagentur Ltd.
CLUSTERO	Romanian Cluster Association
CWC	Croatian Wood Cluster
DTP	Danube Transnational Programme
ECEI	European Cluster Excellence Initiative
EPO	European Patent Office
ERDF	European Regional Development Fund
ESCA	European Secretariat for Cluster Analysis
ESIF	Europe Structural and Investment Fund
EUSDR	European Union Strategy for the Danube Region
FBI	Forrest Based Industry
FDI	Foreign Direct Investments
GSE	Green Synergy Cluster
H2020	Horizon 2020
ICME	Innovation Centre of the Faculty of Mechanical Engineering (Serbia)
ICT	Information and Communication Technologies
IPA	Instrument for Pre-Accession Assistance
IPR	Intelelctual Property Rights
LATAM	Latin America
NCA	National Cluster Association (Czech Republic)
NGO	Non governmental organisation
OP	Operational Programme
Poly4Emi	Polymers for Emerging Industries
PP	Project Partner
PR	Public Relations
PV	Photovoltaic
R&D&I	Research, Development and Innovation
RES	Renewable Energy Source
RIS3	Regional Innovation Strategy 3
SEE	Southeast Europe
SME	Small and Medium Sized Enterprise
TRIZ	Theory of the Resolution of Invention-related Tasks
TRL	Technology Readiness Level
VC	Value Chain
WIPO	World Intellectual Property Organisation

GLOSSARY

Bioeconomy Bioeconomy is the production of renewable biological resources and the conversion of these resources and of waste streams into value added products, such as food, feed, bio-based products and bioenergy. Its sectors and industries have strong potential for innovation due to their use of a wide range of sciences, enabling and industrial technologies, along with local and tacit knowledge. (Source: European Commission (2012). Innovating for Sustainable Growth: A Bioeconomy for Europe, p. 3)

Cluster Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms within related industries, and associated institutions (for example, universities, standards agencies, and trade associations) in a particular field that compete but also cooperate with one another. (Source: M. Porter (1998). On Competition, Updated and Expanded Edition. Harvard Business Review Book, p. 213)

Cluster Initiative Cluster initiatives are organised efforts to increase the growth and competitiveness of a cluster within a region. They involve cluster firms, government and/or the research community. (Source: Ö. Sölvell, G. Lindqvist and Ch. Ketels (2003). The Cluster Initiative Greenbook, p. 9)

Cluster organisation By a cluster organisation one should understand an organised effort to facilitate cluster development, which can be pivoted by various entities, ranging from non-profit associations to public agencies, or even companies. (Source: PricewaterhouseCoopers (2011). Uncovering excellence in cluster management, p. 6)

Cluster management can be defined as the organisation and coordination of the activity of a cluster in accordance with a certain strategy, and with the goal of achieving a set of clearly defined objectives.
(Source: PricewaterhouseCoopers (2011). Uncovering excellence in cluster management, p. 3)

Cluster participants

Cluster participants are industry, academia or other intermediaries that are commonly engaged in a cluster initiative. Given the case where a cluster initiative has a certain legal form, like an association, cluster participants are often called cluster members.

Cluster Policy

Cluster policy is an expression of political commitment, composed of a set of specific government policy interventions that aim to strengthen existing clusters and/or facilitate the emergence of new ones. Cluster policy is to be seen as a framework policy that opens the way for the bottom-up dynamics seen in clusters and cluster initiatives. This differs from the approach taken by traditional industrial policies which try (and most often fail) to create or back winners. (Source: European Commission (2016). Smart Guide to Cluster Policy, Guidebook Series: How to support SME Policy from Structural Funds, p. 11).

Eco-innovation

Eco-innovation aims at significant and demonstrable progress towards the goal of sustainable development. Eco-innovation projects will therefore aim to produce quality products with less environmental impact, while moving towards more environmentally friendly production processes and services. Ultimately, these projects build towards the goal of reduction of greenhouse gases or the more efficient use of various resources. (Source: European

Commission (2015). Eco-innovation: When business meets the environment. FAQ: What is Eco-Innovation? Online).

Programme Programmes are a vehicle through which to implement policies, e. g. a funding programme for R&D in environmental technology. In addition to programmes, policies are also implemented through regulation (or regulatory framework, e. g. laws on consumer protection).

Smart Specialisation Strategies S3 Smart Specialisation is a strategic approach to economic development through targeted support for research and innovation. It involves a process of developing a vision, identifying the place-based areas of greatest strategic potential, developing multi-stakeholder governance mechanisms, setting strategic priorities and using smart policies to maximise the knowledge-based development potential of a region, regardless of whether it is strong or weak, high-tech or low-tech. (Source: Foray (2015). Smart Specialisation, Opportunities and Challenges for Regional Innovation Policy, Routledge).

Value Chain The value chain describes the full range of activities that firms and workers partake in to bring a product from its conception to its end use and beyond. A value chain refers to the full lifecycle of a product or process, including the material sourcing, production, consumption and disposal/recycling processes. This also includes activities such as design, production, marketing, distribution and support for the final consumer. (Source: University of Cambridge (2017). What is a value chain? Definitions and characteristics. Online).

We will clearly distinguish between clusters, cluster initiatives and cluster organisations to make our intended proposals clearer and more precise.

1.RATIONALE

This document has been elaborated as part of DanuBioValNet, a project run in the framework of the Danube Transnational Programme, in the period 2017-2019, aiming to facilitate eco-innovations in the bio-based industry by improving framework conditions and making better use of the clusters, potential and diversity of the Danube region.

Clusters are well established, proven and efficient instruments of regional economic development based on innovation and internationalisation. By definition, enterprises in clusters tend naturally to align themselves along the value chain, making use of the positive spill-over effects of the network. On the other hand, from the Black Forest to the Black Sea, the Danube crosses a variety of economic landscapes characterised by a gap of competitiveness between the Western side, speeding at full power towards Industry 4.0, and the Eastern side where traditional sectors are faced with the dramatic impasse of innovating or dying out.

Documents of the European Union Strategy for the Danube Region have identified bioeconomy as a cross-sectoral, highly innovative sector where most of the regions prove complementary competitiveness advantages and a high potential that could contribute to a prosperous, eco-innovative development of the entire Danubian macroregion.

From this perspective, bio-based value chains require the adoption of new technologies and high capabilities from firms to act in interconnected value

chains (VCs). The VCs must bring together producers, users and buyers within the regions and connect them along the Danube. Development of VCs must entail actions to speed up cross-sectorial and cross-regional connectivity regarding the flow of knowledge and information as well as the formation of a critical mass to overcome fragmentation and foster access to VCs.

The systematic multilevel approach to improve the framework conditions for eco-innovation in innovation in the field of bio-based industry demands new tools on all levels. Cluster Services are the key for cluster organisations to support their cluster actors to innovate and become more competitive. Given the above, the DanuBioValNet partners have identified the most promising cluster services that cluster managements and other similar organisations may apply to support SMEs in general and particularly the SMEs within the bio-based industry to innovate across sectors along the VCs or to match the "right" partners to bridge existing VC gaps.

We received input from the European Secretariat for Cluster Analysis, from surveys among the cluster organisations in the region and from dedicated cluster management trainings. Cluster training schemes have been designed in order to encourage the transfer of best practices between regions and to advice cluster managers on how to adapt and implement the identified cluster services. 3 training session took place: Sofia (BG) (19.03.18), Cluj (RO) (17.05.18) and Opatja (HR) (05.06.18).

As a result, 16 services have been identified/developed and grouped under six thematic areas: Innovation, Internal Networking, External Networking, Business and Commercial Activities, Entrepreneurship, and Cluster Policy.

2.WHAT ARE CLUSTERS: CLUSTER INITIATIVE VERSUS CLUSTER MANAGEMENT ORGANISATION

Since the beginning of the 20th century when Alfred Marshall laid the foundation of cluster theory (although proto-clusters could be found in industrial European regions as early as the 1st Industrial Revolution began), the concept of a cluster evolved in a multitude of meanings and understandings. Coming to it from the different perspectives, scholars and practitioners have used the term for: geographical proximity, value chain analysis, competitiveness of enterprises, innovation, state interventions etc.
Nevertheless, the common understanding of the term, as accepted today by the majority of cluster actors, refers to either:

- A cluster (initiative) as an industrial agglomeration in the Porterian sense of the term;

- A cluster as the management organization of an industrial agglomeration, i.e. of the cluster (initiative)

This apparent tautology, striking at first, is a matter of colloquial convenience: it is easier to say „the X or Y cluster" than to say „the management organisation of the X or Y cluster", or the „cluster manager" instead of „the manager of the management organisation of the cluster". The still-persisting confusion is much more than a matter of pedantry, but has already caused negative consequences. For example, projects have been rejected because evaluators have not understood the connection between the cluster and its management body, as described in the proposal.

The orientation of the cluster management organisations is twofold. The capacities of the cluster management team, in terms of staff, skills, and financial resources have to be developed (1) and enhanced in order to make them able to render relevant services for the cluster members (2), which, as a rule, are rather impatient and expect quick results.
The extent to which cluster managers are able to resolve the dilemma described above makes the difference between success and failure of a cluster initiative.

It is our hope that the successfully implemented cluster management tools described in this brochure will be of valuable help for cluster managers struggling on the stairway to excellence.

3.THE CLUSTER TOOL BOX

The aim of the Cluster Tool Box is to provide a variety of ready-to-use best-practice services supplied by well-established and competitive business-support organisations. The tools shall be used by any cluster management or similar organisation to facilitate competitiveness and excellence.

The tools described in the current chapter correspond to six main types of cluster services usually provided by cluster management organisations:

- Innovation-related activities beyond mere information exchange: Collaborative technology development, technology transfer, R&D etc.;
- Matchmaking and general exchange of information and experience among cluster participants (internal networking);
- Matchmaking and networking with external partners, promotion of cluster location etc. (external networking);
- Business and commercial activities: Exports promotion, sales promotion, offshoring/outsourcing etc.;
- Entrepreneurship (support);
- Policy Support

3.1 Innovation

Innovation may be defined as the process of translating an idea, invention or the results of the research and development process into good services structures that create added value for which customers are willing to pay.
„The Oslo Manual identifies four types of innovation:

- **Product innovation:** A good or service that is new or significantly improved. This includes significant improvements in technical specifications, components and materials, software user friendliness or other functional characteristics.
- **Process innovation:** A new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.
- **Marketing innovation:** A new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.
- **Organisational innovation:** A new organisational method in business practices, workplace organisation or external relations." [1]

In the current industrial context, innovation is now a conditio sine qua non of economic success and of maintaining the enterprises on the business market. Innovative clusters are recognized as key drivers of innovation and economic growth, developing a collaborative and multi-sectoral approach, and also stimulating interactions between innovation actors. Innovation can be seen as a result of interactions between different actors from an innovative system. Learning, trust, and social capital turn into foundation pillars of this model.
Clusters develop various services in support of innovative processes at the level of their members, such as:

- The acquisition of third-party funding (e.g. through public funding);
- The distribution of information about funding programmers and possibilities;
- The organization of working groups, etc.;
- International R&D projects (mainly initiated by the cluster management)

[1] https://www.oecd.org/site/innovationstrategy/defininginnovation.htm

3.1.1 The TRIZ Methodology

Title of the good practice
Application of the TRIZ methodology

Location of the good practice
Ostrava, Czech Republic by the Moravian Silesian Automotive Cluster

Start date of the good practice and (if applicable) end date
2012 until 2016

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

The Moravian-Silesian Automotive Cluster (Autoklastr) came up with the idea to support their members by using the TRIZ methodology five years ago.

The main idea of this good practice is to inspire and lead the researchers and developers of the companies to think differently. The principle of the so called “TRIZ” methodology is to find a new, or the best solution of some “technical problem” by transforming it into a “physical problem” by using the GOLD FIRE software.

Generally, engineers/technicians of a company are only able to apply solutions with which they are familiar to technical problems. As such, the ability to create new (and probably better) solutions is limited by their experience, resulting in a relatively low progress of the company. The TRIZ methodology enables them to think differently: a technical problem is transformed to a physical problem, and almost all physical problems are already solved by many patents/studies all over the world. The database of ways in which to solve physical problems is part of the GOLD FIRE software.

Using it enables the identification of a variety of solutions for the physical problem, and these solutions can then be applied to the technical problem as well.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

The service has been conceived as a commercial use of the TRIZ methodology and of the GOLD FIRE software. The service is available for all companies, regardless of their sector (not only cluster members), but it is not for free. Cluster members can receive the service at a discount.

During the last four years, a total of seven companies used the service, three of which were not Autoklastr members.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

The impacts of the service are:

1) That using the TRIZ methodology and the GOLD FIRE software leads to the discovery of new and unique solutions to specific technical problems. It enables the development of new processes and innovations in companies and institutions.

2) That the time needed for finding the proper solution to a specific technical problem is considerably shorter when using the methodology. The companies that used the service confirm the positive effect of using the TRIZ methodology, and some of them even bought the GOLD FIRE software for their own purposes.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

The idea of finding better solutions by applying different or unusual methods of thinking is practiced around world (the TRIZ methodology originating from Russia). Autoklastr made it more accessible to its members, and thus supported their development, ability to innovate, and competitiveness.

Nevertheless, the main issue faced by the Autoklastr was a lack of awareness about the benefits of the TRIZ methodology. In fact, it is not easy for companies to imagine their particular benefits. As a result, interest in using the TRIZ methodology and the GOLD FIRE software was lower than Autoklastr expected. Therefore, the lesson learned is that good PR and promotion is necessary for a more successful implementation of this sophisticated cluster service.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The TRIZ methodology can be applied to many kinds of industries, and the biobased industry does not make exception. The need to solve technical problems is universal, regardless of the industry.

For example, in the case of eco-construction, we can imagine using the TRIZ methodology and the GOLD FIRE software to find the best way of building with natural materials while making the buildings stronger, higher, safer and more resistant.

3.1.2 Horizon 2020 Tailored Services for SMEs

Title of the good practice
How H2020 can provide a tailored service for SME

Location of the good practice
Nitra Region, Slovakia

Start date of the good practice and (if applicable) end date
03/10/2017 and ongoing

Description of the good practice

What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

1) PROUNION (as the Cluster Management Organization of Bioeconomy Cluster) conducted interviews with SMEs in order to perform **Innovation Audits** and **identify their problems and/or technology requests**. The main aim of the interviews was to identify innovative SMEs and to increase their level of competitiveness through innovation and internationalization.

2) Based on the results of the interviews, PROUNION has searched for the most relevant financing instruments to meet the practical needs of its clients. Several **financing instruments were identified** (e.g. ESIF OP Research and Innovation, EIP - European Innovation Partnership - within the Rural Development Programme 2014-2020, the H2020 projects with cascading mini-grant schemes (such as SuperBio project).

3) Subsequently, PROUNION **matched the needs and requests of SMEs with relevant financing instruments** in order to apply for client-tailored support, and assisted the clients in preparing the application forms for different programmes and projects.

4) The identified **SuperBio project, financed by H2020 with its cascading mini-grant scheme**, has been considered as a new type of support for SMEs in the field of Bioeconomy, and was thus selected as a good practice example. One proposal prepared by PROUNION in cooperation with a client and a grant provider (a SuperBio project partner) was submitted to the European Market Survey service of specific bio-based products.

5) If the application is approved, then the service (with a maximum value of 60,000 EUR) will be provided by pre-selected, relevant professional companies and financed up to 75% through the mini-grant scheme of the SuperBio project. The service provider will prepare a **market survey of a specific bio-based product** produced by a client from agricultural waste (still in testing phase). This survey can then be used in another sector (like eco-construction). The market survey of this product will be a crucial aspect for the client in order to access the foreign markets and thus further develop its diversified activities.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

Beneficiaries of the service are SMEs for which the Innovation Audits identified specific needs and technology requests, and which were interested in applying for relevant grant support.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

In total, **23 organizations were interviewed**, of which 7 companies underwent an innovation audit and/or a technology request.

Based on their needs, **several potential tools and programmes were identified** to support practical solutions for SMEs (e.g. Horizon2020 including BBI JU, ESIF Research Programmes, Rural Development Programmes 2014-2020 EIP Cooperation measure).

One H2020 project related to bioeconomy, SuperBio, was selected for **submission** in order to meet the practical needs of a client.

PROUNION provided specific recommendations and assisted the client in preparing the application form, which is currently in the process of approval. If the application will be approved by the project's consortium, the SME would **receive the innovation service** (i.e., the market research) **worth 20,000 €** (5,000€ co-financing).

Based on the results of the market research, the SME will be able to decide to which **new markets** it could expand in order to find relevant end-users of its innovative product. However, this project could also help foster the commercialization of the bio-based product and find linkages to relevant partners.

Lessons Learned
What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

Consultations provided to SMEs helped identify the specific needs and problems they face. Firstly, a general overview of the funding schemes was presented to all the clients, followed up by specific recommendations for individual organisations. This activity showed that **regular meetings with the clients** is helpful for both sides.

First, clients consider the **"tailor-made" approach** and support very helpful. Second, regular consultations between PROUNION and its clients lead to easier identification of current and specific needs of the SMEs. Although such an individual approach is time-consuming, it is inevitable for a successful cooperation.

Other observations show that there are **relatively many financing tools** available to support innovative products and services in the bio-based industry, **but it is quite difficult to know about all of them.**

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

Consultations with SMEs, Innovation Audits, and the subsequent search for relevant H2020 projects and mini-grant schemes, as well as the selection of projects offering financial resources, while thematically fulfilling the needs of these particular clients, may be applied to a variety of areas. At the same time, PROUNION diversified the spectrum of its activities and services, and thus remained competitive.
It is worth noticing that the SuperBio project offers **10 other types of services for SMEs** in the area of bioeconomy.

In addition, there are **other relevant H2020 projects** offering similar types of services related to financial support. It is crucial to search for those bio-based instruments and projects and disseminate the information to the wider public.

One such project, and the most relevant of them, is the **Bio-Based Industries Joint Undertaking (BBI JU)** Public-Private Partnership between the EU and the Bio-based Industries Consortium. This project offers several small grant schemes for various types of services.

Rural Development Programmes 2014-2020 offer a new type of support to SMEs in bio-based innovation via the Cooperation Measure, which supports the creation and development of Operational Groups of European Innovation Partnerships at the regional and national level. Additionally, these partnerships can be further networked and transferred to the EU-level through multi-actor projects financed by H2020.

European Structural and Investment Funds provide many opportunities (mainly in less developed regions) to support SMEs through individual regional and national research programmes in bio-based areas if they are well defined within the Regional Innovation Smart Specialisation Strategies.

3.1.3 Voucher Scheme for Cross-Sectoral Bio-Based Value Chains

Title of the good practice
Voucher scheme for cross sectoral biobased value chains

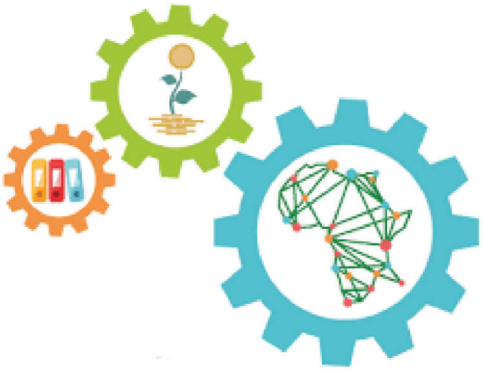
Location of the good practice
Ljubljana, Slovenia; International

Start date of the good practice and (if applicable) end date
01/10/2015 until 30/09/2016

Description of the good practice

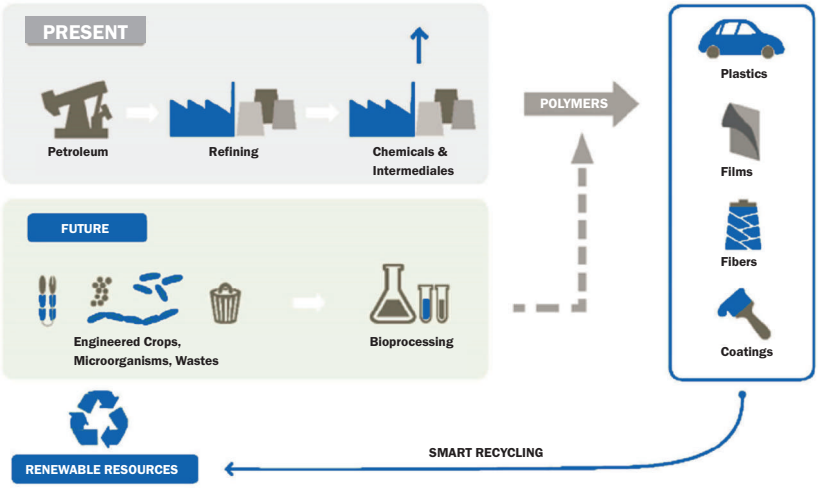
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

A sustainable, inclusive growth of the biopolymer industry (Figure 1)[2] requires a dedicated and balanced approach to addressing specific innovation challenges, while also integrating actors and stakeholders spread across industrial sectors, clusters, traditional value chains and geographic locations.



To explore radically-new business solutions, a systematic approach, the commitment of the regional and national policy makers, the drivers of industrial change, different industries, clusters, SMEs, and entrepreneurs must be used in order to facilitate cross-sectoral spill overs.

Figure 1: Transformation of polymer based industry

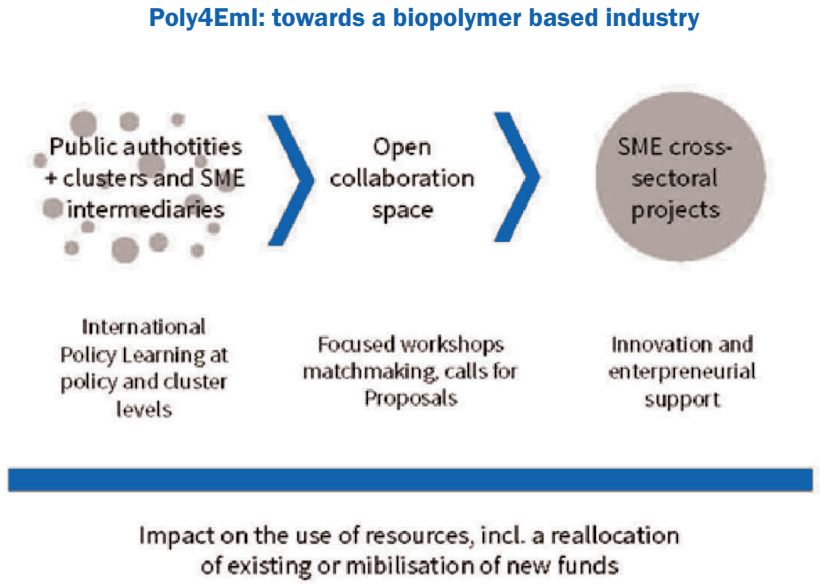


Poly4Eml (http://www.poly4emi.eu) (hosted by Anteja ECG) builds on the proposition that cluster platforms can be an effective approach for promoting entrepreneurship in emerging industries. This was the context in which the cluster management role was tested (Figure 2).

Various tools and services originating from different policies were tested in order to integrate demand and innovative solutions along the selected value chains. These could further serve as a policy mix supporting emerging industries through clusters.

[2]Source: Good practice Guide on Cluster policy Excellence for Structural Change in Emerging Industries; Poly4Eml, EUSALP AG Forum, 2017

Figure 2: The Poly4Eml approach



Biopolymers were used to develop a real case-based policy model that can be extended to different emerging industries, as well as serve as a model for further regional implementation of the Smart Specialization Strategy.

Within the Poly4emi project, a new voucher scheme has been developed and tested to support the configuration of (international) value chains, focusing but not being limited to the biopolymer sector.

The vouchers have been tested on business entities (regardless of their size) that expressed their interest and displayed the ability to engage in the new value chain and implement (bio) polymer-related products/services into their product/service portfolio/production.

The Poly4EmI voucher scheme started with the identification of bio-economic world trends, potential propulsive sectors in Slovenia, and all relevant stakeholders (researchers, companies, cluster organisations). Focused workshops were organised in collaboration with key cluster organizations (Pulp and Paper Institute). The Chamber (CCIS- Chamber of Commerce and Industry of Slovenia) served as an intermediary for SMEs.

The Chamber's role was to identify the existing (but incomplete) biopolymer value chains and to group the relevant stakeholders around new, innovative projects run by the companies and users of various solutions. The Chamber published a voucher scheme. The vouchers seek to facilitate the formation of new value chains and networks.

The main 4 areas for vouchers:

- development of an innovative product;
- internationalisation of innovation;
- value chain (cluster) development; and
- gaining of entrepreneurial skills (training).

The value chain/cluster development voucher empowers companies to start collaborating and define common interests, goals, and strategies. They are encouraged to define and develop their “own” business model for cooperation. The vouchers were dedicated to value chain development and coordination activities. These include partner search/meetings, strategy and project development, cooperation/business model design, and implementation.

The voucher provided an incentive for the companies and knowledge suppliers to join the new, cross-sectoral value chain. The voucher has empowered companies to approach knowledge suppliers (i.e. other companies) and R&D institutions in the value chain with challenges of innovation something that they might not have done in the absence of such an incentive.

Up to 15 Type A vouchers and up to 10 Type B vouchers have been targeted. The call was open for 30 days.

Two types of vouchers have been implemented:

1. VOUCHER TYPE A

The voucher is intended for companies and mature business entities (i.e. existing for more than 3 years) that are initiating and leading the bio-polymer related projects. They apply for the vouchers by presenting a project proposal on a pre-designed application form that includes a presentation of strategic challenge, an identification of partners in the value chain, and a description of the initial project development.

The biopolymer-related projects with the potential of creating new value chains are selected at cross-sectoral B2B (business to business) and R2B (research to business) workshops, stimulating cross-sectoral cooperation and value chain development in the field of biopolymers. Participants in these workshops are mature business and research entities.

Partnership criteria:

- The project partnerships need to consist of a minimum of two partners;
- The partnerships need to be multidisciplinary, integrating multiple technologies and actors;
- Projects based on a consortium of actors, and reflecting cross-sectoral approaches are encouraged;
- Partners in a proposed project can act either as beneficiaries or as service providers;
- Either the applicant or the partner must be involved in the open collaboration space activities and cross-sectoral workshops organized by the Poly4EmI.

Reimbursement: There are vouchers available to reimburse the costs of services and goods acquired for the implementation of the project.
The amount of support offered by a voucher is up to 3,000 EUR per project.

Criteria for project proposals:

- Innovation (TRL 3 and above);
- Market attractiveness (economic potential in terms of industrial development);
- Potential to create a new value chain (multidisciplinary/trans-sectoral projects);
- Impact aimed to be achieved;
- Quality of the proposal.

Eligible services, covered by the voucher type A:

Service	Description of the service	Providers
State-of the art (prior art) analyses Competing Art analysis	Prior art search regarding already-existing technology solutions, patents, academic articles, and other sources. Prior art is any evidence that the invention is already known. Prior art does not need to exist physically or be commercially available. It is enough that someone, somewhere, sometime previously has described, shown or made something that contains a use of technology similar to the invention. Competing art: ideas that may not be at all like the original but do the same job are »competing art«.	Intellectual property offices (Austria, Germany, others, EPO, WIPO). IPR agents and consultants
Proof of concept including prototyping and scale-up testing	A proof of concept or proof of principle is either **a realization of a certain method or idea that can demonstrate its feasibility**, or a theoretical demonstration which could verify that some concept or theory has the potential of being used (e.g. testing of materials). Building an early sample, model, or release of a product, which could later be replicated or at least learned from. Included are simulations (software) and 3D printing.	Companies, Research organisation. Certified institutions

Consultancy (IPR, legal)	Consultancy services; focus on Intellectual property rights (patenting, registering of a design or a trademark); legal consultancy (focusing on IPR in development/research collaboration contracts).	Consultancy companies.
Market analyses	Analysis of potential markets for an innovative product, including analysis of legal documents/enablers/obstacles for marketing of specific technology.	Market analyses providers; companies.
Value chain/cluster development	■ Initiation, development and coordination of new value chains. ■ If needed, it can include meetings, preparation of legal documents. ■ International partner search according to previously specified criteria. Widening the business network of a cluster or of the value chain members. ■ Strategy and project development. Support to the strategy development of a cluster. Project development know-how. Cooperation/business model design and implementation. Development of a new business model of cooperation (among cluster or value chain members) ■ Mentoring and coaching for cluster/value-chain development.	Members of the value chain. Other providers of business networking. Consultants

Additional advantages for successful applicants of the voucher scheme of the Poly4emi initiative:

- Taking advantage of advice from a European expert jury evaluating their case;
- Reinforcing their visibility at European scale;
- Benefiting from the help of several clusters and partners at the European scale (Spain, Germany, Italy, etc.) to facilitate their approach on associated markets;
- Increasing their innovation potential by the integration of new technological blocks;
- Benefiting from access to European partnering events.

2. VOUCHER TYPE B

The voucher is intended for young companies and start-ups (i.e. existing for up to 5 years) that are initiating and leading biopolymer-related projects. They apply for these vouchers by presenting a project proposal through a pre-designed application form, which includes a presentation of strategic challenge, an identification of partners in the value chain, and a description of the initial project development.

The potential of biopolymer-related projects to create a new value chain is evaluated through a start-up (co-invest) conference that stimulates entrepreneurial ideas and start-ups within the field of biopolymers. Applicants can also be individuals.

The expected results of the vouchers are new relationships and projects developed among companies and research institutions. Additionally, (two-way) knowledge transfer among participating entities is stimulated with the aim of establishing longer-term and closer collaboration.

The vouchers aim to provide an incentive for the companies to enter the new, cross-sectoral value chain. This empowers them to approach knowledge suppliers (i.e. other companies) and R&D institutions with challenges of innovation, which they might not have done in the absence of such an incentive.

The objective is to stimulate knowledge transfer among participating entities and to support incipient project ideas that could lead to long-term cross sectoral cooperation and value chain development in the field of biopolymers.

Criteria for project proposals:

- The project proposal must address biopolymer-related issues;
- The project proposal must be innovative;
- The project proposal must be developed to at least level 3 on the technology readiness level scale (EC);

- The project proposal must be marketable and must aim to achieve an impact;
- The project proposal must have the potential to create a cross-sectoral value chain;
- The project proposal must be in line with Poly4Eml's overall approach.

Vouchers

There are available vouchers to reimburse the costs of:

- training in entrepreneurial topics
- participating in the investor conference investor conferences

Eligible services, covered by the voucher type B:

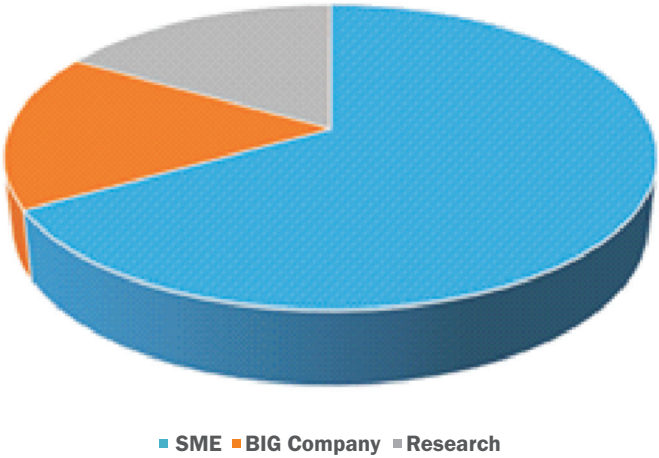
Service	Description of the service
Value chain/network development	Initiation, development and coordination of new value chains. If needed, it can include meetings, preparation of legal documents. Registration for a start-up conference stimulating entrepreneurial ideas and start-ups within the field of biopolymers. Partner (investor) search. Widening the applicant's business network.
Entrepreneurship training **Start-up presentations training (pitching), presentation design**	Training on several entrepreneurial topics (open). Developing presentation skills (pitching to investors).

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

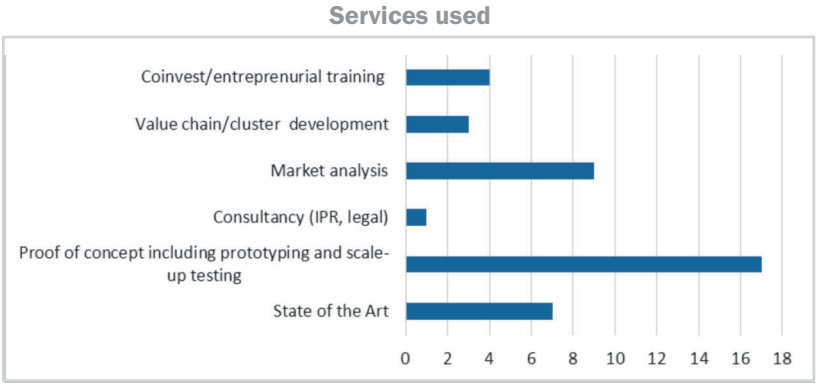
The outcomes of the voucher scheme: 22 Type A and Type B vouchers have been issued (with an initial target of at least 20 vouchers). 28 SMEs, 7 big companies, and 7 research organisations were include into the voucher scheme.

POLY4EMI VOUCHER cooperation organisations



Cluster management: the project demonstrated that cluster management can play a critical role in emerging biobased industries. It can animate, steer and facilitate the creation of new value chains; it can combine various instruments and act as a bridge-builder to connect companies from different sectors and sub-sectors at a regional and cross-regional level; it can establish and nurture linkages between clusters in different locations and provide SMEs with access to the most advanced technologies, know-how, and markets.

The recipients/beneficiaries of the Poly4Emi voucher scheme chose several services as seen below:



Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

The main purpose of the voucher is to build new relationships between SMEs and public research institutions in order to stimulate direct knowledge transfer and/or act as a catalyst in forming longer-term, deeper relationships. The voucher empowers the SMEs to approach knowledge providers with their innovation-related problems, something that they might not have done in the absence of such an incentive.

Some of the projects lead to new products and new technologies. The rest of the companies continue to actively collaborate on new projects, new products, and discovering new possibilities. This being said, all the involved companies are richer in knowledge and ready to investigate new opportunities. All partnerships brought added value to the organisations involved. All of the participants possess new business contacts, new knowledge about the business orientation of their partners, and new networks in their identified biopolymer value chains.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

The value chain voucher proved to be an effective instrument in helping SMEs and entrepreneurs get access to the most desirable support services. It was suggested that a voucher scheme managed by private SME intermediary organizations could be much more effective due to a number of factors, including there being far fewer administrative issues, a better understanding of the target groups, and a much better alignment of the voucher objectives with the broader scope.

The availability of the vouchers is widely advertised in the press and through the internet (e.g. social media). Representative associations, trade bodies and chambers of commerce can also be actively involved in their promotion.The firm and the knowledge provider could set requirements on the use and impact of the voucher, but these should be minimal, given the use of small-scale funding.

Administration and implementation should be kept as simple as possible, from the application process to the selection of the beneficiaries and the reporting of requirements.

Technology lock-ins: if the scheme makes it for the knowledge institution to be from the same country or region as the firm, it can limit the search patterns of an SME and its ability to find an effective solution to its technological problems.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The service is dedicated to the biobased industry, but due to its coherent methodological approach and proven results, it can easily be transferred to other sectors.

3.2 INTERNAL NETWORKING

Clusters are more than "regional agglomerations" of different partners. They are built around a shared vision and jointly-assumed objectives and activities. They also require the harmonization of different interests against the commitment of each partner to contribute to the development of the cluster, as shown in the following table.

Partner	Benefits	Contributions
Industry	-Increase of added value; -New clients	-Cooperation; -Joint use of facilities; -Exchange of personnel
Academia	-Ongoing update of curriculum; -New labs sponsored by industry; -Ongoing learning process; -Research nuclei	-"up to date" and applied research; -Transfer of technology and know how
Government	-Local/regional economic development; -FDI	-Mediator; - -Dissemination of results; -Funding
Catalyst organisations	-Added Value; -New clients; -Participation to an innovative network	-Transfer of know how;- -Coordination; -Dissemination of results at national and international level

In order to stir up the integration process of cluster members, the management provides a wide range of services such as:
-Organizing regular get-togethers and special events;
-Organizing thematic events and workshops exclusive to cluster members;
-Publishing an internal newsletter or a web-based exchange of experience and information, etc.

3.2.1 Business Days

Title of the good practice
Business Days

Location of the good practice
Ostrava, Czech Republic by the Moravian-Silesian Automotive Cluster

Start date of the good practice and (if applicable) end date
2015 until now

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

The Moravian-Silesian Automotive Cluster (Autoklastr) organises for its members the **Business Days event**. The service was created by Autoklastr and it focuses on **cooperation and business relations** among the cluster members.

The idea is that its member companies that are higher in the production chain/value-added chain (i.e. closer to the final customer) - the so-called TIER1 - **inform** the companies lower in the production chain TIER2 (the potential suppliers of TIER1) about their vision and direction of development. The "Business Day" event enables the companies to get very important information about the **future development and direction of the industry**, thus giving them the opportunity to prepare for these future challenges and improve their position in the market.

The automotive industry has a structural particularity is very specific there is no guarantee that the TIER 1 companies will still buy the products from the same suppliers (TIER 2), given that the price and quality of the products are more important than personal linkages. So Autoklastr cannot guarantee stable business relations among its member companies.

Nevertheless, the Business Day event is a great opportunity for the suppliers (cluster members) (TIER2) to receive important information, and thus get prepared for the future in terms of innovation, enhancing their competitiveness, and getting a better chance to become the suppliers for TIER 1. It, moreover, stimulates competition and accelerates the development of innovation of the whole automotive industry.

The Business Days is an unofficial event organised twice a year by the Autoklastr management, it is free of charge and designed only for the cluster's members.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

The beneficiaries are mainly cluster member companies within the same production chain/value-added chain. But the event could also be worthwhile also for universities and research institutes, which are also invited.
The events are organised by Autoklastr twice a year, and each event is on average attended by 15 members.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

The main impact of the service effects the cluster member companies within the same production chain/value-added chain.

1) The companies higher in the production chain/value-added chain (TIER 1) provide information about their future interests and intents to their potential suppliers. They can thus influence their potential to develop the products best suited to their current and future activities. They can also accelerate the competition between suppliers, placing them in a position to challenge one another and come up with new innovations.

2) The companies lower in the production chain/value-added chain (TIER2) receive important and unique information that they could not otherwise encounter, thus earning a competitive advantage, preparing for future trends and heading towards their potential customers. They can thus better adapt their production and R&D activities.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

The Business Days event shows the importance of the companies higher in the production chain/value-added chain (TIER 1), whose growth influences the growth of both their suppliers (TIER 2) and their suppliers' suppliers (TIER 3). TIER 1 companies determine the level of development of the industry and can extend the R&D activities/innovations in the region.

The biggest difficulty faced by the Business Days event is getting TIER 1 companies to come to the event and present their future intentions, the executives of these companies being tremendously busy.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The service can be transferred to any biobased industry that has a strong supply chain. It connects the cluster members (suppliers and customers) and enables them to grow together and support each other in the region.

The pressure put on the suppliers by companies higher in the production chain/value-added chain accelerates the process of innovation and the overall development of the industry.

Transferability to the biobased industry depends on the strength of the business relations among the companies (the competitive environment of the industry) and on the willingness of companies higher in the production chain/value-added chain to advise their potential suppliers on what they could do in the future to be more successful and competitive.

3.2.2 Centre of Experts

Title of the good practice
Centre of Experts

Location of the good practice
Ostrava, Czech Republic

Start date of the good practice and (if applicable) end date
2013 until now

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

The Centre of Experts was created by the Moravian-Silesian Automotive Cluster (Autoklastr). Through the service, the cluster organisation creates an environment where cluster members (mainly firms) can meet experts in specific thematic fields which they themselves designate.

The idea was launched by Autoklastr as a regular service for its members (firms, universities, etc.). Through the Centre of Experts, Autoklastr organises thematic seminars on specialised topics identified from the needs and demands of its members. The project aims to improve the abilities and knowledge of the experts employed by the member companies, who are often the only ones in the company specialised in their particular field. Not having the opportunity to discuss their topic of expertise with any of their co-workers, they are seldom provided with chances to grow professionally and improve their abilities. The exchange of experience with other experts in the same field helps them to get new information, knowledge, and ideas on how to shift/boost the development of their companies or enhance innovation.
Twice a year, the Autoklastr organises five thematic seminars on IT, industrial engineering, maintenance, ergonomics, and support of

innovation, bringing the experts together and increasing their knowledge and experience. Each seminar is attended by experts from 7-10 cluster members. The seminars and the service are provided free of charge to the cluster members.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

Beneficiaries of the service are all the members of the cluster organisation (big companies, SMEs, universities, etc.) who are interested in the chosen fields and would like to enable their experts to grow professionally and thus improve the R&D/innovation environment of their companies/institutions. Autoklastr currently has 75 members.

The service was launched 5 years ago, and its high demand assures that it will continue in the future.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

The cluster service mainly targets to impact:

1)The individual experts it strengthens the abilities and knowledge of the experts, thus increasing their labour market value. It also allows the experts to grow professionally and not be “stuck” in the routine company management processes.

2)The institutions (firms, universities etc.), which can provide their experts with an opportunity to become exposed to new information, learn new things and share their experience with others in their specific fields. The institutions can thus implement the new processes/ideas/innovations and boost their development and competitiveness.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

The interest shown by the cluster members proves that the service works really well and has practical benefits for them. This is why they repeatedly attend the seminars.

The vision of the Autoklastr is to also involve external experts, local and international, as speakers at future thematic seminars.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The generality of the approach makes it relevant for the biobased industry as well. The idea of the Centre of Experts can also be transferred to the biobased industry, as the need for experts to increase their knowledge and exchange information with one another is beneficial, regardless of their industry.

The ability and interest of cluster members to define common thematic topics for the seminars are the main barriers in the way of a successful implementation of the Centre of Experts. It is also crucial for the experts within the cluster to be open and willing to share information among themselves.

3.2.3 Lighthouse Groups

Title of the good practice
Working Groups and Competence Networks - “Lighthouse Groups”

Location of the good practice
Stuttgart, Baden-Württemberg, Germany

Start date of the good practice and (if applicable) end date
2013 until now

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

Allianz faserbasierte Werkstoffe e.V. (AFBW) is a network for textile raw materials and related products. Out of its members, it forms loose working groups formed around specific topics. In case those groups are functioning and beneficial, competence networks with carefully selected members are built out of these working groups in order to bring the cooperation to the next level. AFBW acts as an intermediary that creates a trusted base and connects the different actors. Within these networks, the partners cooperate in a close partnership, which aims at increasing their competence, competitiveness, efficiency and capability.

A good example of a competence network is the so-called “lighthouse group” formed in 2013 which concentrates on goods made out of air-gap technique fibres. The network brings together various actors along the complete value chain of such fibres. Its members are producers of textile fibres, knitted fabrics, and other high-tech fibres. On the next node, there are specialists that machine and handle those fibres in order to give them special treatment. In the end, producers of goods made out of air-gap technique fibres are included. Altogether, nine firms and one research institute form the whole of the competence network.

Modern high-tech fibres like those mentioned above feature a lot of characteristics that make them advantageous compared to conventional fibres and especially useful for innovative industries. Characteristics of such textiles are being fire-proof, water resistant, light-weight, resistant to decomposition, and inhibiting acoustic noise. Those properties are beneficial for high-tech industrial sectors such as aerospace or shipping.
Thus, the relevant markets and potential buyers of products made of air-gap technique fibres are extremely innovative, challenging, and competitive. In order to persist in such markets, it is crucial for smaller or medium-sized actors to join forces with others. Significant benefits can be realized due to cooperation with actors along different nodes of the value chain.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

Beneficiaries of the service are the members of the cluster initiative who form the competence network:

Firms and research institutes that want to participate in a trustful and mature partnership with other actors within their technology field in order to fully occupy the value chain and initiate joint projects and activities and develop new products.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

All firms gained benefits from the higher attention obtained through PR-activities such as the distribution of flyers, the joint website, and the promotion of the network via the communication channels of AFBW.

Furthermore, they are able to realize projects and partnerships with key actors and buyers they would not have been able to address otherwise, an example being a cooperation with the famous Meier Werft.

Some other results are a jointly financed demonstrator, which helped the network to present itself at the Hannover Messe. By means of the demonstrators, potential interest groups can be addressed directly by demonstrating the applicability of goods made from air-gap technique fibres.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

1. A trustful partnership is necessary in order to form competence networks. Thus, an intermediary like AFBW needs to initiate contact and take the first steps.

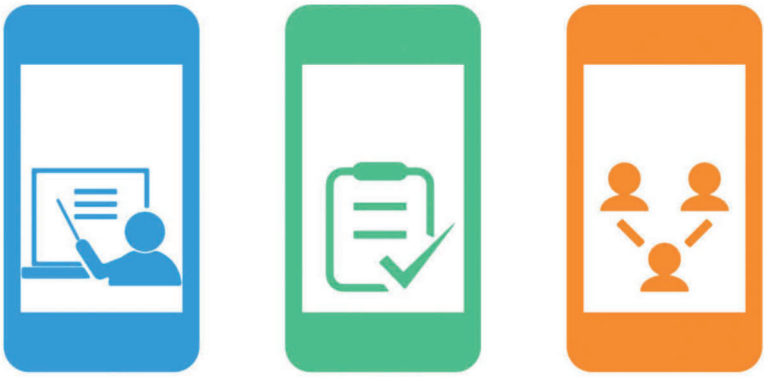
2. It is nearly impossible for a single firm to establish innovative projects and products, especially in highly specialized industry sectors.

3. A functional and jointly operating competence network can create huge benefits for its members.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The service of AFBW can be applied to fields of the biobased economy as well. As the biobased industry is highly specialized and innately innovative, the idea of forming working groups around specific topics and developing competence networks is compatible This requires a cluster initiative featuring a broad range of firms and research institutes in order to appropriately cover the value chain of a certain industrial field.



3.3 External Networking

In order to be able to provide relevant, high-quality services to their members, cluster management has to increase its own capacity of acquiring relevant skills. This can be done through such things as cluster management trainings and a clear division between cluster management activities and the thematic involvement of the management staff.

Exchange of best practices and participation in international cluster networks are of utmost relevance, given the current globalization trends, the inter-regional policy tools and instruments promoted by the European Union, and the complex cross-sectoral character of new industrial value chains.

Not less important is the embedment of the cluster in regional and national innovation ecosystems and the lobby/advocacy work at the level of the cluster's domestic policy-makers in order to better reflect the interests of cluster members in the current/future support programmes.

Briefly, external networking targets mainly cluster management. This can be achieved by:

- PR activities, such as websites in English (and in other languages, when relevant to the cluster), press releases, information material;
- Presenting the cluster and its participants on trade fairs and congresses;
- Organising specific events and workshops to present the cluster and cluster activities to outsiders;
- Organising specific matchmaking/networking with external partners or other clusters, etc.

3.3.1 Cluster Networks

Title of the good practice
Cluster Networks

Location of the good practice
Sofia, Bulgaria and Central Europe

Start date of the good practice and (if applicable) end date
01/01/2017 until 30/06/2019

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

The Bulgarian Furniture Cluster (BFC) has started the internationalization in the frame of FORESDA, a project that the organization participates in. This has been done in order to gain knowledge not only for itself and its members, but also to pass it along to anyone interested and in need of such knowledge. Working together with clusters, universities, and SMEs from Europe, BFC's Project Manager and President, Genoveva Christova, has participated in several cluster trainings, exchanging knowledge, experience, and ideas with not only Bulgarian companies, clusters, and SMEs, but also with several others coming from Europe and the rest of the world. Along with organizations from Germany, Romania, Austria, Bosnia and Herzegovina, Slovenia, and Croatia, the Bulgarian Furniture Cluster has managed to accomplish the project of internalization by creating newsletters both for the Cluster and the Project, by participating in different types of events around Europe, etc. Presentations were made, explaining whom the cluster consists of and what its role is in the FORESDA Project. BFC was also part of a very big event The TCI Cluster Conference that took place in Sofia, Bulgaria. The cluster is going to present one of its innovations currently in progress new production processes that allow the re-manufacturing of once-used timber to include it in new wooden products. These processes provide a longer life cycle for the timber material and reduce the carbon footprint of the items produced. These production processes will be used to develop an eco-friendly,

transformable wooden bike, which will follow the growth of the children between the ages of 2-6 years old. These features guarantee a longer use-cycle for the product. The combination of re-manufactured components and the use of only natural and recycled materials assure the absolute minimum impact on the environment. Bulgarian Furniture Cluster is hoping that this new product will be used on an international level.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

Beneficiaries of the service are:

- A total of 20 project partners, presentations in front of a total of 300 national companies, higher education institutions, national authorities, organizations, etc.;
- Numerous European organizations, project managers, Clusters.
- Kids from age 2-6 and parents, due to the eco-friendly wooden materials used.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

There are 20 project partners participating in the internationalization, one SME collaborating with the Bulgarian Furniture Cluster on the development of innovative products and materials and on developing the eco-friendly transformable wooden bike, the submission of a Pilot Design, a Roadmap, and a Working Group Agreement within the FORESDA Project. From the 20th to the 22nd of March 2019, the prototype of the wooden bike will be presented in front of representatives from more than 19 countries.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

The idea, process, and implementation of the transformable bike from recycled materials may seem simple, but the endeavour is far more complicated than what meets the eye. Extensive research, testing, statistics, and gathering of information went into finalizing the idea, and into preparing the required documents for the implementation to start. A lot of effort was put into successfully accomplishing the innovation and

internationalisation that will almost certainly lead do success. Working on this product also raises awareness of how much wooden material is wasted, which could be recycled and reused in valuable ways.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

In order to make the best practice relevant, BFC thinks that more products should be made out of recycled wooden materials that are not only eco but also economical and environmentally-friendly. This also makes it relevant to the bio-based industry. Such changes should be made by approaching as many companies, organizations, SMEs, and clusters that work with wooden materials, showing them the benefits of using recycled and raw materials. Working with such materials could change the way we think, work, and protect the FBI sectors. These changes can be implemented not only nationally but also on the international level, which is part of the service's main objective.

3.3.2 Event Management

Title of the good practice
Event management

Location of the good practice
Croatia, Southeast European region and EU

Start date of the good practice and (if applicable) end date
17/04/2017 until ongoing

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

The Croatian Wood Cluster works closely with other clusters in Croatia in order to enhance cross-sectoral cooperation. Notable cooperation has been achieved with the Croatian Competitiveness Cluster for the Food Processing Sector, which represents a networking and cooperation platform for different business subjects aiming to improve food processing sector competitiveness in the Republic of Croatia. In order to enhance the cross-sectoral approach among their members, but also among the wider audience, the clusters co-organize a conference on Bio-based Industries (BBI) in South-East Europe. This specialized conference, entitled ˝Building Competitive Bio-based Industries in the Context of Agricultural, Food Processing, Forestry, and Wood Processing Development" was held in Brussels in July 2017.

Brussels was chosen for several reasons: 1) to meet Brussels officials with the potential of starting bio-industries in the Southeast European (SEE) region and 2) to meet participants from SEE countries and open discussions on avant-garde topics related to bio-based industries. Topics of the conference include investments, innovation, rural development, EU funds, best practices, policy-making processes and the latest sectoral legislation related to BBI.
The conference brings together companies and institutions from forestry, agriculture, and the wood and food processing industries in the South-Eastern European region (Croatia, Bosnia-Herzegovina, Serbia, Slovenia)

and other EU countries, as well as the representatives of EU professional associations, relevant EU institutions, development banks, lobbyists, and so on. The key lectures are being held by the representatives of the European Commission and members of the European Parliament who present the latest EU legislation in the field of BBI and RES. The conference is supported by the Croatian MEPs. Study visits and bilateral meetings are also organized along with the conference
Preparation activities for the conference started in April 2017 and involved human (cluster manager and cluster team engagement), operational (dissemination, motivation, and logistics) and financial resources of both clusters for the organizational activities. Participants bore the costs of travel, accommodation and the participation fee.

The Conference aims to be held on a yearly basis.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

- Companies and institutions from forestry, agriculture, and the wood and food processing industries in the South-Eastern European region (Croatia, Bosnia-Herzegovina, Serbia, Slovenia);
- Cluster members;
- Beneficiaries related to BBI form other EU countries;
- Representatives of EU professional associations, relevant EU institutions, development banks, lobbyists, etc.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

Outputs and results can be seen from several different perspectives - from the EU and SEE region level, the policy level, and the SMEs' level:
- Facilitates the visibility of bio-based industries;
- Provides filtered and focused access to relevant information concerning BBI;

Expected impacts:
- Enhanced cross-sectoral cooperation;
- Greater knowledge concerning BBI;
- Better access to EU funds;
- Application of innovations.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

There is a lack of awareness in relation to the bio-based industry (BBI) in South East Europe (SEE). The hardest part of organizing the conference was getting companies interested in attending it. The EU institutions and associations showed great interest in the SEE region. The event offers a more filtered and focused access to relevant information (investments, possibilities on cross-sectoral cooperation, EU policies and EU funds) and support for SMEs, and it facilitates the promotion of the BBI in general. It also facilitates cooperation between cluster members on several topics. The event aims to be held again on a yearly basis in order to follow trends in the BBI and transfer the knowledge from the EU to the SEE region (at the policy and company level).

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The event management is directly transferable to the BBI because the topic of the event is directly related to this particular sector. Topics and aims of the event should be communicated clearly with cluster members, as well as their potential involvement and benefits from attending the event. Besides the aspect of learning, added-value from the event should also be emphasized, such as networking and cross-sectoral cooperation.

3.3.3 National Cluster Conference

Title of the good practice
Romanian National Cluster Conference

Location of the good practice
Romania

Start date of the good practice and (if applicable) end date
2012 until ongoing

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

Romania was a late-comer in the European cluster landscape. It was only in 2008 that the first cluster mapping was performed. The first cluster, ProWood, was generated in 2010 and it serves the field of wood and furniture. The Romanian Cluster Association (CLUSTERO) was founded in 2011. From the very beginning, Romanian clusters faced 2 main challenges: 1) to increase the innovation level of their member SMEs and 2) to go international. The way to achieve these goals was to increase the visibility of Romanian clusters at the international level, to accede to international cluster partnerships, and to foster the international transfer of best practices to Romania in order to speed up the cluster development process and to catch up with the European level. Hence, beginning with 2012, the Romanian Cluster Association has been organizing the National Romanian Cluster Conference, a 2 days international event attracting cluster policymakers and practitioners from Europe and beyond. Every year, internationally relevant cluster topics are put on the agenda. The conference has a strong orientation towards SMEs, with dedicated workshops and international C2C and B2B brokerage events co-organised by the Enterprise Europe Network. The conference follows a regional approach, taking place, whenever possible, outside of Bucharest. 7 editions have been organized so far: Bucharest (2012), Bucharest (2013), Iasi (2014), Cluj (2015), Galati (2016), Bucharest (2017), Oradea, RO &

Debrecen, HU (2018). There have been over 400 international participants present at the 2018 event. Financing is assured by a mix of project-based funds (Interreg Europe Clusterix, Clusterix 2.0; DTP DanuBioValNet), government support (Ministry of Research and Innovation, regional authorities) and sponsorships.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

Beneficiaries of the service are:

- Clusters and cluster members: SMEs, universities and research organisations, policy makers, catalyst institutions;
- International clusters;
- The Danube region and the entire European Union

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

Outputs: Following the success of the 2015 conference in Cluj, the Northern Transylvanian Cluster Consortium (a regional branch of the Romanian Cluster Association) decided to organise their own international cluster conference, so that the 2017 edition saw the organization in Cluj of the Open Innovation 2.0 European conference, co-organised by the European Commission and the cluster consortium. This was the most important innovation conference ever to be organized in Romania;

The success of the 2017 national conference in Bucharest convinced the EU Commission to postpone the European Cluster Conference, originally meant to take place at the end of 2018 in Austria to May 2019, to be co-organised by the EU, the Romanian Ministry of Economy and the Romanian Cluster Association under the Romanian EU Presidency.
The 2018 edition saw the first jointly-organized cluster conference by 2 neighbouring countries, Romania and Hungary, as the first event of the EU Cluster Weeks initiative.

Results: from an international perspective, with 26 bronze, 3 silver and especially 2 gold labelled clusters by ESCA (status of December 2018), Romania holds the first place in Eastern Europe and has become a relevant voice at the European level; CLUSTERO is currently a member of the consortium implementing the new cluster excellence initiative (ECEI II);

Romanian clusters are active members of international consortia and have turned their strategic priorities towards internationalization, with first cluster missions to China being organized in 2018.

From a national perspective, as a result of the 2016 edition in Galati, a national cluster programme supporting the elaboration of the RDI strategy has been launched, with 12 clusters running projects over the 2018-2020 period.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

The success of the conference can be explained by the following factors: relevance of the addressed topics, the mobilization of a large partnership in the organization phase (the conference must be regarded as a business in itself; not only expenditures, but also possible sources of income must be taken into account), and the regional approach (making local organisers proud of hosting the conference, thus leading to their involvement in the organizational effort).

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

A good example is the 2016 conference in Galati, which was oriented towards the EUSDR and its priorities. When organizing a similar event, topics related to the biobased industry should be addressed by a keynote speech and a dedicated panel. Considering the organization of a huge conference restricted only to this topic would not be advisable, as it would restrict the number of participants to only experts, and would lead to a loss in terms of international visibility.

3.4 Business Support

The core service of any cluster is the support it gives to its members, and in particular to the SMEs. Of particular interest is the internationalization aspect.

The spectrum of activities may include:

- The development and implementation of a strategy for internationalization;
- Participation of the cluster management in trade fairs and conferences abroad with its own booth to present the cluster and its participants;
- Other activities by the cluster management to intensify international contacts and cooperation with foreign partners and clusters (networking visits, business travel, matching events etc.);
- The establishment of branch offices or other permanent representations of the cluster abroad.

3.4 1 Experience Exchange Rounds

Title of the good practice
Experience Exchange Rounds (Synonyms: regulars' table, Task Force, Round Tables)

Location of the good practice
Upper Austria, Austria

Start date of the good practice and (if applicable) end date
2000 and ongoing

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

For more than a decade now, Business Upper Austria has been successfully offering and implementing so-called “exchange of experiences rounds” as a cluster service.

The starting point for an Experience Exchange Round is a Kick-Off event where potential participants and interested parties collect topics they want to work on together in the group. Usually, the Experience Exchange Rounds consist of representatives from different companies of a specific branch, for example, quality managers from the food industry, HR managers from the automotive industry and so on. This ensures that experts can talk to each other face to face. The groups consist of between 10 and 20 people so that a comprehensive exchange is possible. Participation is subject to a fee. As a rule, there are four to five meetings per year and each of them takes about three to four hours.
The host is usually a company from the group of participants and it presents its work to the other participants after the session. The topic discussed at the next meeting is decided in advance. Each participant addresses the daily topic openly through a presentation and through sharing their own company's experiences with the group. If necessary, an external input provider is also invited. If this is the case, priority is given to the involvement of R&D facilities, monitoring or interest groups. The meetings are coordinated, organized and moderated by the project managers of the cluster of which the participants belong.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

Companies from the manufacturing industry particularly benefit from this service. Nonetheless, the service could be offered to any other sector, such as the food, recycling, or the IT sector. Since this service has been offered for more than a decade by almost every cluster of the Biz Up (with clusters organizing several rounds with various specific focuses and an average group size of 15 participants) a large number of companies have already benefited from this service and will probably continue to do so in the future.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

The overall goal of the described cluster service is for participants to exchange know-how on intersectional issues and to initiate projects.
Several opinions and experiences on a topic from different people can lead to new insights for the individual. So every single company can gain added value from this service because new solutions and approaches to sector-specific challenges can be found through an open and honest common exchange of ideas.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

For an unrestricted exchange of experience, it is important that the group consists of participants coming to the meetings in good faith and open to discussion. It doesn't make sense to admit participants who only want to sell themselves or their company's products, thus destroying the groups' structure.
Since confidential information is often exchanged, experience has shown that it is better if the group consists of the same people for several years. This is the only way for a trust to be established in the long term. If they earn each other's trust, even competing companies can sit together and openly share their experiences and opinions.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The service can easily be adapted to the biobased industry. In fact, the concept is already successfully applied in the biobased industry within the field of bioplastics. The plastics cluster and its subordinate biopolymer team meet several times a year to organise the “Biopolymer team meetings”.

Since the majority of the participants/companies are still in the development phase of implementing bioplastics products, the topics covered and discussed are very research-intensive. One possibility would be to include representatives and experts from the Danube region in order to further advance the transnational exchange of know-how and possibly to also integrate SMEs that operate upstream or downstream in the sector of biopolymers. This means, for example, that raw material suppliers or the users of bio-based packaging material (e.g. the food sector) could also be integrated, so that new value-added chains can be developed in a more coordinated manner and the ideas, wishes, requirements, and restrictions of the entire value chain can be addressed.

3.4 2 Cluster Internationalisation

Title of the good practice
Cluster Internationalisation

Location of the good practice
Plovdiv, Bulgaria and Central Europe

Start date of the good practice and (if applicable) end date
01/01/2016 until 30/06/2018

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

In 2015, the Green Synergy Cluster, together with a group of seven other European clusters Femac (SP), Green Chemistry (PL), Inbiom (DK), Agrocluster (PT), CREA (CZ), Végépolys (FR), and Innoskart (HU), all working in the field of natural resources, established the European Strategic Cluster Partnership NATUREEF. The concept of NATUREEF is to act as a natural-resource-efficiency entity fostering solutions via cluster cooperation. It was founded via the regional integration of two European policies Resource Efficient Europe and Promoting Research and Development and Innovation. After its establishment, the consortium elaborated an Internationalisation Strategy Plan targeting three third-country territories Latin America (LATAM including Brazil, Mexico, Peru, Columbia), China and The Philippines. The purpose of the NATUREEF ESCP is to design and implement a joint strategy promoting cross-sectoral cooperation, and thus to facilitate the internationalisation of its members through mentoring SMEs and through the dissemination of their innovative technologies using the new Natural Efficient Resource Concept.
Hence, the Natureef consortium started to work together to help their SMEs obtain information on third-country markets, products and services based on the natural-resource-efficient philosophy. During the implementation of the NATUREEF Cluster Go International project funded by the COSME programme, the project promoted natural-resources-efficiency business in South America, Asia and the Philippines. The project provided an opportunity for SMEs working in the areas of agriculture,

renewable energies, green chemistry and bio economy, which were interested in the target country markets, to further develop their marketing and networking. The project also improved the networking with organizations and third-country actors.
During the first part of the NATUREEF Cluster Go International project, four Cluster Natural Resource Efficiency missions were implemented. The main aim of the missions was for cluster managers to participate in a number of fact-finding missions and thus be able to identify the needs and key actors in the targeted territory. For this purpose a NATUREEF ambassador was established in each target territory with the goal of establishing valuable contacts.
Thus, Green Synergy participated in the following NATUREEF missions:

- NRE (Nature Resource Efficiency) Chinese Mission From the 4th to the 9th September 2016 (The Fuzhou Workshop included introductory meetings with the Government of the Fujian Province Ministry of Agriculture to discuss the prospects of developing a sister agriculture cluster in China)
- NRE LATIN AMERICA Missions (Mexico) From the 25th to the 27th October 2016 (Renewable Energy, Energy Efficiency, Waste Management, and Wastewater Technology Fields)
- NRE Philippines - From 21st to the 25th November 2016
- NRE LATIN AMERICA Mission, Brazil (Energy efficiency in Industry) June 2017

SME members of Green Synergy Cluster took part in the third-country business missions in China, Mexico, The Philippines and Brazil. Having the opportunity to participate in targeted B2B (Business to Business) and B2C (Business to Clusters) missions, their cooperation with other EU clusters and SME members was strengthened.
As a result of these missions, some of the Green Synergy Cluster's SMEs started new projects implementing feasibility studies within the LCBA Mexico (Low Carbon Business Action) initiative about:
1) A cogeneration biogas plant based on agave and waste from tequila production.
2) A used-tires plasma processing plant.
Members of Green Synergy Cluster (GSC) also signed two partnerships agreements for the implementation of solar projects in Brazil, which is part of LCBA Brazil. Another waste-to-energy project is under preparation in The Philippines.
Another main NATUREEF achievement was the participation in the VIBE

International conference in January 2017 in Angers, France. The VIBE conference was jointly organised with Natureef partner VEGEPOLYS and provided all Natureef cluster members with opportunities for gaining international contacts and information on available tools for internationalisation.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

- Green Synergy Cluster (GSC) together with - Femac (SP), Green Chemistry (PL), Inbiom (DK), Agrocluster (PT), CREA (CZ), Végépolys (FR), and Innoskart (HU) ; NATUREEF ESCPi;
- SME members of GSC Energy Agency of Plovdiv, Solery, Sofena, Crane Ltd.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

Several cooperation agreements were signed.

- During one of the Low Carbon Business Actions in Mexico a Cooperation Partnership Agreement (CPA) was signed to carry out a feasibility study on waste-for-energy technology. Within the following months, a site visit with the aim of carrying out the feasibility studies and agreeing on an installation worksite will take place. The next step will be reaching a bankable proposal.
- Discussions for a joint project to convert green waste biomass to energy have been held with a number of potential partners in The Philippines. As a result, a partnership agreement has been negotiated.
- A project to implement solar PV+thermal energy technology in a number of social houses is being discussed in Brazil.
- A project to implement solar PV+thermal energy technology in a large enterprise is being discussed in Brazil.
- In The Philippines, the province of Guimaras has expressed its interest in setting up its own cluster for small and medium-sized enterprises in the field
- Consequently, Natureef was among the three finalists for the EU Cluster Partnership of the Year award.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

Opportunities for internationalisation can provide new horizons to SME members of clusters. We learned that, with strong preparation and the support of the clusters' bodies, extending markets to third-countries can be highly beneficial.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The service can easily be adapted to the biobased industry. In fact, this concept is already being successfully applied for the biobased industry in the field of bioplastics. The plastics cluster and its subordinate biopolymer team meet several times a year to organise “Biopolymerteam meetings”. Since the majority of the participants/companies are still in the development phase for the implementation of bioplastics products, the topics covered and discussed are very research-intensive.

One possibility would be to include representatives and experts from the Danube region in order to further advance the transnational exchange of know-how and possibly also to integrate SMEs that operate upstream or downstream in the sector of biopolymers. This means, for example, that raw material suppliers or the users of bio-based packaging material (e.g. the food sector) could also be integrated, so that new value-added chains can be developed in a more coordinated manner and the ideas, wishes, requirements and restrictions of the entire value chain can be addressed.

3.4.3 Meet&Match

Title of the good practice
Meet&Match

Location of the good practice
Baden-Württemberg ,Germany

Start date of the good practice and (if applicable) end date
2013 and ongoing

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

BIOPRO Baden-Württemberg GmbH offers regular events where small groups of around 10 to 60 participants can exchange ideas on specialist subjects, thus generating new impulses and partnerships on joint developments. Usually, interdisciplinary topics are chosen in order to make working together with other networks necessary. External partners from science or economy can also participate. There are three types of Meet&Match meetings: “Classic”, “Speed dating”, and “One-to-One”. All meetings are free of charge and might vary depending on the needs.

Methodology:
Classic - A lecture event on a specific or interdisciplinary topic featuring 5 to 9 speakers (Keynotes and 15 min talks + 5 min discussions). This is a whole-day event with long breaks for lunch and coffee. Before lunch, there is also a short presentations session (45 minutes) where participants are given three minutes and one slide to present their organization, showing their company's profile and its linkages to other potential cooperation partners. This is meant to simplify networking during the breaks.
External partners can participate as equal partners in organizing the event participation in programme developing, marketing, costs (depending on the partner), pre and post-organization. External partners can also participate simply as marketing partners.

If the external partner is a company or a research organisation, it is also possible to give them more slots to present (1-2 slots or a longer keynote lecture).

Speed dating - Event in the direct-meeting format meant to facilitate fast and efficient identification of potential cooperation and development partners. It is perfectly suited for companies or R&D entities looking for concrete project partners on a specific topic. More precisely, two groups of attendees are usually invited "users" and "manufacturers" of a specific value-added step, with a maximum of 10-15 participants, or small groups from 2-4 people. Agenda: 1-2 Impulse talks followed by each organization presenting a 7-10 minute talk on their organization and their cooperation needs. Afterward, each participant has 5-10 minutes to talk to every other participant to establish a cooperation or to exchange experience.
This is a half or whole-day event with coffee and lunch breaks perfect for networking, and it can be combined with company tours.
External partners can participate as hosts (Providing rooms at their location, developing the programme, or marketing), partners (neutral location), or marketing partners.

One-to-One - A prearranged-meeting format attended by one or more national/international clusters/networks and their members. This is a feasible format for fast and efficient identification of potential cooperation and development partners on a national and international level. A maximum of 10-15 participants or small groups.

Half or whole day event with coffee and lunch breaks for networking, possibly combined with company tours.
Clusters and networks participate as equal partners each cluster or network supplies an equal amount of members.

Beneficiaries
Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

Beneficiaries of the service are the cluster itself and its members, as they take part in matchmaking and learning interactions with other cluster members, national, and international participants. Since 2014, 3-4 focus events have been conducted each year, totalling approx. 800 participants.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

Knowledge of synergistic competencies on a local, regional, national and international level is difficult for business and research entities to identify, due to their budget and time constraints. Matchmaking events encourage discussions on potential cooperation and collaborations.

The added value of this activity is the concrete matchmaking between service and product providers and those able to apply their products. In contrast to conferences or workshops, these events distribute specific information and solutions for a problem raised up during the event Based on the feedback, it appears that the events are of great interest to the participants and that many projects and collaborations have resulted from the Meet&Match events.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

There is a great need for cooperation along the whole value chain in all sectors, especially for SMEs and knowledge institutes. To identify the "currency" of the workshops, tracking initiated cooperation between organisations is one of the biggest challenges. All Meet&Match meetings need significant follow-up work to identify the impact of the event. Preparation is also work-intensive, as organizers have to find enthusiastic participants and hot topics that the target group might be interested in. Furthermore, it is of considerable importance to identify which of the "Classic", "Speed dating", and "One-to-One" formats is the right choice. For the "Classic" format, a more general event is delivered, putting the participants under less pressure to present their concrete needs and state of the art technology. For the "Speed dating" and "One-to-One" formats, concrete needs and demands need to already be defined by each participant, which allows for a perfect identification of cooperation in the sector.

Transferability to the biobased industry
What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The whole concept can easily be transferred to the bio-based industry. This industry includes “old” and “new” industry, such as forestry, agriculture, waste management and new companies transforming these streams into valuable new products (e.g. Bioplastics).

Thus it is necessary to inform all actors about potentials, existing good practices, and to connect all players, especially the demand and offer side of a value-added step. However, the Meet&Match meetings might need to feature a smaller amount of participants, considering that bioeconomy is a new field and there are fewer companies engaged in it. This does not hinder the innovative approach but could result in even more focused Meet&Match events for the specific needs of certain companies and R&D institutes.

For more information visit www.biopro.de

3.4.4 Matching Suppliers-Buyers

Title of the good practice
Matching Supplier-Buyers by Silicon Saxony Cluster

Location of the good practice
Dresden, Saxony, Germanyy

Start date of the good practice and (if applicable) end date
2013 until now

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

The Silicon Saxony Cluster Management brings together suppliers of technological equipment, software, and so on, as well as respective research and development institutes with relevant buyers of such technologies. Cluster members had the chance to participate in a meeting with buyer agents in order to promote their products and services. Especially for SMEs in the semiconductor sector, it is a challenge to get in touch with the big buyer agents.

The framework for the meeting was during the Samsung Innovations Days in January 2015. As a major player in the high-tech sector, Samsung represents a huge opportunity for SMEs to develop their business. Silicon Saxony members are offered specific training in preparation for meetings, as well as direct contact to buyer agents. Due to the preparation for the face-to-face meetings with intermediaries, they can achieve a higher success rate in establishing new business partnerships. The benefits for the companies within Silicon Saxony are the creation new business ties and the formation new channels of distributions.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

The beneficiaries of the service are:

- The members of the cluster initiative, and especially the SMEs, which would otherwise not gain direct access to intermediaries of the key players;
- The cluster management, which is able to promote and position itself.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

All firms benefited from training on how to present their products and services to large resellers. Five out of the twenty firms that participated in this event concluded contracts with Samsung and have now become suppliers.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

There are two key - lessons learned:

1). SMEs cannot approach big resellers individually;
2). The service helped the participating firms pitch themselves and present their products and services in a professional manner. This was particularly important for small firms that lack a commercial department;
3). If this service is professionally implemented by the cluster management, it can have a significant impact.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

Silicon Saxony's approach to connecting suppliers with buyers from the Samsung management can easily be applied to the biobased industry. The first step would be screening and analysing present actors of the biobased industry in order to identify adequate suppliers and buyers in various regions. There are big companies active in the biobased industry that can be targets for SMEs (e. g. automotive for bio-packaging.

3.5 Entrepreneurship

There is a wide range of support structures of the innovation system (technology transfer centres, technology parks, etc.), and some particularly dedicated to entrepreneurship (incubators, accelerators, hubs). Often, business incubators or technology parks are considered (or consider themselves) to be clusters, but they are not. Rather, they are instruments that clusters (or other innovation actors) may use to follow their strategic objective of supporting entrepreneurship at a regional level. Business Incubators are organisations that provide physical or virtual rental space, often at fares lower than the market price, as well as other related support services aimed at developing start-ups (e.g.: training, accounting, or legal support). In addition to that, hubs and co-working spaces highlight the advantages of a controlled micro-business environment based on cooperation, as they often result in accelerating the business development process of the companies.

Technology transfer centres ensure the connection between the R&D offer (coming from universities and research institutes) and demand (represented by companies). In clusters, they play the role of a catalyst for innovative processes. Clusters can be located in technological parks, entities providing large research infrastructures and sometimes offering incubation facilities for highly innovative start-ups.

Apart from providing physical (or virtual) support infrastructures, clusters can provide several other services in support to entrepreneurship, such as:
-Consulting and coaching of entrepreneurs;
-Acquisition of financial sources (venture capital, banks, public funds etc.) on behalf of entrepreneurs, etc.

3.5.1 Cluster Support to Start-Ups

Title of the good practice
Cluster support to the creation of start-up company, Commercialization of Cross-sectoral Innovation

Location of the good practice
Niš, South and East Serbia Region

Start date of the good practice and (if applicable) end date
01/10/2014 until 01/02/2017

Description of the good practice
What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

In order to enhance the level of innovation of the cluster's SMEs and facilitate the collaboration between companies from different sectors, construction cluster Dunđer supported the special-thematic group around Project IZORETEX. The companies were brought together in an attempt to commercialize the results of the research project, which concerned the development of a new insulation material.

Project IZORETEX was initiated by the Dunđer cluster, and a total of 25 firms in the cluster were involved in the year-long project. The idea was to build on and upgrade the results of the 3 years long FP7 project, STOREPET, funded by the EU under Grant Agreement No. 286730 (https://sites.google.com/a/storepet-fp7.eu/storepet/consortium-and-management). This was a project in which Dunđer took part as one of 20 partners. Among other results, Project IZORETEX has developed a new non-woven insulation product that integrates phase-change material with heat-storage-capacity skills for light-weight houses.

The IZORTEX project supported the establishment of the Serbian start-up company Pinter-Odplast, whose core activity is the collection of textile

waste and its recycling into company-developed insulation panels. Dunđer provided support in initiating the project by finding a source of funding, supporting the collaboration of the partners, managing a project, and promoting the results. The main investor was the prominent construction company Vagres, whose interest was to have bio-based, good-quality insulation materials for their light-weight houses. In addition, there are also design studios that foresee the use of this insulation materials in their projects, Universities that could test the characteristics of the materials and help out with their improvement, several consulting companies, tech companies that could make software for calculating the thickness and density of the required panels, and ultimately more construction companies.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

The direct beneficiaries of the service were the 25 cluster-member companies that participated in the project: 5 companies benefiting from diverse consulting services, 3 companies as investors, 2 universities, 3 software companies, 5 design studios, and 7 construction companies that intend to use the material.

The project is a case of a good practice with tangible results. A new company was established within the cluster, thus closing a loop in the value chain.

The other cluster members are indirect beneficiaries, as they are now aware of the availability of the service. Other indirect beneficiaries are the construction companies that have a better supply of insulation materials from recycled products.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

Output: 25 companies participating in the project
1 new company established
A new product launched to the market

Impact: Closing the value chain loop, thus making it more efficient; demonstrating its effect to other companies; the newly established company is active in the market with good business results.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

While the methodology might seem rather standard at first glance, it is the collaborative work between the companies and the cluster manager that ensures the success of everyone involved. For the company, it offers a more filtered and focused access to relevant information and "tailor-made" support in view of innovation; for the cluster manager, it raises the level of trust of the member companies, and it helps management diversify its spectrum of activities and services and increase the degree of cooperation between members.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The approach is directly relevant to the bio-based industry. Its result is the commercialization of a bio-based product that can be used in construction. It is a way in which a well-established, traditional sector like the construction sector can become part of the bio-based value chain.

3.6 Policy Support

Clusters are used by local, regional, and national policymakers as instruments of economic development. They provide jobs and highly-specialized products, attract foreign direct investments, and foster innovation and entrepreneurship.

"The cluster organisations can be useful both in a RIS3 design phase in identification of priority domains, in engaging and mobilising actors to formulate the strategy, but also in the implementation by leading the area by pushing forward the activities and following up on the planned activities and the policy mix." (http://s3platform.jrc.ec.europa.eu/cluster-organisations).Clusters are also useful in designing the national industrial policy. Their role and linkage to other instruments are highlighted in the following table:

Clusters	**Value chains**
Systemic Approach	Linear approach
Geographical concentration	Global approach
Useful tool in consolidating the value chain around a big integrator	Value - chain - support policies are targeting the weak links
Clusters	**Special economic zones**
Government has the role of a catalyst, offering a business-friendly environment	Emphasis is put on the infrastructure aimed offered to a group of geographically-concentrated enterprises aiming at local economic development
Wider region	Very localised
Clusters	**Growth poles**
Implies a bottom up approach where the government supports the leverage effect of the existing economic activities in a region.	Implies a top down approach where the government provides financial and non-financial incentives in order to localise certain enterprises / industries in less developed regions
Cluster Policy	**Industrial Policy**
Cluster policy seeks a positive sum-view of international competitiveness, eliminating entry barriers and encouraging imports in order to raise the competitiveness of value chains	The industrial policy seeks a zero-sum view of international competitiveness, protecting certain sectors until they have reached the size and degree of sophistication allowing them to act on their own account

3.6 1 Cluster Accreditation System

Title of the good practice
Cluster Accreditation System

Location of the good practice
Romania

Start date of the good practice and (if applicable) end date
2016 until now

Description of the good practice

What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

The first mapping of Romanian cluster initiatives was performed by the Romanian Ministry of Economy with the support of the German Agency for Technical Assistance (GTZ), based on a set of qualitative criteria, including geographical concentration, labour force, RDI, exports, and cooperation. As the situation evolved, an inflationary process could be observed, such that by the end of 2016 over 100 clusters were recorded at the Ministry. In 2011, the Romanian Cluster Association (CLUSTERO) was founded as a representative body of Romanian clusters at the national and international levels.

In 2015, CLUSTERO established a set of criteria for the recognition of the cluster status. As the association does not enjoy the status of official policy maker in Romania (being a private NGO), the accreditation process is done on a voluntary basis. Out of the 72 clusters present in Romania, 32 currently hold the CLUSTERO recognition. The following criteria are applied: 1. The existence of a partnership agreement identifying the cluster; 2. The composition of the cluster must respect at least the triple helix model; 3. The cluster must have at least 10 SMEs and a research organization; 4. The cluster must have a designated legal entity acting as a management

organization; 5. The cluster must have a developed strategy; 6. The cluster has to provide requested quantitative and qualitative data, on its business and innovation situation. It is worth noting that, although CLUSTERO uses the data in elaborating the bi-annual Competitiveness Analysis of Romanian Clusters, only the provision of the required information is enough for the accreditation process; no further evaluation criteria are applied, in terms of level excellence are applied. As for the quality of the cluster management, they are referred to the European Secretariat for Cluster Analysis.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

The primary beneficiaries of the instrument are the Romanian clusters; they get the CLUSTERO accreditation and are promoted by the Association on the national and international levels.

The second level of beneficiaries are the Romanian policy makers and the European Cluster Cooperation Platform. CLUSTERO can only provide information about accredited clusters.

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

Output: 32 clusters currently enjoy the CLUSTERO recognition.

Results: In the 2nd national mapping done in 2017 in cooperation with CLUSTERO, the Ministry of Economy took over the CLUSTERO methodology and took it as an alternative accreditation with that offered by ESCA As a consequence, the number of clusters registered by the Ministry dropped from over 100 by the end of 2016 to the current 74; the cluster financing scheme in the frame of the National RDI Programme, launched at the end of 2017 to provide support for the elaboration of cluster innovation strategies, marked CLUSTERO recognition with bonus points in the evaluation process.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

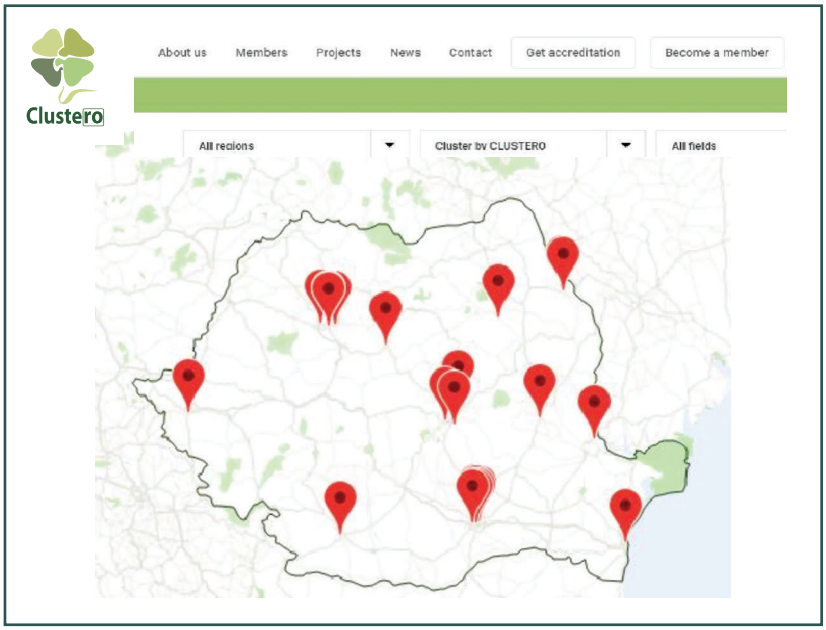
The success of the measure was influenced by the following factors:

- The participative process: criteria have been established in agreement with all the members of the association.
- The integrity no exceptions have been made in the application of the criteria.
- The recognized status of the Romanian Cluster Association as a representative body of clusters at the national and international level.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The approach is general and can be adapted to any other field. A series of specific indicators and criteria can be applied for the bio-economy sector.



3.6 2 The Open-Space Innovation Arena (OSIA)

Title of the good practice
The Open-Space Innovation Arena (OSIA)

Location of the good practice
The Danube Region

Start date of the good practice and (if applicable) end date
2018 until now

Description of the good practice

What was the starting point/challenge?
Methodology. What has been done? What is the time frame of the activity? What resources did it involve? How much did it cost? Who implemented it? (Cluster Organization/managements, one Cluster Participant, external provider?) In case it is a service to Cluster Participants, what is the access policy?

Clusters are well-established, proven and efficient instruments of regional economic development based on innovation and internationalisation. By definition, enterprises in clusters tend to naturally align themselves along the value chain, making use of the positive spill-over effects of the network. Over the years, partners of DanuBioValNet have been involved in various international cooperation projects developing and testing numerous open collaboration spaces and platforms. All the projects aimed to provide clusters and member organizations with a space to share innovative ideas, reflect on their shared challenges, find new topics of cooperation, and develop new partnerships for creating business solutions.
Based on its accumulated experience, DanuBioValNet identified and followed Open Space Innovation, which best fit its particular approach. Open Space Innovation was a great fit, as the organization was in need of a tool to facilitate cooperation between SMEs, industry, and academia across regions and sectors, while maintaining its focus on the emerging bioeconomy with its vast possibilities and eco-innovations along the VCs.
OSIA strives to redirect the focus of the interactions between SMEs and cluster managements to a place where they can concentrate on doing transactions, pursuing innovations, and starting new businesses to fill the gaps along the VCs and create new jobs.

Beneficiaries

Who are the beneficiaries? How many Cluster Participants benefited from this Activity?

OSIA provides a space where different actors along selected VCs can meet and explore the cross-sectoral solutions, opportunities, and eco-innovations needed for the generation of selected Vcs

Output and Results

What is the added value of this activity? What are its outputs, results and expected impacts?

Several instruments have been identified as a base for the development of Danubiovalnet's OSIA:

- The "Idea Call" Workshop for value chain actors;

  The workshop format aims at establishing cooperation between the disconnected actors of a value chain by using creative methods of sharing perceptions and understanding each other's supply opportunities and needs, in order to eventually develop new project ideas and reach cooperation agreements for a better collaboration along the VC.

  The Idea Call Workshop is meant to be a platform for targeted exchanges that could encourage future joint business projects and thus further the development of innovations in bio-based value chains.

- Focus Groups for the European Innovation Partnership;

  "The European Innovation Partnership Agriculture and Innovation" (EIP-AGRI) works to foster competitive and sustainable farming and forestry that "achieve more and better from less". It was established in 2012 with the aim of helping the agricultural and forestry sectors become more productive and sustainable. The EIP-AGRI consists of so-called Focus Groups, featuring selected experts invited to share their knowledge and experience on their specific area. The Focus Groups deal with their chosen topics by collecting and summarizing relevant information, identifying both problems and opportunities, and subsequently creating a place for discussing new ideas and innovative solutions. In general, Focus Groups meet twice a year, with several documents being created in between meetings. In the end, a final report is developed and disseminated to the general public through the EIP Network. Focus Groups provide spaces for

experts from the whole of Europe to meet and discuss a single issue from a variety of perspectives. They therefore constitute a strong basis for building a fruitful network that can propose new ideas and find appropriate solutions.

- The Foresight Methodology.

  FORESIGHT is a systematic, participatory, future-intelligence-gathering, and medium-to-long-term vision-building process aimed at inspiring present-day decisions and mobilising joint actions. Research and innovation policies are based on (implicit or explicit) visions of the future of science, technology, and society.

  FORESIGHT is a methodology that brings together stakeholders to discuss the future, set objectives, and conceive work plans that could lead to achieving them.

Lessons Learned

What did you learn from the implementation of this activity? What was the hardest part of doing it? What would you do differently? How do you think you could improve it? How do you think you might evolve that activity in the future?

The proposed OSIA is a way to correctly kick off the activities of new VCs. It is meant to be followed by further meetings of the working groups pursuing the original strategic outlines.

Transferability to the biobased industry

What are main points that can be transferred to the biobased industry? What should be changed/added in order to make the best practice relevant?

The following methodology can also be used for other business sectors. However, the details of this particular OSIA implementation and the topics in focus are specific to DanuBioValNet's iteration and need to be adjusted when used in other value chains.

Phase 1: Setting the scope of the process (workshop/seminar etc.)

This phase consists of discussing and formulating the central question on which the entire process will concentrate. This will likely consist of a brainstorming session starting from the identified problems.

Phase 2: Prioritizing the problems

The second phase is a moderated interactive session in which the participants can discuss and prioritize the factors influencing the central question (strengths, weaknesses, opportunities, threats, risks etc.). To assure that this stage reflects the interests of all parties, all type of participants should be represented in equal number (SMEs, academia, policymakers, etc.)

Phase 3: Group Work

A working group should be created for each identified problem. The groups would be tasked with discussing the concrete actions and measures required to fix these problems.

Phase 4: Strategy Development

The results of the working groups will be presented in a plenary session. Then they will be discussed and aggregated into strategic outlines: vision, general objective, operational objectives, actions, risks, etc. The logical matrix is the most useful tool for the process.

Phase 5: Establishment of Focus Groups

The conclusion of the conference should be the establishment of focus groups involving all interested parties to discuss all aspects of the value chain, all of these having been discussed during the workshop. The objectives would likely originate from the future bio-based initiatives/projects/products discussed by the SMEs. While not legally binding, the discussions at the conference will prove the participants' desire for further cooperation on the identified objectives, and will thus ensure the sustainability of the approach beyond the lifetime of the project.

Side Events: Study Visits and Brokerage Events

In order to increase the regional relevance of the process and attract more stakeholders, the organizers should consider organizing brokerage events and study visits to relevant actors.

4. ABOUT DANUBIOVALNET

The DanuBioValNet project is aiming at establishing bio-based industry networks across the Danube Region. The emerging transnational cooperation of clusters will foster bio-economy and eco-innovations and lead to a strengthening of the regional economies.

Consequently, with this project the partners pursue a strong strategic orientation beyond the immediate and medium-term economic objective of strengthening the regional economy. It is the strategic goal to establish cross-border strategic partnerships, particularly in developing regions, with the help of powerful cluster organisations. In this way, project results will be sustained beyond an immediate effect and the creation of strategic investments, especially in emerging industries such as the bio industry, will be enabled and facilitated. This will be achieved mainly by newly emerging or transforming value-added chains, which are increasingly being transnationally established and further developed as a result of the increasing internationalisation of value-added processes.

In this way, long-term economic effects are achieved, based on a network of agile clusters, which prepare the investment approaches in a targeted manner and implement them with high efficiency. One example of the present project is the establishment of bio-refineries in the regions, which can form a strategic technological backbone of a successful independent bio-industry.

The partners intend to develop and implement a long-term, industry-driven roadmap for such collaboration along the entire value chain based on cluster partnerships for these processes. With the project, a pilot function of the implementation is taken over and the prerequisite for creating a blueprint for similar and similar cross-national cooperation, also in other industries, is created.

For achieving these tasks, 17 project partners from 10 countries have joined forces. The project paves the way from an economy based on fossil resources towards an economy using renewable resources. The striving of

the partners to minimise greenhouse gases and resource-saving as well as resource-efficient utilisation of available biomass will result in synergistic effects. These effects will improve the sustainability, regional development through diversification of the local economy and will also positively affect the workforce. The development of new bio-based value chains from primary production to consumer markets needs to be done by connecting enterprises from different regions and industries. But due to a missing holistic transnational approach, Danube actors in bio-based industry still operate disconnected and cannot properly benefit from the potential. Therefore, the aim of this project is to develop new methods, strategies and tools to connect enterprises transnationally.

Clusters as the strong representatives of a group of industries that are closely linked by common products, markets, technologies and interests are chosen to organise and bear the industry cooperation and creation of new value chains, because they are performant and sustainable partners and guarantee the upgradeability in the dimension industry, sciences and also politics.

One of the outputs of this project is the development of a Joint Bio-based Industry Cluster Policy Strategy (JBCS) to describe the procedure and to make it actionable and reusable. Furthermore, a bundle of new methods and tools to support clusters for transnational working are developed and joint into a strategy. They are tested in three pilot actions where it is planned to create new bio-based value chains in the Danube Region.

The main target groups are on the one hand the policy four Ministries are involved, on the other hand clusters and their SMEs nine cluster organisations are involved. The policy level will benefit from the JBCS, which can be used as a political framework.

- **BIOPRO Baden-Württemberg GmbH** comes under the auspices of the Baden-Württemberg government and is specifically focused on the following themes: bioeconomy, biotechnology, pharmaceutical industry and medical technology (healthcare industry). **www.bio-pro.de/en/**

- **ClusterAgentur Baden-Wuerttemberg** was established to provide support to cluster initiatives and regional networks contributing to their further development. It aims to promote the development of clusters in the strategic growth areas of Baden-Württemberg.
www.clusterportal-bw.de/clusteragentur/

- **Anteja** promotes the transition to bio-economy through cross-fertilization of sectors and digitalization of value chains. It guides policies and strategies for all-inclusive growth and sustainability through clusters and cross-regional cooperation. **www.anteja-ecg.com**

- **PROUNION** is an innovative consulting company focused on development of national and regional policies, research and innovation, networking including clusters, support to SME through technology transfer, consulting and project management.**www.prounion.sk**

- **Romanian Cluster Association** -is the representative body of Romanian clusters and the main platform of cooperation, exchange of information and support towards the development of the national cluster landscape based on innovation and internationalisation. **www.clustero.eu**

- **Association of Business Clusters** is the Bulgarian platform for cluster collaboration, information exchange and networking. It unites and protects the interests of clusters, stimulates cluster development and is actively involved in the creation of cluster policies in Bulgaria. **www.abclusters.org**

- **National Cluster Association (NCA)** brings together cluster organisations and cluster supporting bodies with the purpose to coordinate the sustainable development of cluster policy in the Czech Republic. NCA focuses on the role of clusters in innovations and new strategies, such as bioeconomy. **www.nca.cz**

- **The Ministry of Economy** is a synthesis institution of Romanian Government, in charge with elaboration and implementation of the National Strategy for Competitiveness. ME is a coordinator of cluster policy and national coordinator of PA8 - EUSDR. **www.economie.gov.ro**

- **The Ministry of Economy**, **Entrepreneurship and Crafts** performs tasks related to the development and advancement of the competitiveness of the Croatian economy, dedicating a great deal of attention to development of innovations and investments. The Ministry also participates in the activities by the EU's bodies. **www.mingo.hr**

- **Ministry of Education, Science and Sport** is responsible for regulating all levels of Education, Science and Sport, and defines the adoption of political documents in the field of Research and Innovation. MIZS has also become an active supporter of bioeconomy in Europe. **www.mizs.gov.si/en/**

- **Croatian Wood Cluster** creates a long term business model for strengthening competitiveness of wood processing sector by encouraging the activities linked to R&D&I and commercialisation of innovations, technology and investments development. Www.drvniklaster.hr

- **Institute for Economic Forecasting** under National Institute for Economic Research, Romanian Academy. Focus on: macroeconomic analysis and international comparisons; regional development; economic modelling&forecasting; economic agents' behaviour.
  www.ipe.ro/enmain.html

- **Business Upper Austria (Biz-Up)** is the Business agency for the region of Upper Austria with the mission to strenghten and further develop the local economy. The Services accelerate innovations, strengthen the competitiveness and support diversification. **www.biz-up.at**

- The **Innovation Center of the Faculty of Mechanical Engineering**, Belgrade, aims to apply scientific, technical and technological knowledge and inventions to create and realise new and improved products, processes or services and support the creation of new business. **www.inovacionicentar.rs**

- The **Montenegro Wine Cluster** (ME) was formed in 2007 and since then it has been helping individual growers and producers to align their production to standards applied in European Union.
  www.winesofmontenegro.me

- **Ministry of Finance and Economics Baden-Wuerttemberg**
  PA 8 under EUSDR is coordinated by the Ministry (and Croatia) with the involvement of a wide network of players. The Ministry has been in charge with regional cluster policy since many years. So far, about 110 clusters and cluster initiatives have been supported by the BW cluster policy.