



biobridges

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FOR THE MARKETABILITY OF SUSTAINABLE BIO-BASED PRODUCTS

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 **Horizon 2020**
European Union Funding
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 **Bio-based Industries Consortium**

 **BIO-BASED INDUSTRIES**
Public-Private Partnership

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This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 792236



biobridges

FOR THE MARKETABILITY
OF SUSTAINABLE BIO-BASED
PRODUCTS

D5.1

Proceedings from the European, national and regional co-creation events and policy debates 1

Document ID	D5.1		
Due Date	31 August 2019		
Submission date	30 August 2019		
Dissemination Level	Public		
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Document Version	V1		
Grant Agreement	792236	Duration	24 Months
Start Date	SEP 2018	End Date	AUG 2020

Partners

LOBA . CIVITTA . Q-PLAN . APRE . PEDAL
FVA . ECOLOGIC . PARTICULA . ASEBIO



Horizon 2020
European Union Funding
for Research & Innovation



Title Biobridges – Bridging Consumers, Brands and Bio Based Industry to improve the market of sustainable bio-based products – Grand Agreement N°: 792236

Duration 24 months (1st SEP 2018 – 31st AUG 2020) | **Website** www.biobridges-project.eu

Coordinator GLOBAZ, SA - LOBA (www.loba.pt) – Portugal - **Ms. Candela Bravo**

Project Overview

BIOBRIDGES is a 24 months action aiming at boosting the marketability of bio-based products - BBPs by establishing close cooperation and partnership between bio-based Industries - BBI, brand owners and consumers' representatives. The ultimate goal is to stimulate and support the active engagement of and interaction among all stakeholders (including local communities and local authorities) and improve market acceptance of BBPs.

BIOBRIDGES will design and implement replicable methodologies, procedures and good practices supporting multistakeholders' interaction, leading to new cross-sector partnerships. Main activities will be:

- Identify the cooperation challenges among consumers, brand owners and BBI
- Create a sustainable multi-stakeholder community involving consumer representatives, BBI and brand owners from different bio-based economy clusters and stimulate dialogue and cooperation
- Following a co-creation approach, increase consumers' and brand owners' awareness, confidence and trust on the benefits of BBPs compared to the fossil-based counterparts,
- Support the establishment of at least 2 new cross-cutting interconnections in bio-based economy clusters and define replicable procedures and good practices leading to the establishment of new cross-sector partnerships and business opportunities
- Stimulate the multi-stakeholder discussion toward pre-and co-normative research, new standardisation/labelling and emerging co-creation models (B2B and B2C).

At the end of the project, at least 2 new cross-sector interconnections in bio-based economy cluster will be established, while the foundations for the creation of new ones based on the arguments, best practices and recommendations deriving from the project will be formed.

The BIOBRIDGES consortium merges a variety of complementary expertise, aiming to build a consistent multi-actor approach integrating 9 partners already involve in other projects like BLOWAYS, BIOVoices and BIOSTEP.

Consortium	
Estonia	Civitta Eesti As
Italy	FVA Sas Di Louis Ferrini & C
Greece	Q-PLAN INTERNATIONAL ADVISORS PC
Germany	Ecologic Institut gemeinnützige GmbH
Italy	Agenzia Per La Promozione Della Ricerca Europea
Croatia	Particula group d.o.o
Slovakia	Pedal Consulting Sro
Spain	Asociacion Espanola De Bioempresas

Budget 995.485 EUR | **Contact** info@biobridges-project.eu

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1. Executive Summary

The Biobridges project (www.biobridges-project.eu) is funded by the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme (Grant Agreement No 792236). The project aims to foster cross-sector partnerships between Bio-Based Industries, Brand owners and Consumer representatives, for the improvement of the marketability of sustainable bio-based products.

The project facilitates multistakeholders' collaboration, raises their awareness on other's stakeholders' needs and expectations, addresses shared challenges, maximises opportunities and supports strategic partnerships, adopting a co-creation approach.

Biobridges' target stakeholders are Bio-based Industries, Brand owners/retailers and Consumers, but it involves also other relevant actors such as policy makers and the research community, to ensure that all perspectives are taken into consideration and the challenges are addressed, counting on the contribution of all the relevant players.

To reach the above-mentioned objectives, the project has designed, organized and run some of the 18 co-creation events at different geographical level:

- **The European co-creation events** (two) will be organized in the framework or in conjunction with EU fairs, conferences, etc. will result in unique perspectives on circular economy and value chains. They will be made up of the opinions of the stakeholders (industry, brand and consumer representatives) involved in these co-creation events.
- **The Biobridges National and regional co-creation events** (at least two in each partner country) will be targeted to an early engagement of the national communities. Stakeholder groups will be invited to collaborate on a bottom-up approach from the design of the entry strategy to assess the bio-based markets.

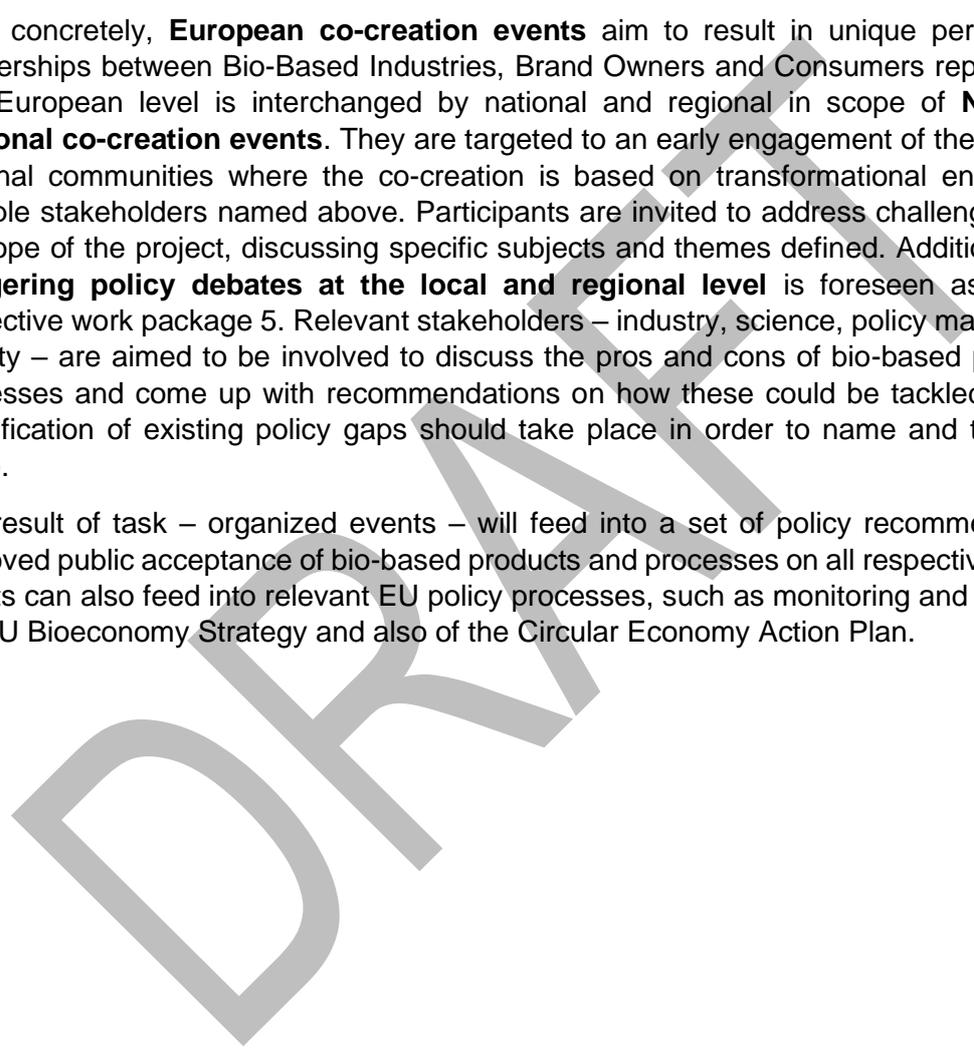
The findings described in this deliverable will support the Biobridges partners in the organisation and implementation of the remaining workshops, providing them with guidance on the how to design, implement and evaluate successfully the co-creation workshops.

2. Introduction

The overall aim of D5.1 “Proceedings from the European, national and regional co-creation events and policy debates 1” is to report on the outputs of all the events organized until M12 of BIOBRIDGES project, concretely in scope of three tasks within WP5: Task 5.1 – European co-creation events; Task 5.2 National and regional co-creation events; Task 5.3 Triggering policy debates at the local and regional level. These tasks are based on the scientific presumption that the ideas within the collective can offer a fresh perspective on what BIOBRIDGES project aims to achieve.

More concretely, **European co-creation events** aim to result in unique perspectives on partnerships between Bio-Based Industries, Brand Owners and Consumers representatives. The European level is interchanged by national and regional in scope of **National and Regional co-creation events**. They are targeted to an early engagement of the national and regional communities where the co-creation is based on transformational engagement of multiple stakeholders named above. Participants are invited to address challenges identified in scope of the project, discussing specific subjects and themes defined. Additionally, to this **Triggering policy debates at the local and regional level** is foreseen as part of the respective work package 5. Relevant stakeholders – industry, science, policy makers and civil society – are aimed to be involved to discuss the pros and cons of bio-based products and processes and come up with recommendations on how these could be tackled by policies. Identification of existing policy gaps should take place in order to name and then address these.

The result of task – organized events – will feed into a set of policy recommendations for improved public acceptance of bio-based products and processes on all respective levels. The results can also feed into relevant EU policy processes, such as monitoring and evaluation of the EU Bioeconomy Strategy and also of the Circular Economy Action Plan.



Remark: During the first 12 months of the project the partners organized and reported 8 events. “Proceedings from the European, national and regional co-creation events and policy debates 1” is analysing these and offers quantitative and qualitative results, lessons learned from these events and also preliminary recommendations to be considered.

3. Methodology

The organization of the three tasks – Task 5.1 European co-creation events; Task 5.2 National and regional co-creation events; Task 5.3 Triggering policy debates at the local and regional level – has been carried out based on the D4.1 “BIOBRIDGES PLATFORM design: WHAT, WHO and HOW” in scope of which guidelines were developed for the design of workshops that are relevant, attractive and motivating for the target stakeholders (Bio-based Industries, Brand owners/retailers and Consumers) to contribute and finally to deliver impactful outcomes.¹

D4.1 operationalized the co-creation process, defining the contents and subjects (WHAT), the stakeholders to be involved (WHO) and the plan for the activities (HOW). This document also harmonically integrated the three dimensions of the BIOBRIDGES platform design.

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¹ All activities as outlined in the Task 5.3 description will be implemented. With the proposed changes, this will be done in the context of the national co-creation events under Task 5.2. Instead of covering only three countries as originally proposed, this change will enable us to address stakeholders in a total of eight countries. This will enhance the quality and relevance of our planned Policy Paper (D5.4).

4. Quantitative overview of the organized events

Eight co-creation events were organized by M12 of the BIOBRIDGES project. This chapter aims to provide the readers with a quantitative overview of these events. At first the scale of the event, the country where the event took place and the total amount of events organized are given in the chart (chart 1) below, together with the respective organization carrying out the event.

Scale/country	Organizing partner	Total
Regional		2
Italy	FVA	1
Spain	ASEBIO	1
National		5
Portugal	LOBA	1
Germany	ECO	2
Croatia	PARTICULA	2
European		1
Italy	APRE	1
Grand total		8

Chart 1 - Number of events organized

Secondly, the audience total number, and also the number by type of stakeholders is provided. Altogether 249 participants took part at 8 respective events. Their background was in research, industry, civil society, public sector and also in other spheres (chart 2).

Audience (number by type of stakeholders)					Total Audience
Research	Industry	Civil Society	Public Sector	Other	
105	78	23	26	11	249

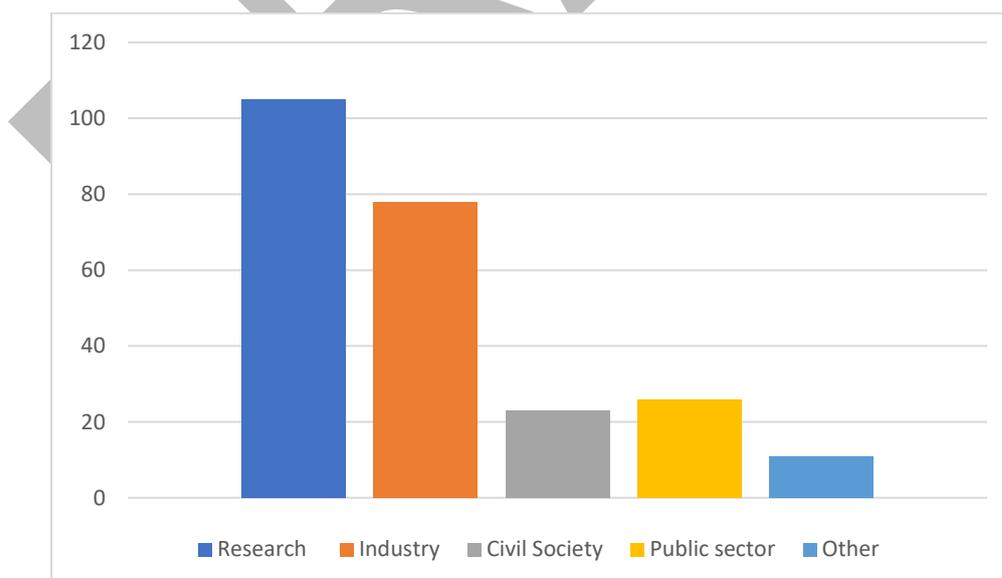


Chart 2 - Audience

Thirdly, a chart offering an overview of the application sectors and their representation out of all the events carried out is given below (chart 3). Textile, Fertilizers and Agrifood application sectors were represented at 1 workshop each, chemistry and wood at two workshop, as well as bio plastics, agriculture and bio chemicals, represented at two workshops.

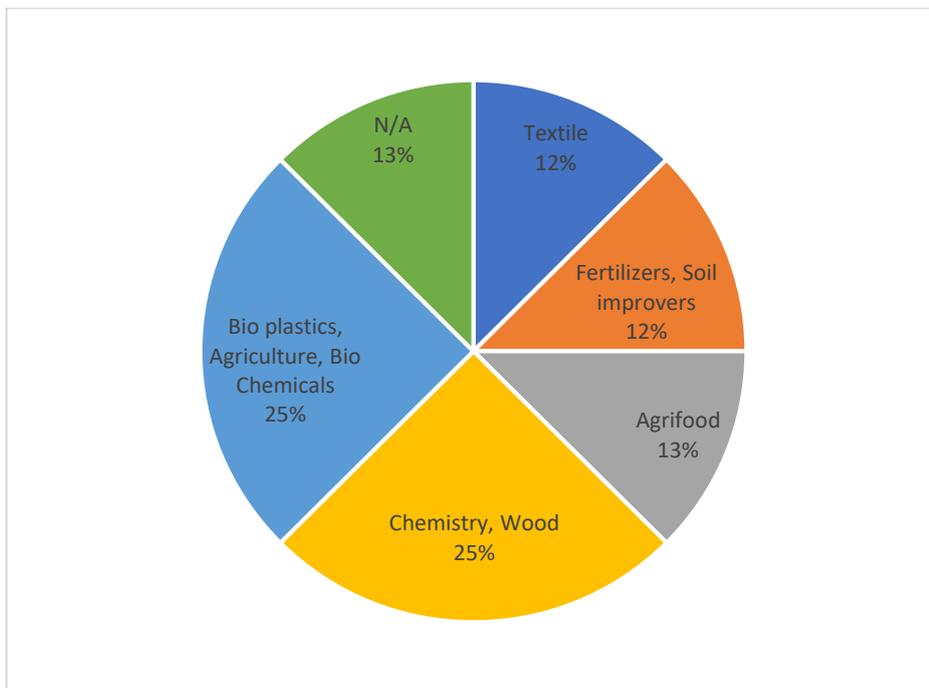


Chart 3 - Application Sector

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5. Qualitative overview of the organized events

This chapter provides the reader with a chronological overview of all the 8 workshops carried out up to M12 of the BIOBRIDGES project. The basis of the chapter is made up of the 8 reports provided by the respective partners. Highlights, comments and recommendations made during these co-creation workshops are outlined and later on categorized based on the application sector, challenge, and type of stakeholder, for the readers to easily navigate.

5.1. National co-creation event in Croatia I.

5.1.1. Event data

BIOBRIDGES representative (name and organization)	Luka Dobrovic- Particula Group Danijela Dobrovic- Particula Group
Event venue	University of Zagreb Faculty of Food Technology and Biotechnology Pierottijeva 6, 10000 Zagreb, Croatia
Date	02 April 2019
Event organized in partnership with	<ul style="list-style-type: none"> • Biobased Industries Consortium • University of Zagreb Faculty of Food Technology and Biotechnology • Ministry of Agriculture of the Republic of Croatia • Bio-mi d.o.o. company (BIC member) • Beeco d.o.o. company (BIC member)
- (Description)	The first co-creation event held in Croatia aimed to trigger the discussion about the challenges and opportunities for the bio economy in Croatia. This workshop was one of the first events in which most of the key players in the field of bio economy discussed further action plans and ways to enhance multi stakeholder and cross sector collaboration on a national level.
- (Website)	n/a
Work package	WP5
Task number	T5.2

5.1.2. Description of the BIOBRIDGES event

Title (original language / English)	Okrugli stol "Razvoj bio-gospodarstva i bioindustrijskog sektora u Republici Hrvatskoj" / Round table "Development of bio-economy and
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	bio-industry sector in the Republic of Croatia"
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	All
Total number of participants, out of which	19
Public sector	1
Private sector	10
Civil society	1
Research	7
Countries addressed	Croatia
Summary of main activities at the event	The co-creation event was structured as a round table chaired by the representative of the Republic of Croatia to BBI JU professor Anita Slavica. A total of 5 speakers were invited to present their projects and their work including Mr. Luka Dobrović from Particula Group d.o.o. company who presented the BIOBRIDGES project and aims of the co-creation event. The other speakers from public and private sector presented their organizations and projects in the sector of bio economy. The representative of the Ministry of the Agriculture of the Republic of Croatia was listening to all the challenges and issues addressed by the speakers and informed participants that the next round table will be held in July 2019 together with BIC in order to startup discussion on Bio economy strategy for Croatia. The second session was structured as a workshop in which the stakeholders discussed ways to solve presented problems.

5.1.3. Rationale and Purpose of the Event

The first co-creation event was held in Zagreb, Croatia on 2nd of April 2019. The workshop was organized in the framework of the roundtable “Development of bio-economy and bio-industry sector in Republic of Croatia”. The event was co-organized by Horizon 2020 Biobridges project, Bio-based Industry Consortium (BIC) and other Croatian BIC members and stakeholders at the University of Zagreb, Faculty of Food Technology and Biotechnology.

The workshop was attended by eighteen participants and five speakers representing government, academia and industry. Participants discussed about their good practices, projects, obstacles and challenges but also possible solutions. The Triple Helix stakeholders also discussed the future of bio-economy and bio-based industries in Croatia. Mr. Marco Rupp, Public Affairs & Governmental Relations Manager from Bio Based Industries Consortium provided an overview of the opportunities in Croatia to develop further bio-based industries by presenting the pillar of the Vision for “The Circular Bio-society in 2050”.

The workshop was divided into three parts; the presentation and overview of the opportunities in Croatia for bio-economy development from BIC representative, the case studies about the R&D work from BIC members and industry representatives BEECO, Bio-MI and Particula Group and their contribution to building up bio-based industries in Croatia and finally the roundtable and discussion on the lack of strategies and other policy initiatives dedicated to development of bio-economy in Croatia.

5.1.4. Key outcomes from the workshop

Key topic	Tackling the challenges in Croatian Bio economy sector
Sector/s represented	Plastics, Gas&Oil, Agriculture, Wood Industry, Research
Business	<p>All of the business sector representatives tackled the question of Bioeconomy or Circular Bioeconomy Strategy lack. The key questions raised were addressed to the representative of the Ministry of Agriculture who was present at the meeting. All the participants agreed that without these strategies there is no point to further discuss different sectors of bio economy as “we” do not know where are we going, and the Government doesn’t know it either. Representatives of the Business sector have described some of the projects they are developing, but are not sure if those would be viable without solving the 3 main pillars of the bio economy in the framework of national bio economy strategy:</p> <ul style="list-style-type: none"> • Biomass availability • Technology readiness • Existing market for the bio-based products <p>Moreover, bearing in mind the specific situation in the Republic of Croatia in which the most of the biomass reserves in terms of wood biomass, agricultural land and sea waters are mostly owned by the republic of Croatia, puts even greater importance of structuring the national bio economy strategy.</p> <p>In addition to the importance of the strategies, some of the participants addressed the importance of legislation which will support the future bio economy strategy in practice.</p> <p>In the end, some of the successful projects and companies were mentioned, but most of these had available biomass from sources which were not owned by the Government.</p> <p>The final remark was given to the lack of financial support for the bio economy projects by the Croatian Bank for Reconstruction and Development (HBOR).</p>
Civil Society	Due to fact there was only one present participant from a Civil Society Organization, all the participants concluded that CSO representatives should be invited to future events.
Policy Makers	The representative of the Ministry of Agriculture has addressed participants shortly saying he was present at the round table with the goal of hearing all the challenges and issues companies and

	<p>other organizations deal with in Croatia. He pointed out that the Ministry of Agriculture was selected to be responsible governmental body for Bio economy in Croatia, and thus will provide greater support for the sector in the future.</p>
<p>Research</p>	<p>Representatives of research sector were present from three faculties of University of Zagreb: Faculty of Food Technology and Biotechnology, Faculty of Agriculture and Faculty of Chemical Engineering.</p> <p>All the representatives agreed that the level of technical knowledge needed for the bio economy industry implementation in the Republic of Croatia is good and experts are already available. The biggest challenge according to them was the low level of cooperation between the industry and research needed for the upscaling and "exiting from the laboratory".</p> <p>Representatives of the research sector expressed their willingness to startup the PPP on the national level similar to BIC.</p>
<p>Any consensus points? Points/advice/perspectives agreed by all stakeholders to enable progression in driving the bio-based sector forward</p>	<ul style="list-style-type: none"> • To keep up with the organization of events like this one. • To share good practices and success stories from other BBI funded projects • To set up working group together with the Ministry of Agriculture • Plan coordination meeting with the representatives of banks • To engage more stakeholders for the upcoming second round table in July • To set grounds for drafting of Croatia's Bio economy Strategy

5.1.5. BIOBRIDGES partner's own perspectives and comments

The co-creation event was the first of a kind event in Croatia that aligned most of the relevant stakeholders from bio economy sector in Croatia. Even though the bio economy eco-system in Croatia does not exist, this co-creation event has proven that the BIC member companies from Croatia, with the support of BIC and BBI, can play a crucial role in the development of local eco-systems. Moreover the workshop gave floor to all the present stakeholders to present their already running bio economy projects from other EU funded programs like Erasmus+ and LIFE+. All the participants contributed to the workshop via presentations and also during the discussions.

At the end of the workshop, in order to facilitate further networking of all the stakeholders, a lunch for all the participants was organized. This event has been considered kick-off in terms of development of bio economy eco-system in Croatia.

The discussions during the co-creation event brought up challenges and issues needed to be overcome by the Government and other stakeholders in the Croatian bio economy sector. Although some of the business sectors in Croatia are already taking part in bio economy (e.g. wood industry, agriculture, marine industry), but due to fact their feedstock is biomass, it is clear that many other well developed sectors (like food industry, plastics industry and chemical industry) need to overcome bottlenecks with the support of the Government in terms of

legislation. Moreover, the waste management sector was also mentioned as a crucial sector for the bio economy in Croatia in the following years, especially due to high potential of the bio waste and municipal waste as feedstock.

From the consumers' point of the view, it is more likely that the top down approach in terms of consumers awareness will push companies from plastics and chemical industry to invest more in bio economy sector. The EU regulations were also stressed out as the crucial "game changing factor."

All the participants expressed willingness to follow-up with BIOBRIDGES project activities. Croatian oil and gas company INA and Miscanthus producer company BEECO d.o.o. expressed interest to commonly work in the future in the development of 2nd generation biofuels. The involved stakeholders also concluded that in the future events CSOs from the consumers should be involved in order to further strengthen the consumers' awareness and thus shape up the market demand for bio-based products.

5.1.6. Evaluation of the event

All the participants including the Government officials have contacted the organizer after the event thanking for organizing this co-creation event. Since the workshop was a very successful one, another event was planned for July 2019.

A total of 5 speakers including the representative from BIC created an excellent atmosphere and stimulated fruitful discussions between stakeholders both from private and public sector. A number of new ideas and potential cooperation projects emerged as a result, so Particula Group will follow-up the development of kick-started ideas.

The compliments given by the Ministry of Agriculture representative and their inquiry to support the organization of future events gave the organizer even more enthusiasm to continue with their work.

5.1.7. Photos from the event





5.2. Regional co-creation event in Italy I.

5.2.1. Event data

BIOBRIDGES representative (name and organization)	Susanna Albertini - FVA New Media Research Louis Ferrini - FVA New Media Research Michela Cohen - FVA New Media Research Robert Miskuf - PEDAL Consulting Matteo Sabini - APRE Pietro Rigonat - LOBA
Event venue	SellaLab, Via Corradino Sella ,10 13900 Biella Italy
Date	09 April 2019
Event organized in partnership with	BIOVOICES Project, Chamber of Commerce of Biella and Vercelli, CNR National Research Council, the European Bioeconomy Network, Chimica Verde Bionet, Onda Verde Civica and the BIOPEN project
- (Description)	The workshop aimed to stimulate and facilitate the collaboration between stakeholders for the creation of shared action plans, to promote regional development, based on Piedmont

	territorial resources, with particular attention to the textiles industry.
- (Website)	www.biovoices.eu/biella
Work package	WP5
Task number	T5.2

5.2.2. Description of the BIOBRIDGES event

Title (original language / English)	La Bioeconomia come opportunità di rilancio territoriale basato sulle risorse locali / Bioeconomy as an opportunity to boost local development based on territorial resources
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	All
Total number of participants, out of which	76
Public sector	7
Private sector	37
Civil society	7
Research	25
Countries addressed	Italy
Summary of main activities at the event	<p>The morning session of the event was structured as a conference and provided insights and pitches. 25 speakers were invited to present their projects and their good practices in the morning session. The conference combined thematic pitches with group discussions supported by the ICT facility (Mentimeter) to enable the participants to contribute to the discussion using their cell phones.</p> <p>The afternoon session was structured as a workshop in which the stakeholders of Quadruple Helix worked on the challenges, opportunities and barriers to promote regional development.</p>
Material developed (link to the internal repository)	https://drive.google.com/drive/u/2/folders/16LKv1mGXF5RoQnAhByxHLC3zvi9Z1mz

5.2.3. Rationale or Purpose of your Event

The workshop’s aim was to stimulate and facilitate the collaboration between stakeholders for creation of shared action plans, promotion of regional development based on Piedmont territorial resources, with particular focus on the textiles industry.

The morning session provided insights and pitches to stimulate the afternoon discussion in which the Quadruple Helix stakeholders worked on the challenges, opportunities and barriers to promote regional development on the two thematic areas:

- The textile industry of the future: opportunities represented by the circular bioeconomy for the re-launch of the textile industry in a sustainable key (Biobridges)
- Beyond textile: Opportunities and challenges for integrated territorial development in green key (BIOVOICES)

The cutting of the day was practical to generate ideas and stimulate possible collaborations among the participating stakeholders in order to promote sustainable development made possible by bio-economy, with particular attention to the Piedmont territorial reality.

5.2.4. Key outcomes from the workshop

Key topic	The opportunities represented by the circular bioeconomy for the re-launch of sustainable textile industry
Sector/s represented	Textile
Mentimeter results	As an output of voting, participants considered the day useful for:
The day stimulated ideas for ...	<ul style="list-style-type: none"> ▪ Possible collaborations ▪ New opportunities ▪ Exchange of good practices ▪ New value chains ▪ Territorial action plans
What are the main challenges facing the textile industry today?	<p>According to the participants, the main challenges that the textile industry is facing today, in relevance order, are:</p> <ul style="list-style-type: none"> ▪ Competition ▪ Innovation ▪ Circular Economy ▪ Sustainability ▪ Recycling ▪ Skills and knowledge ▪ Value chain ▪ Collaboration ▪ Lack of funding ▪ Communication ▪ Cultural change ▪ Exploiting surplus ▪ Traceability

	<ul style="list-style-type: none"> ▪ Internationalization ▪ Health ▪ Safety ▪ Generational replacement ▪ Technicality ▪ Networking
<p>What are the opportunities for a bio-based textile supply chain that integrates tradition and innovation?</p>	<p>According to the participants, the opportunities for a bio-based textile supply chain, that integrates tradition and innovation, are:</p> <ul style="list-style-type: none"> ▪ Consumption and intelligent use of resources ▪ Local feedstock ▪ Know-how ▪ Sustainable growth ▪ Use of biomaterials available in the area aiming for short supply chains ▪ Collaboration with local organizations for the exploitation of resources ▪ Higher costs ▪ Sustainable techniques ▪ Enhancement of raw materials ▪ Internationalization ▪ Increased market competitiveness ▪ Re-launching territorial economy ▪ New materials and products ▪ Effective communication and social awareness ▪ Health ▪ Knowing the entire health fabric chain ▪ Importance of end-of-life in terms of composite materials
<p>What are the main problems and barriers?</p>	<p>According to the participants the main barriers for a bio-based textile supply chain, that integrates tradition and innovation, are:</p> <ul style="list-style-type: none"> ▪ Lack of adequate controls on the certifications held by companies ▪ Lack of financial benefits for bio-based products ▪ Lack of certifications and labels that are clear for citizens / consumers ▪ Targeted communications ▪ Poor product / process traceability ▪ Poor attention from policy makers ▪ Lack of communication with consumers ▪ Confusion in existing protocols / certifications ▪ Prejudices ▪ Regulations ▪ Cost of biomaterials ▪ Economic competitiveness

	<ul style="list-style-type: none"> ▪ Poor skills ▪ Bureaucracy ▪ Consumer culture and mentality ▪ Lack of collaboration ▪ Terminology ▪ Cultural change ▪ Development costs ▪ Local Lobby ▪ Non-integrated supply chain ▪ Lack of funds and funding instruments ▪ Challenges arising from synthetic textiles and their influence on humans and the environment
<p>Is there a market demand for bio-based products or processes?</p>	<p>100% of the participants claimed that there is a market demand for bio-based products and processes and the industries should adapt their business strategies.</p>
<p>What resources must be put in place to adopt solutions related to the circular bioeconomy in textile industries?</p>	<p>According to the participants the resources that must be put in place to adopt solutions related to the circular bioeconomy in textile industries are, in relevance order:</p> <ol style="list-style-type: none"> 1. Policies 2. Funding 3. Standards / Regulations 4. Technological infrastructures 5. Information and knowledge 6. Industries 7. Valorisation of secondary raw materials
<p>With which categories of stakeholders is it necessary to improve collaboration to encourage the development of a more sustainable textile supply chain?</p>	<p>According to the participants the categories of stakeholders with whom it is necessary to improve collaboration to encourage the development of a more sustainable textile supply chain are, in relevance order:</p> <ul style="list-style-type: none"> ▪ Policy Makers and public administrations ▪ Industries and investors ▪ Research and universities ▪ Civil society

<p>What contribution do you expect from companies / investors?</p>	<p>Participants expect from companies and investors contributions is in terms of funding, creativity, less distance between research and SMEs.</p>
<p>What kind of activities could be promoted to strengthen cooperation and the creation of new partnerships or chains?</p>	<p>According to the participants, activities that could be promoted to strengthen cooperation and the creation of new partnerships or chains are:</p> <ul style="list-style-type: none"> ▪ Funding ▪ Support services ▪ Dissemination ▪ Workshops ▪ Discussions and working tables
<p>Any consensus points? Points/advice/perspectives agreed by all stakeholders to enable progression in driving the bio-based sector forward</p>	<ul style="list-style-type: none"> ▪ Investments on specialized staff that allows all the actors of the quadruple helix to participate in the European tenders, offering them support. ▪ Plan a series of continuous and scheduled events, a memorandum of understanding to start outreaching the cultural change. ▪ Importance of networking. Connect the actors more, to start a dialogue. ▪ Share models to follow. ▪ Train citizens, in particular young generations. The key to success is citizen involvement. ▪ Transfer the results of meetings like this with a terminology that everyone can understand. ▪ Use European projects as a tool to support research and industry

5.2.5. BIOBRIDGES partner's own perspectives and comments

The co-creation event provided an excellent platform to connect all four key stakeholders in a focused workshop to discuss how bioeconomy can be an opportunity to re-design the textile industry, based on the valorisation of the territorial resources. The workshop was beneficial mutually, enriching the knowledge of stakeholders, but also providing useful feedback to the project. It was also an opportunity to establish closer connections with experts.

With this event a true network of contacts was facilitated. Following the event an online worksheet was created, requested by the participants, where they could exchange contacts to organize a series of meetings and continue the work started with the workshop.

The discussions allowed the identification and emergence of the most relevant problems, barriers and resistances to the introduction of a more sustainable textile value chain, integrating bio-based products.

In one hand, the local players that “survived” the big textile crisis, tend to be very resistant to any change that could jeopardize their actual market share. For this reason, although they are interested in sustainability issues (also because the consumers are demanding that), in practice they tend to be conservative and close to novelties, potentially risky.

Driving a change in bioeconomy is more feasible when it comes to application fields (like food packaging, toys, cosmetics) where health is the main driver, while in the textile other drivers prevail, like the fashion, the good fit, the low cost (disposable fashion).

The strong resistance to change in textile sector in Biella, suggest that the bioeconomy scale-up is more likely to take place in areas in which the consumer's demand is more pressing the industries to adopt different business models. The role of bioeconomy in textile sector is more easily applicable to processes like yarn and fabric dyeing and finishing, as well as waste waters treatment, etc.

The stakeholders participating were interested in being informed on novelties and innovations that have been presented during the morning session. Several ideas for future collaborations and working tables emerged, although it is not easy for Biobridges to follow-up. The afternoon discussion stimulated the awareness, knowledge and ideas as well as the challenges, opportunities and barriers for the future, more sustainable textile industry.

The need of awareness and information activities have been agreed by all participants, as well as a more supportive legislation. The role of consumers in driving the change has been emphasized several times by all stakeholders.

5.2.6. Evaluation of the event

15 speakers have sent an email to underline the importance of the day, thanking the project for the opportunity and the day full of ideas. Many compliments were received for the organization and for the interactive procedure of the workshop and the quality of pitches and contents. The day stimulated ideas for possible collaborations, new opportunities, new supply chains, territorial action plans and exchange of good practices. The awareness-raising action carried out in the area wanted to bring a breath of fresh air, opening a few glimpses in the

barriers identified. It has been requested by many participants the publication of the speaker presentations and sharing of contacts among the participants. New ideas for cross value chains as for instance waste from textile industries to be used as substrate to grow e.g. fungi.

5.2.7. Photos from the event



5.3. National co-creation event in Germany I.

5.3.1. Event data

BIOBRIDGES representative (name and organization)	Zoritzia Kiresiewa – Ecologic Institute Holger Gerdes - Ecologic Institute Marius Hasenheit - Ecologic Institute
Event venue	Leopoldina, Nationale Akademie der Wissenschaften, Halle (Saale)
Date	13 May 2019
Event organized in partnership with	Bioeconomy Cluster, Central Germany, http://en.bioeconomy.de/
- (Description)	The workshop was organized in the context of the 8th International Bioeconomy Conference in Halle (Saale). The Bioeconomy Cluster, Central Germany organized the International Bioeconomy Conference and helped with the logistic organization and promotion of the event.
- (Website)	https://www.ecologic.eu/16415 https://www.bioeconomy-conference.de/en/program/
Work package	WP5
Task number	Task 5.1

5.3.2. Description of the BIOBRIDGES event

Title (original language / English)	Chancen und Herausforderungen der Multi-Stakeholder-Zusammenarbeit in der Bioökonomie / Opportunities and challenges of multi-stakeholder cooperation in the bioeconomy
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	Policy makers, researchers, association representatives
Total number of participants, out of which	22
Public sector	2

Private sector	4 (clusters representatives)
Civil society	n/a
Research	16
Countries addressed	Germany
Summary of main activities at the event	The workshop started at 9:30 and ended at 13:30 with a light lunch providing time for networking. It was kicked off by a short presentation about Biobridges and the results of the Work package 2. After that, representatives of three bioeconomy related clusters and from the Ministry of the Environment, Climate and Energy Economics, Baden-Württemberg were asked to share insights and good practices from their work in terms of challenges with cross-sectoral and multi stakeholder collaboration. This was followed by a discussion with all participants. The workshop was held in German and attended by 22 participants. One week after the event, the minutes and the presentation were circulated among the participants and uploaded on the event website (in German): https://www.ecologic.eu/16415 .
Material developed (link to the internal repository)	The minutes and the presentations can be found here: https://www.ecologic.eu/16415

5.3.3. Rationale and Purpose of the Event

On the 13th of May 2019, Ecologic Institute organized the workshop “Beyond sectors – chances and challenges of the multi-stakeholder collaboration in the bioeconomy” in the context of the [8th International Bioeconomy Conference](#) in Halle (Saale), Germany. The aim of the workshop was to discuss the challenges of cross-sectoral, multi-stakeholder cooperation in the bioeconomy as well as potential instruments for their facilitation and to present good practice examples.

5.3.4. Key outcomes from the workshop

Key topic	The workshop addressed, among others, the following questions: <ul style="list-style-type: none"> • How to create new relationships between individual bioeconomy actors? • How to search for common points of interest and interconnection? • How to create new value chains at regional level and better align existing ones? • How to ensure the successful involvement of various actors at regional level?
Sector/s represented	Chemistry, wood
Business	A differentiation of the stakeholder groups is not applicable for this

	event.
Civil Society	<p>The following key messages emerged from the discussion:</p> <ul style="list-style-type: none"> • The integration of small- and medium-sized enterprises into regional clusters is time-consuming and labour-intensive. This requires a continuous process, to be designed and implemented by cluster management. • Specific exchange formats for networking (e.g. cross-sectoral get-togethers, factory tours, etc.) can be effective instruments for bringing actors together and planning joint activities. • In order to make clusters attractive, it is necessary to identify, communicate and promote concrete synergies between different actors (e.g. the use of residual materials, etc.). • An effective participation of different actors, including the public, requires an "honest" communication of the potentials and limitations of the participation – in order not to disappoint expectations nor to underestimate the effort. • Clusters with numerous (semi-)public research institutions and their respective networks are especially attractive for smaller companies in regions where industrial research by large companies is scarce. • Within the chemical industry, the bioeconomy approach is mostly limited to specialty chemicals – especially in Central Germany (where initial contacts between representatives of the basic chemical industry and the sugar industry exist). • The development of regional bioeconomy strategies beyond the cluster level should be in line with sustainability, environmental or climate goals. A broad concept of bioeconomy promotes the involvement of different groups of actors; the joint exchange of different views was described as effective (in Baden-Württemberg). • Whether the development of a common bioeconomy narrative is effective in order to promote the cooperation of different actors is controversial (depending on the actors involved).
Policy Makers	
Research	
<p>Any consensus points? Points/advice/perspectives agreed by all stakeholders to enable progression in driving the bio-based sector forward</p>	<ul style="list-style-type: none"> • Policy can provide important impulses for the bioeconomy through framework setting, product-labelling activities (labels) and sustainable procurement. • A trusting atmosphere among the relevant actors is essential for cross-sector cooperation. A particular challenge is the joint development of business models; clauses of trust between local research institutions (scientific consultants) and companies can facilitate such cooperation.

5.3.5. BIOBRIDGES partner's own perspectives and comments

In the first part of the workshop the above mentioned thematic questions were raised. Afterwards, these questions were discussed with all participants in a plenary session. This set up worked out very well as the input presentations provided many practical and concrete examples in terms of challenges and opportunities of multi-stakeholder and cross-sectoral collaboration and facilitated the discussion moving from theory to practice. Having a representative of the Ministry who was involved in the development of the regional bioeconomy strategy allowed the organizer to link the workshop topics to the ongoing political discussions.

In general, the organizer managed to create a trustful atmosphere and had a lively and opened discussion with all participants. The experience exchange at the beginning of the workshop facilitated the discussion. Challenges in terms of cross-sectoral and multi-stakeholder collaboration in general were stressed. Trust was an important issue especially when it comes to cross-sectoral collaboration.

5.3.6. Evaluation of the event

The evaluation form was distributed after the workshop. However, only a few participants filled in the form, mostly by only completing the closed questions without providing additional details. Based on the information collected, participants stated that the content, the organization of the workshop and the discussion were good or very good. However, it was flagged negatively that the time available for networking (only during the lunch break or the reception before the meeting, 1 hour in total) was not sufficient. Another issue raised by the participants was that the feedback form was too long and that not all questions were related to the content of the workshop.

5.3.7. Photo from the event



5.4. Regional co-creation event in Spain I

5.4.1. Event data

BIOBRIDGES representative (name and organization)	Beatriz Palomo - Asebio Daniel Claudio - Asebio
Event venue	IFEJA, Ferias Jaén
Date	17 May 2019
Event organized in partnership with	<ul style="list-style-type: none"> BLOOM Project
- (Description)	ASEBIO with the collaboration of BLOOM project, has prepared a workshop where we can join the principal stakeholders (industry, researchers, administration and consumers) interested in collaborate to innovate, promote and sell different products coming from the olive tree.
- (Website)	
Work package	WP5
Task number	T5.2

5.4.2. Description of the BIOBRIDGES event

Title (original language / English)	Bioeconomy and collaboration with other stakeholders in the olive sector
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	All (Mainly Agri-Food, Forest, Olive)
Total number of participants, out of which	18
Public sector	2
Private sector	2
Civil society	10
Research	4
Countries addressed	Spain
Summary of main activities at the event	The main social problems such as population increase, pollution, etc. were presented and the bioeconomy like a possible solution introduce. Contribution of the bioeconomy through the projects

	<p>BIOVOICES, BIOBRIDGES and BLOOM were also presented.</p> <p>The objective was also to bring bio-based products closer to this sector, to promote the collaboration between different value chains, and to generate awareness around them, to see them as a more sustainable product and equal in quality than those customers already know, and to see the need to use these products instead of those that are fossil-based.</p>
Material developed (link to the internal repository)	

5.4.3. Rationale or Purpose of your Event

ASEBIO with the collaboration of BLOOM project, has prepared a workshop where the principal stakeholders (industry, researchers, administration and consumers) interested to collaborate and innovate, promote and sell different products coming from the olive tree, could get together. The aim of the event was to:

- Enhance the value of Clusters and their function to accelerate action plans in bioeconomy and projects in rural areas.
- Improve the public-private collaboration in bioeconomy in order to create new value chains and broader markets for bio-based products.
- Create awareness about bio-based products.
- Bringing information about bioeconomy to rural sector about the technological specificities of these products, the possible uses, and these bio-based products are equal of insurance and better for the environment than those that are in the fossil-based market.
- Identify ways to increase the adoption of bioproducts.

5.4.4. Key outcomes from the workshop

Key topic	Collaboration to innovate, promote and sell different products coming from the olive tree
Sector/s represented	Oil, Plastics, Agrifood Industry, Research
Policy makers	<p>The Administration has a lot of work to do in boosting the bioeconomy. Through the "green purchase" for administrations of sustainable bio-based products, which promote the visibility of bio-based products. Favours and incentivising taxation in favour of companies researching bio-based products and incentivising this type of companies.</p> <p>They also consider that bioeconomy should be presented with its 3 aspects: economy, social and environmental.</p> <p>Promoting bioeconomy in the education of the youngest and use success stories to show them to brand owners.</p>
Business	It still remains a challenge to promote business the positive sides of

	<p>more presence in bioeconomy, and the idea that with bio-based products they can compete with fossil-based products. More financing is needed though.</p> <p>Work in the media and social networks with a common message and aligned to reach the consumers with a message favourable to bio-based products is needed. Companies also have to reach out to companies; that companies would gain a better image if they demonstrate that they act in bioeconomy.</p> <p>It is necessary to look for places where to sell these BBP, in an initial moment it will be necessary to specify the points of sale where these BBP are so that the people who want to buy them can go to these points. It would be a good starting point, to have specific places of purchase for the first users. Contacting with small (retailers) or big supermarkets for example to have some bio-based products lines of sale.</p> <p>All participants agreed to involve the public administration in the education of the youngest.</p>
<p>Civil society</p>	<p>The civil society lacks the information what is bioeconomy, they think it is a very difficult term to understand, very broad, so it is better to use examples, real bio-based products for a better understanding. The attendees considered that this type of projects that are based on collaboration between actors of the 4-helix are essential to strengthen the bioeconomy at the European level. Discussions among 4-helix actors are the best way to find the right ways to boost bioeconomy.</p> <p>The thing is, consumers have to see the BBP as something differential. Recognise the environmental values associated with bio-based products. There has to be a standardized certification, so people can easily recognize bio-based products.</p>
<p>Research</p>	<p>Bioeconomy should be presented with all its 3 aspects:</p> <ul style="list-style-type: none"> • Economy: An economic model with a strong business fabric that generates income for the regional economy. • Social: Impact on employment, promoting green employment. • Environmental: Global sustainability based on the use of bio-based products. <p>Show bio-based products as social and environmental products that generate green jobs in rural areas, promote rural and environmental development. The consumers have to recognize bio-based products as efficient and quality products, which demonstrate positive results in terms of sustainability. They need to be easily associated by people as sustainable and effective products, which also promote rural development.</p> <p>All agree in involving the public administration in the education of the youngest, materialized in:</p> <ul style="list-style-type: none"> • Promoting the culture of bioeconomy.

	<ul style="list-style-type: none"> • Promoting the knowledge of BBP among the youngest. • Producing a change of mentality among the youngest. <p>Knowing how to transmit Success Stories to consumers, so that consumers know what BBPs are through success stories. Providing customers with the information where the BBPs that are on the market come from, if they come from recycled waste/products that the consumer can see in the value they generate (including a label or a picture in the product with the information where they come from).</p> <p>Main barriers</p> <ul style="list-style-type: none"> • Ignorance of Bioeconomy. • Ignorance of Success Cases. • Little work of the Administration in implementing the current legislation. • Concepts that are difficult for civil society to understand; they must be reached with a simpler and clearer message.
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5.4.5. BIOBRIDGES partner's own perspectives and comments

People are very participative, because they are very interested in the event, but it is always a problem to organize events inside of a big fair or other event of that kind because people cannot spend four hours at one workshop, they also have a lot of other things to do in the fair (meetings, being at the booth, participate in other workshops, etc.).

Bioeconomy is a difficult word to understand, so there should be efforts to use examples or success stories which can be used to understand the concept.

The Government has to be a point of reference (using this kind of products that are more sustainable, so they have to be more involved in the education of the society (legislation, incentives, education of young people, etc.))

5.4.6. Evaluation of the event

Scientists and consumers participated at the co-creation event, so different points of view were presented. In general, participants were very interested in bioeconomy. However, there was not a satisfactory number of participants because the event was part of a big fair so people also had a lot of other things to do within the fair.

It was very important to do the collaboration with BLOOM project, because its representatives have more influence and contacts in Andalusia and they could disseminate the event directly to people that were interested in bioeconomy.

The idea for the next co-creation event is to invite people from other projects, consumers association, etc. to do a speech within co-creation event about their projects and services and ensure the participation like this.

5.4.7. Photo from the event



5.5. European co-creation event in Italy II.

5.5.1. Event data

BIOBRIDGES representative (name and organization)	Matteo Sabini - APRE Chiara Pocaterra - APRE
Event venue	Palazzo della Regione Friuli Venezia Giulia, Piazza Unità d'Italia, 1 – Trieste, Italy
Date	24 May 2019
Event organized in partnership with	Biovoices, Power4Bio (in collaboration with University of Trieste, Cluster Agrifood FVG, Cluster Spring)
<ul style="list-style-type: none"> (Description) (Website) 	The worksop was part of the Pro-ESOF event “Bioeconomy and Bio-based industry for the rural renaissance of regions” http://eventi.regione.fvg.it/Eventi/dettaglioEvento.asp?evento=14122
Work package	WP5
Task number	Task 5.1

5.5.2. Description of the BIOBRIDGES event

Title (original language / English)	The alliance between primary production and bio-based Industries. A macro regional approach
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	Researchers, enterprises, policy makers, association representatives

Total number of participants, out of which	33 – Please, consider that this is the number of the people that filled the registration form. During the event, in some moments, there were more people attending the workshop, as showed by Mentimeter slides (e.g. in the first question there were 47 people participating in the discussion).
Public sector	4
Private sector	6
Civil society	4
Research	19
Countries addressed	Italy, Slovenia, Croatia, Austria
Summary of main activities at the event	<p>The workshop was part of the Pro-ESOF event “Bioeconomy and Bio-based industry for the rural renaissance of regions”, organized by Università di Trieste, Regione Autonoma Friuli Venezia-Giulia and Elettra Sincrotrone. The 2-days event had a specific geographical focus, mainly in the macro-regional area formed by north-east Italy, Austria, Slovenia and Croatia.</p> <p>The co-creation event had a focus on the wood value chain and it was divided in 3 sections.</p> <p>In the first part, an introduction was made by Biobridges, Biovoices and Power4Bio for introducing the event and the scope of the workshop. During this stage, participants were questioned through <i>Mentimeter</i> with the aim to understand the nature of the participants, their position along the value chain and the expectations of the event.</p> <p>Then, speakers from the targeted regions made efforts to:</p> <ul style="list-style-type: none"> • set the scene; • analyse the state of the art of the wood value chain in the bioeconomy context (highlighting needs, gaps and barriers); • provide new approaches and best practices. <p>In general, this part aimed to provide inputs to the audience for the last “section”, when participants were actively involved in the discussion through the use of <i>Mentimeter</i>.</p>
Material developed (link to the internal repository)	https://www.biovoices-platform.eu/registeredarea/mmls/viewMml/4403

5.5.3. Rationale and Purpose of the Event

The workshop aimed to identify opportunities offered by bioeconomy, with a particular emphasis on its bio-based component, for the interregional development of Italy, Slovenia and Croatia. The focus was put on enhancing those value chains of rural areas able to generate potential investments for and in collaboration with the bio-based industries. The workshop was organized in two sessions. During the first part, case studies representing the regions involved were presented, providing ideas and practical examples to stimulate discussion during the following session. In the second session, the Quadruple Helix stakeholders worked in a participatory way on the challenges, opportunities and barriers to promote the interregional development. The discussion, the exchange of ideas and best practices contributed to the elaboration of practical recommendations that fed the dialogue between the main actors of this field at European level.

5.5.4. Key outcomes from the workshop

Key topic	How to develop the bioeconomy in the wood-based at macro-regional level
Sector/s represented	Wood-based sector
Mentimeter results	
How bioeconomy can offer new business opportunities and value chains in the wood sector:	

How Bioeconomy can offer new business opportunities and value chains in the wood sector:

Exploiting by-products	It can increase competitiveness of the existing primary production	Nuovi utilizzi Bioraffineria
Integration of feedstock owners in the value chain	Collaboration in the supply chain	Sound policies of Forest management
Opening	Targeted performance materials (modified wood)	bio fuels improving enzymatic degradation

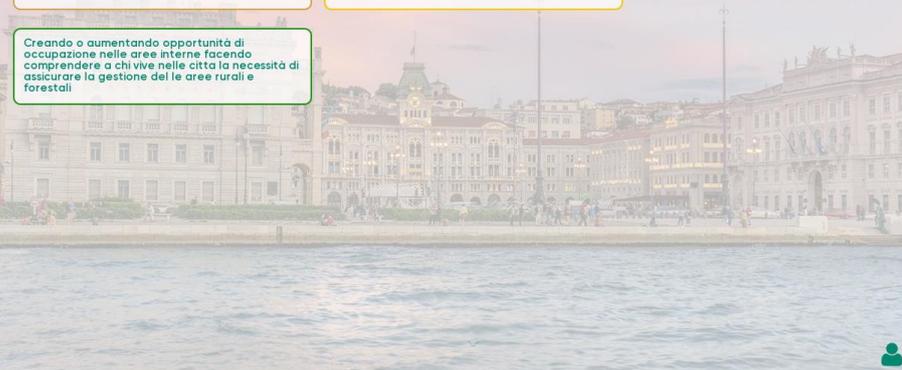
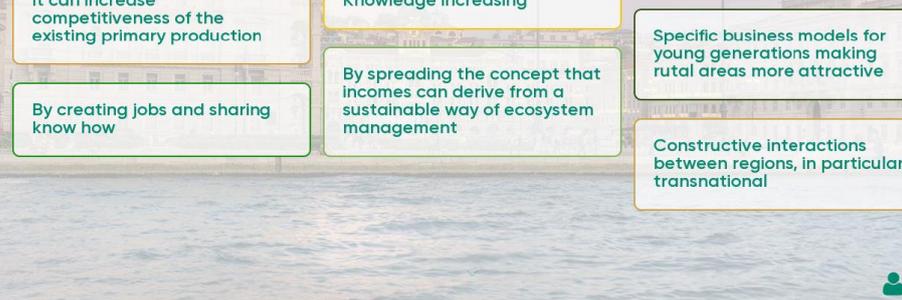
How Bioeconomy can offer new business opportunities and value chains in the wood sector:

New Smart materials	smart foresting	Opening new opportunities
New bioproducts	Non-traditional uses of the material (composites)	Lignine tannine
Bioenergy Biofoams	New products using the same tech	Vero utilizzo a cascata del legno

How Bioeconomy can offer new business opportunities and value chains in the wood sector:

New added value	Hugely increased competitiveness	Critical mass needed
Rural regeneration and new business models	Integration	Smart mobilization of resources
Prevent abandonment of mountain areas	Segmentando di piu il mercato e possibile aumentare il valore	Bioproducts

	<h3>How Bioeconomy can offer new business opportunities and value chains in the wood sector:</h3> <table border="1"> <tr> <td>New process development</td> <td>Common creation of knowledge, harmonisation, international value chain creation</td> <td>Sustainability assessment of new technologies and products in the BBI</td> </tr> <tr> <td>"simple" jobs retainment</td> <td>Technical and research/innovation/creative industries job creation</td> <td>not enough knowledge/resource in single region - for real bioeconomy collaboration is a must</td> </tr> <tr> <td>promise of significantly higher revenue/profit drives collaboration</td> <td>Rural-local divide among countries</td> <td>Not balanced in tecnological and CAPITAL sense (very much tilted towards Austria and Italy)</td> </tr> </table> <p>Other ideas that emerged during the discussion:</p> <ul style="list-style-type: none"> • New ways for using biorefineries • A better use of the various timber components • More fragmentation of the market in order to increase the value of the products 	New process development	Common creation of knowledge, harmonisation, international value chain creation	Sustainability assessment of new technologies and products in the BBI	"simple" jobs retainment	Technical and research/innovation/creative industries job creation	not enough knowledge/resource in single region - for real bioeconomy collaboration is a must	promise of significantly higher revenue/profit drives collaboration	Rural-local divide among countries	Not balanced in tecnological and CAPITAL sense (very much tilted towards Austria and Italy)									
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<p>Possible collaboration: for what? With whom?</p>	<h3>Possible collaborations: for what? with whom?</h3> <table border="1"> <tr> <td>Management of the incomes, landowners</td> <td>Universities both for spreading information and harvesting new ideas</td> <td>Data integration/collaboration with stakeholders, target groups</td> </tr> <tr> <td>Neighbourhood regions</td> <td>Data sharing</td> <td>for enhancing the individual potetials through multi-sectoral inputs...every piece of wood can serve new markets</td> </tr> <tr> <td>Innovative products for furniture industry</td> <td>Inter regionals via clusters aggregation projects proposals</td> <td>data integration collaboration with stakeholders</td> </tr> </table> <h3>Possible collaborations: for what? with whom?</h3> <table border="1"> <tr> <td>Nuove materie base da vegetali</td> <td>Primary producers and bio-based industry</td> <td>Mobilizing communities of mountain areas</td> </tr> <tr> <td>Academia and producers</td> <td>Collaboration for the validation of Management tools</td> <td>Applied research with Research Institutions and SMIs</td> </tr> <tr> <td>Training</td> <td>Maggiore sperimentazione applicata</td> <td>Mapping territories fpr understanding potentials</td> </tr> </table>	Management of the incomes, landowners	Universities both for spreading information and harvesting new ideas	Data integration/collaboration with stakeholders, target groups	Neighbourhood regions	Data sharing	for enhancing the individual potetials through multi-sectoral inputs...every piece of wood can serve new markets	Innovative products for furniture industry	Inter regionals via clusters aggregation projects proposals	data integration collaboration with stakeholders	Nuove materie base da vegetali	Primary producers and bio-based industry	Mobilizing communities of mountain areas	Academia and producers	Collaboration for the validation of Management tools	Applied research with Research Institutions and SMIs	Training	Maggiore sperimentazione applicata	Mapping territories fpr understanding potentials
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	<h3>Possible collaborations: for what? with whom?</h3> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid orange; padding: 5px; width: 30%;">Inter regionals via clusters aggregation projects proposal</div> <div style="border: 1px solid orange; padding: 5px; width: 30%;">creating new professional skills and workers</div> <div style="border: 1px solid orange; padding: 5px; width: 30%;">Enhance sustainable growth</div> </div> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p>Creando o aumentando opportunità di occupazione nelle aree interne facendo comprendere a chi vive nelle città la necessità di assicurare la gestione del le aree rurali e forestali</p> </div>  <p>Other ideas that emerged during the discussion:</p> <ul style="list-style-type: none"> • New materials from vegetal base • More applied research • Increasing employment in rural areas thanks to better management of such areas, and also a better communication with urban citizens in order to explain why it is so important • Better communication and collaboration between the various stakeholders is needed
<p>In your opinion, how the bioeconomy can contribute to the regional/transregional development?</p>	<h3>In your opinion, how the bioeconomy can contribute to the regional/transregional development?</h3> <div style="display: grid; grid-template-columns: repeat(3, 1fr); gap: 10px;"> <div style="border: 1px solid green; padding: 5px;">By creating added value</div> <div style="border: 1px solid green; padding: 5px;">By producing new enterprises</div> <div style="border: 1px solid green; padding: 5px;">By exploiting all available resources without harming the environment</div> <div style="border: 1px solid green; padding: 5px;">It can increase competitiveness of the existing primary production</div> <div style="border: 1px solid orange; padding: 5px;">Knowledge increasing</div> <div style="border: 1px solid orange; padding: 5px;">Specific business models for young generations making rural areas more attractive</div> <div style="border: 1px solid green; padding: 5px;">By creating jobs and sharing know how</div> <div style="border: 1px solid green; padding: 5px;">By spreading the concept that incomes can derive from a sustainable way of ecosystem management</div> <div style="border: 1px solid orange; padding: 5px;">Constructive interactions between regions, in particular transnational</div> </div> 

	<p>In your opinion, how the bioeconomy can contribute to the regional/transregional development?</p> <ul style="list-style-type: none"> Creating new value chain Restoration of (4.0) rural economies Focusing on the peculiar aspects of each territory To promoting regional economic models in contrast to global models. A mobilized regional economy being more sustainable By limiting the negative impacts on natural ecosystems Developing our own model for sustainable development based on "real" economy thus making our communities more resilient to social changes creating new jobs and opportunities Enterprise costs Regulations
<p>What are the main existing barriers for the development of wood bioeconomy in the macro-region?</p>	<p>What are the main existing barriers for the development of the wood bioeconomy in the macro-region?</p> <ul style="list-style-type: none"> Logistics Lack of clear cost-benefit analyses Enterprises' costs Normative constrain Lack of awereness on opportunities that bioeconomy opens for resource rich countries To have evident examples sustainable industrial chain To think "macroregional" and not only "regional", especially in border territories Policy Framework sometimes conflicting Policy makers are not awa the potential related with wood bioeconomy <p>What are the main existing barriers for the development of the wood bioeconomy in the macro-region?</p> <ul style="list-style-type: none"> Fragmentations of regulations Most events are not coordinated The effort required to involve all the stakeholders involved and affected by future policies Culture and knowledge of political decision makers Advantages viceversa costs Lack of common legislation End of waste regulation complex legislation Lack of vision

	<p>What are the main existing barriers for the development of the wood bioeconomy in the macro-region?</p> <div style="display: flex; flex-wrap: wrap;"> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px; width: 30%;">Lack of trust between complementary but also usually competing actors</div> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px; width: 30%;">Insufficient awareness of benefit of bioeconomy for communities and ecosystems</div> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px; width: 30%;">Specific educational programmes integrating relevant knowledge</div> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px; width: 30%;">Not all industries are open to innovation</div> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px; width: 30%;">Legislazione complessa è contraddittoria rispetto alla strategia</div> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px; width: 30%;">That it possible</div> </div>																		
<p>Which kind of resources should be committed?</p>	<p>Which kind of resources should be committed?</p>  <table border="1"> <thead> <tr> <th>Resource</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Public fundings</td> <td>63.9</td> </tr> <tr> <td>Private fundings</td> <td>40.9</td> </tr> <tr> <td>Creation of an integrated value chain</td> <td>54.7</td> </tr> <tr> <td>Research/technological infrastructures</td> <td>72.2</td> </tr> <tr> <td>Industries</td> <td>67.5</td> </tr> <tr> <td>Supporting policies</td> <td>72.7</td> </tr> <tr> <td>Standards and certifications</td> <td>59.1</td> </tr> <tr> <td>Know-how, skills and capacity building</td> <td>77.9</td> </tr> </tbody> </table>	Resource	Percentage	Public fundings	63.9	Private fundings	40.9	Creation of an integrated value chain	54.7	Research/technological infrastructures	72.2	Industries	67.5	Supporting policies	72.7	Standards and certifications	59.1	Know-how, skills and capacity building	77.9
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<p>Any consensus points? Points/advice/perspectives agreed by all stakeholders to enable progression in driving the bio-based sector forward</p>	<ul style="list-style-type: none"> • Higher level of integration in terms of better collaboration among actors of the value chain • Implementation of the bioeconomy strategies (both as actions not fragmented by sector, as well as cooperation at macro-regional level) 																		

5.5.5. BIOBRIDGES partner’s own perspectives and comments

Participants were actively engaged in the discussions thanks to Mentimeter that gave them the possibility to explain what their answers appearing on the screen were about. Considering the audience in the room, the discussions were focused on:

- The role of policy makers and what they can do to improve the bioeconomy strategies implementation
- How to ease the macro-regional cooperation in bioeconomy (with a focus on the wood sector)

- How to communicate the issues important for bioeconomy and to raise awareness of consumers/citizens

The discussion focused on the role of policy makers and, in particular, how they can help to remove barriers and contribute to the integration of the sector. This happened also because there were relevant policy makers (representatives from Regione Autonoma Friuli Venezia Giulia and Ministry of the Agriculture of the Croatian Republic) and researchers and entities working with regions in the bioeconomy sector (e.g. Power4Bio partners and Alberto Bezama that presented useful tools for regions).

Participants actively asked for contribution in removing barriers and in creating a more integrated system that would stimulate the cross-sectorial cooperation. The discussions highlighted the need of organizing an event more focused on the analysis of such barriers and identification of solutions, where industry and customers can actively engage and have a dialogue with policy makers aimed at changing the legislative framework.

5.5.6. Evaluation of the event

Co-organizers and speakers sent emails highlighting the importance of the day, the contents emerged and expressing the willing to collaborate again in the organization of such events.

In particular, the interaction method was really appreciated by participants, since all of them had the possibility to express their opinions and contribute to the discussions.

The event provided relevant insights and ideas for the development of the wood-based sector within a more integrated macro-regional bioeconomy strategy. In particular, the event gave the possibility to put around the table some relevant actors coming from different regions that have an increasing level of cooperation along the value chain. This aspect of the event was really appreciated by participants.

5.5.1. Photos from the event



5.6. National co-creation in Germany II.

5.6.1. Event data

BIOBRIDGES representative (name and organization)	Zoritz Kiresiewa - Ecologic Institute Holger Gerdes - Ecologic Institute
Event venue	Bonn Science Shop, (WILA Bonn)
Date	29 May 2019
Event organized in partnership with	In collaboration with the EU funded projects BLOOM, BIOVOICES
- (Description)	This workshop, which was co-organised by the EU-funded projects Biobridges, BLOOM and BIOVOICES, was targeted at representatives from science, business, policy and civil society. The objective of the workshop was to develop a common understanding of existing challenges in the German context, and to develop solutions that are based on multi-stakeholder cooperation, (project) ideas and policy recommendations to address the identified challenges.
- (Website)	https://www.ecologic.eu/16422
Work package	WP5
Task number	Task 5.1

5.6.2. Description of the BIOBRIDGES event

Title (original language / English)	Perspektiven & Herausforderungen in der Bioökonomie / Challenges and Opportunities in the Bioeconomy
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	researchers, business, policy makers, civil society
Total number of participants, out of which	16
Public sector	2
Business sector	4
Civil society	3
Research	7

Countries addressed	Germany
Summary of main activities at the event	<p>Dr. Dieter Konold (Project Management Jülich) kicked off the workshop with a presentation on the topic of "Bioeconomy as a motor of sustainable development and societal change?" and presented the research priorities of the Federal Ministry of Science and Education. In his closing remarks Mr. Konold pointed out that, that in his opinion the bioeconomy as an overall concept would not necessarily lead to a more sustainable form of economy and society - partial aspects could, however, contribute to this. Afterwards four experts were asked to give a short presentations on the topics:</p> <ol style="list-style-type: none"> 1. Standardisation 2. Market development, products & consumer demands 3. Public Procurement 4. Public perception of the bioeconomy <p>After kicking off the discussion with these brief presentations, the workshop participants were divided into three breakout groups. The breakout discussions followed a two- step process: First we organized a World Café session and discussed the challenges and obstacles with regard to a) Standardization, b) Procurement / environmental impact & market development / local markets and c) Public perception of the bioeconomy and acceptance. In this session, the participants discussed the current state of the art and the challenges related to the respective topic and exchanged ideas on potential measures. For the second part of the workshop, the future scenario technique was used, which works well to pick up specific challenges or topics to address and to work on first suggestions for solutions and on concrete measures. Each group picked up one specific idea from the list of ideas identified in the World Café sessions and discussed :</p> <ol style="list-style-type: none"> 1. What supports the implementation of the idea? 2. What impedes the implementation of idea? 3. Which concrete implementation steps are necessary?
Material developed (link to the internal repository)	https://www.ecologic.eu/16422

5.6.3. Rationale or Purpose of your Event

The objective of the workshop was to develop a common understanding of existing challenges in the German context, and to develop solutions that are based on multi-stakeholder cooperation, (project) ideas and policy recommendations to address the identified challenges.

The workshop agenda was framed around these questions:

- What kind of solutions are required to increase the market share of sustainable bio-based and circular products in Germany and Europe?
- Which products and product properties do consumers demand?
- What are the innovations that can be developed and what are suitable research and communication strategies?
- What role do local value chains and markets play?
- How does a supportive regulatory environment look like?

5.6.4. Key outcomes from the workshop

Key topic	<ol style="list-style-type: none"> 1) Standardisation 2) Market development, products & consumer demands 3) Public Procurement 4) Public perception of the bioeconomy
Sector/s represented	<i>Not applicable</i>
Business	4
Civil Society	3
Policy Makers	2
Research	7
Any consensus points? Points/advice/perspectives agreed by all stakeholders to enable progression in driving the bio-based sector forward	<p>Due to the product spectrum of bio-based products on the market, it is difficult to cover the individual products with a universal sustainability standard. In this context, it was also noted that comparability between bio-based and fossil products is not only difficult but even not possible.</p> <p>The participants agreed that the bioeconomy is not a well-known concept among the general public. Maize, on the other hand, is. The biofuel (E10) debate and the resulting buzzwords such as tortilla crisis (describing the emerging food shortages) or the “food vs. fuel” discussion in general are still vividly remembered. It was also stated that the 'bioeconomy' is a complicated term and need an explanation. Communication in the bioeconomy is still top-down. And when communication or participation procedures take place, it is usually too late. Citizens are not sufficiently considered, but merely seen as consumers. In general, the critical issue is that bioeconomy development and participation are not balanced.</p>

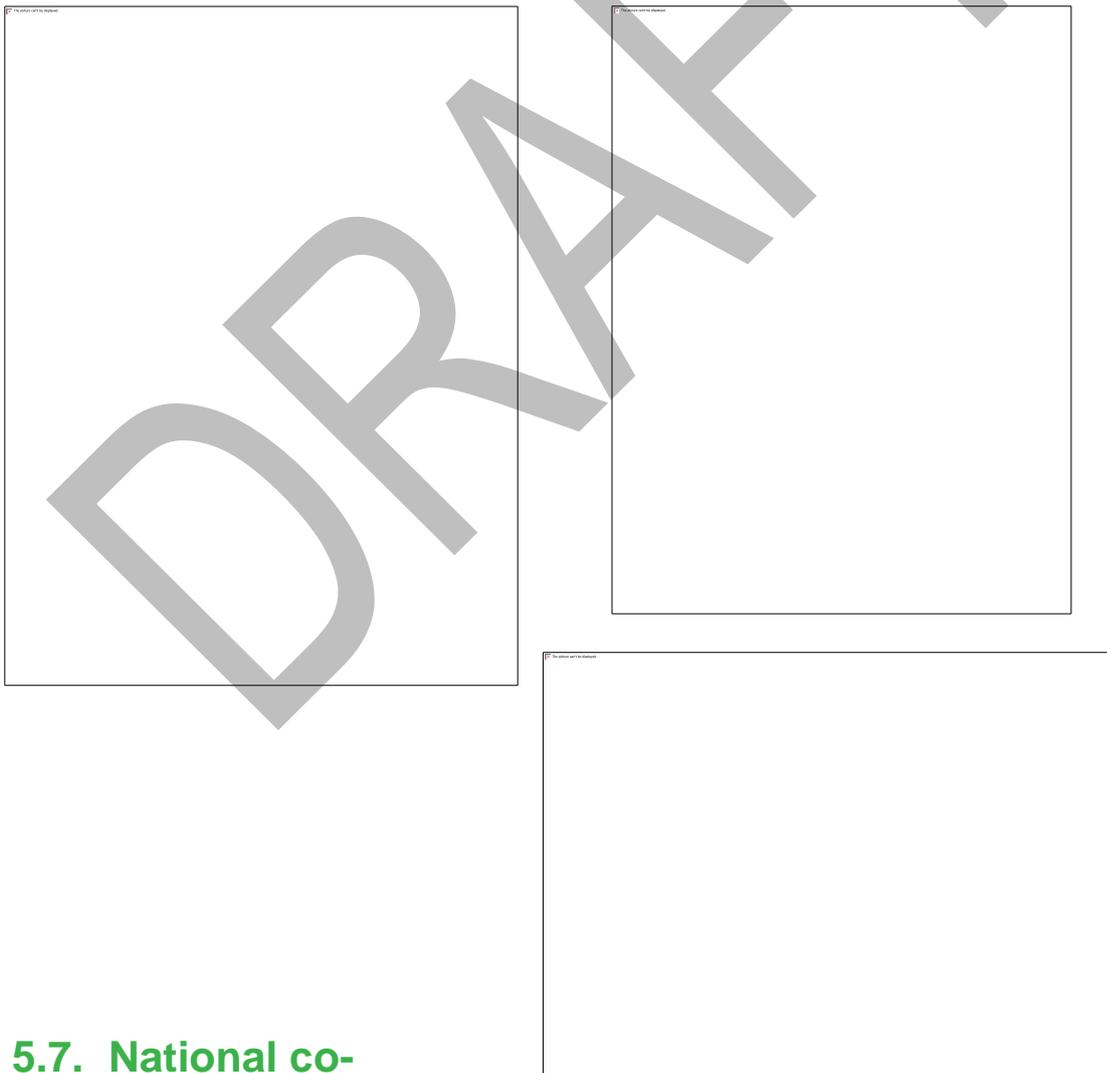
5.6.5. BIOBRIDGES partner's own perspectives and comments

The number of participants was below expectations (16 in total) and of those who attended the workshop the huge majority was from research/academia. The reasons might have been a sub-optimal timing of the workshop (just before a public holiday) and a general 'stakeholder fatigue' regarding bioeconomy workshops/events in Germany, resulting from an overflow of ongoing research projects. The fact that the workshop had to address issues/topics of relevance for three related but still distinct research projects resulted in a rather broad workshop agenda, which might have deterred some stakeholders from attending. Despite these organizational challenges, the discussions were lively and the organizer was able to gather relevant insights on the topics of standardization, market development, public procurement and public acceptance of bio-based products.

5.6.6. Evaluation of the event

The evaluation feedback form was filled in by 7 out of 16 participants. The content and the organization of the workshop were evaluated very positively. No additional feedback and recommendations beyond the questions included in the survey were provided.

5.6.7. Photos from the event



5.7. National co-

creation in Portugal I

5.7.1. Event data

BIOBRIDGES representative (name and organization)	Alexandre Almeida - LOBA Pietro Rigonat - LOBA
Event venue	Lisbon Congress Center, Lisbon, Portugal
Date	29 May 2019
Event organized in partnership with	Lipor, EUBCE, BIOVOICES project
- (Description)	Telmo Machado; Susana Lopes from Lipor: entity responsible for the management, recovery and treatment of the Municipal Waste produced in the eight associated municipalities: Espinho, Gondomar, Maia, Matosinhos, Porto, Póvoa de Varzim, Valongo and Vila do Conde.
- (Website)	(https://www.lipor.pt/en/) (https://www.biovoices.eu/) (http://www.eubce.com/)
Work package	WP5
Task number	T5.2

5.7.2. Description of the BIOBRIDGES event

Title (original language / English)	Agricultural and forestry biomass as innovation boost for small scale farms
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	Business, research, civil society (students)
Total number of participants, out of which	20
Public sector	0
Private sector	12
Civil society	2
Research	6
Countries addressed	Portugal

Summary of main activities at the event	The workshop, co-organised by Biobridges and BIOVOICES projects was structured as follows: <ul style="list-style-type: none"> • A common Biobridges and BIOVOICES introductory and engaging section until 11:30: here first both projects were presented as well as objectives of the workshop. Second, LOBA provided a presentation on current status of agriculture in Portugal, focused on highlighting the valuable Mediterranean feedstock available in the country. • Lipor followed the presentation by explaining their sustainable soil improver Nutrimais (in order to show “what is already being done in Portugal”). Lipor presentation was followed by a quiz on “current existing bio-based applications for Mediterranean feedstock”. The aim was to first show the feedstock potential of Portugal, and then show what can be done, and is already being done, with that same feedstock. • After the common section of the workshop, two separate activities for the two projects were performed: <ul style="list-style-type: none"> ○ BIOVOICES activity through Mentimeter ○ Biobridges co-creative activity through Mentimeter and open discussion with the audience
Material developed (link to the internal repository)	https://drive.google.com/drive/u/3/folders/1knZDeDpigVn8WdM7zJTC_vZS_A49jSk

5.7.3. Rationale and Purpose of the Event

Biobridges project boasts wide experience in approaches based in **co-creation** initiatives, which are essential to capture the social needs and aspirations on the ground, unlocking the bioeconomic potential of agroforestry and boosting rural growth.

A direct involvement of bioeconomy stakeholders will allow them to be informed, to access and to fully utilise the advances in research and development, and benefit from them. For instance, ensuring that rural businesses of all types and sizes have access to appropriate technology and new management tools can contribute to deliver economic, social and environmental benefits.

This calls first for the engagement and second for the cooperation of a broad range of actors, ranging from biomass producers and bio-based industries to policy makers and consumers.

Biobridges is exactly aiming at engaging key stakeholders for tackling these two fundamental and interrelated phases.

5.7.4. Key outcomes from the workshop

Key topic	Agricultural and forestry biomass as innovation boost for small scale farms
Sector/s represented	Fertilizers/ Municipal-waste-derived products
Business	Business representatives appreciated the overview that was provided with regards to current status of Portuguese agriculture. For the audience, it has been clear after the workshop both the

	business potential of Portuguese agricultural and forestry biomass, and at the same time the difficulties, constraints deriving from land ownership (which is scattered, characterized by small land owners not that “open to innovation”).
Civil Society	They showed a quite deep interest in the sustainable solutions Lipor is finding with regards to collection of municipal waste, food waste from canteens, “flower waste” from cemeteries and subsequent re-use of the collected waste to produce a high-quality soil improver/fertilizer called Nutrimais. They were enthusiastic especially with regards to the engagement of the citizens in the collection process and were keen to replicate the same approach in their hometown. Which in this case was Lisbon. Therefore the “replicability factor” in this case was way more complicated due to the size and complex administrative framework of the Portuguese capital.
Policy Makers	n/a
Research	<p>The main concern of research representatives regarded the EU (and therefore Portuguese) regulations to be compliant with, especially when taking into account the quality standards of the success case: Nutrimais from Lipor (i.e. minimum requirements for nitrogen, phosphorus, potassium, calcium, magnesium, boron VS maximum limit of heavy metals such as cadmium, lead, chromium, copper, mercury, nickel, zinc).</p> <p>They realized that there is a need for a high critical mass, resources and most of all, facilities, to comply with these parameters and deliver to the market a product with competitive price and high quality (as Nutrimais).</p>
Any consensus points? Points/advice/perspectives agreed by all stakeholders to enable progression in driving the bio-based sector forward	<p>Business: they expressed the will to continue the discussion, also at their premises as there is a lot of enthusiasm, backed up by Portuguese potential in terms of feedstock and by the concrete example of Nutrimais.</p> <p>It will be of core importance to exploit the momentum for a concrete follow-up in September, during the national workshop in Caparica at Wastes2019 (https://www.wastes2019.org/).</p> <p>Civil society: high interest and will to replicate Lipor’s best practice (in terms of sustainable, local, circular value chain deriving also from successful public engagement of citizens). This of course is a good signal but cannot be considered as “totally representative” as Lipor is acting in the north, including the city of Porto which is the second largest city in Portugal, however, Lisbon has a way different social, economic and political environment and therefore the issue shall be further deepened. The students representing civil society gave their availability to start a “buzz” at university level. A follow-up on the matter is therefore likely to happen, this can already be considered a success for a single workshop.</p>

5.7.5. BIOBRIDGES partner’s own perspectives and comments

Participants showed their interest and will to collaborate with Biobridges especially once LOBA explained them the “brokerage service” the project can offer them: with regards to requests

from SMEs which asked Biobridges to be put in contact with bio-industries for developing a bio-packaging for their products, participants showed a high interest in “other brokerage services” the project may offer them. Specifically, it was asked whether the project focuses just on bioplastics or also textile for the Aveiro region (which is a region that produces fabrics), or whether it could establish synergies with companies that are producing “take-away propane gas”: propane gas stations where users can go and take as much gas as they want, avoiding standard receptacles (that normally are too roomy for domestic uses) that cause users to waste their money, and companies to make less profits. Moreover, this solution saves tones of plastic waste.

Participants (mainly from the business sector) complained about the lack of level playing field between bioenergy and the rest of bio-based applications, with regards to public subsidiary framework. With this in mind, it was clear for all participants (and for LOBA as well) that one workshop, obviously, could not solve such a structural problem.

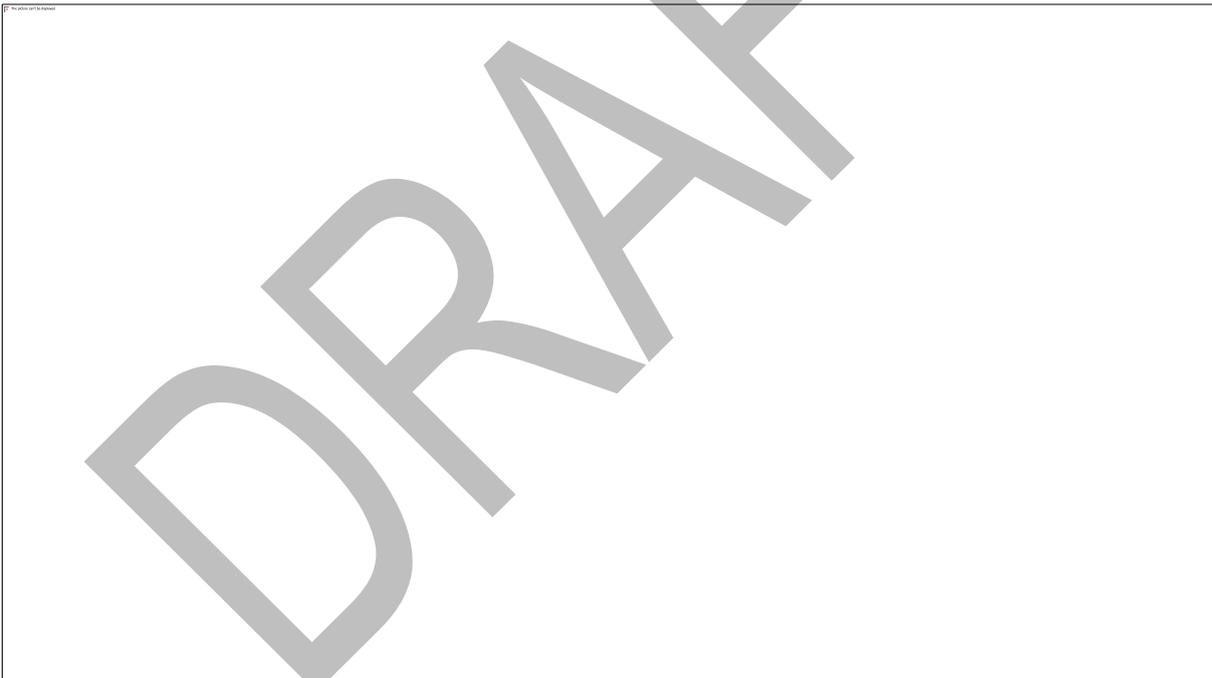
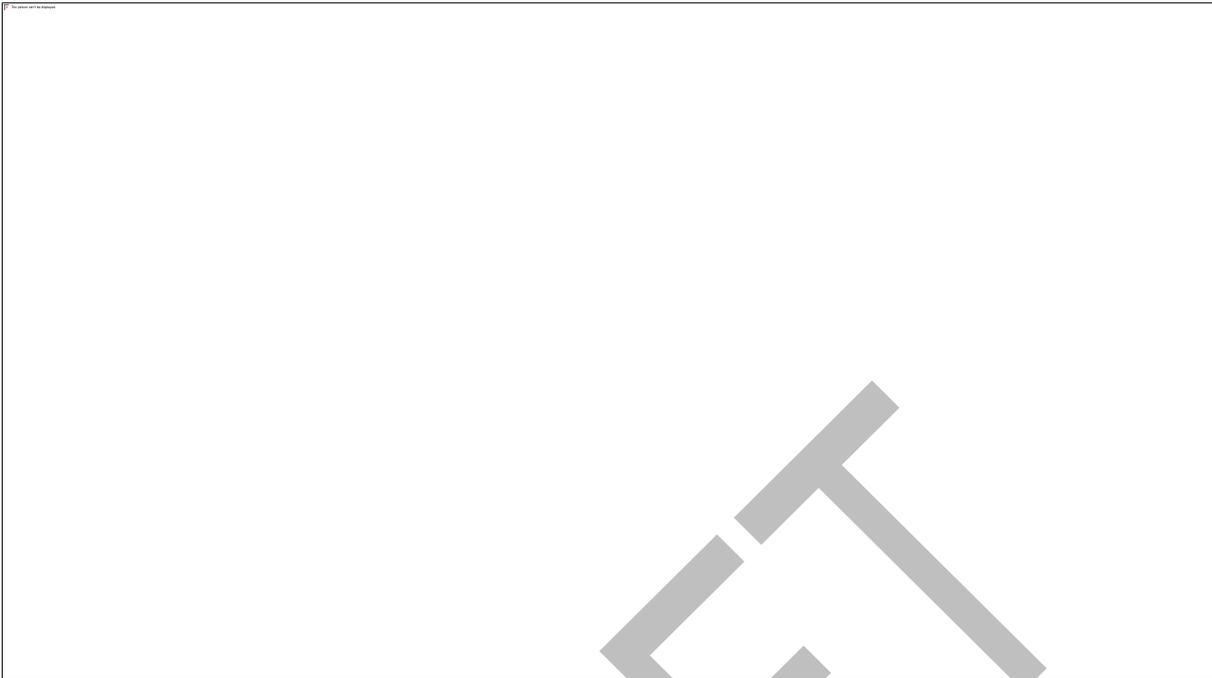
LOBA asked participants how they envisage bioeconomy regional development built on integrated services (with main regards to transportation). In their opinion, from a public administrative point of view, working on integrated supply chains, integrated value chains or integrated transports is a serious barrier and at the same time a key turning point for bioeconomy. Even within the same region (municipality to municipality) there may be difficulties to arrange integrated services solely dedicated to “bioeconomy services” (ie integrated collection of waste and transport to a plant).

It was however clear and agreed with the project, the fact that “integration” is the key factor to boost bioeconomy, for the simple fact that there is a lack of processing units/ plants, etc. in the whole territory.

Taking on board an actor such as Lipor was a real success factor. They are indeed a very unique example of successful waste management and recycling company, public engagement practices, and circular, local, sustainable value chain all at once. Their presence and presentation inspired participants and positively pushed them to interact with LOBA.

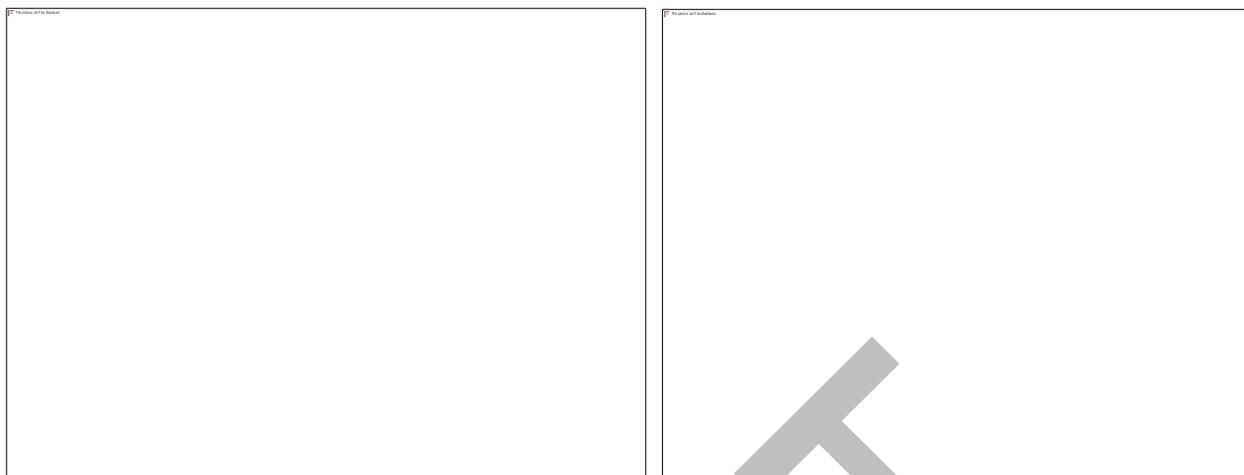
The main consensus point derived from the last co-creative section of the workshop. This section, which was introduced by the 2 Mentimeter slides below, was focused on “driving” participants in either propose solutions for successful biomass integration in local value chains or provide the organizer with success cases that fit Biobridges objective. In this case the objective was to “find a sector or already existing product/application that could create cross-cutting interconnections in the bioeconomy field”.

There was a concrete and promising response and upon it, the organizer will build its future co-creation workshop in Caparica to find the right actors to put them into practice, and concretely create a new cross-sector interconnection in Portugal.



DRAFT

5.7.6. Photos from the event



5.8. National co-creation in Croatia II.

5.8.1. Event data

BIOBRIDGES representative (name and organization)	Luka Dobrović Danijela Dobrović
Event venue	Faculty of Agriculture, University of Zagreb, Zagreb, Croatia
Date	04 July 2019
Event organized in partnership with	
<ul style="list-style-type: none"> - Croatian Ministry of Agriculture - BBI-JU - BIC 	
www.mps.hr www.bbi-europe.eu www.biconsortium.eu	Mr. Nikša Tkalec, Assistant Minister, Ministry of Agriculture; Mr. Tomislav Panenić, chair of the Agriculture Committee of the Croatian Parliament, Member of Croatian Parliament; Ms. Antonella Canalis, BB JU Project Officer Mr. Dirk Carrez, Executive Director Biobased Industries Consortium
Work package	WP5
Task number	Task 5.1

5.8.2. Description of the BIOBRIDGES event

Title (original language / English)	Okrugli stol o mogućnostima za bioindustriju u Republici Hrvatskoj / Round table “Opportunities for Bio-Based Industries in the Republic of Croatia”
Stakeholders attending (<i>Policy Makers, Researches, Business, Citizens, Civil society, Media</i>)	Policy makers, Academic communities, SME’s representatives, researches, business, civil society, media
Total number of participants, out of which	45
Public sector	19
Private sector	10
Civil society	2
Research	14
Countries addressed	
Summary of main activities at the event	<p>The aim of this event was to encourage the engagement and cooperation of policy makers and stakeholders to identify opportunities for further development of bio industry in Croatia. The workshop was divided into three sessions: 1. European context for the bio-economy/bio based sector, 2. Developing a bio-economy and bio-industry sector in Croatia and 3. Policies and initiatives for developing the bio-economy and bio-industry sector in Croatia (Biobridges co-creation event). During the first session, the organizer had the opportunity to talk to Mr. Waldemar Kutt, Head of Bio economy Unit DG RTD, European Commission via video, find out about Austria’s National Bioeconomy Strategy lessons learnt from Ms. Isabella Plimont, Director for Innovative Technologies and Bio economy from Federal Ministry for Sustainability and Tourism of the Republic of Austria and had the privilege to discuss with BIOEAST Secretary General, Mr. Barna Kovacs on BIOEAST Initiative. A total of 6 speakers were invited to present their projects and work including Particula group with BIOBRIDGES project progress, main objectives and conclusions from BIOBRIDGES FOCUS GROUP CO-CREATION WORKSHOP in Brussels on 12 June 2019. The other speakers from public and private sector presented their organizations and case studies in the sector of bio economy. The main focus of the third session was on the absence of Bio economy Strategy and strategic integration as well as interactive inter sector communication in Republic of Croatia. The main questions pointed out were how to mobilize Croatian stakeholders, what are the hurdles for businesses to</p>

	develop the bio-based industries in Croatia, the role of public policies in boosting innovation capabilities and technologies transfer opportunities and how to create synergies between key EU financing instruments and policy initiatives relevant for development of the bio-economy/bio-based industries.
Material developed (link to the internal repository)	

5.8.3. Rationale and Purpose of the Event

The aim of the workshop was to encourage the engagement and cooperation of policy makers and stakeholders to identify opportunities for further development of bio industry in Croatia. The workshop was divided into three sessions:

- Session I: European context for the bio-economy/bio-based sector
- Session II: Developing a bio-economy and bio-industry sector in Croatia
- Session III: Policies and initiatives for developing the bio-economy and bio-industry sector in Croatia (BIOBRIDGES co-creation event)

The workshop was attended by different participants: Representatives of the Ministry of Agriculture, Ministry of Environmental Protection and Energy, Ministry of Economy of Entrepreneurship and Crafts, Ministry of Science and Education, Ministry of Regional Development and European Union Funds, Academic Communities and SMEs. They participated in the final discussion on politics and Initiatives for further development of the national bio economy strategy and bio industry sector in Croatia.

5.8.4. Key outcomes from the workshop

Key topic	Policies and initiatives for developing a bio-economy and bio-industry sector in Croatia
Sector/s represented	Plastics, Gas&Oil, Agriculture, Wood Industry, Research
Any consensus points? Points/advice/perspectives agreed by all stakeholders to enable progression in driving the bio-based sector forward	<ul style="list-style-type: none"> • Further development and raising the potential of Croatia to a higher level will require a more systematic approach through the creation of a national bio economy strategy and stakeholder engagement throughout the entire bio economy chain. • Urge to have Horizon 2020 Project Officer in Croatia to inter connect all the participants in one platform for better partnership, networking and opportunities development

5.8.5. BIOBRIDGES partner’s own perspectives and comments

All the participants were actively included to discussion, and the meeting was held in a positive atmosphere. Presence of the highest ranked officers and members of the parliament shows that the bio economy in Croatia is moving slowly, but the situation is getting better.

The main challenge was the discussion about responsibilities for Bio economy further development in the framework of the central Government of the Republic of Croatia as well as public funding needed.

It was concluded that the projects like BIOBRIDGES can be drivers for the bio economy success and it was pointed out that such projects should be funded by ESI funds as well as national funds.

5.8.6. Evaluation of the event

Regarding the evaluation of the event, the organizer was very happy to receive 20 completed questionnaires with all the excellent answers. The accent was put on follow-up actions and need to organize more events like this co-creation event.

5.9. Categorized outputs from co-creation events

In the following chart, the most important outputs are presented to the readers, categorized by application sectors, challenges and also by the type of stakeholders bringing up those.

Application Sector	Type of stakeholder	Most important outputs
Textile	Public sector	<p>Barriers that need to be overcome:</p> <ul style="list-style-type: none"> ▪ Lack of adequate controls on the certifications held by companies ▪ Lack of financial benefits on bio-based products ▪ Lack of certifications and labels that are clear for consumers ▪ Poor product / process traceability ▪ Poor attention from policy makers ▪ Lack of communication with consumers ▪ Confusion in existing certifications ▪ Cost of biomaterials ▪ Consumer culture and mentality ▪ Lack of collaboration ▪ Cultural change ▪ Non-integrated supply chain ▪ Lack of funds and funding instruments <p>Solutions of the challenges:</p> <ul style="list-style-type: none"> ▪ Policies ▪ Funding ▪ Standards / Regulations ▪ Technological infrastructures ▪ Information and knowledge ▪ Industries ▪ Valorisation of secondary raw materials <p>Important tips:</p> <ul style="list-style-type: none"> ▪ Plan a series of continuous and scheduled events, a memorandum of
	Private sector	
	Civil society	
	Research	

		<p>understanding to start outreaching the cultural change.</p> <ul style="list-style-type: none"> ▪ Importance of networking. Connect the actors more, to start a dialogue. ▪ Share models to follow. ▪ Train citizens, in particular young generations. The key to success is citizen involvement. ▪ Transfer the results of meetings like this by a terminology that everyone can understand. ▪ Use European projects as a tool to support research and industry.
Agrifood	Public sector	<p>How to boost knowledge of bioeconomy?</p> <ul style="list-style-type: none"> ▪ The Administration has a lot of work to do in boosting the bioeconomy. Through the "green purchase" of sustainable bio-based products for administrations, which promote the visibility of bio-based products. ▪ Favouring and incentivising taxation in favour of companies researching bio-based products and incentivising this type of companies. <p>How to promote the marketability of BBPs?</p> <ul style="list-style-type: none"> ▪ Promote bioeconomy in the education of the youngest. ▪ Use success stories to show them to brand owners and inspire them.
	Private sector	<p>How to promote the marketability of BBPs?</p> <ul style="list-style-type: none"> ▪ Work with the media and social networks with a common message and aligned to reach the consumer with a message favourable to bio-based products. ▪ Reaching out to companies with information that they would gain a better image if they demonstrate that they act in bioeconomy. ▪ It is necessary to look for places where to sell BBP; in an initial moments it will be necessary to specify the points of sale where these BBP are so that the people who want to buy them can go to these points. It would be a good starting point, to have specific places of purchase for the first users. Contacting small (retailers) and also big supermarkets to have some bio-based products lines of sale.
	Civil society	<p>How to boost knowledge of bioeconomy?</p> <ul style="list-style-type: none"> ▪ People usually don't know what is bioeconomy, they think it is a very difficult term to understand, very broad, so it is better to offer examples, real bio-based products for a better understanding. <p>How to promote the marketability of BBPs?</p>

		<ul style="list-style-type: none"> Recognizing the environmental values associated with bio-based products. It has to be standardized certification, so that people can easily recognize bio-based products.
	Research	<p>How to boost knowledge of bioeconomy?</p> <ul style="list-style-type: none"> The attendees consider that projects like Biobridges that are based on collaboration between actors of the 4-helix are essential to strengthen the bioeconomy at European level. Discussions among 4-helix actors are the best options to find the right ways to boost bioeconomy. <p>How to promote the marketability of BBPs?</p> <ul style="list-style-type: none"> Show bio-based products as social and environmental products. A product that generates green jobs in rural areas, that promotes rural and environmental development. The consumer has to recognize bio-based products as efficient and quality products, which have positive results on sustainability. Promote the culture of bioeconomy. Promote the knowledge of BBP among the youngest. Support a change of mentality among the youngest. Transmit Success Stories to consumers, so that consumers know what BBPs are through success stories. Know where the BBPs that are on the market and where they come from recycled waste/products that the consumer can see the value they generate (including a label or a picture in the product about they come from).
Chemistry, Wood	Public sector	<p>Important tips:</p> <ul style="list-style-type: none"> The integration of small- and medium-sized enterprises into regional clusters is time-consuming and labour-intensive. This requires a continuous process, to be designed and implemented by the cluster management. Specific exchange formats for networking (e.g. cross-sectoral get-togethers, factory tours, etc.) can be effective instruments for bringing actors together and planning joint activities. In order to make clusters attractive, it is necessary to identify, communicate and promote concrete synergies between different actors (e.g. the use of residual materials, etc.). An effective participation of different actors, including the public, requires an "honest" communication of the potentials and limitations of the participation – in
	Private sector	
	Civil society	
	Research	

		<p>order not to disappoint expectations nor to underestimate the effort.</p> <ul style="list-style-type: none"> ▪ Clusters with numerous (semi-)public research institutions and their respective networks are especially attractive for smaller companies in regions where industrial research by large companies is scarce. ▪ Within the chemical industry, the bioeconomy approach is mostly limited to specialty chemicals – especially in Central Germany (where initial contacts between representatives of the basic chemical industry and the sugar industry exist). ▪ The development of regional bioeconomy strategies beyond the cluster level should be in line with sustainability, environmental or climate goals. A broad concept of bioeconomy promotes the involvement of different groups of actors; the joint exchange of different views was described as effective (in Baden-Württemberg). ▪ Development of a common bioeconomy narrative would be effective in order to promote the cooperation of different actors is controversial (depending on the actors involved). ▪ More fragmentation of the market in order to increase the value of the products ▪ Using new materials from vegetal base ▪ More applied research ▪ Increasing employment in rural areas thanks to a better management of such areas, and also to a better communication with urban citizens in order to explain why it is so important. ▪ Supporting collaboration among actors of the value chain ▪ Implementation of the bioeconomy strategies (both as actions not fragmented by sector as well as cooperation at macro-regional level)
Bio plastics, Agriculture, Bio Chemicals	Public sector	<ul style="list-style-type: none"> ▪ To set up working group together with Ministry of Agriculture ▪ To set grounds for drafting Bio economy Strategy for Croatia
	Private sector	<ul style="list-style-type: none"> ▪ Lack of Bioeconomy or Circular Bioeconomy Strategy • A need to solve 3 main pillars of the bioeconomy in the framework of national bioeconomy strategy: 1. Biomass availability, 2. Technology readiness, 3. Existing market for the bio-based products

		<ul style="list-style-type: none"> • Importance of legislation which would support the future bio economy strategy in practice • Lack of financial support for bioeconomy projects by the Croatian Bank for Reconstruction and Development (HBOR) • Setting a plan to have a coordination meeting with the representatives of banks
	Civil society	<ul style="list-style-type: none"> ▪ To keep up with the organization of events like this co-creation event ▪ To share good practices and success stories from other BBI funded projects
	Research	<ul style="list-style-type: none"> ▪ Low level of cooperation between the industry and research which is needed for the upscaling and "existing outside of the laboratory".

Chart 4 - Categorized outputs from co-creation events

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6. Lessons learnt

In the first year of Biobridges, 8 co-creation workshops already took place. The list of the lessons learnt from these workshops is included in this chapter. Observations of partners organizing the workshops concerning things that have worked and on the other side of what can be improved in the future, will enable the readers to learn from them and take them actively into account when organizing their own impactful workshops. The lessons learnt are categorized, providing the reader with an easier orientation in the feedback from the organizers.

What has worked?

Participant-orientation

- Involving large number of participants is complex and time consuming, but it decreases the risk of having a poor discussion or missing stakeholders
- Events with up to 20 participants are better due to the fact that everyone can participate in discussions and give presentations

Inspirational pitches as a key to success

- The short series of inspirational pitches presented before the actual co-creation workshop. This creates a common understanding, stimulates collaboration and creativity
- In order to keep the level of engagement high, it is recommended to alternate Mentimeter sessions with pitches

New technology support for more interaction

- Using Mentimeter, with the pre-defined questions is highly recommended

Collaborations

- Collaboration with bigger events may have a positive impact
- The involvement of local players, multipliers and other stakeholders is highly recommended
- Organising the workshops in scope of an international conference proved to be an efficient tool for mobilising stakeholders. Using the dissemination channels of the conference organizers and being part of the official programme were also very beneficial for attracting participants.
- To break down local resistances to change, it is important to involve local actors (chamber of commerce, clusters of industries, policy makers, etc.) in the organization of the event. They can appear as co-organizers.

Practical tips

- Preparations of the workshop minimum 3 months in advance.
- Lunch break organized after the workshop gives participants time to discuss ideas and potential cooperation “post festum”

Special success quote

- “Since all the invited participants attended the co-creation event, and there was no free seat in the room, we are sure we made a great job in creating synergy with the Government.”

What could be improved?

Good timing

- To moderate the risk of last minute cancellations, it is suggested to involve higher number of participants
- Avoiding sub-optimal timing of the workshop (just before a public holiday) and trying to overcome a general 'stakeholder fatigue' regarding bioeconomy workshops (resulting e.g. from an overflow of ongoing research projects in this topic).

Co-organizing events

- Some countries are currently holding many competitive sustainability related events. It is a good idea to co-organise events having similar focus with other actors. However, collaboration with bigger events may have also a negative effect. It is recommended to negotiate all the details beforehand.
- It is a challenge to organize a workshop in scope of a big fair or similar sized event because the participants cannot spend four hours at one workshop, they usually plan meetings and participation at other workshops during the fairs.

Workshop content

- When designing the agenda of the event, all partners should integrated the pre-defined questions related to the set of policy recommendations for improved public acceptance of bio-based products and processes at the local and regional level.
- Presented experiences in terms of challenges but also good practices should be mainly focused on the multi-stakeholder and cross-sectoral collaboration which is the main KPI of the BIOBRIDGES project.
- Workshop addressing issues/topics of relevance for three related but still distinct research projects can result in a rather broad workshop agenda, which might discourage some stakeholders from attending.
- It is complex to have an exhaustive overview of the topic, keeping into consideration all the angles. For that, it's recommended to organize the events in collaboration with experts in the domain to advise if the events are covering all the aspects and he/she might suggest new angles.

GDPR and feedback

- It is important to take the GDPR aspects very carefully into consideration.
- Only a few participants filling in the feedback form, mostly by only completing the closed questions without providing additional details. The survey was perceived as very long and not entirely related to the content of the workshop. In addition, the time for filling it in was limited. More time, maybe even a dedicated time slot during/after the workshop, should be given to participants for filling in the survey or try to collect feedback in bilateral talks during the breaks, which could be a great opportunity for getting more detailed and targeted feedback.

Involving relevant stakeholders

- In some cases, it is difficult to have particular stakeholders involved
- The expertise and background of the participants is not always easy to be evaluated and if there are just a few participants present, there is a risk that one table is addressing challenges or topics not relevant/interesting/motivating for them.
- The Government representatives and other policy makers should be given a detailed plan of the event in order to avoid resistance to participate
- Representatives of financial sector should be invited as participants
- Lacking success in involving representatives from consumer associations while one of the reasons for this might be the lack of awareness on bioeconomy, knowledge about bio-based products and processes as well as that consumer associations might not feel to be affected by the topic. Therefore, a more systemic work with this stakeholder groups needs to be carried out.
- More participation of actors with a different perspective should be stimulate (e.g. representatives that has concerns on the bioeconomy or on the actions implemented in the sector by a specific actor).
- The presence of business is of core importance as its representatives are capable to frame the problems of bio-based marketability from different points of view: “pure business” (prices and competition), “users’ perspective”, “regulatory frameworks”, etc.
- As per the research sector, the representatives dispose of high expertise, but in some cases lack “the entire picture”.
- Policy makers’ engagement and participation is a key factor, perhaps the most critical in terms of impact and credibility of project’s activities.
- Participants from other projects, consumers associations, etc. can be invited to give a speech about their projects or services within the scope of the organized co-creation events, widening the range of stakeholders group involved and ensuring participation.

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7. Preliminary recommendations

During the co-creation events a variety of policy challenges and opportunities for the uptake of sustainable bio-based products and the bioeconomy as a whole have been identified. The ideas how these can be tackled by policy makers and public bodies at all levels, from regional to national and European, range from concrete financial instruments such as additional tax incentives for bio-based products and providing funding for cluster activities to more efficient and transparent citizen engagement. These outcomes of the discussion will feed into the policy paper D 5.3 “Improving the public acceptance of bio-based products and processes at the local and regional level.

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8. Conclusions

The overall aim of D5.1 “Proceedings from the European, national and regional co-creation events and policy debates 1” was to report on the outputs of all the eight events organized until M12 of BIOBRIDGES project, concretely in scope of 2 tasks within WP5: Task 5.1 – European co-creation events and Task 5.2 National and regional co-creation events. These tasks were carried out based on the scientific presumption that the ideas within a collective approach can offer a fresh perspective on what BIOBRIDGES project aims to achieve.

More concretely, **European, National and Regional co-creation events** were mostly targeted to an early engagement of the national and regional communities where the co-creation was based on transformational and cross-sectorial engagement of multiple stakeholders. Participants were invited to address challenges identified in scope of the project, discussing specific subjects and themes defined beforehand. Relevant stakeholders – industry, research, policy makers and civil society – were involved to discuss the pros and cons of bioeconomy, bio-based products and processes to come up with recommendations on how these could be tackled by existing and future policies.

The results of tasks categorized in this document, together with preliminary recommendations are planned to feed into a set of policy recommendations for improved public acceptance of bio-based products and processes on all respective levels. Lessons learnt during event organization are also summed up and will be taken into account in future organization actions.

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9. Annexes

The Template for the Feedback Form of the CO-CREATION EVENT workshops can be found here:

<https://drive.google.com/drive/folders/1R0h9oiObUqkuLvJC5TZrj-rfKhv6qDj6>

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This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 792236