



Boosting European Citizens' Knowledge and Awareness
of Bio-Economy Research and Innovation

D 3.5

Report on innovative Outreach and Awareness Activities



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Executive Summary

In BLOOM and over the project lifespan the five main hubs and three co hubs have implemented a total number of 136 activities which had 62.903 participants all together. In contrast to that only 110 activities had been promised in the description of action. Of the implemented activities 30 were co-creation activities, totalling 163 participants and active stakeholders in working groups and 106 were outreach activities that led to 62.740 people reached in total.

In addition the hubs have co-created joint activities. Those activities included an international webinar series, a suitcase with sample products from the bioeconomy and a FAQ section on the website. Moreover, lots of material was developed in cooperation with the partners from work package 1 and 6 to support the hubs' outreach activities.

The second phase of the activities of the hubs, the outreach phase was dominated by the outbreak of the global pandemic COVID-19 in the last project year. The hubs adapted to this changed environment by offering to participate in their activities online and were successful in doing so. In total 19 webinars have been hosted, with a summary of 599 participants. Additionally more formats were transformed and adapted so that they could be held online which included for example online Science Espressos, an online conference, social media campaigns and more.

1. Introduction

BLOOM is an EU Coordination and Support Action implemented from 2017 to 2020. The project aims at bringing together partners from across Europe to debate, communicate, and engage the public in the potential of bioeconomy. An economy based on biomass promises to foster a circular economy and to enhance climate change mitigation, while reducing dependence on fossil fuels.

Bioeconomy covers a broad range of sectors, from agriculture and the agrifood industry, to fisheries, forestry, biorefineries, chemistry and (bio) energy – but despite its many applications, it has yet to enter into the public consciousness as an exciting solution to societal challenges.

The project BLOOM aims at boosting European citizen's knowledge and awareness of bioeconomy research and innovation and is dedicated to setting up five national hubs that will serve as platforms where bioeconomy stakeholders can be engaged to help increase public awareness and seek out opportunities for the bioeconomy.

Public involvement in the discussion of issues, problem solving approaches and policymaking activities is often seen as a medium to enhance the quality of decision making, as it provides for lay knowledge and locally adjusted solutions (Münster et al). In the case of BLOOM, the concept of bioeconomy provides for a context and purposes in order to ensure a successful participative process.

This deliverable aims to give detailed insight into the activities the BLOOM hubs have implemented over the project lifespan. In its first chapter the project aims and approach will be presented followed by a presentation of each hub in a second chapter. The third chapter gives overview over the implemented activities, that have been promised in the Description of Action (DoA) and will give a chronological order of implementation. In this chapter also the process and elements of the hub's work and embedding in the project will be described. The fourth chapter will be about the predefined formats and activities. There will also be a subchapter on new and adapted formats as well as the joint activities and the dissemination activities. Finally, the hubs' learnings on activity implementation will be presented.

1. Summary of project aims

BLOOM's main goal is to establish open and informed dialogues between EU citizens, the civil society, bioeconomy innovation networks, local research centres, business and industry stakeholders and various levels of government including the EU commission.

BLOOM is dedicated to five central objectives:

1. Raise awareness and enhance knowledge on bioeconomy
2. Demonstrate the potential economic, environmental and social impact of bioeconomy
3. Build and strengthen regional bioeconomy communities of practice
4. Create space for debate and exchange of information, knowledge and aspirations
5. Make bioeconomy knowledge and research available for education from school trainings to vocational programs and more

2. Approach

Work package 3 “Dialogue and outreach activities – Co-creation and stakeholder involvement” focuses on empowering bioeconomy stakeholders in getting engaged in the bioeconomy. Anchor points are five BLOOM hubs across Europe that form communities of practice. They consist of consortium and network partners of the project and regional quadruple helix partners and other bioeconomy stakeholders. Together, they build working teams following a living lab approach. Within these regional hubs the stakeholders and partners analysed relevant stakeholders' needs, issues, chances and barriers of the region, explored and validated content and developed a roadmap for improvements for their regions. In co-creation workshops they commonly designed outreach activities and strategies, experimented and tested different innovative open formats of knowledge sharing, dissemination and networking. Furthermore, partners and stakeholders worked towards an increased public engagement in raising awareness for bioeconomy. The main objectives for engagement and co-creation formats and methodologies in BLOOM were to:

- Initiate multi-stakeholder two-way open dialogues
- Commonly reflect on bio-economy ideas strengths and weaknesses (co-creation) Identify barriers and opportunities on the uptake of bio-economy ideas

- Deploy co-creation workshops, collaboratively creating multi-format exhibits and showpieces and materials for use in outreach and education activities
- Develop open outreach activities and dialogues with selected groups by fostering innovative formats and communication methods

2. The hubs

In BLOOM five regional hubs have been established of which two have so-called co-hubs. These hubs formed communities of practice and were led by consortium partners who invited and involved network partners, such as regional triple helix actors and other bioeconomy stakeholders. Together, they built working teams that developed outreach activities and materials in co-creation workshops to strengthen increased public engagement in bioeconomy. Together with the European Schoolnet the hubs formed the heart of the project, and offered a safe space for communication, discussion and exchange.

2.1. Description of each hub

Each hub has found its own focus area according to the regional features the hub is embedded in. The hubs and their foci are:

1. **Spain** (Focus: usage of rest materials from agro-production for valorisation; innovation and networking within the agro-food sector)
2. **Poland** (main and co-hub; focus: bioplastics, pharmaceuticals, food, agriculture)
3. **Netherlands** (“Dutch Hub”; focus: bio-chemicals and bio-plastics)
4. **Finland & Sweden** (“Nordic Hub”; focus: new wood-based products)
5. **Austria & Germany** (“Austrian/German Hub”; focus: innovative circular materials)

The Spanish hub

The Spanish Hub was set up by taking advantage of the system created for the development of the Andalusian Bioeconomy Strategy, published in the year 2018. It is led by ceiA3 and its focus lies on Innovation and networking within the Agri-food sector. The aims were to promote networking between all the actors involved into the agri-food sector in the Mediterranean area and to foster innovation and awareness regarding bioeconomy. They furthermore worked to disseminate the Andalusian strategy, to identify the main demands of civil society, to identify the main obstacles and strengths of the circular bioeconomy in the field of communication and to design outreach activities and strategies for better participation of civil society and its organisations..

The Polish hub

The Polish hub is led by the University of Krakow and is connected to the co-hub which is led by Copernicus Science center. The focus of this hub lied on Bioplastics, pharmaceuticals, food and agriculture. The aim was to raise public awareness about the bioeconomy; Showcase new food packaging materials, use of waste of agricultural production, use of biomass waste in agriculture; Increase interest for bioeconomy studies/ education. In the

region of Malopolska, hardly any efficient bioeconomy networks existed, so the objectives were directed to raising awareness and knowledge about bioeconomy among Polish citizens, presenting to a wider audience innovative solutions and directions of bioeconomy development in Poland, strengthening the bioeconomy community through the involvement of non-governmental institutions, administration, business, research and innovation sector and educational institutions

The Dutch hub

The Dutch hub is led by Wageningen Research University and focused on Bio-chemicals and Bio-plastics. The setting up of the regional hub in the Netherlands has been conducted by finding alignment with current networks, strategies and activities. This hub aimed to follow and promote the new cross-sectoral collaborations between chemical companies and the agro-industry and to gather and promote dialogue between the bioeconomy stakeholders across the region. The aim of this hub thus was to follow and promote the new cross-sectoral collaborations between chemical companies and the agro-industry; to gather and promote dialogue between the bioeconomy stakeholders across the region.

The Nordic Hub

The Nordic hub is divided into a main hub in Finland led by JAMK University of Applied Sciences in Central Finland and a co-hub in Sweden led by Vetenskap & Allmänhet (VA) in Stockholm, Sweden. The focus of the Nordic hub was on forest bioeconomy and new wood-based products. The hub partners conducted activities within the two countries while also collaborating closely through extending the Finnish and Swedish bioeconomy networks and planning joint activities. Furthermore, the following objectives were defined: to raise awareness and enhance knowledge on the bioeconomy and forest-based materials and products among Finnish and Swedish citizens, to strengthen the Finnish & Swedish bioeconomy community, by engaging NGOs, policy makers, business, research and innovation sector and the education sector.

The Austrian and German Hub

This Hub is also divided into a main hub led by the Ecosocial Forum Vienna (EFE) in Austria and a co-hub led by Bonn Science Shop (WILAB) in Germany. Its focus lied on innovative circular materials. The Austrian FTI Strategy on research, technology, innovation was developed and presented in May 2018. A specific bioeconomy strategy was presented only in the beginning of 2019. At the end of 2010, Germany was one of the first countries in the world to publish a six-year, cross-departmental "National Research Strategy BioEconomy 2030", thereby setting the first concrete course for a bio-based change in industry and society. In 2013, the Federal Cabinet decided on the "National Policy Strategy Bioeconomy" as a further milestone for a bio-based, sustainable economy in Germany – which was updated in January 2020. The Federal Government was advised by the Bioeconomy Council between 2009 and 2019. Thus big networks had already been operating when BLOOM started. In several meetings between WILAB and EFE, the following objectives of the German speaking hub were defined: to make innovative (and often circular economy) products and materials of bioeconomy known to a broader public, to increase understanding of the need for such

products in order to pursue climate protection and other social goals, to foster the network with key players, to enable an open discourse. Furthermore, his hub aimed to showcase that the bioeconomy can develop new innovative products and materials. Thereby the bioeconomy provides economic opportunities for manifold sectors, industries and products and diminishes the environmental burden caused by the fossil-based economy. The hub aimed at to better integrate stakeholders and increase the general understanding for a bioeconomy and its potential on a finite planet.

You can read more about the hubs and their roadmaps in [D3.2 „Roadmap and Synthesis of the hubs“](#).

3. The activities

As the hubs form the core of the project, the activities were the basis of the hubs. Bloom's goal is to raise awareness and enhance knowledge on the bioeconomy among EU citizens by stimulating activities via regional hubs and developing outreach activities demonstrating the potential social, economic and environmental impact of the bioeconomy.

To reach this goal, the hubs engaged various audiences through co-creation workshops to support knowledge exchange and to design outreach activities and materials on the bioeconomy. Co-creation processes were at the heart of Bloom's five regional hub activities because co-creation follows an approach of involving different perspectives and collaboratively designing tools, materials, processes, activities or strategies.

Each hub acted as a community of practice and explored and tested, assessed, adapted, disseminated and implemented concrete actions, promoting the full uptake of bioeconomy. These activities – together with the innovative outreach formats – also supported the exploitation of the co-created actions. Many outreach activities have been jointly elaborated and designed in the previous co-creation workshop.

The following chapter will give an overview over the required activities and their order of implementation during the project lifespan.

3.1. Overview

As stated in BLOOM's description of action a multiple number of activities and events had to be organised by each hub. Table 1 gives overview over the required activities.

Table 1: Activities in each hub

| Activity | Number of events | Short description |
|--------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Co-creation Workshops | 3-5 | <ul style="list-style-type: none"> To design outreach activities tailored to the needs of the hub's selected focus topic Step 1 Mapping and creating; Step2 Analysis and Adoption; Step 3 Planning and Design Multi-stakeholder Report at the end of workshop series Month 10-28 |
| Type B Webinars | 2 (minimum) | <ul style="list-style-type: none"> to complement, strengthen and continue actions taken up during co-creation workshops targeted to hub members performed in each hub between April and October 2019 (Month 18-24) |
| Type C Webinars | 3 (minimum) | <ul style="list-style-type: none"> outreach webinars targeted to the general public main goal: to raise awareness of citizens in one field of bioeconomy and to increase number of stakeholders reached by BLOOM performed in the period between January and August 2020 (Month 27-34) |
| Outreach activities developed in co-creation workshop | 3 | <ul style="list-style-type: none"> 2-way open dialogue in hub region developed in co-creation workshops |
| Science Espressos | 5 (minimum) | <ul style="list-style-type: none"> A short talk (of about 10 minutes) followed by informal discussions 1 experts introduces a current research topic Intended for small groups of participants Event is open to the public Month 17-34 |
| Gallery Walk | 1 | <ul style="list-style-type: none"> Gallery developed by GEN (multimedia material) Hubs will use this material in outreach activities Offer 1 Gallery walk means: activity offered to run through and discuss all the material Can be travelling through the hub's regions/ cities Month 17-34 |

| Activity | Number of events | Short description |
|----------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Optional Activities | 2 | <ul style="list-style-type: none"> • Optional in terms of choosing the activity format • Activity format should be chosen from D3.3 “Guidebook on engagement and co-creation methodologies” • Month 17-34 |

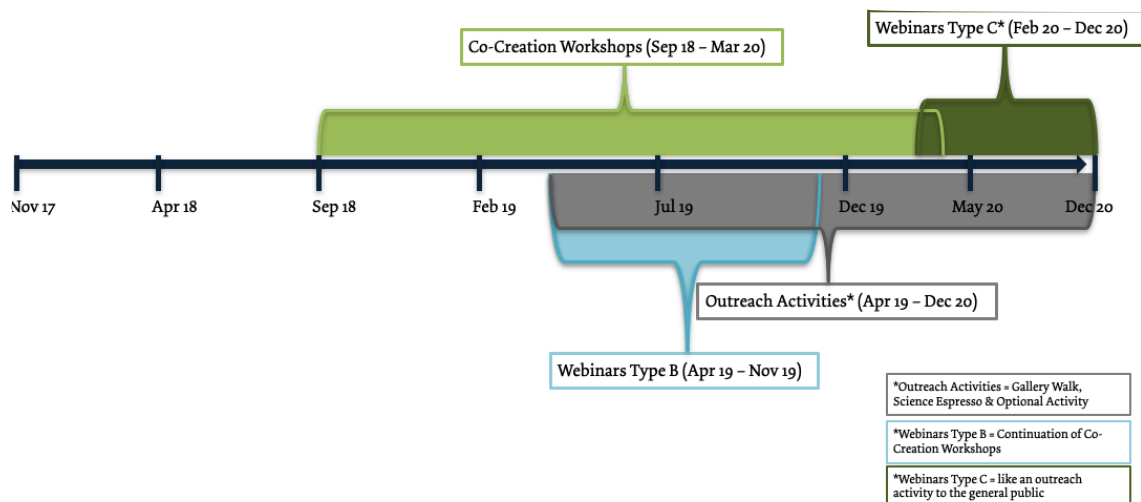
Table 2 shows the required activities to implement by each co-hub.

Table 2: Activities in Co-hubs

| Activity Format | Number of events | Short description |
|--------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Outreach activities developed in co-creation workshop | 1 | <ul style="list-style-type: none"> • 2-way open dialogue in hub region developed in co-creation workshops |
| Science Espresso | 3 | <ul style="list-style-type: none"> • A short talk (of about 10 minutes) followed by informal discussions • 1 experts introduces a current research topic • Intended for small groups of participants • Event is open to the public • Month 17-34 |
| Gallery Walk | 1 | <ul style="list-style-type: none"> • Gallery developed by GEN (multimedia material) • Hubs will use this material in outreach activities • Offer 1 Gallery walk means: activity offered to run through and discuss all the material • Can be travelling through the hub’s regions/ cities • Month 17-34 |

Timeline

During the project the activities followed a specific timing, making sure that the outcomes and results were most fitting to the stage and objectives of the hubs and the project in general. The overall timeline of hub activities is shown in the graph below.



3.2. The link between co-creation and outreach

The co-creation workshops were intended to offer a platform for the multiple stakeholders to commonly design outreach activities and strategies, experiment and test different innovative open formats of knowledge sharing, dissemination and networking.

In the **Nordic hub** the co-creation workshops succeeded to be a neutral place for discussion, which were a new and innovative offer in the regions. Together, stakeholders designed and thought of suitable outreach activities and target groups. It turned out, for example, that in Finland, some of the activities should specifically be targeted to young students and that stakeholders consider it very important to organise awareness raising and education on bioeconomy in schools. In **Poland** both hubs, main-hub and co-hub ran the co-creation workshops together designing multiple activity formats, especially for the needs of the Polish public (see more on this in chapter 5). In **Spain** the co-creation workshops were used to found a bioeconomy focus group which picked a target group of experts with different profiles from researchers, to private and public scope of agrifood sector and then designed all of their outreach activities to the needs of this target group. In **Austria** the co-creation workshops led to a number of targeted webinars and many learnings as to their audience. The workshops helped to better understand their stakeholders needs and gaps in knowledge. In **Germany** the co-creation workshops initiated a working group which then designed the outreach format of a detailed lecture series, using various formats and addressing the needs of their target group.

Like indicated in the timeline above, the co-creation workshops were planned to run for the first one and a half years of the project, to form the basis of the hubs' outreach plans. However, all hubs agreed that finally the **co-creation process has been an ongoing process** in their hubs, which was not terminated at a certain point. The co-creation thus helped to continuously update the understanding of stakeholder needs, views, knowledge gaps and opinions and helped them taking root in and becoming part of the local networks.

3.3. Use of generated BLOOM Material and content

In work package 1 and work package 6 many materials have been developed for the hubs to be used in their outreach activities. Such materials included for example **infographics**, **leaflets**, **factsheets**, posters, a **quiz**, **podcasts** and a **series of documentaries**. The material content stems from a series of **Key Messages** that were developed with different target groups in mind. When put together the material provides answers to the fundamental questions: What is the bioeconomy and why is it important? The Key Messages and the User Group segmentation allowed for a better targeting of the varying bioeconomy knowledge levels that were encountered in the hubs.

See **D1.4 Compilation of stakeholder targeted materials Final version** for more details on this topic.

4. Predefined formats & activities

The BLOOM description of action held information on which activities should be implemented (see tables and graph above). In the Deliverable **D3.3 Guidebook on outreach and engagement methods** the activity formats relevant to the BLOOM project were described in detail. It serves a basis and handbook for the hubs and their activity implementation. Furthermore, the hubs were also trained in internal Knowledge Mobilization and Cross-Fertilization workshops (October 2018 and December 2019) in order to be able to achieve the best results. In these workshops the activities which have been collected in the BLOOM Guidebook on Outreach and engagement methods were practiced and new formats co-created together. To support the adaption and the creation of open innovative dialog formats, hub members were also trained towards learning media practice as well as deep upstream engagement of community- and participatory research methods during these hub cross fertilization meetings.

4.1. Co-creation formats & activities

Each of the five hubs carried out a series of three to five co-creation workshops with multiple stakeholder groups, following this scheme: Step 1 Mapping and creating, Step 2 Analysis and Adoption, Step 3 Planning and Design (Step 1-3 held the option to be repeated). The hubs offered these workshops as a creative and social space for designing and experiencing and collaboration. Based on principles of design thinking and prototyping, the multi-stakeholder groups were accompanied in a process of learning, creating and reflecting. In the co-creation workshops, all participants had the possibility to and exchange ideas, ambitions and concerns related to the bioeconomy. Participants collaboratively defined activities to engage citizens and create ideas on how the topic can be communicated to different target groups.

The main objectives of the regional co-creation workshops held by the Bloom hubs were to:

- Initiate multi-stakeholder two-way open dialogues
- Commonly reflect on bioeconomy ideas, strengths and weaknesses (co-creation)

- Identify barriers and opportunities on the up-take of bioeconomy ideas
- Collaboratively creating multi-format exhibits and showpieces and materials for use in outreach and education activities
- Develop open outreach activities and dialogues with selected groups by fostering innovative formats and communication methods

The formats that have been tested and implemented in the BLOOM hubs can be further explored in the [BLOOM Guide on co-creation](#).

General summary

An overview over all the actually implemented Co-Creation workshops and activities can be found in Annex 1. In summary the hubs have implemented **30 co-creation activities** in total. All together **163 participants** took part in these workshops. The first co-creation workshop took place on the 25th of October and the last on 1st October 2020. In the Netherlands four co-creation workshops were organised, in Poland both hubs implemented the workshops together, which were five in total and in Germany two co-creation workshops were organised and implemented. In Austria six co-creation activities were held, of which two were webinars and one additional workshop was held together with the German hub. In Finland four co-creation activities were held, of which one was a webinar, in Spain five in total of which two were webinars and in Sweden three co-creation webinars were held.

4.2. Outreach formats & activities

Outreach and engagement activities bring along a number of benefits to all sides of the dialogue. They can foster a feeling of trust between the different stakeholders and give the opportunity to influence processes and end results for stakeholders that would otherwise have been left out. Furthermore, they enable the transfer of local knowledge which would otherwise have been left unheard to decision making or to research authorities and remove barriers of cooperation between stakeholders. Outreach and engagement activities allow to create the conditions where a shared understanding, a feeling of shared responsibility and a sense of ownership can emerge, which helps with expectation management of the participating stakeholders and which leads to increased satisfaction with outcomes by all sides.

The BLOOM guidebook on Outreach and Engagement gives an overview of the participatory outreach and engagement methodologies used by the hubs.

General summary

In total **106 outreach activities** have been implemented by the BLOOM hubs of which **29 were newly designed or especially adapted**. See chapter 5 for more details on these activities. In total **62.740 people participated** in the BLOOM outreach events. 68 events were held which were based on formats that were given in the BLOOM Description of Action. The first outreach activity was implemented on 28th September 2018 and the last one will be in Spring 2021, as of the current status. Some more activities (e.g. in Finland) will be held in December (the last project month) and can therefore not be included in this report.

In total **27 different formats** were used for the outreach activities by the hubs. Furthermore **nine gallery walks** took place, as well as **33 Science Espressos**.

The activities that reached the most people were the Video for public transport, the TV-discussion in Austria, the social media campaigns, the online conference in the Polish hub, and the exhibition at the Dutch Design week. All these activities had been proposed by the stakeholders of the co-creation workshops.

4.3. Webinars

In BLOOM three different types of webinars were implemented. **Type A webinars** intended to complement the face-to-face training workshops for hub coordinators. Later, the knowledge and skills gained during the Type A webinars were used by local hubs to support cooperation among members via online channels and for designing and delivering part of the outreach activities by using online co-creation methods. A **type B webinar's** main goal was to complement, strengthen and continue actions taken up during co-creation workshops organised in the hubs, mostly, in terms of designing and developing outreach activities, public engagement methodologies and open dialogue formats. During those webinars local hub members had the possibility to update, or re-discuss the ideas and topics which appeared during co-creation meetings and upgrade their knowledge on how to perform different participatory activities themselves. Especially during the COVID-19 pandemic this type of co-creation activity helped the hubs to stay on track with their objectives and work with their stakeholders. Last but not least, each hub was obliged to perform three outreach webinars targeted to the general public, which are the **type C webinars**. The main goal of the outreach webinars were to raise awareness of citizens in one field of bioeconomy. The usage of the webinar format supported the non-digital activities and allow to easily increase the number of citizens reached by the BLOOM project program, again especially in times of COVID-19.

More information about the different types of BLOOM webinars can be found in [D3.4 - Innovative Open Dialogue Format trainings and Webinars](#).

General summary

In BLOOM a total of 19 webinars have been hosted, of which 5 were held internationally. All together the BLOOM webinars had 599 participants. The international webinars had 225 participants.

5. New and adapted formats

Like described in chapter 3.2.2. The link between co-creation and outreach it was also a goal to design and tailor outreach activities specifically to the different regional needs of the hubs. Thus, each hub has come up with new and/or innovative formats that can now also be used in other regions.

The Spanish hub

In the Spanish hub the following formats have been newly designed or adapted:

- A bioeconomy Innovation Route
- A bioeconomy Escape Room / Teachers' pack
- An bioeconomy newsletter that will be published regularly also after the project ends

The Polish hub

In the Polish hub the following formats have been newly designed or adapted:

- An outdoor Family Game
- A short Animation videos to be shown in public transport
- A co-created Monograph
- A bioeconomy ambassador trip

The Dutch hub

In the Dutch hub the following formats have been newly designed or adapted:

- Publications about bioeconomy

The Nordic Hub

In the Nordic hub the following formats have been newly designed or adapted:

- A bioeconomy contest
- The taste of wood mingle
- An all senses exhibition

The Austrian and German Hub

In the Austrian and German hub the following formats have been newly designed or adapted:

- A lecture series about bioeconomy
- A local TV discussion
- A bioeconomy study trip

The hubs have also run social media campaigns on the topic of bioeconomy.

All these activities have been jointly elaborated and designed in the previous co-creation workshops and can also be found in the BLOOM Guidebook on outreach and engagement.

Further multi media material for outreach

In addition further materials have been developed by the hubs and the partner **Otelo eGEN**, which were intended to support the hubs' outreach actions. This included:

- a Quiz for outreach activities (translated into four languages)

- a presentation for the European week of the Regions and Cities that build on tablets and a web app about bioeconomy and BLOOM
- a video for public transport (idea from Polish hub; translated into five languages)
- the videos for the BLOOM suitcase as a virtual presentation (joint activity of the hubs and translated into all hub languages)

6. Joint activities

Although the hubs are spread over the most diverse settings and knowledge infrastructures on bioeconomy all over Europe, it was still a core objective to work together on achieving the activity objectives and to have cross-fertilization effects between the hubs. Therefore, two face to face workshops have been organised for the hubs and in an internal co-creation process a number of joint activities have been designed which have then also been implemented.

The joint activities that have been designed included:

An international webinar series

In this webinar series all the hubs worked together and hosted five international online events in total. Each main hub had organised a webinar with the help of their co-hub and/or an additional partner. The topics ranged from Bioplastics, over fabrics, trees to refineries and innovative products. These webinars ran from May 2020 until November 2020.

The recorded webinars can be accessed via the [BLOOM website](#).

A Bioeconomy Suitcase and Leaflet

This suitcase on bioeconomy products was one of the major findings all the hubs had in common: providing something that makes bioeconomy touchable and help participants and the broader public better understand the concept. So all partners jointly created a suitcase that includes products from all over Europe: fabric made from wood, cups made from wood and other natural resources, egg cartons made from potato starch & cellulose fibres, straws made out of apples and many more.

The suitcases can be rented for events from each hub and an accompanying brochure about the suitcase can be [downloaded from the website](#). There is also one [video introducing the suitcase](#) and another one showing it in action.

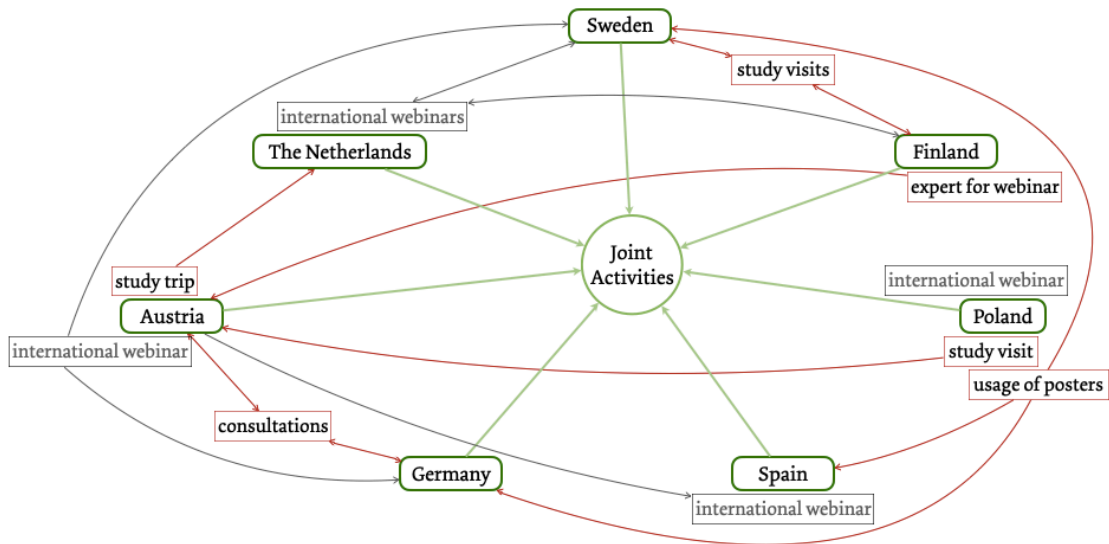
An FAQ section on the website

Another learning of the hubs was that in many workshops and activities the same questions were asked - and not only in one hub, but all over Europe. So the hubs, together with work package 1 leader Wageningen Research, collected these questions and published them in a [FAQ section on the website](#).

None of these activities have been promised in the BLOOM Description of Action, but stem from the experiences the hubs have gained through the co-creation phase and the feedback they have gotten from their stakeholders.

Apart from these joint activities the hubs have also worked together on various other activities. Figure 1 gives overview over these activities.

Figure 1 - Hub cooperation



7. Success Stories

Each hub holds its own success story where the activity implementation was especially smooth or had the most valuable outcomes. The tables below represent the achievements they have made.

Spain

"First of all it was a success to work with mostly the same people during the co-creation workshops and the background of these people and also that they were working in order bioeconomy spheres of the region. These participants allow to learn and get in contact to the territory faster than if we were worked with another group of participants."

„We think that the Innovation Route was quite good and it is quite replicable, close to the participants and allow to create debate as well as raise awareness, also allows to connect different sectors, in this case the private sector-academia-general public.“

„We have identified the teacher´s pack as one of the main important story of success. It has been very interesting to share with teenagers relevant info about bioeconomy knowing that they are an early key of the change. It combines material from our partner, the European school network and all the other material that has been created in BLOOM, including an activity generated during the co-creation process, the Escape Room. All of this we are giving them for free to several high school centers where they can use this material for a long time and adapt to their local situation. “

„Another success story has been the C3-Bioeconomy newsletter. It is expected to be published before 2021 and it will offer a thematic framework for bioeconomy where international researchers are able to publish their manuscripts in open access.“

Poland

"After the publication of the monograph 'Bioeconomy. Chosen aspects' the representatives of Łódzkie and Świętokrzyskie voivodships got in touch with us presenting readiness for future cooperation for bioeconomy. However, we think the participation of young-ambitious in 2 of the three hands-on workshops was most important. They have never heard of the bioeconomy before. During the workshops in Austria and bioplastic workshops, they saw the possibilities of bioeconomy, got involved in the topic, some people chose bioeconomy as the direction of their professional development. For young people, the bioeconomy has simply become part of their reality, the direction in which economics is going.“

- Main hub representative

„The set of spring webinars! We chose topics that gathered big audience because of its connection to current events (Covid and its ups and downs: bioplastic usage in medicine, food waste as a biomass etc.) These topics attracted people and gave us good start to expand the bioeconomy issues.“

- Co hub representative

The Netherlands

„Our participation at Dutch Design Week! A large event with thousands of visitors, as well the professional community (national international and regional) as well civilians. We have had continuous conversations over 9 days. „

Finnland

„In co-creation we identified that we would support especially communication with youth. The collaboration of different schools have been fruitful in many perspectives. Firstly, we reach also youth that are not so active to seek information and who are not always taking part in dialog of bioeconomy. Secondly, we could build collaboration with schools and continue the cooperation also after the project at some level. Thirdly, to show case the product examples rose interests of youth and made the future solutions very concrete to the stakeholders.“

Sweden

„The co-creation part where different stakeholders needed to listen and communicate with each other and the communication activities where the simplest talk about forest went into a talk about sustainability and what kind of world, we want to live in in the future. Connected to education and research. The subject bioeconomy is a good way to have a dialogue on science communication and the importance of involving different stakeholders and Responsible Research and Innovation, RRI.“

Austria

„Our Gallery Walk: by organising the event together with the homebuilders' fair (Häuslbauer Messe) we were able to reach a large and new group of people. The visit of two federal ministers motivated even more visitors to step by.“

Germany

The most positive experience was to see that our stakeholders, researchers and managers, students and citizens were very open minded for new developing new outreach concepts and new ideas of presenting the topics of bioeconomy.

There was not much exchange of information and experience between ongoing projects in the beginning. The exchange formats and co-creation events created a trustworthy basis of mutual recognition.

The world has no raw material problem. It needs a higher-quality material use. This is where plant breeding comes into play. (Experts at the panel discussion)

8. Dissemination activities

Next to the co-creation, outreach and awareness activities in the BLOOM project, also many dissemination activities were undertaken. The deliverable **D6.4 Report on Dissemination and Sustainability and exploitation plan** describes the dissemination activities that the project undertook during the past 3 years. It refers to the original Dissemination Strategy that was formulated and implemented at the start of the project and comments on the degree of success of the objectives described therein. Specific mention is made of the key metrics that indicate the scale and reach of our dissemination campaigns and activities, especially those that can be found on Social Media.

9. Learnings and future recommendations

This chapter holds summarised reflections and recommendations by the hubs that stem from the experiences they have made during the implementation of their activities. These outcomes and experiences are also represented in the Policy Brief on Public Engagement in Bioeconomy.

Learnings on activity implementation (Co-creation and outreach)

The co-creation activities in the **Spanish hub** have allowed to provide an informal space where experts that use to work together in other bioeconomy networks in Andalusia have been able to discuss, debate and co-create about how to improve the awareness and the knowledge about bioeconomy. Also the methodology, open and adaptable to the participants and the development of the work done in previous workshops, allows to go deeper in some aspects as thinking about the more suitable outreach activities or target groups for instance. Furthermore, it was important to get people involved in the process.

The outreach activities allowed to test the effectiveness of the co-creation processes. Those activities that were focused on general public and inside bigger events permitted to “spread” the concept of bioeconomy without going deeper in other aspects. such as the sustainability of the bioeconomy or its relationship with the circular economy.

In the **Polish main hub** the co-creation method and its effects held many surprises. After a not so successful first workshop, the next 3 workshops brought surprisingly positive effects. The absolutely key issue was the diversity of participants, i.e. representatives of the largest possible group of stakeholders; it made people not feel pressure to be the best specialist in their field and saw different contexts of the same problem.

The outreach activities were designed in the context of findings from co-creation workshops. Interest in free open events was limited. Events based on co-creation effects and targeted at very specific groups (also designed by co-creation) were popular. The greatest success was undoubtedly the series of ‘hands on’ workshops on various aspects of bioeconomy, organized for a group of young and ambitious people. Importantly, some efforts had to be made to participate in the workshop. Limited (or apparent limitation) of availability increases interest in the event.

The **Polish co hub** found that people need to understand their method well (whatever method they choose to implement for their workshops), and that it is important to add an extra hour for practicing cooperation, especially when stakeholders are from different groups/professions/environments.

As to the webinars, this hub found the most important thing is to interactively exchange with the audience. The audience always has plenty of questions and wants to have dialogue or Q&A sessions with lecturers, which means lectures should take only 1/4 of the events time (max. 20 minutes), the rest should be for active participation, such as polls, quizzes or as mentioned before Q&A session. As most of the outreach activities have taken place online, it was really important to choose a good time for the webinar (each target group has different restrictions, the day of the week is also very important).

The **Dutch hub** made the experience that it is important to build a common ground or domain from where to start co-creating. It was important to present and discuss the BLOOM bioeconomy concepts as well as the regional approach, network and initiatives on Bioeconomy.

Furthermore, it is important to really interact with the people to find common understanding, otherwise it is hard to describe and visualize the perspective of bio-

economy. Some people already have some knowhow or awareness, other people are totally unaware. In a conversation one will discover the level of awareness and can adapt the storyline in order to optimally reach the specific public. This is especially relevant for the format of the Gallery Walk.

In the **Nordic main hub**, in Finland, co-creation as process was a very motivating and fruitful way to build up communication between stakeholders. Nevertheless, the greatest challenge was to get people involved in the process. It is considered crucial to have direct contact to the stakeholders that are wanted to be on board. The stakeholders of the co-creation process represented a large variety of professionals of different knowledge areas as well as representatives of media and NGOs. The discussion brought up interesting perspectives in different bioeconomy fields.

In practice it was very difficult to know beforehand what sort of outreach pleases stakeholders though the activities were formed in co-creation. However, over the course of the process this hub noticed some outreach formats being popular and continued to repeat those with some swing.

In the **Nordic co hub**, in Sweden, co-creation as process was a good way to make a common understanding and facilitate dialogue between the different stakeholders. The greatest challenge was to convince stakeholders to take time and effort for being involved in the process. Most important are communication skills and detailed planning, to allow different stakeholders to understand the value of the process. Furthermore, it is not that important to have all stakeholders on board but at least to mention all different types of stakeholders in the process. To give the participating stakeholders feedback on outcomes was seen as very important.

This hub preferred a combination of different activities due to the fact that they had a broad target group, “the general public”. Moreover, it was not that important what was done as long as the target group and stakeholders were reacting and taking part. Which means that one needs to find suitable place and timing as to where to reach the audience. Then any outreach can evolve to be better and reach the goals that were set beforehand. Co-creation was experienced as an ongoing process, implemented in this project to inspire the different stakeholders to create their own outreach activities.

In the **Austrian hub** Co-creation proved to be a highly effective approach for the development of outreach activities. For structuring the topic and the identification of perceived chances and risks in the implementation of a bioeconomy, co-creating a list of topics and prioritisation worked well. For choosing and characterising the target groups for outreach activities the persona method was very suitable. For elaborating a concrete outreach activity prototyping was perceived an entertaining and very efficient method. The concept of personal co-creation workshops and subsequent co-creation webinars to refine the content proved very efficient. One could assume these online workshops only worked out, because there was a first round of workshops where participants could meet in person and the underlying question did not require a high level of creativity (or because of the online channel the participants refrained from being to creative). On the positive side, the willingness to participate in online co-creation was higher, because participants did not

have to travel. The introduction of participants and methods and agenda took quite some time. It is crucial to have a clear structure and aim for the online workshop and to prepare the content for online communication, to save time during the webinar. Moreover, such a webinar should not be longer than 45 minutes. If needed, more short and subsequent webinars could be organised.

Most of the outreach activities of this hub have taken place during the Covid-19 pandemic. Therefore, a high level of flexibility was needed. When organizing a webinar instead of a personal event, several other aspects have to be considered. For example, for a webinar that takes 2 hours, three inputs are enough. It is also important to give much room and time for discussion and interaction with the participants, which was always highly appreciated. The outreach activities that could be held as face to face events were very successful because of the interaction of quadruple helix partners and networking possibilities. Online formats cannot compete in this respect. Although the knowledge building aspects can be done very well in online activities.

The **German co-hub** experienced, when inviting for BLOOM activities, that the field of bioeconomy activities and projects is highly competitive in the region. Stakeholders saw time constraints because of being asked to participate in many other project's activities. Projects or other project teams were not cooperative in sharing thoughts in the beginning. Personal contacts, e.g. through participating in other projects' events (before Covid 19) or phone calls, created a level of trust among the hub team and stakeholders. The co-creation events, especially the future scenarios, then were very creative and led to formats such as the lecture series, but also helped to create the content for other formats such as school webinars or the gallery walk. As a success of the early co-creation can be stated that the stakeholders (their organisations) then took the responsibility to further develop and organise the formats events agreed on – in close contact and exchange with the hub-coordinator.

As for the Austrian hub most of the outreach activities have taken place during the Covid-19 pandemic. A high level of flexibility was needed, not only from the hub team, but also from the co-creation team. The format of lecture series had to be switched to hybrid, events had to be organised outdoors instead of inside and all events had to be reorganised for the second half of 2020. This also requested a high flexibility from speakers.

Sustainability of activities

Many of the hubs have worked to establish a network that even after the end of the BLOOM project know how to engage with the general public on bioeconomic issues. In Spain, for example, the focus group has established a way of working together and the newsletter on bioeconomy will continue to be published after the project ending. In Sweden, for example, the goal in this project was to inspire the different stakeholders to make their own outreach activities. In Poland UAK is planning an educational project at the MA level concerning bioeconomy, which will use the experience of BLOOM. Another example is the bioeconomy suitcase that will be available to lend after the project.

More on this topic can be found in D6.4 Report on Dissemination activities and sustainability and exploitation plan.

Learnings on international hub cooperation

For the **Spanish hub** the international cooperation between hubs was a really good experience to get to know better other ways of working and implementation. It is important to be updated about other strategies and sharing initiatives. The fact of keeping contact to other hubs potentially enriches the hub and provides useful information to get common objectives aligned to international policies, particularly focused on bioeconomy, sustainability, climate change. It would be interesting to promote international bioeconomy hubs interaction regularly.

For the **Polish hub** the international hub cooperation was potentially the greatest value. They managed to implement a joint event with the Austrian, involving people from practically all over the world and from a large number of environments. In addition, all the live meetings carried out by various institutions had a positive impact on UAK activities. This hub sees the activities and work done by the partners in work package six as link between all the hubs. The monthly exchanges between the hubs were packed with knowledge, ideas and support.

From the point of view of the **Dutch hub** it was crucial to find common objectives and initiatives for the hubs, especially since every hub was set in different environments and followed different approaches.

For the **Nordic main hub**, the findings of other hubs were important to share and discuss. It is important to understand what the outreach establishment and results were in other hubs to get ideas and other tips for own activities.

From the point of view of the **Nordic co hub** It is important to share and inspire each in such a project. A close co-operation with the BLOOM communication/dissemination partner is crucial throughout the whole project in order to have the same goal what regards website and communications, in the international perspective.

The **Austrian hub** comments that the conduction of the international webinars was fostering international cooperation. When organizing small joint activities, you come closer to other hubs. Likewise, the organization of joint activities – such as the translation of material into the German language – improved the level of connection. International cooperation was on the positive side of shifting to online formats due to the Corona crisis. The consortium meetings served as a rich source for creation of joint events. Some of the ideas could be carried out into practice (deliberative workshop with Polish hub).

For the **German co hub** stakeholders the international cooperation was less important. Nevertheless, it was important to get access to their networks, nationally and internationally. The international (inter hub) collaboration for larger European events, such as the European Week of the Regions and Cities, was fruitful and led to a broader recognition of BLOOM and its goals (see dissemination report).

Learnings on local level

The **Spanish hub** concluded that implementing the co-creation processes with mainly the same people, allows to get to know each other better, every person's background (public administration, academia, civil society,...) and the demands and points of view of these sectors. Regarding the outreach activities this improved the position in their territory, as they learned how to adapt the activities and input in order to get closer to local communities. Furthermore the activities approached have given to Spanish hub an increased vision of bioeconomy and understanding of other topics and needs.

In the **Polish main hub** communication was undertaken with numerous groups of recipients. They learned that a large part of the community is not interested in communication or broadening knowledge at all. It also turned out that the groups selected by the hub - young and ambitious or women with young families want to develop knowledge, want to have access to its resources. As I mentioned before the effects of the formats designed in the co-creation process at the request of young ambitious and women with young families were highly appreciated. In their hub opportunism and sometimes even short-sightedness of the business was noticed and very slowly awakening awareness on the part of the administration. Furthermore, attempts to involve the administration at national level have not been successful and the target group of farmers are on the one hand interested in the implementation of bioeconomy, but on the other hand they are highly distrustful.

With organizing online events (webinars) the **Polish co hub** managed to reach various target groups. Their eagerness and enthusiasm to learn about bioeconomy was refreshing and gave optimism. Through this the hub realized that "General Public" wants more specific, and expanded knowledge about bioeconomy.

In the **Dutch hub** mainly the personal contacts either with the professional quadruple helix network were very fruitful. The mobilization interviews and the co-creation meetings were very fruitful in finding common understanding. They have seen that other people and organizations in Emmen region, Hub NL, are copying BLOOM activities. Next to that the Dutch Design Week where they got in contact with thousands of people, helped to understand the level of understanding and awareness of citizens. It helped to discover the Key questions which people ask, and which need to be clearly answered, in order to bring the bio economy forward.

In the **Nordic hub** the climate change and plastic challenge were really strongly in media during the project, as well the forest management and use in the beginning of the project. Therefore this hub offered to be an important platform for communication about forest bioeconomy. The youth seems to miss dialog about future perspectives and were interested of sustainability in practical showcases and how to promote sustainability in their own daily life.

In the **Nordic co hub**, the activities helped to better understand and gain new understanding and knowledge about the preferences, attitudes and values of your local community. This included: The different views and expectations of different stakeholders and the urge to get a common understanding of bioeconomy and how to work

collaboratively on a way forward. The importance of a being a “neutral” platform for these questions, not a marketplace but a dialogue space. There’s a large interest in acting more sustainable among the general public. But there’s a lack of knowledge of how to do this and of already existing, materials, processes and new innovations, cutting-edge research. There’s a need to coordinate communication on bioeconomy in Sweden and therefore the work this hub was much appreciated by the Swedish stakeholders.

As of now, the **Austrian hub** has reached about 1,500 people with their outreach activities (2-way dialogue). These interactions have made it possible to gain a deeper understanding of the preferences, attitudes and values of our local community. As the society is an open system, there are always “unknowns” (See concept of critical realism). Thereby different types of activities promoted different glimpses into the perceptions of participants.

In the **German hub** the personal contacts and the individual engagement was crucial for the set up of all activities. This was even reinforced by the Corona crisis. All activities more or less were built on face to face contacts established before the lockdown. The local/regional competition between projects was a bit underestimated in the beginning of BLOOM activities. With excellence clusters and a high policy topic in a coal mining area it was difficult to convince certain stakeholders that there was an added value through ‘services’ BLOOM can offer. Once personal contacts were deepened the project activities ran smoother. BLOOM also built an add-on for other Bonn Science Shop projects in the field of education and awareness raising and offered the ‘international dimension’ to these projects.

Recommendation for future projects

The **Spanish hub** recommends to:

- always work with the educational sector: i.e. teachers and students. This forms the basis raise awareness of any topic
- implement bottom-up co-creation processes. They are crucial in order to design effective activities
- show tangible examples of bioproducts, as well as success stories, innovations in order to inspire specially the young people.
- diversify the focus public to create an increased network as recipient of bioeconomy knowledge. It is important to have on mind that all age ranges, general public, administration and private sector are all actors involved in the planet climate change

The **Polish hub** recommends to:

- define the recipient of information in a very specific way and construct the message in a very customized way to this recipient. Consider each group's readiness to engage in communication.
- to build awareness of the term itself and what bioeconomy means. So the presence of this phrase in public space is desirable in any form.

- although printed educational materials and general “gadgets” are not the most sustainable, but in the digital era we live in, people more willingly want to experience things and educate themselves in real life, with hands on experience. The suitcase is also very useful for a bioeconomy warm up before any activity or lecture.

The **Nordic hub** recommends to:

- give space for dialog between people introducing different perspective and values is important. By committing more people in sustainable future perspective the change of society is possible. It is of crucial importance that this space is a “neutral” platform and not a marketplace.
- form common ground and understanding of the bioeconomy concepts and facts.
- initiate and foster knowledge exchange and collaboration between different bioeconomy projects and networks to avoid reinventing the wheel.

The **Dutch hub** recommends to:

- store the BLOOM materials and the concepts, and promote the use among EU, national and regional networks. The materials are very professional and can easily be re-used many more times in different public events. It is a pity that due to Covid, many outreach activities have been postponed, de-seized, become virtual. We missed some opportunities to reach out for many more people.
- have a regional approach with regional innovation networks, it does work. Many EU regions have invested in triple helix collaboration and knowledge and innovation. These regions have interest in broadening the network and connections with civil society. This is not easy, because civil society is often not well represented.
- invest in partnership and find the partners who are most open and who have much interest in this connection, especially into the local administration and the educational organizations. Further some intermediate organizations and communication specialists.

The **Austrian and German hub** recommends to:

- It needs to implement a system to rent out touchable bioeconomy products to schools
- Awareness raising activities have to be embedded into the national context
- The different stages in the implementation of bioeconomy on European level, as well as the different approaches, definitions, interests and barriers have to be addressed
- Openness in thinking is a problem, the opportunity of co-creation is not recognised, especially in stakeholder groups applying for similar funding. In general, there is a big interest in participation but difficulties to take the step to become active.
- See participation not only as top-down involvement in bioeconomy awareness raising. Participation can be also seen as support to knowledge transfer and allows to integrate freedom of research and bottom-up commitment.
- A bottom-up approach and conflict-sensitive adaptation should be chosen, with a r a broad diversity of actors to develop new collaborations.

- Adapt to existing communication and engagement structures in order to foster engagement of stakeholders
- For co-creation of bioeconomy actions all participants need to have confidence in the scientific background of the topic, but the difference between experts and non-experts has to be taken into account.
- Develop of a joint big vision and ensure reflexivity and a long term perspective
- For engaging people, the co-creation initiators must find a way to shift the awareness of the participants about a certain issue into the willingness to act on it.
- There is no one best way to co-create: The implementation depends on countries and the relation between government, academia, business and citizens
- Try-out different co-creation methodologies to demonstrate that co-creation can be a mean of tackling bioeconomy. Provide capacity building on co-creation methodologies, include intervention points and consider enough time for the preparation of participatory activities (online requests more preparation time). Also include joint hands-on activity to support “horizontality” between all stakeholders.

Appendix

Appendix 1 - Table Co-creation activities

Appendix 2 - Table outreach activities

BLOOM Co-Creation Activities

| Hub | Format | Title (if applicable) | Date and time | Total number of participants |
|--------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------|
| Netherlands | Co-creation testing | | 18th December 2018 | 8 |
| Netherlands | co-creation preparation session | | 28th January 2019 | 40 |
| Netherlands | co-creation workshop | | 18th April 2019 | 17 |
| Netherlands | Co-creation workshop | | 04th June 2019 | 12 |
| Poland (main and co hub) | Co-creation testing | Test workshops - what does bioeconomy mean: business, science, NGO | 3rd July 2018 | 9 |
| Poland (main and co hub) | co-creation workshop | What, whom and why to communicate about the bioeconomy? Business, science, NGO, administration | 25th October 2018 | 29 |
| Poland (main and co hub) | co-creation workshop | What, whom and why to communicate about the bioeconomy? Business, science, NGO, administration | 26th October 2018 | 20 |
| Poland (main and co hub) | co-creation workshop | What are the limitations and expectations of our targets? What features should an outreach designed for them have? Representatives of selected target groups | 30th November 2018 | 27 |
| Poland (main and co hub) | co-creation workshop | Designing outreach activities for developed targets. NGO, science, workshops open to all interested | 7th March 2019 | 30 |
| Austria | Co-Creation Workshop | Co-Creation Activity II: Students' expectation of the bioeconomy in the context of sustainability | 28th November 2018 | 19 |
| Austria | Co-Creation Workshop | Co-Creation Activity III: Co-creation workshop on the role of the bioeconomy in sustainable packaging (alternatives) | 16th January 2019 | 12 |
| Austria | Co-Creation Workshop | Co-Creation Activity IV: Co-creation workshop on Outreach formats for effective awareness-raising and a common understanding | 18th June 2019 | 16 |
| Austria | Co-Creation Webinar | Planning of a TV discussion about bioeconomy with DorfTV | 6th November 2019 | 14 |
| Austria | Co-Creation Webinar | Planning of two Outreach Webinars for 2020 | 11th December 2019 | 9 |

| Hub | Format | Title (if applicable) | Date and time | Total number of participants |
|-------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------|
| Austria | Co-Creation Workshop | Co-Creation Activity II: Students' expectation of the bioeconomy in the context of sustainability | 28th November 2018 | 19 |
| Austria & Germany | Co-Creation Workshop | Co-Creation Activity I: Break-out Session at the "Growth In Transition" conference | 15th November 2018 | 18 |
| Germany | co-creation workshop | Bioeconomy in Germany -Where is research at? And why are the results not reaching the users? | 17th January 2019 | 5 |
| Germany | co-creation workshop | Persepectives & challenges of bioeconomy | 29th May 2019 | 18 |
| Finland | co-creation workshop | | 15th November 2019 | 15 |
| Finland | co-creation workshop | | 27th November 2018 | 14 |
| Finland | co-creation workshop | | 9th May 2019 | 8 |
| Finland | co-creation webinar | with Nuori Suomi association to develop outreach activity | 9th March 2020 | 7 |
| Sweden | co-creation workshop | | 5th December 2018 | 15 |
| Sweden | co-creation workshop | | 29th January 2019 | 15 |
| Sweden | co-creation workshop | | 5th April 2019 | 5 |
| Spain | co-creation workshop | bring together a representation of each of the stakeholders | 18th December 2018 | 11 |
| Spain | co-creation workshop | together with Biovoices project | 6th May 2019 | 13 |
| Spain | co-creation workshop | design outreach activities focused on secondary school activities by means of design-thinking | 17th February 2020 | 13 |
| Spain | co-creation webinar type B | As a result from the Spanish hub co-creation process to develop the contents and structure, for the C3-Bioeconomy newsletter | 14th July 2020 | 9 |
| Spain | co-creation webinar type B | As a result from the Spanish hub co-creation process to follow the main objectives defined on the previous meeting for the C3-Bioeconomy newsletter developing | 1st October 2020 | 8 |

BLOOM Outreach Activities

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|---------------------------------------|-----------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------|
| Austria | Students Trip | yes | The role of the Bioeconomy in food value chains | 25th September 2019 | 14 |
| Austria (Cooperation with Polish hub) | Deliberative Workshop | no | Bioeconmy - Motor for Sustainable Development in Rural Areas? | 22nd October 2019 | 32 |
| Austria | webinar | no | "Out of fossils, into ...? A check of products from renewable raw materials" | 6th October 2020 | 55 |
| Austria | international webinar | no | International Webinar: Bioeconomy and Textiles | 17th June 2020 | 164 |
| Austria | TV-discussion | yes | Jobs and economic boom in rural areas: can bioeconomy make it possible? | 22nd April 2020 | 563 |
| Austria | webinar | yes | "Climate change, damaged wood, falling prices: with bioeconomy out of the crisis" | 3rd September 2020 | 131 |
| Austria | Science Espresso | no | "Building with Wood" at the Venue of "Häuslbauer Messe" & 6th Central European Biomass Conference CEBC 2020 & Winter Conference 2020 – Specialist Day on Forestry, Graz | 24th January 2020 | 18 |
| Austria | Science Espresso | no | WEBINAR: Bioeconomy Showcases at the Long Night of Research | 9th October 2020 | 44 |
| Austria | Science Espresso | no | Gallery Walk & exploring the suitcase at the "Hernalser Umwelttag" | 11th September 2020 | 26 |
| Austria | Science Espresso | no | Gallery Walk & exploring the suitcase at the Long Night of Research | April 2021 | n.a. |
| Austria | Science Espresso | no | Webinar: compostable! Really true? Bio-based, biodegradable and compostable. How to know the difference (in cooperation with the Austrian compost association) | 12th November 2020 | 124 |

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|---------|-------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------|
| Austria | Public Exhibition & Civic dialogue | yes | Bioökonomie: nachhaltig und kreislauforientiert | 7th November 2018 | 164 |
| Austria | webinar | no | Tomorrow's Home - EcoSocial Habitation and "Do-it-Yourself" in Practice: Bioeconomy & Circular Economy" | 26th March 2020 | 96 |
| Austria | gallery walk | no | at the Venue of "Häuslbauer Messe" & 6th Central European Biomass Conference CEBC 2020 & Winter Conference 2020 – Specialist Day on Forestry, Graz (2 days) | 23rd January 2020 | 190 |
| Germany | Science Espresso | no | Basics of biomass production for the production of energy crops | 20th July 2020 | 17 |
| Germany | Science Espresso on MS Science Ship | no | Everyone is doing bio-economy? But how? | 15th August 2020 | 50 |
| Germany | Science Espresso on MS Science Ship | no | From the plant to the product | 15th August 2020 | 50 |
| Germany | Science Espresso on MS Science Ship | no | Structural change in the Rhineland: from the use of fossil resources to a bio-economy | 15th August 2020 | 50 |
| Germany | gallery walk | no | Potentials of bioeconomy | 15th August 2020 | 150 |
| Germany | Lecture series: Panel discussion | yes | "Bio-economic potential for the economy and labour market?" | 5th October 2020 | 42 |
| Germany | Lecture series: online lecture | yes | "Bioeconomy to tackle climate change?" | 21st September 2020 | 14 |
| Germany | Lecture series: online lecture | yes | "How much ethics is in bioeconomics" | 23rd September 2020 | 13 |
| Germany | Online Science Espresso | no | Bioeconomy - everything organic or what? From lignite to the bioeconomy territory | 28th October 2020 | 24 |

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|-------------|-----------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------|
| Netherlands | Exhibition | Yes | at Dutch design week | 19th -27th October 2019 | 1500 |
| Netherlands | Masterclass | yes | Recreational sector Drenthe | May 2020 – postponed due to covid | |
| Netherlands | Science Espresso | yes | at DDW, delegation of Dutch Top Sectors | October 2019 | 20 |
| Netherlands | Science Espresso | No | Odd fellows Assen | October 2018 | 40 |
| Netherlands | Science Espresso | yes | delegation of Canadian business network | October 2019 | 20 |
| Netherlands | webinar | No | Biobased Emmen | Mai 2020 | 70 |
| Netherlands | international webinar | No | Bioplastics | September 2020 | 80 |
| Netherlands | gallery walk | yes | at municipality of Wageningen | 2nd-12th October 2020 | 20-100 |
| Netherlands | gallery walk | yes | at Dutch design week | 22nd October 2020 | ? virtual gallery walk |
| Netherlands | Science Espresso | No | at Dutch design week | 22nd October 2020 | 90 |
| Netherlands | Science Espresso | No | presentation Circular bioeconmy concepts teachers | 6 th November 2020 – | 10 |
| Netherlands | webinar | No | Wood | Mai 2020 | 61 |
| Netherlands | Booklet | No | Biomass (also in Spanish) | Nov 2020 | - |
| Netherlands | Booklet | no | Bioplastics | Nov 2020 | - |
| Netherlands | Science Espresso | No | Bioplastics in the bioeconomy | 12th October 2020 | 8 |
| Spain | Open Space | yes | INNOVAGRO Congress (about innovation in bioeconomy gathering participants from Europe and Latin America) | 11-14th June 2019 | 150 |

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|-------|-----------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------|
| Spain | Innovation route | yes | Revalorization of tomato production by-products (biorefinery) in GRUPO LA CAÑA Revalorization of wine production by-products into cosmetics in BODEGAS ROBLES | 12th June 2019 | 30 |
| Spain | Bioeconomy newsletter | yes | C3-Bioeconomy newsletter: Bioeconomy policies, success cases and monograph of cooperation. | 18th December 2020 | - |
| Spain | Gallery walk | no | Bioeconomy and BLOOM material | October - December 2020 | 154 |
| Spain | Science Espresso | no | How does the bioeconomy affect you? | 28th September 2018 | 24 |
| Spain | Science Espresso | no | BLOOM project monologue | 27th September 2019 | 24 |
| Spain | Science Espresso | no | BLOOM project monologue | 27th September 2019 | 27 |
| Spain | Science Espresso | no | BLOOM project in AmBioBlitz workshop | 25th April 2019 | 27 |
| Spain | Civic Dialogue | no | Expoliva. Event dedicated to the Olive Sector in collaboration with Biovoices | 16th May 2019 | 15 |
| Spain | Online Workshop | no | New opportunities- New products,new markets | 27th May 2020 | 16 |
| Spain | International webinar | no | International webinar Bioeconomy in our daily life- webinar: "Biorefinery and innovative bioproducts" | 19th May 2020 | 76 |
| Spain | Webinar | no | Bioeconomy in our daily life- webinar: "Bioeconomía Circular con el sector del olivar y de la industria del aceite de oliva" | 14th July 2020 | 48 |
| Spain | webinar | no | Bioeconomía en nuestro día a día (Bioeconomy in our daily life) | 21st October 2020 | 56 |
| Spain | Science Espresso | no | How does bioeconomy affect you? Demonstration in the BLOOM project framework | 27th November 2020 | 85 views |

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|-------------------|------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------|
| Spain | Online Workshop | no | New opportunities- New products,new markets | 23th October 2020 | 9 |
| Spain | Teacher's pack | yes | Escape Room as student's activity in addition to the online workshop on 14th December | November 2020 | n.a. |
| Spain | Online Workshop | No | New opprtunities- New products, new markets | 2th December 2020 | 9 |
| Poland (main hub) | Science Espresso week (5 events) | no | Bioeconomy and food: bioeconomy in the context of food and agriculture | 24th -28th June 2019 | 40 |
| Poland (main hub) | Seminar and a contest | no | Farmers women, food and bioeconomy | 10th August 2019 | 20 |
| Poland (main hub) | Gallery walk and outdoor game for families | yes | Bioeconomy and food | 5th October 2019 | 250 |
| Poland (main hub) | Ambassadors of bioeconomy (Cooperation Austrian hub) | yes | Day 1: Sustainable and circular agriculture: hands on workshop: organic farming Day 2:"Bioeconmy - Motor for Sustainable Development in Rural Areas? | 21th-22nd October 2019 | 32 |
| Poland (main hub) | Gallery walk | no | What is and why do we need bioeconomy - an event for children and youth | 14th January 2020 | 85 |
| Poland (main hub) | Ambassadors of bioeconomy | yes | Bioplastic DIY: hands on workshop on producing biopolymers | 20th - 21st January 2020 | 10 |
| Poland (main hub) | Ambassadors of bioeconomy | yes | Sustainable and circular agriculture: Precise farming as a tool of sustainable intensification | 15th-18th January 2020 | 53 |
| Poland (main hub) | Video on Bus TV | yes | Bioeconomy | 15th-21st July 2020 and 5th-12th October 2020 | 2000 |
| Poland (main hub) | Monograph | yes | Bioeconomy. Chosen issues. | June 2020 | n.a. |
| Poland (main hub) | Social media promotion campagne | no | Bioeconomy | 03th – 30th November | |

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|--------------------------|----------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------|
| Poland (main and co hub) | Online conference | no | Bioeconomy: Institutional and production aspects. | 21st -25th September 2020 | 845 |
| Poland (main and co hub) | YouTube channel | no | Bioeconomy: Institutional and production aspects. | Start: 21th September | n.a. |
| Poland (main hub) | Postconference publication | no | Bioeconomy – institutional and production aspects | November 2020 | n.a. |
| Poland (co hub) | webinar | no | Bioeconomy and food: Sustainable future of the food. Sustainable agriculture, food production and food waste. | 11th September 2019 | 16 |
| Poland (co hub) | panel discussion | no | Bioeconomy and food: lecture, panel discussion, Q&A, social voting about food, food production & consumption fake news | 6th October 2019 | 300 |
| Poland (co hub) | Science Espresso | no | Bioeconomy and food: science espresso, functional food and the backstage of its production | 4th October 2019 | 58 |
| Poland (co hub) | Science Espresso | no | Bioeconomy and food: science espresso, climate change and the future of food | 6th October 2019 | 60 |
| Poland (co hub) | Workshop with influencers | no | how to talk about food and its production in a sustainable way so as to interest and engage the audience with this topic | 19th December 2019 | 10 |
| Poland (co hub) | webinar | no | Food waste issues | 23rd April 2020 | 129 |
| Poland (co hub) | webinar | no | Boplastic - plastic alternatives | 14th May 2020 | 121 |
| Poland (co hub) | webinar | no | Living organisms in the protection of agricultural production | 4th June 2020 | 149 |
| Poland (co hub) | Gallery Walk (redo) | no | Bioeconomy in our lives | 11th September 2020 | 65 |

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|-----------------|-------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------|
| Poland (co hub) | (international) webinar | no | Bioplastics in medical usage and intelligent packaging | 18th November 2020 | 79 |
| Finland | webinar | no | the Future Bioeconomy seminar and webinar | 4th September 2019 | 55 |
| Finland | Science Espresso | no | Let's talk Bioeconomy | 7th September 2019 | 20 |
| Finland | Exhibition | no | Get inspired from bio-based and circular materials exhibition | 12th November - 7th December 2019 | 260 |
| Finland | Science Espresso | no | Let's talk about wood | 21st November 2019 | 30 |
| Finland | Science Espresso | no | Let's talk about wood | 2nd December 2019 | 14 |
| Finland | Workshop in high school | yes | Presenting the future possibilities of wood for high school students in "Let's Get Global - ecological workshops" -event that was arranged by high school students | 5th December 2019 | 72 |
| Finland | Round table | yes | "Discuss about bio-based in schools" | 15th January 2020 | 29 |
| Finland | Round table | yes | "Discuss about bio-based in schools" | 15th February 2020 | 13 |
| Finland | webinar | no | "Bio-based materials - possibilities and challenges" | 15th February 2020 | 25 |
| Finland | webinar | yes | ONLINE: "Discuss about bio-based in schools" | 19th March 2020 | 12 |
| Finland | Materials for young Finland network | yes | | 30th March 2020 | |
| Finland | international webinar | no | Bioeconomy in our daily life - What the tree can do | 28th May 2020 | 61 |
| Finland | Workshop | yes | Let's get global ecological workshops for secondary school students | | |

| Hub | Type of Activity | designed in co-creation workshops | Title /Topic | Date | Total number of participants |
|---------|--------------------------------------------------|-----------------------------------|--------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------|
| Finland | Science cafes (online) (reported in one QE form) | no | Renewable energy: Solid bio-fuel boilers | Nov 30 th 2020 | 536 (Facebook live & recording) |
| Finland | | no | Visit in virtual forest | Dec 1 st , 2020 | 473 (Facebook live & recording) |
| Finland | | no | Insects as future protein source | Dec 2 nd 2020 | 435 (Facebook live & recording) |
| Finland | | no | Modern farming | Dec 3 rd 2020 | 462 (Facebook live & recording) |
| Finland | | no | Testing properties of circular textile materials | Dec 4 th 2020 | 172 (Facebook live & recording) |
| Finland | Social media campaign | yes | Bioeconomy – what on Earth? | 26.11.-13.12.2020 | 58000 reached and 584 reacted by 6.12.2020) To be completed on Dec 14 th |
| Sweden | social media campaign | yes | #BIOECONOMYinYOURdailylife | 20th -27th September 2019 | 1292 |
| Sweden | all senses exhibition | yes | #forest4future – Welcome to the wood | 12th-13th June 2019 | 360 |
| Sweden | Taste of wood mingle | yes | Taste of wood | 12th-13th June 2019 | 30 |
| Sweden | Science Espresso | yes | ”My future job – the forest!” | 12th June 2019 | 20 |
| Sweden | Science Espresso | yes | ”From the forest to the catwalk” | 12th June 2019 | 20 |
| Sweden | Science Espresso | yes | “New materials from the forest” | 13th June 2019 | 20 |
| Sweden | Science Espresso | yes | ”BLOOM in School” | 13th June 2019 | 20 |
| Sweden | Science Espresso | yes | “The role of the forest today and in the future” | 12th June 2019 | 20 |
| Sweden | gallery walk | Yes/no | What is Bioeconomy? | 12th-13th June 2019 | 20 |
| Sweden | Quiz | no | Bioeconomy | 12th-13th June 2019 | 0 |