



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

D 3.4

Innovative open dialog format trainings and webinars

Technical information and basic
guidelines



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1. Introduction

1.1. Objectives and goals of trainings and webinars in BLOOM

The main objective of the BLOOM project is to establish open and informed dialogues, co-created by European citizens, the civil society, bioeconomy innovation networks, local research centres, business and industry stakeholders and various levels of government. BLOOM will elaborate five hubs (communities of practice) that allow for an iterative process that involves with all stakeholders through various cycles of value development, enabling cross-fertilization and idea generation through shared knowledge and experiences. In co-created workshops outreach activities will be designed, explored and validated that will be exactly adapted to the regional needs.

To support the adaption and the creation of open innovative dialog formats (which are a key goal of the WP3 “Dialogue and outreach activities – Co-creation and stakeholder involvement”),

hub coordinators will be trained towards media practice as well as sound upstream engagement of community and participatory methods during the hub cross fertilization meetings. Moreover, an additional training will be offered each year through a webinar. The training workshops and webinars will provide the hub coordinators with tools to lead hub members through co-creation process, to select appropriate outreach formats and to perform them accordingly.

The training sessions will be targeted internally (to the hub coordinators) While the webinars will fulfil a variety of goals. Including the aims mentioned above, the online seminars will also be:

- used in co-creation processes
- a tool to deliver trainings for hub members
- an outreach format
- a part of teachers trainings and an element of the Massive Online Open Course (MOOC) for educators on bio economy and its applications in teaching.

1.2. Relation and interaction with other tasks and work packages

Webinars and trainings are mostly scheduled for Work Package 3 (WP3) tasks, as a training tool in Task 3.4 (Co-creation workshops) and Task 3.5 (Mutual Mobilisation Learning training workshops and webinars), furthermore as an outreach format in Task 3.6 (Outreach activities). Moreover, the webinar format is used in WP4 (Awareness and Knowledge gain for young citizens) in two tasks:

- Task T4.3 Teacher training activities to deliver a supplement lecture on bioeconomy topics.
- Task T4.5 as a part of EUN MOOC on bio economy and its applications in teaching. The MOOC will be a part of the EUN Academy, an established platform where teachers

learn about innovation in the school and classroom through online professional development courses.

Webinars and trainings are contributing or are related to a few other work packages and tasks.

- WP2 (BLOOM Platform, repository and virtual communications). Outreach webinars which will be realized as a part of Task 3.6 and might become a part of repository materials on the BLOOMer Platform.
- WP5 (Monitoring and Evaluation)
 - Task 5.4 “Co-Creators in Open Science: Policy Brief”.
 - Task 3.5 (Mutual Mobilisation Learning training workshops and webinars) will formulate recommendations from workshop and webinar findings for future outreach and engagement activities, feeding into Task 5.4.
- WP6 (Dissemination, Cross-Network collaboration and Exploitation)
 - Task 6.5 “BLOOM documentary – film set up by modules collected throughout the project”. This task develops short documentaries which will serve for dissemination through social media channels, and will be used for education materials (MOOCs and Webinars) and outreach activities.

1.3. Timeline for innovative open dialog format trainings and webinars



2. Training Workshops (face-to-face)

The BLOOM project conducts a variety of trainings with different goals. On one side internal trainings support the hub leaders to implement co-creation processes and further apply engagement methodologies. On the other hand hubs themselves provide trainings in form of webinars. Additionally the BLOOM hub leaders get media trainings by MWL and Otelo. This section outlines the face to face trainings conducted within the BLOOM project.

2.1. Co-creation training for BLOOM hub leaders and co-leaders

All hub leaders of the BLOOM project use co-creation methods for multi-stakeholder workshops to design and develop innovative outreach activities and/or materials on the topic of bioeconomy. D3.3 provides a guideline for co-creation processes as well as engagement processes.

Additionally, all hub leaders and co-leaders have been trained on co-creation methodologies, each methods aim, strength and how to successfully implement them.

Building up on D3.3, which includes a guideline for co-creation training, a face to face training was offered to all hub leaders and co-leaders. Questionnaires are sent out to all hub leaders and co-leaders, with the aim to collect the needs of the participants, and gather the expectations. Based on the results the following goals of the training could be identified:

- Confidence in planning and facilitating co-creation workshops
- A clear understating of methods used
- Insight in team building and group dynamics
- Visualisation of results (Harvesting results)
- Experience in co-creation moderation

It was not the aim to target the following points in the training:

- Individual hub-specific method adaptation
- Clarification of hub-specific content
- Knowledge of ALL co-creation methods
- Stakeholder mapping and identifying participants for workshops
- Virtual co-creation methods

The training, organised and performed by ZSI, the project coordinator, was structured as a two days workshop with an interactive hands-on approach. All hub leaders and their teams who are involved in facilitating the co-creation workshops participated in the training, which provides a safe room for them to experiment with different co-creation methods and to experience how to apply them. A variety of methods, which are explained in detail in D3.3, were chosen.

Small groups were asked to prepare a specific session using a specific method. The questions to be applied in these sessions have been prepared by the training organisers and handed out to the responsible team. Besides thinking about goals and non-goals each group had to structure the whole participatory process, identify clear roles for each person and organise a visualisation and strategy to harvest the results. After preparation phase each group implemented their session with partners who took not part in the preparation. Thus, each of the participants took over the role of the facilitator for single sessions. After this crash course reflection templates help to collect the most important thoughts and think about how and when to use the method. Additionally open reflection rounds gave the participants room for exchange and suggestions for supportive materials or additional reading for the hubs' later co-creation process.

For the training a bright room with sufficient day light and flexible furniture was the first choice. Partners from Wageningen Research offered the perfect training room. The training format

did not make use of any digital tools. From the beginning the trainers worked with Flip Charts and dialogue formats actively avoiding frontal presentations.

3. Media Training

The media partners (MWL and Otelo) organise media trainings with different topics for the consortium partners. Those trainings enable the hubs to do either their own short videos and learn how to do pod casts, which might be needed in the further hub work. They can use this experience during their outreach activities.

To work with video and audio materials is the main aim of the trainings. All media trainings take place face to face.

Therefore, MWL organised one training on “how to make a mobile movie” during the consortium meeting in Krakow, June 2018. All participants learned about the basics of movie making, how to use mobile phones best to do so and got confidence to apply these skills in their hub activities.

Another training took place at the teachers workshop at EUN headquarters in Brussels, September 2018. There MWL supported BLOOM teachers with a movie making training. The teachers are supposed to later make their own movies and utilize them in the BLOOM MOOC, which will outreach to teachers all over Europe.

MWL and Otelo will take up needs for further media trainings based on the co-creation workshop results. The consortium meetings are always designed to give room for these media trainings.

4. Webinars

4.1. Basic information about webinars

The word “webinar” is a combination of two words: web and seminar. Seminars are meetings that bring together small groups of people (usually from the academic field) and focusing on a chosen, particular subject. Usually, a presentation or a short lecture is given first, followed by a discussion.¹ The idea of webinars is to perform this kind of meetings online, so it can be attended from any place in the world. To make webinars interesting and comfortable for audience and presenters, special webinar computer applications have been developed with a number of interesting features. Thanks to recent technology shifts, there is a possibility to share almost all digital content in real time. Webinar software now includes video streaming, screen sharing, presenting slides, organizing discussions and interacting with whole group, or with a few teams working in parallel during one meeting. Nevertheless, as in real (face to face) seminars, content and speakers must be well prepared before going online. It is even more important, as webinars compete with other content available on the internet. It is much easier for the viewer to leave a webinar unnoticed, or to pretend being focused. Therefore, the webinar host should take a few important issues into consideration before starting preparations.

- Who is the target group of the webinar?
- For how many viewers is the webinar prepared? The bigger the audience is, the less interactive a webinar can be.
- Who will make a presentation? Usually the host and the presenter are the same person but it does not have to be a rule. Webinar software allows to invite a few presenters and switch between them during the meeting.
- How will the content be presented? Is it going to be a video streaming only? Or, are there some slides shown, or a website, or a short movie?
- How will the interaction between the audience and the presenters look like? Is the audience going to be involved in some actions? Webinar software allows for classic discussions. In addition, other communication opportunities like chats, or real-time voting are given. There is also an option to involve participants in group work in break out sessions/rooms.

In the next chapters we present types of webinars which will be performed in the BLOOM project by consortium members and hub coordinators. Moreover, we provide basic information about how to prepare a webinar and what hardware and software requirements should be fulfilled.

4.2. Types of webinars in the BLOOM project

4.2.1. Training webinars for hubs coordinators (type A)

Type A webinars intend to complement the face-to-face training workshops for hub coordinators. In this type of webinars the hubs coordinators will be trained to acquire skills in preparing

and running interactive, participatory, online meetings (webinars). During two online sessions necessary information, know-how and tools needed to implement interactive webinars

will be presented and practised. By providing this training already in the form of a webinar, participants experience this kind of activity personally and directly. Moreover, they will be able

to experience many possibilities and constraints of this format.

Later, the knowledge and skills gained during the Type A webinars will be 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.

Type A webinars will provide the background and substantive base for running type B and C webinars (see next sections).

Type A	
Task reference	Task 3.5 “Mutual Mobilisation Learning training workshops and webinars”
Target group	Local hub coordinators
Language of webinar	English
Organizers	BLOOM project consortium members (including WILABonn, ZSI, CSC and VA)
Quantity	Two in total
Topics	<p>Webinar A1: “Using webinars for online co-creation and cooperation in local hubs”. Participants (hub coordinators) will be trained in planning and using the webinar format for complement co-creation workshops performed in each country.</p> <p>Webinar A2: “Outreach through webinars” Hub coordinators will be provided with training and information on using webinars to perform outreach activities for the general public (Task 3.6)</p>
Type of interaction	<p>Type A webinars should present participants the full potential of this format. Therefore, they will be designed in an interactive way including:</p> <ul style="list-style-type: none"> • Working in small groups (break out rooms) • Using online tools for group work • Instant voting and survey activities (Instant online polls) • Chats • Video streaming • Switching between different presenters

Length	Up to three hours each	
Recommended Software features	<ul style="list-style-type: none"> • Break out rooms • Chat • Multi-presenters mode • Online surveys 	
Schedule	Month 17 (March 2019)	Webinar A1 “Using webinars for online co-creation and cooperation in local hubs” Hub coordinators could extend communication with hub members after finishing the series of co-creation workshops.
	Month 25 (November 2019)	Webinar A2 “Outreach through webinars” Outreach webinars for general public should be delivered by each hub on the beginning of year 2020

4.2.2. Training webinars on stakeholder engagement methodologies, open dialogue formats and media relations (Type B)

A type B webinar’s main goal is to complement, strengthen and continue actions taken up during co-creation workshops organized 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 will have 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.

Type B	
Task reference	Task 3.4 “Co-creation workshops”
Target group	Local hub members
Language	Language used to communicate in the hub. If several languages are used (as e.g. in the Finnish/Swedish hub), it is recommended to organize at least one webinar in each of the languages (or in English if all hub members are able to use it on a communicative level)
Organizers	Local hub coordinators (with support of WILABonn, ZSI, CSC and VA)
Quantity	Each local hub will have to perform at least two webinars of this type. Therefore, a total number of type B webinars to be delivered by all the hubs together is ten.
Topics	Topics should be established by hub coordinators in consultancy with hub members

Type of interaction	<p>Type B webinars should use all the potential this format could offer in terms of interaction. Therefore, each hub will have to prepare their webinar for the hub members based on the knowledge gained during A1 training webinars, including:</p> <ul style="list-style-type: none"> • Working in small groups (break out rooms) • Using online tools for group work • Instant voting and survey activities (Instant online polls) • Chats • Video streaming • Switching between different presenters
Length	<p>The length of the webinars should be set by each hub organizer individually in consultancy with local hub members. However, it is recommended, that each webinar of type B should last maximum three hours (including breaks). This amount of time is sufficient to perform deep multi-stakeholder discussions based on interactive approach.</p>
Recommended Software features	<ul style="list-style-type: none"> • Break out rooms • Chat • Multi-presenters mode • Online surveys
Schedule	<p>Both webinars of B type must be performed in each hub between April and October 2019 (Month 18-24). Each hub decides individually when to organize their two webinars during this timeline.</p> <p>Type B webinars kick-off in every hub should be performed after the training provided in A1 webinar in Month 17.</p>

4.2.3. Hubs' outreach webinars (Type C)

In the BLOOM project each hub will have to perform a number of outreach activities (see Task 3.6), which will be designed during the co-creation workshops (Task3.5). Moreover, each hub is obliged to perform three outreach webinars targeted to the general public. The main goal of the outreach webinars is to raise awareness of citizens in one field of bioeconomy (chosen by a hub at the beginning of the project). The usage of the webinar format will support the non-digital activities and allow to easily increase the number of citizens reached by the BLOOM project program.

Type C	
Task reference	Task 3.6 “Outreach activities”
Target group	General public that is interested in the bioeconomy topic, which was chosen by the hub coordinators at the beginning of the project (hub focus).
Language	The outreach webinars should be performed in local language, the language of the target group it is aimed at. However, if necessary it can be performed in English as well.
Organizers	Local hub coordinators with cooperation with hub members
Quantity	Each local hub will have to perform at least three webinars of this type. The number of type C webinars to be delivered by all the hubs together is fifteen.
Topics	Topics should be established by hub coordinators in consultancy with hub members
Type of interaction	<p>Due to fact that the type C webinars should reach as much citizens as possible, it is recommended to focus on one-way communication with elements of interactivity.</p> <p>Therefore, it is recommended to:</p> <ul style="list-style-type: none"> • prepare presentations filled with different content like videos, pictures etc. • use the online chat to let the participants send their opinions, and questions via this channel without interfering with the main presentation • use online surveys as a form of interaction
Length	Outreach webinars should not last too long. It is recommended to limit its duration to one hour. Forty minutes is optimum time to keep participants focused and prevent them from leaving before the end.
Recommended Software features	<ul style="list-style-type: none"> • Chat • Online surveys
Schedule	Type C webinars kick-off in every hub should be performed after the training provided by A2 webinar in Month25. Therefore, type C webinars should be performed in the period between January and August 2020 (Month 27- 34). Each hub decides individually when to organize their outreach webinars in this timeline.

4.2.1. EUN webinars for educators

As part of the WP4 activity, EUN has offered one internal webinar to the 20 pilot teachers (see table Table 1). Additionally, EUN is planning to offer at least one other public webinar in the context of Tasks 4.1 and Task 4.5

The public webinar planned in WP4 (Awareness and Knowledge gain for young citizens) could take place in the context of Task 4.1 “Creation of bio economy teaching resources for schools” or Task 4.5 “MOOC on bio economy and its applications in teaching”. For example, one public webinar connected to Task 4.1, could be hosted by WP4 teachers to present the BLOOM School Box, which teachers are developing in the same task. A webinar in connection with T4.5 would act as a MOOC pedagogical webinar focusing on the course content (more information in Table 2). Therefore, the main purpose of these public webinars would be a) to promote the outcomes of the work done by the 20 pilot teachers in WP4 and to promote the project activities, or b) to act as synchronous learning activities for MOOC participants.

The organization of the webinar will be coordinated by EUN, who will:

- create the online meeting room using the Adobe Connect online conference software,
- and prepare promotional information about the event. This information will be promoted via the social media channels of EUN and the project, and shared with the project consortium for added dissemination support.

The webinar will be recorded and the recording shared via the BLOOM website, and where applicable, on the MOOC platform.

For BLOOM pilot teachers

The internal webinar offered to the BLOOM pilot teachers had the purpose to act as a reminder for the 10 pilot teachers who took part in the first WP4 workshop on 2-4 March 2018 in Brussels, and to give the other 10 support teachers a first-hand introduction to bio economy.

Table 1 - WP4 internal webinar

Task reference	Task 4.1. “Creation of bio economy teaching resources for schools”
Target group	Twenty pilot teachers involved in elaborating and testing teaching resources for school teachers.
Language	English
Organizers	EUN (European Schoolnet)
Quantity	One webinar delivered shortly after first workshop with 10 pilot school teachers in Brussels in 2-4 March 2018
Topics	Presentation on bioeconomy topics
Type of interaction	10 minute Q&A session at the end
Length	50 minutes
Software	Adobe Connect
Schedule	12 April 2018

As a part of the EUN Massive Open Online Course (MOOC)

Table 2 - MOOC webinar for teachers

Task reference	Task 4.5. “MOOC on bio economy and its applications in teaching”
Target group	Mainly science, technology, engineering and mathematics (STEM) teachers, but teachers of other subjects, as well as educators, can benefit from them.
Language	English
Organizers	EUN (European Schoolnet)
Quantity	A minimum of one webinar over the span of the MOOC.
Topics	Potential topics include presentation of the BLOOM School Box by BLOOM teachers and introduction to bio economy for educators. The webinar will act as a synchronous learning activity, as a part of the standard MOOC pedagogical design offered by EUN.
Type of interaction	The participants will have a chance to interact with the speaker and between themselves via the chat function of the webinar tool, during the live session. Moreover, 10-15 minutes for questions and answers session at the end is planned.
Length	The standard structure of a webinar is 45-50 minutes presentation plus 10-15 minutes for Q&A session.
Software features recommended	The software used for the webinars is Adobe Connect. Participants only require a good internet connection on their devices to join.
Schedule	The webinar is planned to be held in the first quarter of 2019.

4.3. Preparations

Before a webinar is conducted a number of issues must be prepared and taken under consideration.

4.3.1. Content, structure and interaction

- Before starting preparations, a webinar organizer should answer a few questions:
 - Who is the target group of the webinar?
 - What are the goals and what messages should be presented?
 - What content would fulfil those goals?
- In the next step, it must be decided who will prepare and present the content. If any external experts shall be involved, this decision should be made at very early stage of preparations.
- Each webinar, like every other meeting, should have its agenda. It helps to keep the timing. Moreover, it is a good planning tool, which can help to evaluate if the time calculated for the webinar is sufficient to go through the whole content.

- While designing a meeting structure, it is worth to consider diversifying its dynamics by using different tools like presenting video materials, making real-time surveys or giving participants some tasks to perform as a group; or individually in front of their screens.
- Designing an interaction with and between viewers is not an easy task, due to the barriers caused by an online interface. However, a number of options are available to interact with the webinar's audience.
 - The most common and easy to use tool is a chat, which is a coherent element of every webinar software. Every participant can send a text message and it can directly be seen by selected or all attendees.
 - It is possible to let the participants speak by unmuting their microphones. However, this communication tool is not recommended if there is a large number of participants.
 - Some webinar applications allow to perform real-time surveys and quizzes. (see more in the “Webinar software interactive features” section)
 - It is possible (in some software only) to perform the webinar as a discussion workshop with tools to split the audience into working groups (see break out rooms feature description in the “Webinar software interactive features” section).

4.3.2. **Organization of work, people and procedures**

- **Staff involved:** It is recommended to make a list of staff involved in preparations and performing a webinar. At first glance it might seem that only organizers and presenters are needed. However, it might be necessary to ask for example IT support is needed, or people are needed who will provide crucial assistance at the backstage. It is also worth considering having someone around, who can take care of all interactive elements during the meeting. If you plan to use breakout rooms, you might need to have room moderators. Therefore, it is recommended to make a list of tasks to be done, with staff appointed to fulfil them.
- If planned to involve external experts in preparations or presentations during a webinar, more detailed planning has to be considered. Availability of experts should be checked at least one month before the date of the planned webinar. In case of including them in the preparation phase, more time might be needed. Keep in mind, that some experts might need an extra support or training to be able to use the webinar software. Always check beforehand.
- **Hardware and software check-up:** in the technical requirements section standards hardware and software should meet to allow organizers to perform smoothly a successful webinar were listed. It is recommended to check computers, peripheral devices and software in advance and be prepared for extra expenses and time for purchase or a short-term rental. Most webinar softwares are provided on commercial

terms, usually in a form of monthly paid subscription. For more information see the Technical Requirements section of this document.

- Webinars should be treated as an experience that viewers participate in. This experience starts long before the online meeting (when the first information is sent out) and finishes afterwards (after follow-up meetings, materials dissemination etc.). The experience we deliver as organizers refers to the whole process, not only to the webinar itself. Therefore,
 - It is recommended to prepare a schedule which clearly assigns what tasks should be done when and by whom to prepare, communicate, perform and summarize the webinar.
 - It must be decided what channels will be used to communicate information about the webinars (social media, web page, email communication, posters, leaflets, word of mouth etc.)
 - Invitations for potential participants should be sent out in advance. If a webinar is planned as a part of an outreach activity, the information campaign should be introduced early enough to win interest of the webinar target group.
- **Presentation format:** It is recommended to prepare presentations in PPT (PowerPoint) or PDF formats. Some webinar apps allow to upload the presentations, so the sharing is smoother and the slides are provided in better resolution compared to just simple screen sharing. It is worth remembering that like in regular seminars, slides play only a supportive role to what is said by a presenter. They should not be overloaded with content, especially text. Presenters must respect content copyrights coverage, quotation and reference rules. Attaching a bibliography at the last slide is highly recommended.

4.4. Technical requirements²

If you use a hardware, additional equipment or software for the first time, test it, at least a few hours before the webinar. By doing that you will be able to make all needed settings in advance, learn how to use options of the webinar application and know in advance about troubles, which might occur.

It is recommend to check hardware, software and internet connection requirements on the webinar software website. Usually those features are listed on a support page, or in the FAQ sections. Some webinar software providers offer fast, automatic system compatibility check for free. There are some general rules to be followed that are listed below:

4.4.1. Internet connection

It is recommended, that a webinar host's computer is connected via broadband, cable connection. Wireless connections due to unstable signal and lower data transfer are not recommended. Webinar programs and services providers recommend broadband connection with speed transfer at **least 1.2 Mbps**. Participants may be connected via WiFi, however it is

recommended for them to use cable, broadband connection as well, especially for interactive, groupwork-based webinars.

4.4.2. Hardware

For hosts

To host a basic webinar no special hardware is needed. A common laptop is a sufficient tool to perform a webinar. However, to have a fluent presentation using video streaming and screen sharing, some specific features are recommended. For more developed, professional looking webinars some extra equipment and services might be needed.

- In reference to software providers recommendations, a **computer** should have a processor type dual core 2Ghz or higher. Recommended Random-Access Memory (RAM) is 4 GB or higher. Usually webinars cannot be held by using mobile phones.
- Laptops **cameras** are usually good enough to achieve a clear picture. It is recommended to check whether the camera works in high resolutions (HD is recommended). If not, the picture might be blurred for the viewers. If the resolution of the camera is not high enough, there is a wide range of internet cameras (connected via USB slot) available on the market for reasonable prices. If you plan to have more speakers seen in the same picture we recommend to use external cameras which capture a broader picture. However, this might require additional equipment and staff support. As an alternative a multi-speaker option allows to split the video stream into two or more pictures. In this case each presenter has to use a separate computer. The advantage of this solution is that, the speakers do not have to be in the same room and may connect from different venues.
- **The Microphone** is a crucial and often underestimated piece of equipment used during video calls and webinars. Bad sound might ruin the best presentation. It is recommended to have headsets with a microphone attached or external microphones connected to the computer. We highly recommend **not** to use earphones with an integrated microphone (usually used for mobile phones), as they provide very poor quality of sound and “catch” a lot of crackle sounds. If you plan to have more people sitting and speaking in the same room, we recommend using external, directional microphones. However, this might require additional equipment and staff support.
- **Headphones or speakers.** If using speakers during a webinar one must be aware, that sometimes a voice loop effect might appear which reveal as a high-tone, painful noise. Or as an echo effect, when we hear our own voice in the speakers being emitted with a delay. Most of the webinar programs have ability to reduce these effects, however they may occur. Therefore, if more interaction with participants is planned, it is recommended, that hosts have their own headphones to reduce the possibility of interferences.

For viewers:

- Webinars can be attended by viewers with a computer, tablet or mobile phone. However, if planned to have an interactive webinar with breakout rooms, it is recommended, that participants use computer with the same features as the presenters.
- Internet connection should be fast enough to allow watching a streamed video. Therefore, the most sufficient connections are broadband, fast WiFi or 4G in mobile phone networks. In case of trouble with the internet connection some of the software providers give an access to local phone numbers which can be used to call in. After entering the meeting number the participant can join the webinar through a phone call. However, this option allows only for audio connection.
- Headphones or earphones are recommended to avoid problems with sound loops or echo effects. Basic laptop cameras and internal microphones are enough to participate in an interactive webinar. However, the better equipment features are, the easier the workflow is. For traditional webinars, where participants use only the chat function to communicate with presenters and other viewers, the microphone is not needed.

4.4.3. Software**For Hosts**

- Computer operating system- usually Windows 7 and higher or Mac OS X 10.9 and higher are accepted by webinar application providers. Not every program works under other operating systems (f.ex. Ubuntu). To avoid problems we recommend hosting webinars on computers with one of those two commercial operating systems.
- For scheduling, managing and starting sessions the host needs a web browser. Usually, webinar app providers recommend which browsers are compatible with their webinar interface. Most of the softwares use Java script. Therefore the Java script option must be enabled. If you do not know how to check it, you will find this information in the FAQ sites of webinar software providers.
- **Webinar software:** most of the webinar applications providers request to install a full version of the program to host an online meeting. In some organizations there are restricted rules on installing new software on the organizations' computers. It might require involving IT experts in this process. Therefore it is recommended to install and check a webinar host application much in advance. The choice of the specific app should be based on the required features like:
 - Estimated number of attendees
 - Communication channels between a host and audience (chat, voice, video)
 - Number of presenters
 - Breakout rooms availability (see the Webinar software interactive features section)

Types of software:

There is a number of applications on the market which can be used to host webinars. Below you can find a few examples. This list is not exhaustive and presents only the most popular programs. It is recommended to make a market survey before making a final choice. We also suggest

to check, if your organization has already purchased access to a webinar platform already for other purposes. In this case you can use it for BLOOM webinars as well. Usually, access to a platform is available for a monthly fee. The amount depends on the options you choose. Moreover, WilaBonn can provide software for partners who don't have their own webinar software, or have a software, which doesn't allow to use breakout rooms feature (see "Webinar software interactive features section below")

There are also free webinar solutions available. However, it might require more technical/IT skills from the host and the quality of the connection, sound and video is not guaranteed.

For free:

- Google Hangouts On Air with use of YouTube Live. You can find all necessary information how to run a webinar with those on the Google support website (<https://support.google.com/youtube/answer/7083786?hl=en&authuser=0>) If you perform a video streaming for the first time from a specific Google account, it might take 24 hours to verify your request to use it. You must also consider that some features are available via Google Chrome Web browser only.
- Skype: small webinars (up to few people) can be held with a standard Skype call. Skype has all needed features like chat, video calls and screen sharing. However, Skype is not an efficient tool for bigger meetings.

Commercial:

Below you can find a few examples of commercial platforms which can be used to host webinars. Of course there is a number of other programs available. Those listed below are most popular:

- Zoom- You can host for free an up to 40-minutes long webinar for not more than 100 people. Longer meetings with up to 100 participants are available in Pro plan or higher. Zoom has a breakout rooms option available (see below). There is also a special Webinar plan for up to 10 000 viewers. All the information about the program and pricing are available at: <https://zoom.us/pricing>
- Adobe Connect- The Adobe Connect application also has the breakout rooms option available (see below). All the information about the program and pricing are available at: <https://www.adobe.com/products/adobeconnect.html> . This program allows to use a number of extensions which can be used to make the webinar more attractive and interactive. It also gives availability to combine it with other platforms and applications used for learning (for example Moodle platform)
- GoToWebinar (<https://www.gotomeeting.com/en-pl/webinar>) is an app designed directly to host webinars. It provides interesting options which allow to engage audiences through slide-in questions and live results (Polls&Surveys). However, it does not provide breakout rooms features. If you need this option for a webinar, you

have to use a sister application- GoToTraining. It is dedicated for education, training and is designed for working in a workshop mode.

All the information about the program GoToWebinar and pricing are available at: <https://www.gotomeeting.com/en-gb/webinar>

For GoToTrainig visit this site: <https://www.gotomeeting.com/en-pl/training>

For Viewers

Webinars can be attended by viewers with a computer, tablet, mobile phone or via a phone call. If a webinar is hosted with commercial software, an invitation can be send with a special link leading to the webinar. If a phone call option is available, a phone number and a unique meeting number can be attached too. Sometimes viewers have to download an application to their device to watch and participate in webinars (link to installation file, or information how to get it, are usually provided in the invitation generated by the software interface). For mobile devices, webinar applications are available in official application stores (for example Google Play or Apple App Store). Some platforms allow users to attend a webinar by using an internet browser only. For phone call participation no extra software is needed. However, this option allows only for audio connection.

4.4.4. Webinar software interactive features

There is a number of possible ways to involve webinar participants in an interactive exchange. Bellow three of them are presented, which we consider as most useful in reference to the BLOOM project webinars goals:

- **Chat:** is a common and easy in use solution to implement basic interactivity into an online meeting. Its advantages are, :
 - it can be used intuitively by almost all users
 - it works well on all platforms and devices, including mobile
 - multiple messages can be send in a short time
 - other participants see comments of other viewers in real-time and can comment on them as well.

The biggest disadvantage of this communication channel is that it requires high attention from presenters as they have to perform and process all the information from the chat at the same time. It can lead to missing some important comments sent by viewers, or move the presentation off the track.

- **Online surveys:** this feature allows to interact with the viewers as a whole group, in an effective and attractive way. Organizers can design a number of polls, which can be performed during the webinar. Online surveys can be used to ask the group for their opinion on a certain topic, or to make a choice, or to make a quick summarizing test what was remembered from the presentation, etc. Some apps allow to present results in an attractive graphic form.
- **Breakout rooms :** This option is especially useful if a host plans to make a webinar participative and interactive. It supports the involvement of the audience into a virtual group work. Break out rooms option gives a possibility to split participants into a few parallely working groups. After enabling this option, participants can talk only to people from the small group they have been appointed to. The host can switch

freely between groups to join the conversation. When the group work is done, the host can reunite all participants into one, big group again.

4.4.5. **Venue**

It is crucial, that all who present during the webinar should do it in conditions proper to the situation. The best venue is a closed, quiet room with no access for random visitors. All unnecessary sounds, people and objects appearing in the frame would be distracting for viewers and presenters. Before starting a webinar the presenter should turn on a camera and, while being offline, check if:

- The lighting is good enough (not too dark, or not too bright). Presenters should check, if their outline is lit evenly (no shadows or overexposed spots), especially on the face. They should not have a window behind them, since the audience will not be able to see their face clearly (during daytime, the window will be the brightest part of the picture).
- The background is not distractive:
 - No people should suddenly appear in the background (therefore, transparent glass walls are not recommended as a background)
 - Its colour is not distractive. That is why, photo-wallpapers are not recommended as a background.
 - Has no stripes which causes distracting illusions of movement.
- No unwanted objects are in the frame. Especially, if the presentation is given from a host's private venue.

5. References

1. Definition of seminar based on description at Dictionary.com
(<https://www.dictionary.com/browse/seminar> - date of access 9.11.2018)
 2. Internet connection, software and hardware features or requirements were based on information provided by webinar software providers on their webpages:
 - a. Google:
(<https://support.google.com/youtube/answer/7083786?hl=en&authuser=0>)
 - b. Zoom: <https://zoom.us>
 - c. LogMeIn (GoTo family provider): <https://www.gotomeeting.com/en-pl/webinar> or <https://www.gotomeeting.com/en-pl/training>
 - d. Adobe Connect: <https://www.adobe.com/products/adobeconnect.html>
- date of access for all above: 9.11.2018