

## D3.5

# Report on Future skills for Bioeconomy workshops – 1st version

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# Report on Future skills for Bioeconomy workshops – 1st version

**DELIVERABLE TYPE**

**Report**

**MONTH AND DATE OF DELIVERY**

**Month 12, December 2021**

**WORK PACKAGE**

**WP3**

**LEADER**

**UNIBO**

**DISSEMINATION LEVEL**

**Public**

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**Programme  
H2020**

**Contract Number  
101000539**

**Duration  
24 Months**

**Start  
January 2021**



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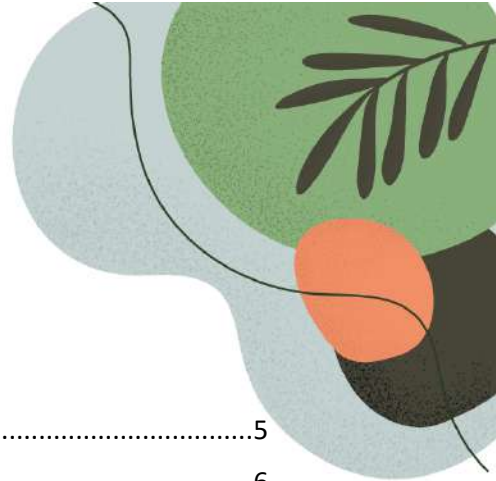
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## Revision History

VERSION	DATE	REVIEWER	MODIFICATIONS
X	DD/MM/YYYY	NAME	MODIFICATIONS
Y	DD/MM/YYYY	NAME	MODIFICATIONS

The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the European Union. Neither the European Union institutions and bodies nor any person acting on their behalf.

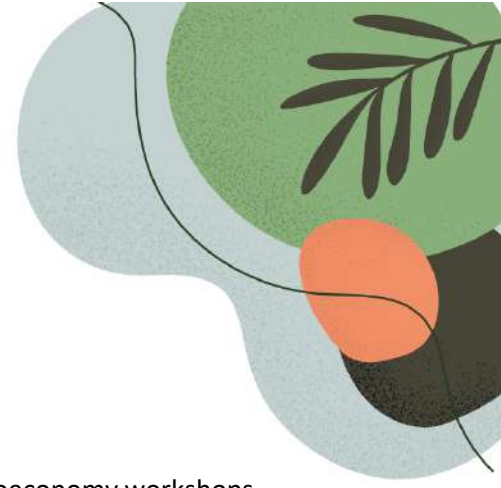


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# 1. Executive Summary

This report constitutes the deliverable 3.5 “Report on Future Skills for Bioeconomy workshops – 1<sup>st</sup> version” of the 24-month Horizon 2020 Coordination and Support Action project Transition2BIO (GA 101000539).

Transition2BIO builds upon the most relevant communication and education EU funded projects and initiatives to contribute to the implementation of the updated 2018 EU Bioeconomy Strategy and promote the transition towards a more sustainable production, consumption and lifestyle.

The project aims to implement an integrated package of communication, awareness-raising and educational activities addressing a wide range of target stakeholders, representing demand side, supply side, multipliers, and supportive environment.

In the frame of the Work Package 3, Transition2BIO aims to contribute to the deployment of the regional bioeconomy strategies by providing Member States and Regions support to implement their bioeconomy raising awareness, communication and education activities through:

- Communication and education mentoring activities to at least six Member States and Regions
- Organization of at least two Mobilization and Mutual Learning (MML) workshops for capacity building in bioeconomy awareness, communication and education in the context of the activities of the Committee of the Regions or other high- level European Initiatives
- Development of five co-creation workshops on identification of future skills and educational needs in the bioeconomy, hosted in selected European educational institutions.

This report corresponds to the 3<sup>rd</sup> objective of the Work Package and documents the preliminary preparation and planning for the organisation of the 5 co-creation workshops foreseen in task 3.3, which will be held during the second year of the project for the identification of the educational and skills needs for the transition towards a sustainable bioeconomy.

The deliverable is the result of various meetings and discussions with the other project partners and the foreseen hosting institutions. Besides the preparatory activities and planning, instructions and recommendations on how to organise the workshops are provided in section 4, while the guidelines for the organisation of the workshops provided as an Annex.



## 2. Introduction and objective

The transition towards a sustainable bioeconomy can lead to positive environmental and socio-economic impacts. Providing the needed skills and meeting the educational needs in the European bioeconomy are key challenges for change (European Commission, 2018).

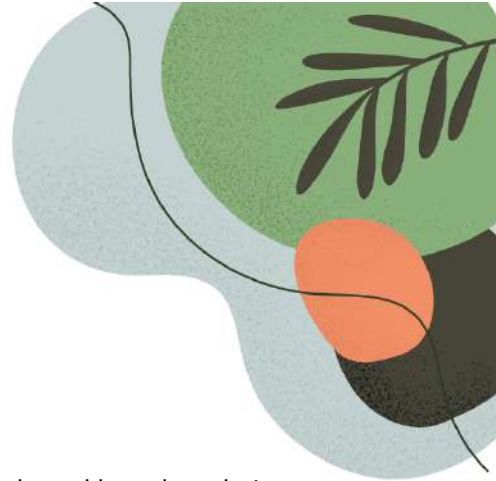
According to the Updated Bioeconomy Strategy of the European Commission (2018), “The systemic and cross-cutting nature of new and emerging bioeconomy approaches and new value chains will need new education and skills”. Education needs could be fulfilled by different educational institutions, as schools and universities courses, vocational training, and life-long learning programmes, with the need to increase the offer of the programmes, covering all the sectors and skills related to the bioeconomy (European Commission, 2018; LIFT, 2020a).

Among its objectives, Transition2BIO will facilitate the identification of the educational and training needs towards the creation of an innovation ecosystem for the bioeconomy (contributing to action 2.4 of the updated EU Bioeconomy Strategy). Addressing this objective, the WP3 through its dedicated task 3.3 planned to organise five co-creation workshops focusing on the “Future skills for Bioeconomy”.

The LIFT project pointed out (LIFT, 2020b) that “Co-creation [...] is a process which ensures that all stakeholders are involved in the design of future industrial and policy agendas, integrating their ideas and concerns to jointly identify and address opportunities, challenges and risks. This approach contributes to responsible policy making and strategic agenda setting, which takes into consideration mutual perspectives, including citizens’ views of the challenges and opportunities.”

Task 3.3 – “Future skills for Bioeconomy” aims to develop these co-creation workshops, involving at least 300 participants in total, to identify future skills and related educational needs in the bioeconomy. UNIBO will coordinate the design and implementation of the co-creation workshops, in collaboration with hosting institutions, aiming at involving Quadruple Helix stakeholders to identify what are the future skills needed for five different bioeconomy sectors.

This deliverable reports the carried out preliminary activities and the planning for the organisation of the workshops.



### 3. Preliminary preparation

The foreseen hosting institutions for the 5 co-creation workshops were selected based on their expertise in different bioeconomy sectors, namely:

- University of Bologna: Agriculture, food and feed
- EurOcean: Blue bioeconomy
- University of Eastern Finland: Forestry
- Novamont: Bio-based products
- AgroParisTech: Bioenergy/biofuels

AgroParisTech, University of Bologna and University of Eastern Finland are also members of the European Bioeconomy University (EBU), an international alliance composed of six leading European Universities in the field of bioeconomy that focus on three essential pillars for the transition to bioeconomy: research, excellent teaching and innovation.

For the promotion of the co-creation workshops, EBU and the European Bioeconomy Network (EuBioNet), an alliance of 98 projects and initiatives promoting, communicating and supporting the European bioeconomy, will be involved. APRE and FVA are the main initiators of EuBioNet, and FVA is the contact point of such initiative

During M9, UNIBO sent an invitation email to the other foreseen hosting institutions (EurOcean, University of Eastern Finland, Novamont, AgroParisTech) to arrange a coordination meeting for the implementation of the co-creation workshops.

In the meantime, other communications have been set bilaterally (during M10) providing the guidelines for the organisation of the workshops (prepared by UNIBO and that are provided in the Annex).

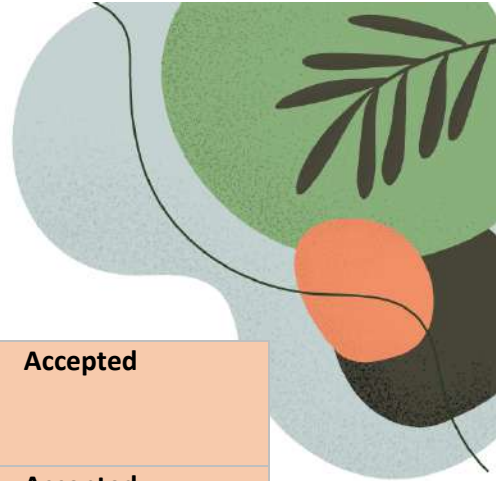
Thanks to the responses of the foreseen hosting institutions, bilateral meetings have been scheduled on M12 by UNIBO. Given that due to the COVID-19 pandemic it has not been possible to physically hold the workshops at Novamont and the fact that it was specifically selected for its leading role in the bio-based sector and to couple a visit in the Novara plant, UNIBO proposed to substitute it with the Italian Technology Cluster on Circular Bioeconomy (SPRING) in order to ensure a broadest scope and a wider outreach.

The bilateral meetings resulted in the agreements shown in the table below.

*Table 1. Hosting institutions of the 5 co-creation workshops on “Future skills for Bioeconomy”.*

Hosting institution	Bioeconomy sector	Status
University of Bologna <a href="http://www.unibo.it">www.unibo.it</a>	Agriculture, food and feed	Accepted





EurOcean <a href="http://www.eurocean.org">www.eurocean.org</a>	Blue bioeconomy	<b>Accepted</b>
University of Eastern Finland <a href="http://www.uef.fi">www.uef.fi</a>	Forestry	<b>Accepted</b>
Cluster SPRING <a href="http://www.clusterspring.it">www.clusterspring.it</a>	Bio-based products	<b>Accepted</b>
AgroParisTech <a href="http://www2.agroparistech.fr">www2.agroparistech.fr</a>	Bioenergy/biofuels	<b>Accepted</b>

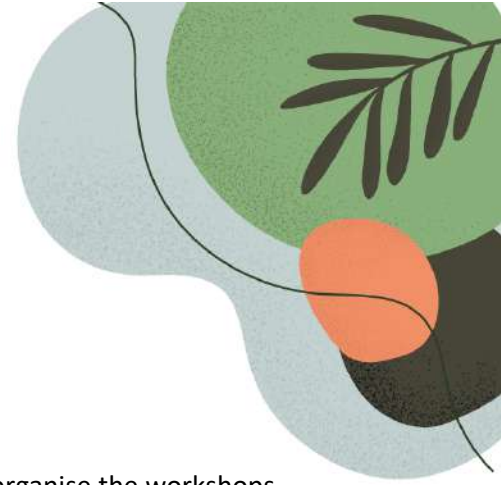
In agreement with the other hosting institutions, the workshop hosted by UNIBO will be organised first as a pilot, to test the guidelines provided to the hosting institutions and identify possible issues to be finetuned before the organisation of the rest of the workshops.

An approximate timetable for the co-creation workshops' setting is as follows:

- University of Bologna – M15
- University of Eastern Finland – M16
- AgroParisTech – M17
- Cluster SPRING – M18
- EurOcean – M21

It is planned to define and agree on a definitive calendar for the organisation of the workshops on M13, so that the hosting institutions will on the one hand be able to set the timing of these events in their annual programme of activities and on the other have enough time to plan, organise and promote the workshop to engage a broad range of participants. In these months, it is also planned to define and agree with the hosting institutions on the other specific details of the planning of the workshops.





## 4. Planning of the workshops

The information outlined in this Section describe the goals and how to organise the workshops for the hosting institutions. This information is also included in the guidelines for the organisation of the workshops provided to the foreseen hosting institutions (see Annex).

A total of five co-creation workshops will be organised, involving Quadruple Helix Stakeholders. The goal is to reach at least 300 participants in total (~60 participants have to be involved for each workshop).

The workshops will be held in English. It is possible for the hosting institutions to hold the workshops in their local languages, but at least the main findings of the workshops must be translated in English for the reporting activity outlined further below.

The workshops will be held online due to Covid – 19 restrictions, through a web platform that allows the use of microphone and camera for the participants and a collaborative platform where participants can write down their opinions and exchange on the requested topics.

The hosting institutions will agree with UNIBO the date on which the event will be held.

The organisation of the event will follow the guidelines described in the Deliverable 7.1 – H - Requirement No. 1, where are indicated the following elements:

- Details on the procedures and criteria to identify and recruit participants
- Detailed information on the informed consent procedures for the participation at the events
- The informed consent form and information sheet.

### Workshops

The objective of the co-creation workshops is to identify what are the future skills and related educational needs for each of the five bioeconomy sectors (see below) and European bioeconomy at large.

Below information on each workshop are provided:

- The hosting institution that will organise the workshop
- The bioeconomy sector on which the participants will focus during the workshop
- The projects and initiatives that expressed their interest in collaborating with the organisation of the workshop and that could be participants as well.

The workshop hosted by UNIBO will be organised first as a pilot, to test the guidelines provided to the hosting institutions and identify possible flaws and strengths.



### **Bologna**

Hosting institution: UNIBO

Bioeconomy sector: Agriculture, food and feed

In collaboration with: H2020 Projects: Sherpa, Be Rural, NextFOOD, FIT4FOOD2030, European Bioeconomy University, Erasmus Project: BoostEDU, Master BIOCIRCE, FOODforce Network, ACTIA - The French Network for Food Technology Institutes, EAAP - European Federation of Animal Science, Slovak University of Agriculture, AgroBioFood platform, Lazio Innova, Lombardy Green Chemistry Association, Slovak Bioeconomy Cluster, BioEAST Initiative, Agro Camera, Innova Camera

### **Lisbon**

Hosting institution: FUNDAÇÃO EUROCEAN (EurOcean)

Bioeconomy sector: Blue bioeconomy

In collaboration with: European Bioeconomy University, Lazio Innova, CNR (Italy) Blue Bioeconomy Forum, Aquimer, Particula Group, Fórum Oceano

### **Joensuu**

Hosting institution: University of Eastern Finland

Bioeconomy sector: Forestry

In collaboration with: European Bioeconomy University, Lazio Innova Biofuel Region

### **Novara**

Hosting institution: Cluster SPRING

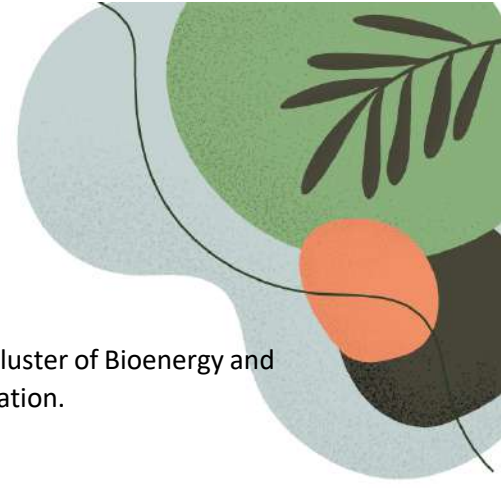
Bioeconomy sector: Bio-based products

In collaboration with: H2020 Projects: LIFT, Biobridges, Biovoices, Master BIOCIRCE – Bioeconomy in the Circular Economy UNITELMA, Lombardy Green Chemistry Association, Innova Camera

### **Paris**

Hosting institution: AgroParisTech

Bioeconomy sector: Bioenergy/biofuels



In collaboration with: European Bioeconomy University, Biofuel Region Cluster of Bioenergy and Environment of Western Macedonia, Lombardy Green Chemistry Association.

## Planning of the workshop

### Before the workshop

Before the date of the workshop, the hosting institution has to invite possible participants from the Quadruple Helix stakeholders, aiming to reach ~60 participants. It is recommended to pursue a balanced distribution of participants with regards to the focus of each workshop, inviting people from different kinds of stakeholders, such as:

- Government and public administrations
- Academia
- Industries
- Networks and associations (projects, industries, academia, teachers, students, etc.)

The hosting institutions will try to make sure to involve every possible stakeholder related to the bioeconomy sector, especially those who are usually under-represented and less engaged (LIFT, 2020b).

Along the same lines, it could be helpful to involve both “problem owners” and “solution providers” (BIOBRIDGES, 2020) related to educational and skills needs of the bioeconomy sector.

The hosting institution will promote the event both locally and on a large scale, in collaboration with UNIBO, the consortium of Transition2BIO and the projects and initiatives that expressed their interest in collaborating with the organisation of the workshop. Different channels will be used for the promotion of the events for example the project webpage, newsletters, social media and even through EuBioNet. Ad-hoc materials will be created according to hosting organisation’s needs. The promotion and dissemination of the events will be performed in alignment and collaboration with LOBA and FVA.

The invitation (via e-mail) will include (BIOBRIDGES, 2020) practical information (date and time of the workshop, platforms used, link to the event, etc.) and the main topic (information on the project, format of the event, bioeconomy sector to focus on, aim of the workshop). The list of invited participants will be much longer than the foreseen participants as in nearly all digital events there is a great percentage of last minute non shows.

A platform for the registration of participants to the workshop will be identified and provided well before the workshop.

To participate in the event, participants must also sign the informed consent, following the procedures indicated in D7.1 and in compliance with the hosting institution's GDPR and privacy policies.

Specific sentences must be indicated in the registration form, such as:

- “For the purposes of communicating and disseminating the Workshop, I give my consent for the production of various screenshots throughout the sessions”



- “Would you like to be invited again in the future for participating to similar events of Transition2BIO project? By confirming this question, you give your consent to [name of the hosting institution] and the University of Bologna to keep your e-mail address for this purpose.

#### During the workshop (Agenda)

The workshop will be organised in a half day format (BIOBRIDGES, 2020) (~3 hours):

- At the beginning of the workshop, the hosting institution will welcome and greet the participants while illustrating the agenda and the format of the event.
- As project coordinator, the Italian Agency for the Promotion of European Research (APRE) will present the main objectives and outputs of Transition2BIO, and how the project could affect participants.
- UNIBO will present the task 3.3 – Future skills for Bioeconomy and the scope of the workshop. Results from previous projects and initiatives on bioeconomy education will be presented too.
- The online survey will be opened, and enough time will be allocated to the participants to fill in it.
- The collaborative platform will be opened. The participants will be involved by writing down their thoughts and opinions for each question, while the hosting institution will moderate the debate also allowing oral discussion.
- Final remarks by the hosting institution.

The survey will be encoded online in order to facilitate its implementation. The draft version of the questionnaire is the following:

#### Section A.

##### Respondent information

#### 1. Which type(s) of stakeholder are you?

Public authorities [ ]

Industry [ ]

Academia [ ]

Citizens [ ]

Other (specify) \_\_\_\_\_ [ ]

#### 2. In which country is your institution placed?

\_\_\_\_\_

#### 3. On which bioeconomy sector do you have more experience and expertise?

\_\_\_\_\_

#### 4. On which field(s) do you have experience and expertise?

Procurement [ ]



- Production [ ]
- Education [ ]
- Communication [ ]
- Research [ ]
- Policy [ ]
- Representation [ ]
- Other

Please specify: \_\_\_\_\_ [ ]

**Section B.**

**Educational and skills needs**

The following questions aim to provide an overview of the main features and stakeholders' understanding of the [Bioeconomy sector] in Europe and European bioeconomy at large.

**5. How much do you agree with the following sentences?**

	Don't agree	I don't know	Agree
a. There is a need of new education	[ ]	[ ]	[ ]
b. There is a need of new skills			
c. Education should be focused only on few technical disciplines	[ ]	[ ]	[ ]
d. Education should be multidisciplinary	[ ]	[ ]	[ ]
e. Education should be transdisciplinary	[ ]	[ ]	[ ]
f. Social and technical skills are both required	[ ]	[ ]	[ ]
g. The new workforce needs only hard skills	[ ]	[ ]	[ ]
h. The new workforce needs both hard and soft skills	[ ]	[ ]	[ ]

**6. How fundamental do you think these educational institutions are in providing the needed education and skills?**

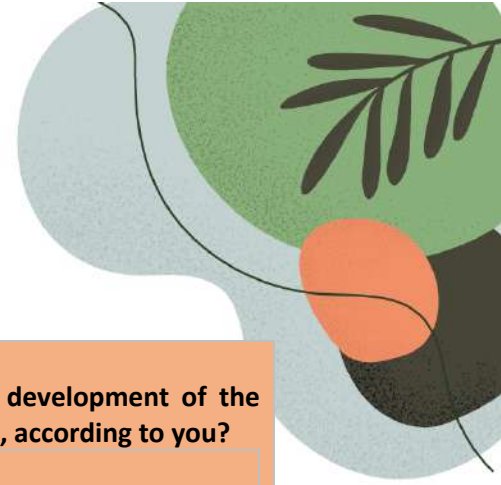
	Not very fundamental	I don't know	Fundamental
a. Pre-school	[ ]	[ ]	[ ]
b. Primary school	[ ]	[ ]	[ ]
c. Middle and High school	[ ]	[ ]	[ ]
d. University courses	[ ]	[ ]	[ ]
e. Doctoral studies	[ ]	[ ]	[ ]
f. Vocational training	[ ]	[ ]	[ ]
g. Life-long learning	[ ]	[ ]	[ ]
h. Informal education	[ ]	[ ]	[ ]

**7. Which educational institution is the most fundamental in providing the needed education and skills, according to you?**

\_\_\_\_\_

While the collaborative platform will stimulate discussion around the following topics:

The following questions aim to provide an overview of the main features and stakeholders' understanding of the [Bioeconomy sector] in Europe and European bioeconomy at large.



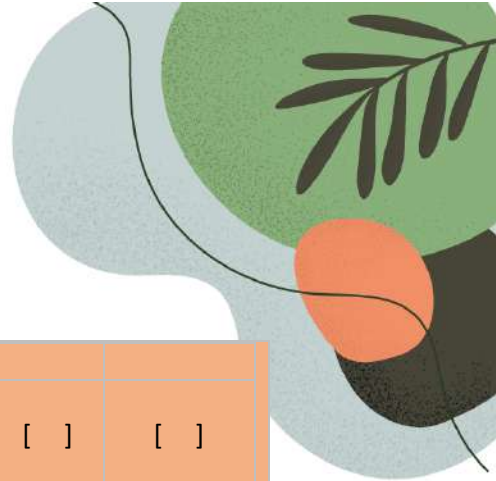
**a. What are the main educational and skills needs for the development of the European bioeconomy at large and of this bioeconomy sector, according to you?**

**b. What do you think are the main hard skills needed by the workforce?**

**c. What do you think are the main soft skills needed by the workforce?**

**d. What are the educational needs of the following stakeholders, regarding this bioeconomy sector?**

Stakeholders	Needs	I don't know	Not applicable
Public procurers		[ ]	[ ]
Young people		[ ]	[ ]
Elderly people		[ ]	[ ]
SMEs		[ ]	[ ]
Large companies		[ ]	[ ]
Teachers		[ ]	[ ]
NGOs and associations		[ ]	[ ]



	Researchers		[ ]	[ ]
	Banks and investors		[ ]	[ ]
	Policy makers		[ ]	[ ]

### After the workshop

After the workshop, it is suggested to send a message of thanks to the participants after the event, including the webpage of the project in order to keep them engaged in our activities and offer them the opportunity to learn more about Transition2BIO. The participants will be informed about the results of the workshop after the implementation of all the workshops.

As soon as possible after the end of the workshop, the hosting institution will report to UNIBO the main findings of the event through the Reporting form (provided in the Annex of the report, as appendix in the guidelines).

The online survey will be provided by UNIBO, while the collaborative platform will be managed by the hosting institution. The results of the activity in the collaborative platform will be shared with UNIBO, as well as detailed notes on the discussion.

If the hosting institution needs to hold the workshop in a different language, the online survey and the collaborative platform will be translated by the hosting institution and the results (translated in English) will be shared with UNIBO.

### Supplementary inputs to identify educational and skills needs

In order to gather further inputs on the educational and skills needs in the European bioeconomy and integrate the information collected through the co-creation workshops, it is proposed to plan additional activities. These will be defined and agreed upon with the consortium on M13, consistently with the definition of the timing and organisational details of the co-creation workshops.

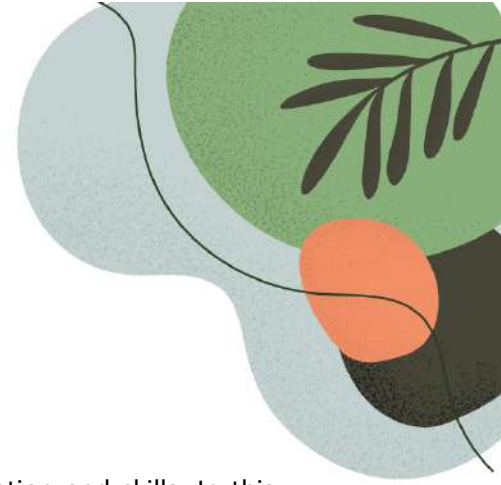
In particular, taking the opportunity of the co-creation workshops, it is planned that the partners in charge of WP5 – Communication, Dissemination, Exploitation, Impact and Sustainability





activities and task 2.3 – Social media awareness and public engagement activities will interview some experts of the co-creation workshops regarding the skills and careers in different fields of Bioeconomy (e.g. what is your job? what is a typical working day?, challenges, your advice to younger generations) and use these recorded videos for a dedicated communication campaign on the social media channels of the project, in order to share some additional information with the wider public. In essence, each interview will be a testimonial on a current job within the bioeconomy. Where practical, it will also shed some light on the envisaged content of future bioeconomy jobs and careers.

Eventually, the information collected through the co-creation workshops and the social media activities will be integrated, framed and validated through an additional public event in collaboration with external initiatives and networks to be identified in the second period of the project, such as EBU and EuBioNet. This event will present and summarise the results of task 3.3, also comparing and contextualising them with the results of other analogous projects and initiatives.



## 4. Conclusions

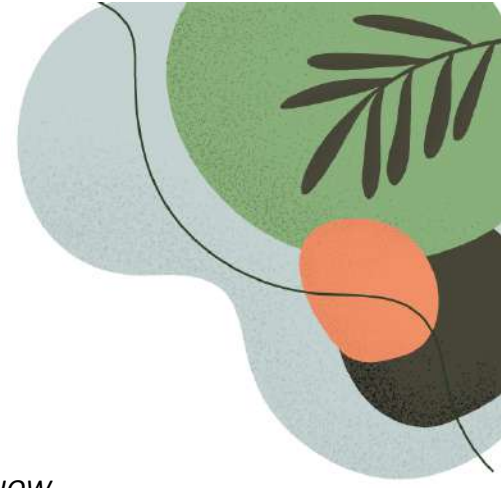
The transition towards a sustainable bioeconomy requires new education and skills. In this sense, task 3.3 can support the identification of the educational and skills needs of different key sectors of the European bioeconomy.

The involvement of hosting institutions with expertise and actively involved in different sectors is crucial in this kind of activity, allowing to engage a greater number of participants who may provide useful information to achieve the objectives of the task.

The engagement of participants from different types of stakeholders also makes it possible to receive information from different angles and points of view, gaining a holistic view of the context and needs.

Furthermore, the pandemic situation pushed towards a different form of participation. In order to allow greater participation, even from different regions of the European Union, it was proposed to hold the workshops online, ensuring a high level of engagement and active participation of participants and hosting institutions.

The results of the 5 co-creation workshops and the actual organisation methods will be reported in Deliverable 3.6 - Report on Future skills for Bioeconomy workshops - update. Deliverable 3.7 - Future skills for Bioeconomy policy brief will be based also on the insights and information gained from the workshops.



## 5. References

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## 6. Annexes

### **Co-creation workshop**

#### **Guidelines:**

# Task 3.3 – Future skills for Bioeconomy

## Co-creation workshops Guidelines

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**LOBA**



**BIOCOM.**



## Task 3.3 – Future skills for Bioeconomy

### Co-creation workshops Guidelines

#### WORK PACKAGE

##### WP 3

*“Support Member States and Regions in awareness, communication and education activities in bioeconomy”*

#### LEADER

UNIBO

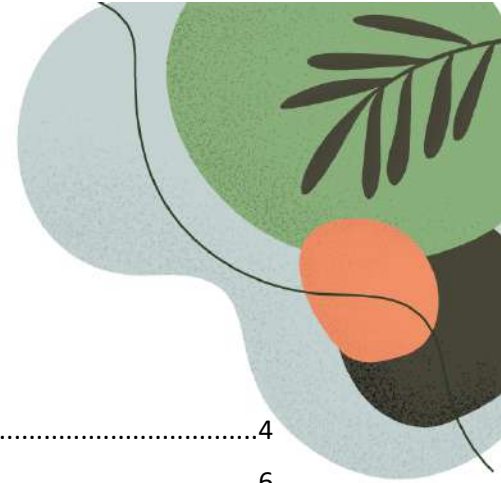
Programme  
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24 Months

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## Introduction

The project “Support the TRANSITION towards the BIOeconomy for a more sustainable future through communication, education and public engagement” (Transition2BIO) will built upon the most relevant communication and education EU-funded projects and initiatives to contribute to the implementation of the updated 2018 EU Bioeconomy Strategy and promote the transition towards more sustainable production, consumption and lifestyle by implementing an integrated package of activities addressing a wide range of target stakeholders, namely: DEMAND SIDE; SUPPLY SIDE; MULTIPLIERS and SUPPORTIVE ENVIRONMENT.

According to the Updated Bioeconomy Strategy of the European Commission (2018), “*The systemic and cross-cutting nature of new and emerging bioeconomy approaches and new value chains will need new education and skills*”. Education needs could be fulfilled by different educational institutions, as schools and universities courses, vocational training, and life-long learning programmes, with the need to increase the offer of the programmes, covering all the sectors and skills related to the bioeconomy (European Commission, 2018; LIFT, 2020a).

Among its objectives, Transition2BIO will facilitate the identification of the educational and training needs towards the creation of an innovation ecosystem for the bioeconomy (contributing to action 2.4 of the updated EU Bioeconomy Strategy). Addressing this objective, the WP3 planned to organise five co-creation workshops “Future skills for Bioeconomy”.

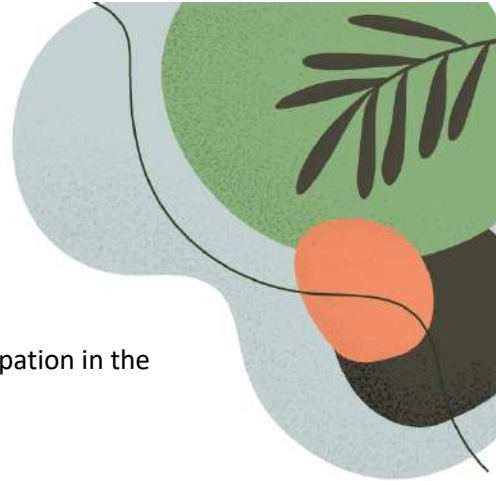
The LIFT project pointed out (LIFT, 2020b) that “Co-creation [...] is a process which ensures that all stakeholders are involved in the design of future industrial and policy agendas, integrating their ideas and concerns to jointly identify and address opportunities, challenges and risks. This approach contributes to responsible policy making and strategic agenda setting, which takes into consideration mutual perspectives, including citizens’ views of the challenges and opportunities.”

Task 3.3 – Future skills for Bioeconomy aims to develop these co-creation workshops, involving at least 300 participants in total, to identify future skills and related educational needs in the bioeconomy.

UNIBO will coordinate the design and implementation of the co-creation workshops, in collaboration with the hosting institutions, aiming at involving Quadruple Helix stakeholders to identify what are the future skills needed for each of the five bioeconomy sectors identified in the ‘Workshops’ section.

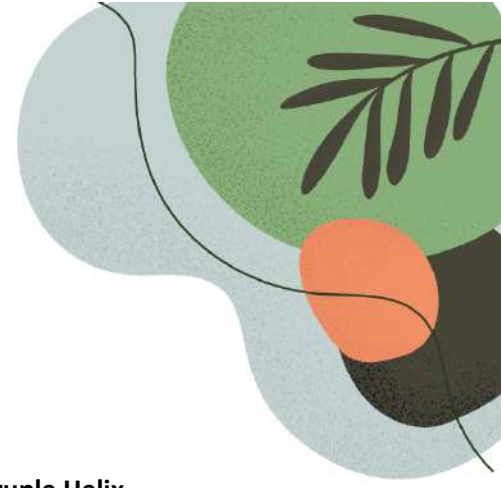
To reach such a goal, the University of Bologna (UNIBO) will take stock of the initiatives undergone in the context of the BoostEDU programme, the European Bioeconomy University; and the MSCA Researchers’ Night in Bologna, organised within the SOCIETY H2020 MCSA project, which focuses on public engagement and co-participation, co-creation and co-design of scientific research.

Each workshop will be held online, in order to encourage participation at the national and European levels and not only locally. Nevertheless, the format of the workshop will allow an



adequate level of involvement of the participants and their active participation in the activities.

This document provides the hosting institutions with the guidelines for the organisation of the workshops. These indications may be adapted to the needs and specificities of the hosting institutions, in agreement with UNIBO.



## Organisation of the workshops

A total of **five co-creation workshops** will be organised, **involving Quadruple Helix Stakeholders**.

The goal is to reach **at least 300 participants in total**. It does mean that **~60 participants have to be involved for each workshop**.

The workshops will be held in **English**. It is possible for the hosting institutions to hold the workshops in their local languages, but at least the main findings of the workshops must be translated in English for the reporting activity outlined below.

The workshops will be held **online**, through a web platform that allows the use of microphone and camera for the participants and a collaborative platform where participants can write down their opinions on the requested topics.

The hosting institutions **will agree with UNIBO the date** on which the event will be held.

The organisation of the event will follow the guidelines described in the Deliverable 7.1 – H - Requirement No. 1, where you can find:

- Details on the procedures and criteria to identify and recruit participants
- Detailed information on the informed consent procedures for the participation at the events
- The informed consent form and information sheet.

### Workshops

The objective of these co-creation workshops is to identify what are the future skills and related educational needs for each of the five bioeconomy sectors (see below) and European bioeconomy at large.

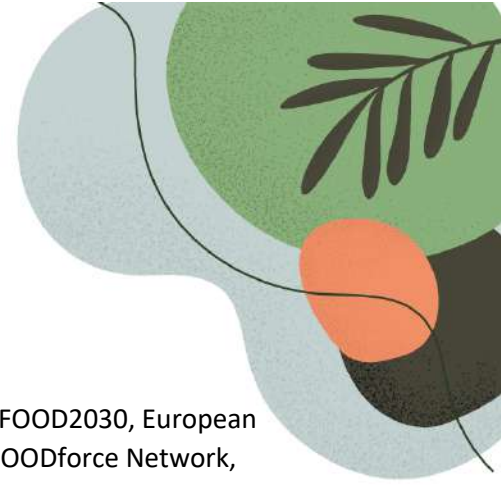
Below you can find information on each workshop:

- The hosting institution that will organise the workshop
- The bioeconomy sector on which the participants will focus during the workshop
- The projects and initiatives that expressed their interest in collaborating with the organisation of the workshop and that could be participants as well.

**The workshop hosted by UNIBO will be organised first as a pilot**, to test these guidelines and identify possible flaws and strengths.

### Bologna

Hosting institution: UNIBO



**Bioeconomy sector:** Agriculture, food and feed

In collaboration with: H2020 Projects: Sherpa, Be Rural, NextFOOD, FIT4FOOD2030, European Bioeconomy University, Erasmus Project: BoostEDU, Master BIOCIRCE, FOODforce Network, ACTIA - The French Network for Food Technology Institutes, EAAP - European Federation of Animal Science, Slovak University of Agriculture, AgroBioFood platform, Lazio Innova, Lombardy Green Chemistry Association, Slovak Bioeconomy Cluster, BioEAST Initiative, Agro Camera, Innova Camera

### **Lisbon**

Hosting institution: FUNDAÇÃO EUROCEAN (EurOcean)

**Bioeconomy sector:** Blue bioeconomy

In collaboration with: European Bioeconomy University, Lazio Innova, CNR (Italy) Blue Bioeconomy Forum, Aquimer, Particula Group

### **Joensuu**

Hosting institution: University of Eastern Finland

**Bioeconomy sector:** Forestry

In collaboration with: European Bioeconomy University, Lazio Innova Biofuel Region

### **Novara**

Hosting institution: Cluster SPRING

**Bioeconomy sector:** Bio-based products

In collaboration with: H2020 Projects: LIFT, Biobridges, Biovoices, Master BIOCIRCE – Bioeconomy in the Circular Economy UNITELMA, Lombardy Green Chemistry Association, Innova Camera

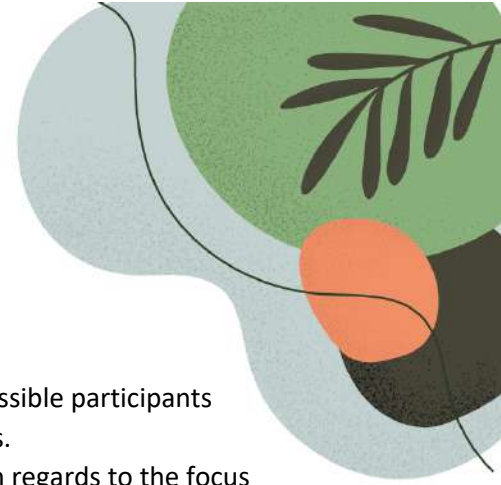
### **Paris**

Hosting institution: AgroParisTech

**Bioeconomy sector:** Bioenergy/biofuels

In collaboration with: European Bioeconomy University, Biofuel Region Cluster of Bioenergy and Environment of Western Macedonia, Lombardy Green Chemistry Association.

## **Planning of the workshop**



### **Before the workshop**

Before the date of the workshop, the hosting institution has to invite possible participants from the Quadruple Helix stakeholders, aiming to reach ~60 participants.

It is recommended to pursue a balanced distribution of participants with regards to the focus of each workshop, inviting people from different kinds of stakeholders, such as:

- Government and public administrations
- Academia
- Industries
- Networks and associations (projects, industries, academia, teachers, students, etc.)

It is important to make sure to involve every possible stakeholder related to the bioeconomy sector, especially those who are usually under-represented and less engaged (LIFT, 2020b).

It could be helpful to involve both “problem owners” and “solution providers” (BIOBRIDGES, 2020) related to educational and skills needs of the bioeconomy sector.

The hosting institution will promote the event locally and on a large scale, in collaboration with UNIBO, the consortium of Transition2BIO and the projects and initiatives that expressed their interest in collaborating with the organisation of the workshop.

The invitation (via e-mail) should include (BIOBRIDGES, 2020) practical information (date and time of the workshop, platforms used, link to the event, etc.) and the main topic (information on the project, format of the event, bioeconomy sector to focus on, aim of the workshop).

A platform for the registration of participants to the workshop should be identified and provided.

To participate in the event, participants must also sign the informed consent, following the procedures indicated in D7.1 and in compliance with the hosting institution's GDPR and privacy policies.

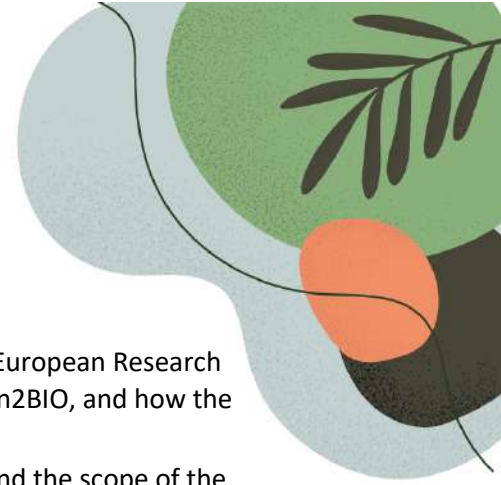
Specific sentences must be indicated in the registration form, such as:

- “For the purposes of communicating and disseminating the Workshop, I give my consent for the production of various screenshots throughout the sessions”
- “Would you like to be invited again in the future for participating to similar events of Transition2BIO project? By confirming this question, you give your consent to [name of the hosting institution] and the University of Bologna to keep your e-mail address for this purpose.

### **During the workshop (Agenda)**

The workshop will be organised in a half day format (BIOBRIDGES, 2020) (~3 hours):

- At the beginning of the workshop, the hosting institution will welcome and greet the participants while illustrating the agenda and the format of the event.



- As project coordinator, the Italian Agency for the Promotion of European Research (APRE) will present the main objectives and outputs of Transition2BIO, and how the project could affect participants
- UNIBO will present the task 3.3 – Future skills for Bioeconomy and the scope of the workshop. Results from previous projects and initiatives on bioeconomy education will be presented too.
- The online survey will be opened, and enough time will be allocated to the participants to fill in it
- The collaborative platform will be opened. The participants will be involved by writing down their thoughts and opinions for each question, while the hosting institution will moderate the debate also allowing oral discussion
- Final remarks by the hosting institution.

#### **After the workshop**

It is suggested to send a message of thanks to the participants after the event.

As soon as possible after the end of the workshop, the hosting institution will report to UNIBO the main findings of the event through the Reporting form (in the annexes).

The online survey will be provided by UNIBO, while the collaborative platform will be managed by the hosting institution. The results of the activity in the collaborative platform will be shared with UNIBO, as well as detailed notes on the discussion.

If the hosting institution needs to hold the workshop in a different language, the online survey and the collaborative platform will be translated by the hosting institution and the results (translated in English) will be shared with UNIBO.



## Contacts

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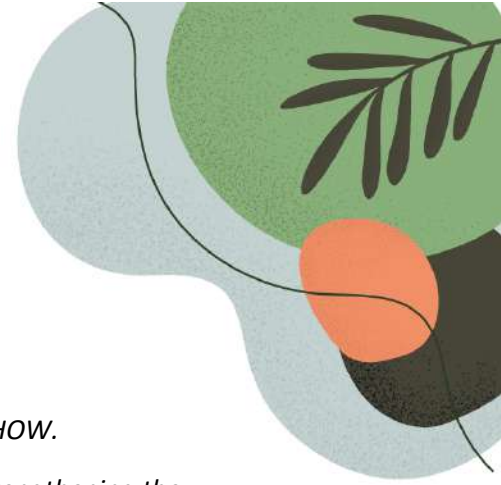
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European Commission. (2018). *A sustainable bioeconomy for Europe: strengthening the connection between economy, society and the environment - Updated Bioeconomy Strategy*.

LIFT. (2020a). *FACTSHEET #2 Bioeconomy Education*. Retrieved from European Bioeconomy Library: [https://www.bioeconomy-library.eu/wp-content/uploads/2020/03/02\\_LIFT\\_FactSheets\\_education.pdf](https://www.bioeconomy-library.eu/wp-content/uploads/2020/03/02_LIFT_FactSheets_education.pdf)

LIFT. (2020b). *FACTSHEET #3 Stakeholders Engagement and Co-creation*. Retrieved from European Bioeconomy Library: [https://www.bioeconomy-library.eu/wp-content/uploads/2020/03/03\\_LIFT\\_Factsheets\\_engagement.pdf](https://www.bioeconomy-library.eu/wp-content/uploads/2020/03/03_LIFT_Factsheets_engagement.pdf)



## Annexes

### I. Online survey



H2020 project Transition2BIO – “Support the TRANSITION towards the BIOeconomy for a more sustainable future through communication, education and public engagement” (GRANT AGREEMENT No. 101000539)

WP3 “Support Member States and Regions in awareness, communication and education activities in bioeconomy”

Task 3.3 - Future skills for Bioeconomy

Co-creation Workshop – [name of the city]

Hosting institution: [name]

[date]

Focus: [Bioeconomy sector]

Survey No. [Serial number of the survey]

Dear participant,

Please answer the following questions according to your experience, expertise and values.

The survey is anonymous. Please, don't write your name on these pages.

Section A.

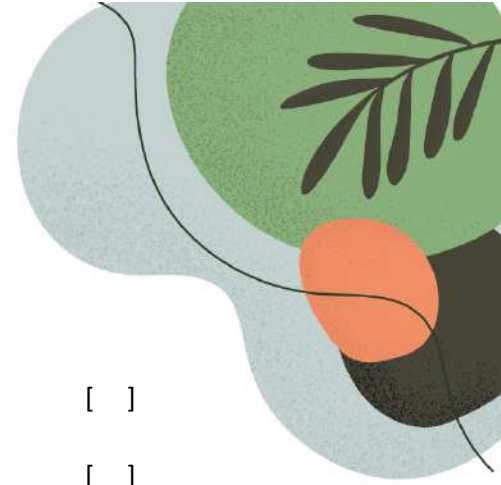
Respondent information

1. Which type(s) of stakeholder are you?

Public authorities [ ]

Industry [ ]

Academia [ ]



Networks and associations [ ]  
 Other (specify) \_\_\_\_\_ [ ]  
 \_\_\_\_\_ [ ]

2. In which country is placed your institution?  
 \_\_\_\_\_

3. On which bioeconomy sector do you have more experience and expertise?  
 \_\_\_\_\_

4. On which field(s) do you have experience and expertise?

- Procurement [ ]
- Production [ ]
- Education [ ]
- Communication [ ]
- Research [ ]
- Policy [ ]
- Representation [ ]
- Other

Please specify: \_\_\_\_\_ [ ]

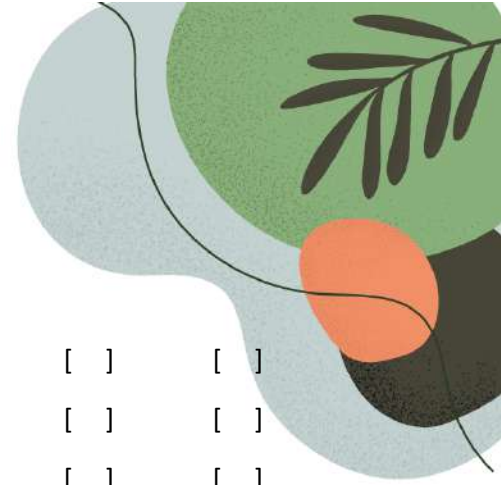
Section B.

Educational and skills needs

**The following questions aim to provide an overview of the main features and stakeholders' understanding of the [Bioeconomy sector] in Europe and European bioeconomy at large.**

5. How much do you agree with the following sentences?

	Don't agree	I don't know	Agree
a. There is a need of new education	[ ]	[ ]	[ ]
b. There is a need of new skills			
c. Education should be focused only on few technical disciplines	[ ]	[ ]	[ ]



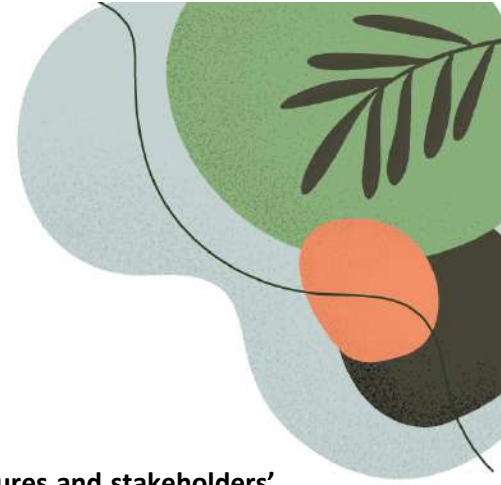
- |  |     |     |     |
|--|-----|-----|-----|
| d. Education should be multidisciplinary             | [ ] | [ ] | [ ] |
| e. Education should be transdisciplinary             | [ ] | [ ] | [ ] |
| f. Social and technical skills are both required     | [ ] | [ ] | [ ] |
| g. The new workforce needs only hard skills          | [ ] | [ ] | [ ] |
| h. The new workforce needs both hard and soft skills | [ ] | [ ] | [ ] |

6. How fundamental do you think these educational institutions are in providing the needed education and skills?

- |                           | Not very fundamental | I don't know | Fundamental |
|---------------------------|----------------------|--------------|-------------|
| a. Pre-school             | [ ]                  | [ ]          | [ ]         |
| b. Primary school         | [ ]                  | [ ]          | [ ]         |
| c. Middle and High school | [ ]                  | [ ]          | [ ]         |
| d. University courses     | [ ]                  | [ ]          | [ ]         |
| e. Doctoral studies       | [ ]                  | [ ]          | [ ]         |
| f. Vocational training    | [ ]                  | [ ]          | [ ]         |
| g. Life-long learning     | [ ]                  | [ ]          | [ ]         |
| h. Informal education     | [ ]                  | [ ]          | [ ]         |

7. Which educational institution is the most fundamental in providing the needed education and skills, according to you?

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## II. Collaborative platform discussion

The following questions aim to provide an overview of the main features and stakeholders' understanding of the [Bioeconomy sector] in Europe and European bioeconomy at large.

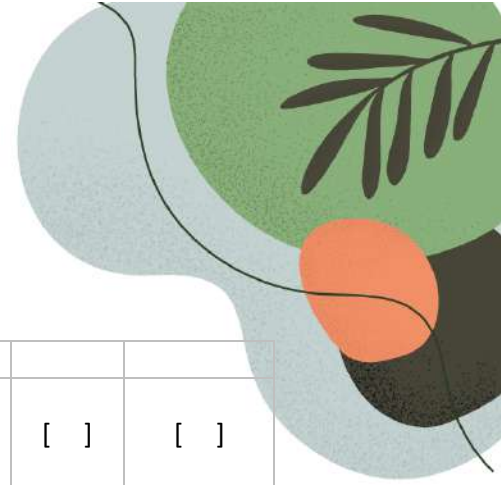
a. What are the main educational and skills needs for the development of the European bioeconomy at large and of this bioeconomy sector, according to you?

b. What do you think are the main hard skills needed by the workforce?

c. What do you think are the main soft skills needed by the workforce?

d. What are the educational needs of the following stakeholders, regarding this bioeconomy sector?

Stakeholders	Needs	I don't know	Not applicable
Public procurers		[ ]	[ ]
Young people		[ ]	[ ]
Elderly people		[ ]	[ ]
SMEs		[ ]	[ ]



Large companies		[ ]	[ ]
Teachers		[ ]	[ ]
NGOs and associations		[ ]	[ ]
Researchers		[ ]	[ ]
Banks and investors		[ ]	[ ]
Policy makers		[ ]	[ ]



### III. Reporting form

Future skills for Bioeconomy

Co-creation Workshops

#### Reporting form

Hosting institution:

Bioeconomy sector on which the event focused:

Online platform:

Date of the event:

Time of the event: From ... to ... (with a break of ... minutes) for a total of ... hours

Language:

Number of participants:

General notes on the organisation of the workshop:

Detailed notes on the discussion on the required topics during the workshop:





If the discussion was held in another language, please list here the highlights in detail (in English):

Link to the collaborative platform discussion:

Link to the translated online survey results (if any):

Provide the list of participants (name, affiliation and e-mail) as annex.

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