

# AllThings.Bio PRO

## Stakeholder Consultation Guidelines

### D3.4: Stakeholder Consultation Guidelines WP 3

Authors: Norbert Steinhaus (BSS); Tabea Waltenberg (BSS)

Allthings.bioPRO - Game changer for the bio-based economy  
H2020-BBI-JTI-2019



## Technical References

Project Acronym	Allthings.bioPRO
Project Title	Allthings.bioPRO - Game changer for the bio-based economy
Project Coordinator	Anne Warnig Fachagentur Nachwachsende Rohstoffe e.V. <a href="mailto:A.Warnig@fnr.de">A.Warnig@fnr.de</a>
Project Duration	September 2020 – August 2023 (36 months)

Deliverable No.	D3.4
Dissemination level <sup>1</sup>	PU
Work Package	WP 3 – Engagement for Game Missions
Task	T 3.4 – Support services for local partners
Lead beneficiary	Bonn Science Shop (BSS)
Contributing beneficiary(ies)	
Due date of deliverable	30 November 2020
Actual submission date	30 November 2020

<sup>1</sup> PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)

Document history			
V	Date	Beneficiary	Author
01	20.11.2020	BSS	Tabea Waltenberg, Norbert Steinhaus
02	25.11.2020	BSS	Tabea Waltenberg
03	26.11.2020	BSS	Tabea Waltenberg



# Summary

This public deliverable is a supportive guidebook for the stakeholder consultation in Allthings.bioPRO for all project partners who are included in the engagement process. It also forms the basis for the internal co-creation training in M6.

The document starts with introducing the guidelines' function within the project and Work Package 3 (WP3). Chapter 2 describes the understanding of stakeholder engagement in Allthings.bioPRO and chapter 3 outlines WP3's management plan and co-operation structure among all co-creation partners. Chapter 4 sketches one possible approach and includes methods to identify, prioritise and understand key stakeholders to be included in the focus groups and co-creation activities. Afterwards, recommendations for the stakeholder recruitment are given.

Chapter 6 describes the whole co-creation phase. It starts with the project's approach to co-creation and Responsible Research and Innovation, followed by an overview of the composition, structure and targets of the different focus groups and co-creation events. Subsequently, the method and procedure of the focus group is introduced to the reader. The section on co-creation workshops familiarizes the project partners with this method, its goals and structure. It further contains a co-creation toolkit with a suggestion of different methods to be applied along the different phases (Opener, diving into the topic, ideation, design and closing and reflection and evaluation) of a co-creation workshop. Finally, an exemplary moderation sheet is given. The sixth chapter proposes further readings on Responsible Research and Innovation, participatory methods, tools and Citizen Science.

# Table of content

<b>SUMMARY</b>	<b>3</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS</b>	<b>5</b>
<b>1 INTRODUCTION</b>	<b>6</b>
<b>2 STAKEHOLDER ENGAGEMENT IN ALLTHINGS.BIOPRO</b>	<b>7</b>
<b>3 MANAGEMENT AND CO-OPERATION AMONG CO-CREATION PARTNERS</b>	<b>9</b>
<b>4 STAKEHOLDER IDENTIFICATION AND MAPPING</b>	<b>11</b>
4.1 STAKEHOLDER MAPPING OBJECTIVES	11
4.2 STAKEHOLDER IDENTIFICATION PROCESS AND METHODS	12
4.2.1 STEP 1: IDENTIFY STAKEHOLDERS	12
4.2.2 STEP 2: PRIORITISE AND LIST STAKEHOLDERS	17
4.2.3 STEP 3: UNDERSTAND YOUR STAKEHOLDERS	18
<b>5 STAKEHOLDER RECRUITMENT</b>	<b>19</b>
<b>6 THE CO-CREATION PHASE</b>	<b>20</b>
6.1 OUR APPROACH TO CO-CREATION AND RESPONSIBLE RESEARCH AND INNOVATION (RRI)	20
6.2 STRUCTURE OF THE CO-CREATION PROCESS	21
6.3 GUIDANCE FOR ENGAGEMENT AND GAME DEVELOPMENT	21
6.3.1 OVERALL AIMS OF THE SERIOUS GAME	21
6.3.2 OBJECTIVES AND IDEAS IN THE FOUR GAME MISSIONS	22
6.3.3 OVERALL FRAMEWORK FOR THE ENGAGEMENT PROCESS	23
6.4 FOCUS GROUPS	26
6.4.1 DESCRIPTION OF THE METHOD	26
6.4.2 BASIC CONCEPT FOR THE FIRST ROUND OF FOCUS GROUPS	27
6.5 CO-CREATION WORKSHOPS	29
6.5.1 CO-CREATION CONCEPT AND GOALS	30
6.5.2 HOW TO STRUCTURE THE CO-CREATION WORKSHOP	30
6.5.3 LOCATION/ SETTING – SPACE AND BEAUTY	31
6.5.4 (CO-CREATION) WORKSHOP METHODOLOGIES	32
6.5.5 REFLECTION	41
6.5.6 MODERATION SHEET	42
<b>7 FURTHER READINGS</b>	<b>44</b>
<b>8 CONCLUSIONS</b>	<b>45</b>

## List of Abbreviations and Acronyms

Abbreviation	Definition
AIMV	AIMV Aktiv in MV gemeinnützige GmbH
BIC	Biobased Industry Consortium
BE	Belgium
BTG	BTG Biomass Technology Group BV
BSS	Bonn Science Shop (Wissenschaftsladen Bonn e.V.)
CED	Communication, Dissemination and Engagement
CSA	Bioeconomy Coordination and Support Actions
CSO	Civil Society Organisation
D	Deliverable
DE	Germany
DoA	Description of Action
EE	Estonia
EuBioNet	European Bioeconomy Network
EURES	European Employment Services
FFG	Fashion for Good B.V.
FNR	Fachagentur Nachwachsende Rohstoffe e.V.
IA	Innovation Actions
IBS	Institute of Baltic Studies
ICONS	Foundazione iCons
INTHUM	Laboratorio Interculturale di Ricerca e di Promozione della Condizione (H)umana
IT	Italy
KCB	Knowledge Centre for Bioeconomy
M	Month
MOS	Municipality of Sigmaringen
MS	Milestone
NetWBL	Network “Work-based Learning and Apprenticeships”
NG	nurogames GmbH
NGO	Non-governmental organisation
NL	Netherlands
NMF	Stichting De Natuur – en Milieufederaties
PI	Prospex Institute
PM	Person Month
PU	Publicly available
R&D&I	Research and Development and Innovation
RIA	Research and Innovation Actions
RRI	Responsible Research and Innovation
SE	Sweden
SME	Small and Medium Enterprises
T	Task
TEEC	Tartu Environmental Education Centre
VA	Vetenskap & Allmänhet
WP	Work Package
WS	Workshop

# 1 Introduction

The overarching objective of **Allthings.bioPRO - Game changer for the bio-based economy** is to raise awareness, continue communication and at the same time introduce a system of innovative engagement formats to allow citizens to contribute to the bio-based agenda. Specifically, the project will:

- Establish methods to foster awareness, participation and co-creation to ensure citizens' feedback and inputs' transfer towards the bio-based industry
- Apply a smart combination of gamification, serious gaming, a mobile app and communication campaign to gather information and data derived by citizens on their ideas and priorities related to specific bioeconomy topics and of direct use for the bio-based industry and the Knowledge Centre for Bioeconomy
- Exploit and further develop the Allthings.bio Platform for bio-based economy communication to the broader public by linking it with the serious game, the smart phone app and a European Bioeconomy Citizen Action Network
- Ensure engagement and uptake of developed results through an early and regular involvement of regional partners and citizens as well as of key bio-based economy stakeholders, policy makers and the Knowledge Centre for Bioeconomy

The following objectives of Work Package (WP) 3 contribute to achieve the overall project objectives:

- Create a common understanding of the four different themes among participating citizens and expert stakeholders
- Implement citizen focus groups, multi-stakeholder co-creation workshops and co-design meetings to commonly reflect on and initiate the creation of knowledge and understanding, which will lead to the development of concepts for each of the game missions. In a co-design process this WP will closely interact with the game developers when the serious game will be produced in WP4

In this context Bonn Science Shop with support from WP1 (Management), WP2 (Content Development), WP4 (Game and App Design and Development) and WP5 (Communication, Dissemination and Engagement) will

- Coordinate regional partners in implementing the missions for the game
- Support regional partners in connecting with citizens and key stakeholders in a learning exercise, enabling them to implement co-creation and co-design processes
- Provide constant support for the regional partners and develop the necessary guidance for them to ensure the smooth implementation of the engagement processes at regional level

The eight regional partners in Allthings.bioPRO will organise and implement the co-creation activities and processes to create input for the game missions, starting with a mapping of mission relevant stakeholders in their regions and assessing their attitudes, needs and constraints.

This public deliverable serves the WP3 objectives by introducing the respective guidelines to the consortium and the mission partners

The guide outlines:

- the management structure for the engagement process
- the understanding of engagement in Allthings.bioPRO
- the stakeholder identification process and recruitment
- the co-creation phase including focus groups and co-creation workshops concepts and methods
- further resources on innovative engagement methods and Responsible Research and Innovation

## 2 Stakeholder Engagement in Allthings.bioPRO

Previous surveys show that citizens have a low level of knowledge about basic concepts of the bioeconomy and bio-based products<sup>1</sup>. Before citizens can be asked to provide detailed input, time is needed for them to learn about general concepts and ideas related to the bioeconomy. Allthings.bioPRO will therefore also refer to projects, which work or recently have worked on providing relevant information to raise awareness and knowledge about bioeconomy in relation to the four mission themes (Food Packaging, Fashion & Textiles, Kids & Schools and Jobs & Careers).

In this project we acknowledge that getting input from citizens is an enormous challenge. It is difficult to find citizens to take part in development/co-creation activities especially if this entails to commit time during a longer duration. In order to mobilise citizens to provide input they need to be interested in the topic – it has to be made clear that their input matters and that they can create an impact. Further, they need to understand the subject matter.

To engage with a group of people, time is needed to learn about their concerns and interests. In Allthings.bioPRO we do not expect citizen participants to already know a lot about the bioeconomy and the four mission themes we will focus on, but we want them to care about sustainable daily life products and issues. Our idea is to meet them at the local level in the community where they live and work. We cooperate with regional mission partners, which are already known and recognised by the citizen participants. This will increase the chance that the citizens and other future interested stakeholders will take-up and use results and ideas we develop within our project.

Involvement of citizens to gather their input into the agendas of the bio-based industry can serve different purposes:

- Fit bio-based industry results/products/value chains to the needs of citizens and consumers
- Gather the citizen perspectives on design and implementation of the bio-based economy, policy and R&D&I agendas
- Provide input to the monitoring of the implementation of the bioeconomy, specifically by connecting to the Knowledge Centre for Bioeconomy (KCB)

For these three purposes there are different instruments, which we are going to use. These are described in the table below.

Table 1 – Purpose of Citizen Engagement in Allthings.bioPRO

Purpose of Citizen Engagement in Allthings.bioPRO			
Purpose of Engagement	Characteristics	Instruments/Tools	Assessment of applicability and what Allthings.bioPRO will do about it
Low Key Input on a general visionary level	Creative, emotional, opinion-led, based on personal experiences less formal and less fact/science-	Campaigns using i.e. photos, art, videos, blogs, short comments, polls, short playful surveys, awards	- existing instruments were established in previous and ongoing bioeconomy projects ➤ Allthings.bioPRO will mobilise and get snap-shot opinions but no alternative for long involvement necessary to get deep insights on/from citizens

<sup>1</sup> For overview studies see e.g. BTG-led RoadtoBio meta-study, “Public perception of bio-based products”, Nov 2017, BioBridges study, “Cooperation challenges among consumers, brand owners and bio-based industry”, Feb 2019. These studies incorporated findings from e.g. the EU funded projects Open-Bio, InnProBio, BioCannDo, and Bloom. In-depth psychological market research conducted by nova- in the European project BIOFOREVER found supporting insights into consumers’ mind-set towards bio-based products.

	based		
Consumer input on developed or already marketed products	Product specific consumer feedback	Established channels for market research but not affordable for SME	<ul style="list-style-type: none"> <li>- big industry and brands know best how to do consumer market research; but relevant for SMEs</li> <li>- existing projects focused on brand involvement also looking to consumer expectations towards brands</li> <li>➤ Allthings.bioPRO will focus on selected application areas to gather citizen insights which are highly relevant for both industry, SME and brands</li> </ul>
Provide civil society expectations on bio-based products	CSO aggregate views of their constituency (e.g. labour organisation; student organisation, environmental NGO)	Used instruments were the Bioeconomy Stakeholder Panel and the Bioeconomy Stakeholder Manifesto	<ul style="list-style-type: none"> <li>- CSOs participate through formal consultations and contribute in different projects</li> <li>➤ Allthings.bioPRO will focus on informal participation pathways, CSOs are part of the Allthings.bioPRO consortium, they will take part in multi-stakeholder formats and as Advisory Partners</li> </ul>
Data generation by citizens used for statistics and other information sources	Crowd collected data for scientific purposes	Citizens science uses new means of digitalisation	<ul style="list-style-type: none"> <li>- Citizen derived data has not been used in the context of the bioeconomy, the KCB focused on market data provided by statistical agencies and research project</li> <li>➤ Allthings.bioPRO will use gamification approach to playfully derive useful data and insights on specific bioeconomy related issues and we will develop a Smartphone App to generate data on bio-based applications. Furthermore we will establish a Citizen Action Network which might take over the role of a permanent Citizen Observatory.</li> </ul>

In Allthings.bioPRO we strive to foster citizens' awareness, participation and co-creation of the future of bioeconomy on four carefully selected mission themes, representing a variety of daily life activities and settings of European citizens connected to the bioeconomy and bio-based industry. Therefore, a combination of serious game and smartphone app will be developed focussing on: Food packaging, textiles and fashion, schools and children and job market.

Eight regional project partners with (regional) expertise and networks in the respective mission theme will collaborate, two regional partners per mission. The project applies a collaborative approach by bringing together the different stakeholder groups in regional focus groups, co-creation workshops and virtual co-design meetings in eight European regions.

In this aspect, the project pursues to strengthen the dialogue on practical opportunities in areas or sectors that are important for the region as well as for specific bioeconomy sectors, and to demonstrate the specific, regional benefits while engaging with regional and local stakeholders.

### 3 Management and co-operation among co-creation partners

Lead beneficiary of WP3 Engagement for Game Missions is Bonn Science Shop (BSS). Table 2 gives an overview about the person months of each project partner in WP3. Ten project partners are directly included in this WP, eight out of ten are members of the project consortium.

The serious game and its four mission themes (packaging, fashion, school, jobs) will be developed in the regions of eight local partners across Europe. Six regional partners are members of the consortium, two are not, but signed a letter of commitment. They will be involved in the local engagement process on a reduced level.

Each game mission will be co-developed by two regional partners and local citizen groups and experts, which are already active in the specific area of the mission. They will receive support from WP1 (on general project objectives), WP2 (on content for the missions), WP4 (Game and App Design and Development) and WP5 (Communication, Dissemination and Engagement). Table 3 shows the mission each regional partner is working in.

To ensure proper continuous coordination, the eight regional partners meet monthly in virtual WP3 Regional Partner Meetings hosted by BSS. FNR (project coordinator) and IBS (evaluation partner) are also invited to attend these meetings. These monthly meetings are the pillars for coordinating the engagement process for the game development. In these meetings, roles and responsibilities are defined and upcoming activities are planned and discussed.

BSS provides schedules, input, methodologies, room for exchange, Q&A and feedback etc. The regional partners present their time schedules, work structure and style, indicate their needs and issues etc.

Every mission team (consisting of two regional partners) internally ensures in own responsibility to plan, coordinate and feedback the mission-internal concepts and activities continuously.

The engagement activities (focus groups and co-creation workshops) in the two regions of each mission will commonly feed into the design process of their mission. Both national activities will therefore need to be integrated, which requires a certain level of collaboration and coordination. The idea is further to learn together and from each other as well as to provide support and feedback on local activities. The four mission teams can use breakout rooms, established in the monthly virtual meetings, to organise themselves. BSS can be present in these bilateral meetings in the breakout rooms to facilitate and support the exchange between the regional partners working on one mission.

Additionally, regional partners and tandems are asked to complement the continuous exchange through e-mail and phone whenever needed.

The Co-creation Working Group (WG), which consists of the project coordinator together with the WP leaders of WP2, WP3 and WP4 together with the mission partners, will deal with the coordination of the engagement process and related interactions. They will ensure proper implementation of the co-creation design methodology, RRI guidelines and take full regard of related ethical issues (e.g. privacy issues, personal data, gender aspects). They will also discuss specific issues related to the regional partner activities on local level and organise the work of the HelpDesk (WP3). The Co-creation WG will work in close relation with the Steering Committee.

BSS will identify HelpDesk experts for supporting the mission partners from the consortium. The list of team members assigned for each of the four missions to support regional partners and other stakeholders in implementing the co-creation process will be delivered in M6. Additionally, BSS will invite external HelpDesk experts for the different mission themes if needed.

The HelpDesk will provide a one-stop support to regional partners, participants in the engagement activities and external parties interested in the project's activities and help them to become and stay an active contributor for the project. HelpDesk Meetings take place every three months (starting from M4) and replace the WP3 Regional Partner Meeting in that month. To ensure a need-based HelpDesk, regional partners are

asked to indicate their needs from the HelpDesk in order to be able to carry out their role in the co-creation process effectively. The HelpDesk will prepare the indicated support in exchange with BSS.

An internal training will be organised in month 6 by BSS. The training will again introduce the project goals, the game missions and the tasks to be performed to the consortium partners and the regional partners who will organise the co-creation and co-design activities. The training will provide guidelines and hands-on exercises on how to implement the co-creation process and engagement methodologies to create input for the four missions (this report will also serve as training material).

Table 2 – Partners contributing to the Co-creation process

<b>Partners Contributing to the co-creation process</b>			
<b>Participant number</b>	<b>Country</b>	<b>Short name of participant</b>	<b>Person Month per Participant</b>
1	DE	FNR	3
2	NL	BTG	2
3	DE	BSS	20.5
4	IT	ICONS	0
5	DE	NG	3
6	BE	PI	0
7	EE	IBS	0
8	NL	FFG	5
9	NL	NMF	5
10	EE	TEEC	5
11	SE	VA	5
12	IT	INTHUM	5
13	DE	MOS	0
14	DE	AIMV	0

Table 3 – Regional mission partners

<b>Regional mission partners</b>			
<b>Mission</b>	<b>Regional partner</b>	<b>Role</b>	<b>Country</b>
Food Packaging	MOS	Not part of consortium	DE
Food Packaging	NMF	Consortium partner	NL
Fashion & Textiles	FFG	Consortium partner	NL
Fashion & Textiles	VA	Consortium partner	SE
Kids & Schools	AIMV	Not part of consortium	DE
Kids & Schools	TEEC	Consortium partner	EE
Jobs and Careers	BSS	Consortium partner	DE
Jobs and Careers	INTHUM	Consortium partner	IT

## 4 Stakeholder Identification and Mapping

The aim of the stakeholder identification mapping is to give a clearer picture of: which specific stakeholders within each group will be targeted users of the respective game mission within the serious game and which stakeholders within each group should be invited to the focus groups, the co-creation workshops and the co-design meetings to co-develop the concept and content for the game and the app. The stakeholder mapping therefore aims to do more than just identifying the individuals and groups who are likely to make use of the serious game and are able to contribute to the co-creation of the missions. It also gives the first insights on needs and constraints of each of the six main stakeholder groups: (1) citizens, (2) policymakers, (3) economic actors, (4) civil society organisations, (5) research, universities and education and (6) other bioeconomy networks and projects. Finally, it gives insights on the kind of issues to be expected when engaging in greater depth within the consultations and co-creation processes.

### 4.1 Stakeholder Mapping Objectives

In the beginning of the stakeholder mapping process, every regional partner is supposed to formulate specific objectives for the mapping, which will guide the process. For the stakeholder identification report (included in D5.1) all regional partners are supposed to fill in Table 4. The following mapping objectives can serve as orientation.

- 1) To identify the profiles<sup>2</sup> of individuals/organisations that are target audiences/actors in the regional bio-based economy of the regional partner
- 2) To identify the profiles of individuals/organisations that are target audiences/actors in the specific mission theme of the regional partner in the region
- 3) To prioritise the profiles of individuals/organisations that are most relevant to engage with for the development of the game mission in the region of the regional partner
- 4) To give an initial overview of the attitudes, needs and constraints of the key stakeholder groups

Table 4 – Report of stakeholder identification process

Report of stakeholder identification process									
Regional Partner	Mission	Stakeholder identification objectives	How to achieve stakeholder identification objectives?	Relevant stakeholder group(s) for focus groups (& co-creation workshops) (e.g. citizens, NGOs, SME, policy)	Inclusion criteria (for each stakeholder group)	Exclusion criteria (for each stakeholder group)	Explanation	How to reach out to stakeholders?	List of activities in stakeholder identification process
BSS									
INTHUM									
VA									
FFG									
NMF									
TEEC									
MOS									
AIMV									

<sup>2</sup> An ideal partner profile is a list of the specific criteria that should be used to identify and qualify partners to ensure they possess the attributes required to fulfil the project's priorities and its target audiences' requirements (e.g. capabilities, capacity, commitment, but also needs and constraints). However, ideal partner profiles are primarily used to help companies identify and select the right partners to recruit. Think of it as a job description for hiring new partners that are engaged, productive and profitable.

## 4.2 Stakeholder identification process and methods

The selection of stakeholders strongly influences the outcomes of any engagement. It thus needs an effective representation of stakeholders including those who are highly interested even with low power as well as strategic stakeholders with high influence, power and means.

### 4.2.1 Step 1: Identify stakeholders

It is necessary to consider all people, or groups, that are affected by the bioeconomy as such and in particular by the partners' mission theme in the regions of the regional partners, who can influence it or who may have an interest in it.

In this first stage it is important to be inclusive and to have a wide approach.

For the citizen (only) focus groups, regional partners need to consider participants who are the potential target users of the respective mission in the serious game in that region. These individuals hold potentially valuable input and feedback for the regional bioeconomy mission theme. We do not expect citizen participants to already know a lot about the bioeconomy or the related mission but we want them to care about sustainable daily life products. Before starting the stakeholder identification process, the eight regional partners define, explain and communicate in- and exclusion criteria for participants in the first round of focus groups. Partners agreed that citizens with professional backgrounds in the respective bioeconomy-related mission will be excluded for the first round of focus groups.

The following shows a first extract from relevant sub-groups of citizens (relevant for the mission job market) but the list needs to be specified by each regional partner for the respective mission:

Citizens

- Students, pupils, graduates
- Young adults and adults
- Job seekers

For the co-creation workshops, which follow the focus groups, citizens, who participated in the citizens focus group, and further experts from the other five main target groups (policy, industry & SME, academia & research, CSOs as well as other bioeconomy networks and projects) are invited.

FNR and BTG will provide suggestions on whom to invite as expert stakeholders after the first round of focus groups. Additionally, regional partners will complement these lists using their local expertise, networks and contacts.

The following lists of stakeholders belonging to the main target groups are a first starting point but need to be further specified by each regional partner according to the mission theme and local context.

Policy

- Decision-makers on different levels in Member States from national to local
- Politicians (local, regional, national)
- Biobased Industry Consortium (BIC)
- Knowledge Centre for Bioeconomy
- Funding bodies

Economy & Industry:

- Industry and SME which are part of the bioeconomy
- Business stakeholders and BIC members

- Brands with products in the product categories covered by the 4 mission themes
- Sector organisations and associations (chambers of craft or trade, professional organisations)

#### Knowledge:

- Universities and universities of applied sciences, vocational schools (e.g. programme coordinators, career advisors)
- Schools and different educational institutes (e.g. teachers, non-formal education institutions)
- Education and training platforms (e.g. Bio Base NWE)<sup>3</sup>

#### Bioeconomy Networks & Projects

- European Bioeconomy Network (EuBioNet)
- Bioeconomy Coordination and Support Actions (CSAs); Research and Innovation Actions (RIAs) and Innovation Actions (IA)
- RRI projects and experts
- Projects on serious gaming, <http://www.bioways.eu/bio-learn/serious-games/><sup>4</sup>

#### Civil Society Organisations:

- Advocacy organisations in different fields (i.e. environment, sustainable development)
- Labour organisations, employment networks (e.g. EURES, NetWBL), professional associations
- Consumer associations

### 4.2.1.1 *Criteria to be considered when starting a stakeholder mapping process*

Table 5 – *Criteria to be considered when starting a stakeholder mapping process*

<b>Criteria to be considered when starting a stakeholder mapping process</b>		
<b>Criteria</b>	<b>Specification</b>	<b>Stakeholder identification objectives</b>
	<i>Indicator / sub-criteria</i>	<i>Questions that invite thinking about indicators and criteria</i>
<b>Engaging a variety of stakeholder groups</b>	Wide range	Is there a wide range of stakeholders involved, such that there is a diversity of values and a diversity of types of knowledge /expertise (i.e., experiential knowledge, scientific knowledge) represented and/or generated? <sup>5</sup>
	Relevant voices	Is there diversity in the stakeholders engaged such that all relevant voices are heard – silent as well as loud (i.e. stakeholder groups that might not feel immediately empowered to let their view know and groups that do, or groups that are difficult to reach)?
	Demographic diversity	Is there diversity within the stakeholder groups involved in terms of gender, ethnicity, class, age and other demographics?

<sup>3</sup> Bio Base NEW (2015): Innovation and training for the biobased economy, project funded under the INTERREG IVB NEW programme.

<sup>4</sup> BIOWAYS (2018): Serious games developed in the project BIOWAYS – Increase public awareness of bio-bawsed products and applications supporting the growth of the European bioeconomy, funded under the European Union’s Horizon 2020 research and innovation programme under the GA No 720762, <http://www.bioways.eu/bio-learn/serious-games>, last accessed 25.11.2020

<sup>5</sup> Rowe, G., Frewer, L. J. (2000): Public Participation Methods: A Framework for Evaluation, Science, Technology, & Human Values, Vol. 25, No. 1, pp.3-29, available at <http://ssrn.com/abstract=1831468>

	Sufficient amount	Are sufficiently many perspectives and participants included, such that eventual outcomes are robust? <sup>6</sup>
<b>Engagement of public(s)</b>	Pertinent engagement	Is it considered to have the right publics involved in the right phases of the project?
<b>Institutional diversity</b>	Internal social differences	Is there attention and respect paid to group/social differences within the Allthings.bioPRO practice (e.g., gender, race/ethnicity, class, sexual orientation, and ability as well as cultural, political, religious, or other affiliations)?
	Minority recruitment strategies	Are there minority recruitment strategies in place to increase, within the mapping for future practices, a balance in race/ethnicity, class, gender, sexual orientation, country of origin, and ability, as well as cultural, political, religious, or other affiliations?
<b>Flexible attitudes to revise views and actions</b>	Individuals	Are the individuals involved willing and able to revise their views and actions?
	Organisations	Do the organisations involved offer adaptive space to respond flexibly to changing circumstances, changing needs and values of other stakeholders and organisations involved?
<b>Changing responsibilities</b>	Role responsibilities	Are actors involved prepared to take, enlarge and/or redefine their role responsibilities? <sup>7</sup>
	Acceptance of accountability	Are actors prepared to accept, through processes of dialogue, accountability fitting their role for potential positive and negative impacts, choices and processes? <sup>8</sup>
<b>Application of results</b>	Stakeholders	Are (affected) stakeholders willing and equipped to apply new knowledge, values/norms and competencies? (e.g., the use of results of the game in its specific missions)
	Organisations and systems	Do the organisations and systems involved offer adaptive space to respond flexibly to changing knowledge, values/norms and learned competencies?

#### 4.2.1.2 *Important points to consider when identifying stakeholders*

- Are stakeholders aware of the concepts behind the bioeconomy?
- Do the regions, regional networks or regional strategic management use the ‘concepts’ for strategic choices and tactical and operational management?
- Who is responsible for making decisions that might affect the mission topic?
- Are there policies emerging or in existence that will benefit from or be affected by the game mission? If so, who needs to be informed?
- Which individuals are likely to be affected by the outcomes of the game mission development? Who, although not directly affected, may be interested in the results of the game mission?
- Are there stakeholders that have been involved in similar projects on previous occasions (some of these may have been identified in stage 1)?
- Which groups or individuals may be able to provide relevant information, equipment or resources?
- Who is likely to have a negative view of the mission topics and results you aim at?
- Which stakeholders are essential to involve? Who is preferably to involve? Who needs to be consulted? Who needs to be informed?
- Which parties are likely to be the most influential?

<sup>6</sup> Sciencewise (2019): Quality in Public Dialogue: A framework for assessing the quality of public dialogue, project funded by UK Research and Innovation (UKRI) with support from BEIS, <https://doi.org/10.1016/j.respol.2013.05.008>

<sup>7</sup> Stilgoe, J. Owen, R., Macnaghten, P. (2013): Developing a framework for Responsible Innovation, Research Policy 42 (9), pp. 1568-1580, available at: <https://www.sciencedirect.com/science/article/pii/S0048733313000930>, last accessed on 25.11.2020

<sup>8</sup> Wickson, F., Carew, A. L. (2014): Quality criteria and indicators for responsible research and innovation: Learning from transdisciplinary, Journal of Responsible Innovation, DOI: 10.1080/23299460.2014.963004

- Who will be critical to the final delivery?
- Criteria to be considered when starting a stakeholder mapping process (see Table 5)

#### 4.2.1.3 *Useful methods for identifying stakeholders*

- Consulting colleagues to share knowledge about who may have an interest in the respective game mission in the region
- Developing a ‘mind map’ that can be used to identify suitable stakeholders; assessing secondary data (e.g. historical records, media articles)
- Initiating self-selection by promoting the engagement process and encouraging individuals with an interest to join
- Brainstorming with other organisations that have been involved in similar activities or those working in similar locations
- Using ‘snowball sampling’ techniques, where one stakeholder identifies further stakeholders until no additional new stakeholders are identified
- Using existing members lists of organisations in order to identify specific groups, networks and agencies who represent relevant elements of society
- Consulting with forums used by government and other organisation (e.g. local authorities, town councils, emergency services etc.)
- Using government statistics and data (e.g. census information)

##### 4.2.1.3.1 *Mind Map of Allthings.bioPRO Stakeholders*

The mind map is a structured way to list possible stakeholder groups as well as single institutions or persons. The first step in developing a mind map is identifying the major target groups that make the centre of the map, and then processing towards greater detail as you move towards the outer edges. It gives an overview to each regional partner and helps collecting further information, having various possible branches and perspectives in mind. The map below shows the general structure of the quadruple- or even quintuple helix including the sub-categories each project partner defines. The mapped stakeholder groups here are taken from the Description of Action (DoA) and serve as a starting point for the missions. The mind map does not list detailed contact information of single stakeholders yet. The mind map is to be deepened with a detailed stakeholder list in a later step.

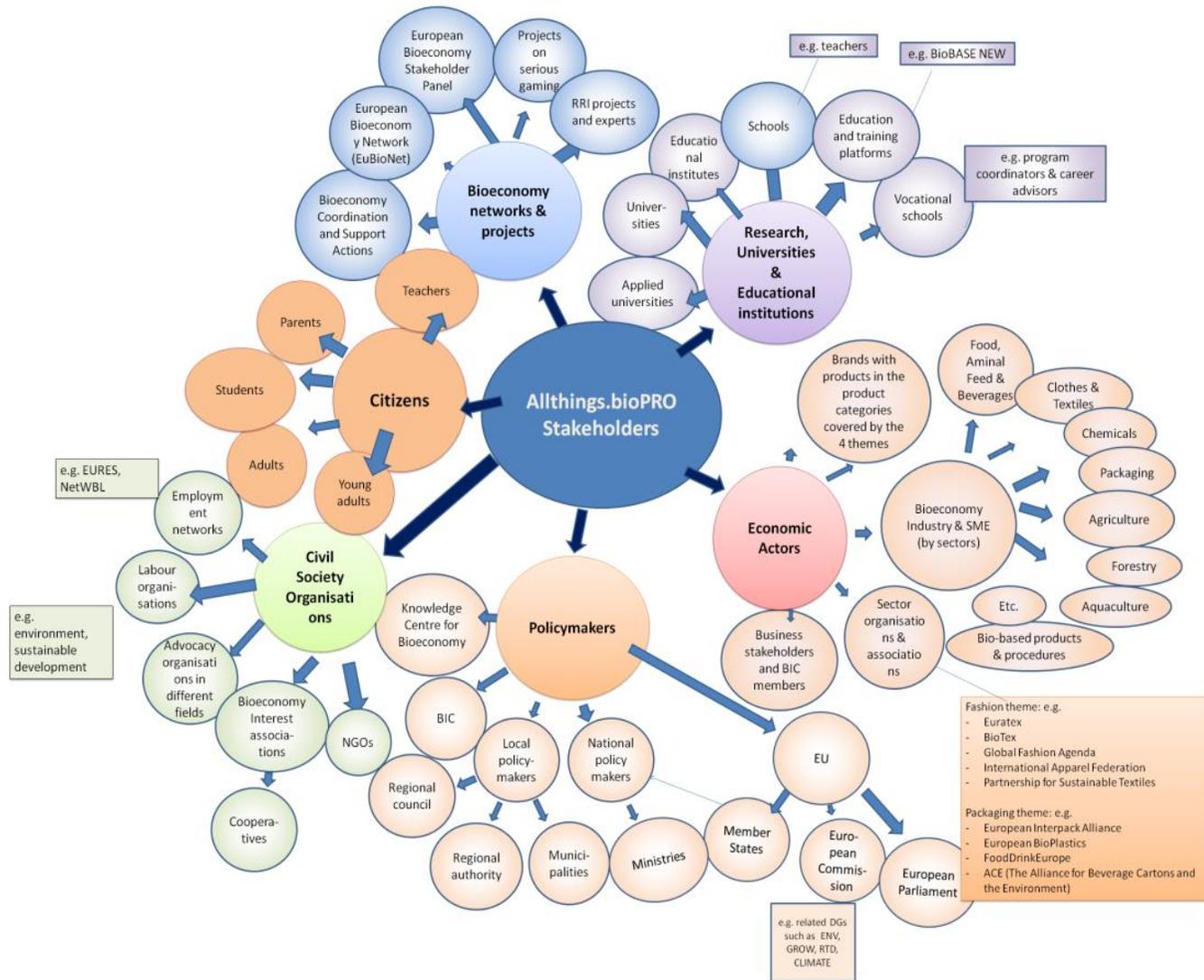


Figure 1 – Allthings.bioPRO Stakeholders Mind Map

## 4.2.2 Step 2: Prioritise and list stakeholders

After identifying the main target groups for the co-creation process regarding the respective bioeconomy mission theme in the region of the regional partners', stakeholders are analysed in order to prioritise them in terms of necessity of or for engagement.

The most commonly used approach is to categorise stakeholders in relation to their relative level of interest and influence.

Each of the four boxes in the figure below represent a 'level' of engagement, from the lowest level ('inform'), through the middle levels ('consult', and 'involve') to the highest level ('collaborate'). For Allthings.bioPRO, stakeholders, who are mapped as stakeholders to involve or to collaborate with, could be potential participants for the focus groups and co-creation workshops.

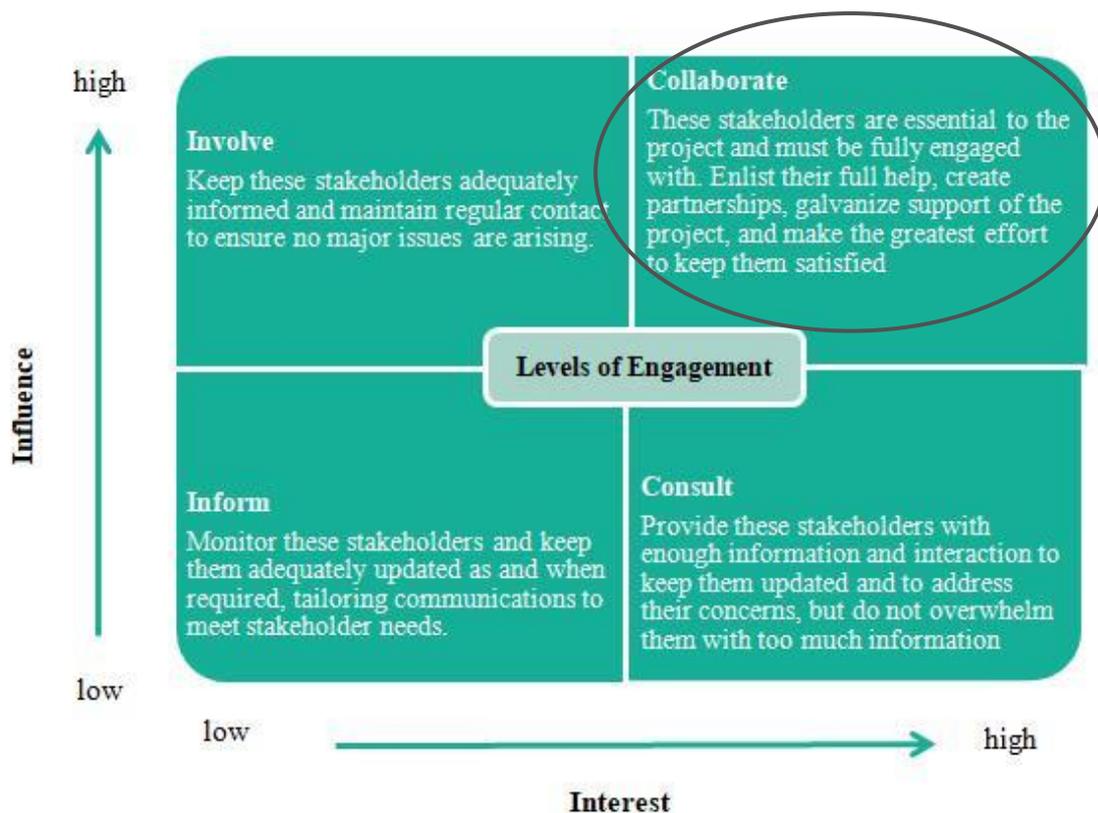


Figure 2 – Stakeholder Mapping according to their likely contribution and interest in the project

After the stakeholders are prioritised, e.g. with the help of the engagement matrix from above, regional partners are supposed to list the prioritised stakeholders in the Stakeholder list template in Table 6 below. This list will serve as the basis for contacting and mobilising participants for the focus groups and co-creation workshops. These lists will further be reported in the Communication, Engagement and Dissemination Plan (D5.1). For data privacy reasons the lists to be published will not include personal contact information of single stakeholders. However, regional partners can create and may work with more detailed contact lists internally.



## 5 Stakeholder Recruitment

The identified stakeholders for the focus groups and co-creation workshops will be contacted and mobilised for the project activities by each regional partner and informed about the process based on the Communication, Engagement and Dissemination (CED) Strategy developed in T5.1 (D5.1). A first plan will be delivered by project partner ICONS in M3.

The project partners FNR and BTG (in charge of content development) will produce fact sheets about each of the four mission themes, to be used in the focus groups and workshops, and develop key messages for the target audiences. These key messages and preliminary versions of the fact sheets will be ready in M4 and can be used as a basis to acquire the focus group participants.

The first round of citizen focus groups is supposed to take place in M6 (Feb 2021). Regional partners should plan sufficient time for the recruitment process and consider possible periods of non-availability during Christmas time and at the beginning of the year.

It is advisable to start the recruiting process as soon as regional partners obtain the preliminary fact sheets for their mission and the key messages to address their potential participants (from early December 2020).

Regional partners are supposed to select the most appropriate communication channels to reach their potential candidates. The initial contacting is preferably personal and may be (among others) through:

- E-mail or e-mailing lists
- phone
- websites
- (virtual) black boards or advertisements
- social media or
- in person

The invitation should include:

- project and mission background information
- expectations on the target group(s) & role of participants in the co-creation process/reason for selection, information on how data will be used
- date, time, location, directions, catering
- reimbursements/incentives & benefits
- information about the regional partner

In case of confirmation, the prospective participants should receive a confirmation e-mail etc. and it is further advisable to call the participants one or two days before the focus group/workshop as a reminder.

While every regional partner is in charge of recruiting the focus group and workshop participants in his/her region, BSS will be a supporter, facilitator, advisor and feedback partner throughout the whole time.

## 6 The Co-Creation Phase

In the co-creation phase comprehensive concepts for the implementation of each serious game mission will be developed. These will be used by WP4 to design the game. Therefore, chapter 6 constitutes the central part of the stakeholder consultation guidelines.

It contains the following: In the beginning our approach to co-creation and RRI is stated and the structure of the co-creation events is introduced. Section 6.3 presents the overall game goals and the objectives and ideas in each of the four missions. This is followed by a rough framework for the different events.

Section 6.4 introduces the focus group method and gives more specific information on the first round of citizen focus groups. Section 6.5 introduces the idea of co-creation workshops and provides a collection of methods for the different stages within co-creation. Finally, an exemplary moderation sheet is given.

### 6.1 Our approach to co-creation and Responsible Research and Innovation (RRI)

Co-creation follows an approach involving different perspectives and collaborative design tools, materials, processes, activities or strategies. This working objective concerns building identity among existing communities, uniting these communities in strategic ways and forging new partnerships among stakeholders in the bioeconomy environment and along the value chains as well as in RRI and related concepts, along the lines of this strategy.

Allthings.bioPRO will support the change from a triple helix model to a quadruple helix model of interaction, which adds civil society actors, specifically citizens to research, industry and public authorities. For real knowledge-sharing to take place, the individuals and organisations involved in Allthings.bioPRO will be brought together around the common goal of creating a serious game along four missions in the co-creation phase. Rather than involving experts, participation is centred in relevant viewpoints informed by necessity or daily activity.

Accordingly, Allthings.bioPRO citizen focus groups and co-creation workshops involve civil society organisations as well as regional stakeholders and individuals thus give voice to local people and local communities. We will provide an inclusive and safe space for participatory dialogue and co-creation with a variety of actors.

As with identifying potential target groups in the stakeholder mapping process, assembling the focus groups (and co-creation workshops), Allthings.bioPRO will have a specific view on characteristics of engaged users/communities and will aim for a balance of gender and social background among the participants. An eye-level communication in the co-creation phase between all participants is the first precondition to provide room for creative ideas and visions.

All Allthings.bioPRO workshops will be evaluated. Therefore, participants will have the possibility to give feedback. This evaluation is crucial for the following co-creation workshops.

Allthings.bioPRO will also capture impact stories (incl. success and failure) and lessons learned from different perspectives.

## 6.2 Structure of the co-creation process

The co-creation phase includes<sup>9</sup>

- four **citizens only focus groups** for each mission, two with each regional partner, structured in two rounds (4 missions, 2 regional partners per mission, 2 rounds: 16 focus groups in total, group size max. 10 participants, hoped to meet in person)
- four **co-creation workshops** for each mission, two with each regional partner, structured in two rounds, following the citizen focus groups (16 workshops in total). The co-creation workshops will include citizens from the focus group plus other stakeholders (quadruple helix) with expertise in the field of the missions (citizens make up approx. half of the group, group size around 20 participants, aspired in person). The findings and suggestions will be supplemented by a Desk Research (WP2) on identified issues as inputs to support the development of ideas in round 2
- two **co-design meetings** for each mission (8 in total, virtual), with a reduced group from the co-creation workshops from both regions participating. They will work in feedback loops with WP4 on Game Design (WP4)
- one **co-evaluation workshop** for each mission (in different regions), will include representatives from each mission including all stakeholder groups but with a strong focus on direct citizen participation (4 workshops in total)

In total the co-creation phase includes 36 meetings (aspired in person) plus eight virtual meetings.

## 6.3 Guidance for Engagement and Game Development

### The right balance between openness and frame

The project team aims at keeping the direction and results of the co-creation process as open as possible to ensure real citizen/stakeholder-led content development, which meets the need of the target groups. To ensure achieving the project goals, delivering the promised results and to allow regional mission partners to work aligned, effectively and confidently, an overall framework is needed in which the partners can operate.

The following section provides some guidance for regional partners about the objectives and desired outcomes of the serious game development. Objectives and ideas in the four game missions are summarised and an overall framework of the engagement process given.

### 6.3.1 Overall aims of the serious game

The overall aim of the serious game is to raise awareness among citizens about selected bioeconomy topics. It will provide users with knowledge about four topics of the bio-based economy: Food Packaging (1), Fashion & Textiles (2), Kids & Schools (3) and Jobs & Careers (4). Through the game, citizens will be able to develop own ideas and communicate their opinions and personal preferences. The derived data will be valuable for bio-based industries. The involvement of citizens to gather their input into the research, innovation and development agendas of the bio-based industry can serve different purposes:

- Fit bio-based industry results/products/value chains to the needs of citizens and consumer groups

---

<sup>9</sup> We hope for face-to-face meetings as they guarantee a stronger commitment to the missions. Due to the current pandemic, the focus groups and following co-creation workshops will probably be partly organised as online events. In case the meetings have to be organised online, introduction and training on methods and tools to be used in virtual meetings will be offered by BSS. Assistance during the implementation of virtual focus groups and co-creation workshops can also be provided by BSS. An addendum with co-creative tools to be used during virtual meetings will then be edited.

- Gather the citizen perspectives on design and implementation of the bio-based economy, policy and R&D&I agendas
- Provide input to the monitoring of the implementation of bioeconomy innovations and their adaptation to the market and consumers' needs and expectations, specifically by connecting to the Knowledge Centre for Bioeconomy (KCB)

To ensure focus, the Allthings.bioPRO consortium already decided on the subject of the serious game by concentrating on four specific missions. However, the final creation of the content will be left to the engagement process.

All game missions have a strong focus on a learning experience for the game user but will also create content, which will support a broader understanding of citizens' motivations, perspectives, ideas, priorities and concerns related to bio-based products and the bioeconomy.

The aims/objectives and more detailed information about the four game mission themes will be lined out in the following section.

## 6.3.2 Objectives and ideas in the four game missions

### 6.3.2.1 Food Packaging

**Mission challenge:** To develop the perfect packaging for different kinds of food.

**Learning effects:** By reaching out to meet the mission challenge, users will gain knowledge about bio-based materials, circular economy, waste, environment and sustainable consumption.

**Use of collected data:** In this mission, we will collect data on consumers' choices and preferences when designing the perfect packaging. The derived information from this game mission can be of interest for the packaging industry, consumer good industry, policy stakeholders and the KCB.

**Inspiration for content:** The mission could be designed as an idea contest or virtual laboratory, factoring life cycle assessment, costs, look, feasibility etc.

**Possible user groups:** Citizens and consumers are the addressed users.

Involved regional partners:

MOS (DE)

NMF (NL)

### 6.3.2.2 Fashion & Textiles

**Mission challenge:** Users, together with other players, design bio-based fashion items and explore the production process (and working conditions) of bio-based textiles and fashion.

**Learning effects:** Users learn about (un-)sustainable fashion and bio-based textiles, sustainable lifestyles and circular economy. They also get handy tips what they can do to contribute to sustainable fashion (e.g. sustainable consumption, local initiatives and political engagement).

**Use of collected data:** Users feed their visions and designs of future sustainable fashion into R&D&I. Fashion and textile industry as well as policy stakeholders and the KCB can make use of the data collected within this mission. This data could be preferences, ethical considerations, preferred materials or sustainable production lines.

**Inspiration for content:** The mission could be designed as a user design contest for a virtual fashion and textiles exhibition. The results could be subject to discussion among the peer users who will vote for the best concept. The ideas ranked highest could then be taken up and transferred from the virtual to the real world to be incorporated in a real life exhibition.

**Possible user group(s):** fashion-conscious consumers, especially youth could be addressed.

Involved regional partners:

FFG (NL)

VA (SE)

### 6.3.2.3 Kids & Schools

**Mission challenge:** Pupils explore the fundamentals of bioeconomy and capture how bioeconomy can be implemented in their everyday school life.

**Learning effects:** Children learn about and explore the general concepts of bioeconomy and sustainable materials, products, services and initiatives within their school environment. It will highlight sustainable development (special focus on SDG 9 & 12) and environmental education.

**Use of collected data:** Schools and other educational institutions can make use of the collected data, e.g. for procurement based on needs, wishes or constraints.

**Inspiration for content:** This mission could be designed in form of a tour through a classroom and/or school/ schoolyard. Knowledge transfer could possibly also happen via quizzes, puzzles or quartets.

**Possible user group(s):** The targeted group of players will be children. However, for the game development we aim at involving a wider range of citizens, namely pupils (aged 10-14), parents and teachers.

Involvement regional partners:

AIMV (DE)

TEEC (EE)

### 6.3.2.4 Jobs & Careers

**Mission challenge:** Match the user's skills and interests with existing job profiles and related skills and competences needed in bioeconomy and bio-based industry in a playful environment

**Learning effects:** Users learn about green jobs and career opportunities and explore existing job profiles and their needed skills and education. To ensure that skills and profiles of future staff matches with needs and offers of industry and business, economic actors will be involved in the game development as well.

**Use of collected data:** User data will reveal what profiles are of interest for young professionals and students. This information can be useful for human resources departments, universities and other educational institutes or schools. A collection of exemplary job profiles can be used in recruiting and educational programmes.

**Inspiration for content:** The mission could be designed as a decision tree along the different bioeconomic sectors displaying job advertisements, employee and employer interviews, short videos of a typical day at work, etc.

**Possible user groups:** Students and young adults in the phase of career orientation as well as job seekers.

Involvement regional partners:

BSS (DE)

INTHUM (IT)

## 6.3.3 Overall framework for the engagement process

From general to specific – funnel-shaped

### 6.3.3.1 First Focus Group:

- **Goal(s):** familiarise with bioeconomy and the specific mission and related content; get first ideas about focus areas within mission theme
- **Composition:** 6-10 citizens
- **Time:** M6/M7
- **Programme/Agenda Points:** Get to know each other, get to know the project, get familiar with bioeconomy, get familiar with mission theme, ask questions and discuss personal views
- **Possible methods:** Opener/ice breaker (e.g. sociometry, joint poster), presentation, moderated group discussion with prepared guiding questions, closers (e.g. drawing the learnings) (these methods can be found in section 6.5.4), online tools for polling, voting, feedback or idea development and mapping in case the focus group has to be conducted online to increase interaction, e.g. Mentimeter, Kahoot!, Poll Everywhere, conceptual mapping (see D7.1 for tool descriptions)
- **Follow up:** Summarise results in local language and English, send them to participants, share and discuss results with mission partner and BSS

### 6.3.3.2 *First Co-Creation Workshop:*

- **Goal(s):** Co-creation participants (citizens and experts) know what is expected from them in the mission development phase of the co-creation process; answer arising questions and develop initial mission concept; initial thoughts about possible ingredients of a story to embed content in; content-oriented not game-oriented; thematic consolidation of the first focus group
  - help citizens to learn more and get answers to their questions directly in discourse with the experts
  - help experts to understand the needs and interests of the citizens related to the subject of the mission
- **Composition:** 6-10 citizens ideally identical with the participants from the first focus group plus approx. 3-7 experts (number of experts depends on the outcomes of the 1<sup>st</sup> focus group. This will identify the elements where expert inputs seem useful)
- **Time:** M8/M9
- **Programme/Agenda Points:** Citizens and experts get to know each other, teambuilding. Presentation of focus group results as starting point, citizens and experts learn from each other, diving into the mission theme, discuss different paths, start to work on identified focus areas and start elaborating on relevant concept elements (who are potential users, what are relevant aspects, what needs to be considered while thinking alternatives? etc.). Ideally, the event closes with initial ideas for a possible story
- **Possible methods:** presentation, fishbowl, list of topics, prioritisation of topics (diving into the topic), future scenarios (ideation), developing personas, online tools for polling, voting, feedback or idea development and mapping in case the co-creation workshop has to be conducted online, e.g. Mentimeter, Kahoot!, Poll Everywhere, conceptual mapping (see D7.1 for tool descriptions)
- **Follow up:** Summarise results in local language and English, send them to participants, share and discuss with mission partner and BSS
- **Related Deliverable:** Report of the first sequence of focus groups and co-creation workshops (D3.2)

### Desk Research

The findings and suggestions from the first round of focus groups and workshops will be supplemented by a Desk Research (WP2) on identified issues as input to support the development of ideas in the second round of focus groups and workshops.

### 6.3.3.3 *Second Focus Group:*

- **Goal(s):** assess and discuss content necessary to develop a specific mission, ask questions; embed content in a story
- **Composition:** 6-10 citizens ideally identical with the participants from the first round of events + approx. 3-7 experts (experts and number depend on the outcomes of the first round of events)
- **Time:** M9/M10
- **Programme/Agenda Points:** Presentation and discussion of results of the first round of focus groups and workshops, complemented by results of the desk research, create a storyline for the initial mission concepts
- **Possible methods:** Presentation, moderated group discussion with guiding questions, methods for creative storytelling, online tools for polling, voting, feedback or idea development and mapping in case the focus group has to be conducted online, e.g. Mentimeter, Kahoot!, Poll Everywhere, conceptual mapping (see D7.1 for tool descriptions)
- **Follow up:** Summarise results in local language and English, send them to participants, share and discuss with mission partner and BSS

#### 6.3.3.4 *Second Co-Creation WS:*

- **Goal(s):** assess and discuss content, answer arising questions, develop final comprehensive mission concept
  - More game-oriented: how can topics and content be translated into the game? (participants should keep thinking in terms of content )
  - help citizens to learn more and get answers to their questions directly in discourse with the experts
  - help experts to understand the needs and interests of the citizens related to the subject of the mission
- **Composition:** 6-10 citizens, 6-10 experts
- **Time:** M11/M12
- **Assignment:** Develop a comprehensive mission concept incl. storyline, game elements, media formats, scope and level of detail of content, award or scoring systems, level of interaction with other players, total gaming time, specific target group, etc.
- **Possible methods:** prototype concept solutions for the game path in small breakout rooms; test prototype with feedback from other teams (testing may be iterative: results may be used to redefine one or more further problems and to find or rule out alternative solutions), online tools for polling, voting, feedback or idea development and mapping in case the co-creation workshop has to be conducted online, e.g. Mentimeter, Kahoot!, Poll Everywhere, conceptual mapping (see D7.1 for tool descriptions)
- **Follow up:** Summarise results in local language and English, send them to participants, share and discuss with mission partner and BSS
- **Related Deliverable:** Report of the second sequence of focus groups and co-creation workshops including the final concepts for the game design (D3.3)

#### *Co-Design Process:*

The co-creation activities are concluded by an assessment process that will be organised in balancing loops, so called goal-seeking loops. Based on the co-created design of the missions, the co-design group (consisting of participants from both regions who took part in a specific mission development process) will give feedback for steering purposes. Engagement will take place in two virtual co-design meetings (between M14-16 and M20-22), which will be organised between the participating stakeholders, partner NG (WP 4 leader) and BSS (2 per mission and 8 in total). These meetings will be organised in English to allow live exchange between all participants.

#### 6.3.3.5 *First Co-Design Meeting*

- **Goal(s):** assess and discuss first mission gaming concepts
- **Time:** M15/16
- **Agenda:** NG presents status of game development and major progress, shares and discusses different versions with co-design group for feedback and steering purposes; co-design group makes further suggestions for improvements
- **Possible methods:** online, but to be specified

#### 6.3.3.6 *Second Co-Design Meeting*

- **Goal(s):** assess and discuss pre-final game development results
- **Time:** M20/M21
- **Agenda:** NG presents major results and pre-final game; co-design group discusses results and makes suggestions for final improvements
- **Possible methods:** online, but to be specified

### 6.3.3.7 Co-Evaluation Workshop

- **Goal(s):** future user group(s) play, assess and evaluate game
- **Time:** M27/M28
- **Related Deliverable:** Results of the co-design process (D3.3)

## 6.4 Focus groups

The focus groups will last half a day each. They will take place in the area of the regional partners participating in one of the four specific missions (2 focus groups per regional partner, 4 per mission). The first focus group will be organised for citizens only. Here citizens will be able to freely voice their ideas and concerns without being intimidated by experts. This will allow them to learn and explore the topic of the mission; formulate questions and needs for further information. The focus groups will be conducted in the local language.

The focus group will be summarised in English and the summary will be translated to the local language. Results will be shared and discussed between the two regional partners working on one mission and BSS. The (combined) results will be presented then to the second focus group as additional input. The first and second sequence of the focus groups will be reported together with the first and second sequence of the co-creation workshop (D3.1 & D3.2).

### 6.4.1 Description of the method

The focus group is a qualitative method, which is designed to help learning more about community and group preferences, values and opinions regarding a defined topic and why these are held by observing the structured discussion. Focus groups can reveal what the participants are really thinking and feeling and group interactions and non-verbal communication can also be observed.

The participants are a small group of people (ideally 6-10 persons) who are selected according to certain common characteristics that relate to the focus group topic (see chapter 4). The focus group is facilitated by moderators whose job is to keep the group focused on discussing the specific topic

It is essential to carefully plan the group's composition and discussion in order to create a non-threatening, permissive environment. Thus, a focus group can be seen as a mix between an interview and a discussion group. If necessary (COVID-19), focus groups could also be conducted online.

#### Strengths of the method

- Allow for the participants to develop and express their opinions in a more 'natural' social context, which may be closer to the ways people form their opinions in everyday contexts
- Can create deeper insights on the participants' attitudes, ideas, preferences and concerns than other methods as it allows for direct observation of the participants' immediate reaction as well as it highlights people's reasoning and thoughts underlying their expressed opinions

#### Weaknesses of the method

Being aware of the weaknesses will help to avoid pitfalls

- Due to the small group number, the results may not be representative for the target group
- The multiple voices of the participants as well as the flexibility in process structure, may result in limited control over the focus group process
- Sometimes group expression can interfere with personal expression and the results may reflect 'groupthink'

## 6.4.2 Basic concept for the first round of focus groups

### Aim

The aim of the first focus group is:

1. Focus group members (citizens) gain a basic idea about the concepts of bioeconomy and to get familiar with the respective mission topic.
2. To collect first ideas about the mission topic and questions or lacking knowledge to take into the first co-creation workshop with experts
3. Focus group members gain a basic idea about AllThingsBio.Pro and the need of their involvement the development of (new) biobased products
4. First ideas/images/constraints from consumer-citizens on how a game/smartphone app could work in practice from the point of view consumer-citizens in relation to the respective mission topic.
5. Focus group members know what is expected from them in the mission development phase of the co-creation process

The focus groups will start with an initial phase to get the participants familiar with the bioeconomy and its general concepts. The second round of focus groups will allow citizens to discuss design and the content necessary to develop a specific mission within the game developed in WP4.

### Input of basic content

The information needed for the first focus groups in each mission will be provided in WP2 by FNR and BTG in form of factsheets (one for each mission). These factsheets will be part of a starter kit. To support the open co-creation process, the first factsheet versions will be quite short to not bias/influence participants considerably. It will be very basic information in an easy to understand language and in adequate formats, i.e. story-driven and daily life-oriented. The factsheets are first produced in English and will then be translated into the local languages of the regional partners who need it.

### Roles of BSS and regional partners

The focus group activities will be organised by the relevant regional partner and co-facilitated by BSS. BSS supported by the regional partners will provide a summary of outcomes in English and the local language for follow up actions.

### Setting

The focus groups last half a day each at a convenient place and time. Date and time should be based on the everyday reality of the focus group participants. E.g. for employees it might be best to schedule the focus group in the evening after work. Avoid hosting the event at locations that might be contentious.

### Generate questions

The mission partners will develop the questions for discussion for each mission jointly. WP1 and WP2, together with BSS can give advice if requested.

- An opening question should be used to acquaint and identify common characteristics among the group members
- An introductory question can be used to introduce the central ideas of bioeconomy and the respective mission theme and foster conversation
- Create a set of key questions (3-5) or topics to drive the group discussion
- Use a concluding question that helps the closure

The questions and the order should be prepared but the moderator remains flexible to adapt them to the group's natural conversation flow. The questions should be clear, relatively short and use simple wording. Moreover, the questions should be open-ended rather than dichotomous.

### Planning the focus group

The regional partners need to carry out the following organisational tasks:

- Recruiting potential participants in the focus groups based on the stakeholder lists created in the stakeholder mapping process (see chapter 4: Stakeholder Recruitment)

- Preparing and sending information materials for the participants (based on the preliminary fact sheets for each mission provided by WP2 (FNR and BTG) as part of the starter kit, (see chapter 4. Stakeholder Recruitment))
- Organising logistics (location, equipment, catering, accommodation, etc.)
- Record proceedings and sessions
- Capture results and summarise them in English and in the local language

One moderator and an assistant or two moderators are required to facilitate the focus groups.

### **Logistics and Recruiting**

- Select a location that is easy to find, minimises distraction and provides a neutral environment
- Make sure the events follow the COVID-19 safety measures (1.5 meter distance, masks, regular hand washing and disinfection)
- Stay within a size between 6-10 participants
- Make sure to invite potential participants at least two weeks prior to the scheduled focus groups
- When recruiting participants it might help to stress the need for citizens insights and input to discuss the topic at hand
- Send personalised invitations to each person who has been pre-selected and who has confirmed their availability and interest in the participation
- Include information about the date, time and length of the event, the direction and public transportation to the location, the availability of food and drinks<sup>10</sup>, the (no-) need for preparation, compensation/incentives
- Call each participant the day before the focus group as reminder

### **Conducting the focus group**

#### **Participants Arrival**

As participants arrive, the moderator(s) greet(s) them and make(s) small talk but avoid(s) the topic of the focus group. Snacks and drinks can further support building up a relaxed environment.

#### **Introduction**

- Obtain declarations of consent
- Begin taping the session
- The moderator welcomes the group, introduces herself/himself and gives relevant background information and an overview of the topic. Emphasise that this is an opportunity for participants to give voice to their opinions and that the project team is here to learn from them
- The moderator explains what the results of the focus group will be used for and explains procedure of the further co-creation phase
- The moderator presents the basic rules (one person speaks at a time, balanced parts of speech, respectful communication on eye-level, all perspectives are valuable for discussion, that session is recorded to ensure that all comments are noted, assure that no specific names will appear in the final report)
- The moderator asks a warm-up question that everyone is asked to answer
- The moderator asks an introduction question (if any) and then moves to the other questions/topics, as pre-decided

#### **Main Part**

- Short input to prepare basis for discussion, e.g. in the form of a fact sheet and a presentation
- Moderated discussion with pre-decided guiding questions/topics

### **Focus Group Conclusion**

---

<sup>10</sup> The availability of food and drinks will be planned in line with the COVID-19 situation and respective resolutions at the time of the event.

- The moderator briefly summarises the main points of view and then asks if the summary is accurate or if anything was missed. (S)he answers any final questions about the focus group work
- The moderator thanks the group for their participation and explains further steps and how the reimbursements will be distributed (if any)

### Focus Group Evaluation

To be coordinated with IBS

Table 7 – Preliminary basic concept of the first round of focus groups

Time	Title	Details	Method	Who?	Materials
	Opener	Getting to know each other, prepare relaxed atmosphere, team building	e.g. joint poster		Flipchart, paper, pencils, photos etc.
	Getting familiar with bioeconomy	Participants are introduced to project and basic concepts of bioeconomy, can ask questions and discuss personal views	e.g. fact sheet and presentation plus group discussion, e.g. as Science Espresso		PowerPoint, fact sheets
	Break	Catering			
	Energiser	Re-activating participants	e.g. Alphabet		e.g. Flipcharts, pencils, timer
	Getting familiar with the mission theme	Participants are introduced to the mission theme, can ask questions and discuss personal views	e.g. Group discussion with guiding questions		Capture input e.g. with cards to be pinned to a Flipchart
	Feedback & Reflection	Participants reflect on the event	e.g. 30 seconds of feedback		
	Closing	Moderator wraps up the event, thanks participants	-		
	Evaluation	Qualitative & quantitative focus group evaluation, developed together with evaluation partner IBS	e.g. ball of wool, questionnaire		

## 6.5 Co-creation workshops

The methodology of co-creation emerges from transformative processes in the entrepreneurial world and aims at generating new products and services. For example big companies and brands carried out effective collaborative creation actions involving users to develop new products and services but also to face structural changes as well as helping to solve new challenges in the internal management<sup>11</sup>. This approach has been taken up by other fields, such as education, arts or the publishing sector.

<sup>11</sup> Senabre, E. (2015) 'White Paper: Methodologies of Open Co-Creation around Digital Culture'. [https://pro.europeana.eu/files/Europeana\\_Professional/Projects/Project\\_list/Europeana\\_Creative/WP1%20-%20Europeana%20Open%20Laboratory/eCreative\\_CoCreation\\_Whitepaper\\_Platoniq\\_1.0.pdf](https://pro.europeana.eu/files/Europeana_Professional/Projects/Project_list/Europeana_Creative/WP1%20-%20Europeana%20Open%20Laboratory/eCreative_CoCreation_Whitepaper_Platoniq_1.0.pdf)

This section provides a guideline for the Allthings.bioPRO co-creation workshops. Even though the co-creation workshops will be designed individually, this guideline will help the regional partners to design the most appropriate workshops and to choose most fitting methodologies to reach their goals. Therefore, besides background information on co-creation, its potential and general information about organising such workshops, this section provides also practical support for a selection of co-creation methods and an example of a co-creation workshop moderation sheet, which can be modified and used.

**This section also serves as the basis for the internal co-creation training for the consortium (organised by BSS in M6).** In this training, partners will learn about participation, co-creation and engagement principles and methods as well as moderation and practice for carrying out co-creation events.

## 6.5.1 Co-creation concept and goals

Co-creation is usually complemented by other concepts such as user centred design, design thinking or participative design<sup>8</sup>. Hence, co-creation follows an approach to involve different perspectives and collaborative design tools, materials, processes, activities or strategies.

The co-creation workshops in Allthings.bioPRO are structured in two rounds. The aim of the first round of co-creation workshops, following the first round of citizen focus groups (concept outlined above), is to get questions answered and develop initial ideas for the four game mission concepts.

A following phase of desk research complements the ideas developed for all four mission concepts. The content produced is to be assessed and discussed in a second round of citizen focus groups and then taken to the second round of co-creation workshops. In this round the final mission concepts will be developed.

Therefore, the overall aim of the two rounds of co-creation workshops is to co-develop a comprehensive concept for the four game missions in the eight partner regions. The concept will for example include the following information: game elements and media formats, scope and level of detail of content, award or scoring systems, level of interaction with other players, total gaming time, specific target group etc. Workshop implementers will receive a list with needed concept information from BSS and NG beforehand. The final draft concepts of the missions, produced in the co-creation workshops, will serve as input for the co-design phase together with the game development partner NG.

The co-creation workshops will include citizens who participated in the citizen focus group and additional expert stakeholders from the other main stakeholder groups (policy, CSO, industry and SME, research and academia, bioeconomy networks and projects). These workshops will on the one hand help the citizens to learn more and get answers to their questions directly in discourse with the experts. They will on the other hand help the experts to understand the needs and interests of the citizens related to the subject of the mission. Four co-creation workshops are planned for each mission (two per mission partner).

In this way, this approach gives voice to local communities. A variety of targeted creative methods and creative materials will support these groups in co-creating their ideas and finally providing the Allthings.bioPRO team with the comprehensive concept for the game missions.

## 6.5.2 How to structure the co-creation workshop

An eye-level communication in the co-creation workshops between all participants is the first precondition to provide room for creative ideas and visions. Thus, after having defined a clear goal, the structure of the workshop will be set up to foster team building within the workshop period and to get successful results. The

structure of a workshop can roughly be divided in an introduction, a core phase and the closing and evaluation. A methodology to be applied has to be chosen.

Before starting creating first mission ideas participants get questions answered they have about the bioeconomy, the mission subject and the prospective game. B. W. Tuckman<sup>12</sup> talks about a team development model, based on five different stages – the forming, storming, norming, performing and adjourning. Every team experiences this process and moderators are recommended to take this up. For instance, Baumann<sup>13</sup> says, when in the beginning of a workshop people tend to behave very polite and superficial, they pursue the goal to find secure structures for interaction and to position themselves in the group. This is part of Tuckman's phase one 'the forming', and will crucially influence the further group processes throughout the workshop. In the forming phase, the workshop goals and methods applied get clear to everybody and the participants have room to introduce themselves, get to know each other and to express their expectations and insecurities but also to find common grounds among them. A good start in this team-building phase is important to fast reach a good performing quickly, where group tasks are collectively solved by bringing in all the different talents individual participants have.

In the core phase of the co-creation workshop, participants will gather ideas, rank them and co-design prototypes in form of mock-ups, visual strategies, tangible objects, sketches and drawings. Here they have already built up a team spirit and try to solve a problem collectively. To do so, Allthings.bioPRO will use some of the creative methods outlined in this guidebook. After an intense creative work process, the closing is important. By visualisation, participants see what they have reached in this workshop and they are given the possibility to reflect and give feedback on what they have experienced.

All Allthings.bioPRO workshops will be evaluated. Therefore, participants will have the possibility to give qualitative feedback supported by qualitative feedback methods and quantitative feedback by filling in a short questionnaire. This evaluation is crucial for the following co-creation workshops.

### 6.5.3 Location/ Setting – Space and beauty

To successfully work with a group of people who might not even know each other, it is very important that participants feel comfortable at the workshop. Therefore, the setting and room plays an important role. As many as possible of the following characteristics should be met when organising the workshops:

- Choose a bright room (daylight)
- Take care of flexible furniture
- The room needs to be big enough for the methods you choose and that people can move around
- Use plants to make the room more welcoming
- Take care that participants keep their jackets outside the room
- Give space to move around or have the option to go out in fresh air

For creating a good atmosphere it might be nice to turn on some music when the participants arrive at the workshop. They need sufficient time to arrive, some coffee, cake or fruits should be provided and through first conversations over coffee they naturally start to get to know each other a bit. It can be useful to provide and set up different kinds of objects in the workshop rooms. This can be juggling tools, balls, or other things, which do not only make the room cosier, but also can be used in different methods.

---

<sup>12</sup> Tuckman, B. W. (1965): Developmental Sequence in Small Groups', in Psychological Bulletin, Vol. 63, No. 6, pp. 384-99.

<sup>13</sup> Baumann, B. (2015): Blühende Workshops und Trainings mit Erfolgsgarantie. Tipps aus der Praxis für die Praxis. BusinessMind, Wien.

## 6.5.4 (Co-creation) Workshop methodologies

There is a broad range of different co-creation methodologies for the various phases of developing a concept for a game mission. This chapter gives an outline of selected methodologies during the various phases, which will be tested and further developed in the Allthings.bioPRO co-creation training in M6 (MS3.1).

In addition to the methods listed here, some of the evaluation tools (online and offline) that are introduced in the Evaluation Plan (D7.1) can also be useful for the focus groups and co-creation workshops.<sup>14</sup>

You may check the tools *Mentimeter*, *Kahoot!*, *Poll Everywhere*, *Ahaslides*, *Conceptual mapping* and *Flash interview* described in the Evaluation Plan (D7.1).

### 6.5.4.1 Opener

Openers and ice-breaking activities are very important for the team building in the workshop. As we want our participants to develop concepts together, this stage of the workshop needs sufficient time and is crucial for the further process in the co-creation workshops.

It is important to always choose an appropriate method for starting a workshop and warming up the participants. The focus of the methodology differs, depending on whether participants already know each other. If participants do not know each other, there is the need for a methodology addressing introduction and getting to know each other, like “Sociometry” or “Joint poster”. If participants do already know each other, methods to gather expectations and fears can be applied, like “Dreams and Nightmares”.

Based on Birgit Baumann’s “Blossoming Workshops and Seminars Guarantee to Succeed”<sup>15</sup> this section provides a list of methodologies, which we see fit as openers for the Allthings.bioPRO co-creation workshops.

#### 6.5.4.1.1 Sociometry/Constellations

- **Goals:** Getting to know each other, find commonalities, support communication, supports getting background information about the group.
- **Group size:** No limitation.
- **Room requirements:** The room needs to be large enough for constellations in a row, or for clustering the participants.
- **Timing:** 10-20 min
- **Summary:** You ask questions which can e.g. be connected to the content of the workshop, which are answered by constellations of the participants. This can be in a row or also in clusters.

Sociometry or Constellations are perfectly suitable for starting an event and as ice-breaker. Team building is supported and communication between the participants stimulated.

To successfully implement this method, it is important to carefully choose the questions. Each question or topic should follow a specific aim. Personal questions help to break the ice and can be followed by questions targeting the content of the workshop – in our case bioeconomy, but also outreach or science communication.

Examples for questions can be the following:

---

<sup>14</sup> The concept papers of the evaluation tools described in D7.1 were developed in the [GreenSAM project](#) (Interreg BSR) as part of an interactive toolbox.

<sup>15</sup> Baumann, B. (2015): Blühende Workshops und Trainings mit Erfolgsgarantie. Tipps aus der Praxis für die Praxis. BusinessMind, Wien.

- Origin of participants. Geographically cluster them.
- Male and female participants
- Size of shoes
- Theoretical know-how about bioeconomy
- Practical experience with bioeconomy
- Etc.

#### 6.5.4.1.2 *Joint poster*

- **Goals:** getting to know each other, finding commonalities; document results and summarise
- **Group size:** max. 20 participants
- **Equipment:** pin walls or flip charts (one per breakout group)
- **Room requirements:** sufficient room for breakout groups to work on their own flip chart/ pin wall.
- **Timing:** 15-20 min (10 min to create the poster and 10 minutes for presenting all posters)
- **Summary:** Collaboratively creating a poster, which highlights the commonalities, but also individualities of each small breakout group

This method helps to identify first common grounds within the group, but also to identify individualities. Small groups of four to five people find together and create a poster highlighting the commonalities and individualities on private and professional level. At the end of the session, the groups give a short presentation of their posters (1 – 2 min each). All posters should be placed clearly visible in the room.

#### 6.5.4.1.3 *Dreams and Nightmares*

- **Goals:** identify expectations and fears and make them addressable
- **Group size:** up to 40 (From 10 people on it is suggested to work in small groups)
- **Equipment:** pin walls, pins, moderation cards (2-4 different colours), pens
- **Timing:** about 20 min
- **Summary:** collecting dreams and nightmares and addressing them appropriately

This method is easy to apply and works well to gather possible concerns and doubts to further target, address and clarify them.

Depending on whether you want individual results or group results, the moderation cards are handed out to individuals or small break-out groups. For collecting only dreams and nightmares regarding the Allthings.bioPRO co-creation workshop, two colours are needed. Make visible, which colour stands for dreams and which for nightmares. Also, the question must be placed clearly visible. The question could be: “Which dreams and which nightmares do you have for this co-creation workshop?” According to Baumann<sup>16</sup> it is highly important to address and answer the raised topics as well as possible during the workshop.

#### 6.5.4.1.4 *Fast networking*

- **Goals:** break the ice and bring quick interaction and activation, activates existing knowledge, provides a good overview, provides focus on the topic
- **Group size:** up to 80
- **Equipment:** cards with questions, writing pad for each participant, flip charts
- **Room requirements:** sufficient space for walking around and interviewing each other. This can also be done outside.
- **Timing:** 30 minutes

<sup>16</sup> Baumann, B. (2015): Blühende Workshops und Trainings mit Erfolgsgarantie. Tipps aus der Praxis für die Praxis. BusinessMind, Wien.

- **Summary:** Participants have one question for interviewing the others. It is not the aim to interview in detail, it is much more the goal to interview as many people as possible within a few minutes.

Depending on the group size and on how many breakout groups can be formed, the number of questions is allocated. All participants get a writing pad with one question on it. Then they have around 5 minutes to swarm out and interview as many participants as possible. In the next step participants form groups with those having the same question on their writing pad, and collect the most important aspects and answers on a flip chart, which they present at the end.

#### 6.5.4.1.5 *Lego*

- **Goals:** to experience the concept of co-creation and what it really means to work together as well as to exercise collaboration, action, change, leadership and performance
- **Group size:** max. 12; but number of groups not restricted
- **Equipment:** Lego
- **Room requirements:** the room should offer enough space to have (multiple) roundtables
- **Timing:** 45-60 minutes max for part 1& 2
- **Summary:** Participants will build a Lego structure together and will then elaborate guidelines for successful team work

In step 1, participants are given secret assignments. They will then have to build a structure with the Legos together. The personal task is to be kept secret from the other participants and there must be absolute silence. In step 2, the team elaborates the performance and develops guidelines for successful team/group work based on the experiences they just made.

#### 6.5.4.2 *Diving into the topic*

This chapter provides methodologies for diving into the main subject of the workshop. It shows the process of how to collect, prioritise process and plan the workshop topics based on the findings of the mission focus groups.

##### 6.5.4.2.1 *List of topics*

This methodology aims at identifying topics and generating a list of them. It aims at finding out about knowledge and ideas within the group and at collecting possible explanations, problem solutions and creative ideas. Generally, moderation cards are used and work well in this regard.

The topic list method works well to give every participant a voice. Depending on the size of the group, participants either in small breakout groups or individually write their thoughts on the moderation cards. The question to be answered is central for this method and again needs to be clearly visible to everybody.

Questions could be the following:

- Which challenges are there when it comes to reaching out to the public with the game?  
Which opportunities are there?
- Which topics will be important for us in the future?
- Etc.

All ideas will be collected on moderation cards (same colour per question!). Per card only one thought should be noted. Afterward the cards will be pinned on the pin wall and clustered by the participants.

If there are too many cards written or the group consists of more than 15 people, it is recommended to ask participants to finally write the 2-3 most important thought on the cards which will be collected on the wall.

#### 6.5.4.2.2 *Prioritisation of topics*

The prioritisation of topics is important to choose collaboratively, on which topics the group wants to continue to work. There is the possibility either to rank the clusters or to prioritise single ideas and thoughts collected. To do so, the participants get sticky dots for ranking.

Again, most important is to ask a clear question and position it clearly visible in the room. A question could be “Which topics do we want to continue working on today?” or “Which of the topics are most important for you when thinking of the mission in a serious game?”

Afterwards, continue working on the proposed topics or take them up for the next steps.

#### 6.5.4.2.3 *World Café*

The world café is another method to enter a topic and works well in larger groups. It aims at gathering the collective knowledge. This method can be applied for different goals, such as getting to know each other and networking (when used as an opener), but also to exchange views, ideas and expectations, or to collect solution approaches or to reflect on something. The world café setting needs space. Tables for small groups of 4 – 6 persons are prepared. All tables work on the same question. Cover the tables with paper and provide sufficient pens for the participants to write. There can also be snacks or drinks provided to support a good atmosphere.

There are three rounds for exchange, lasting 15 minutes per round. Participants exchange and note their ideas and thoughts on the paper. After the first round all participants but one change the table to discuss the same question with other participants. The one person staying at the table has the role of the host and takes care of reminding the others to note their ideas and thoughts and always repeats to the new group what was discussed before at this particular table. This process is repeated a second time. Ensure that the question is clearly formulated and that people who know each other are sitting at different tables.

Videos like [this one](#)<sup>17</sup> about the world café method may be useful for you to better understand how it can look like in one of your co-creation workshops.

#### 6.5.4.2.4 *Science Cafés*

A science café usually has experts giving a talk and answering questions from the public. We reversed this format by having experts ask questions to the public to get inputs on issues relevant to their work. Experts and citizens work together in small groups to formulate solutions to the challenge of making research and innovation more diverse, inclusive and open.<sup>18</sup> The total length of a science café should not exceed 120 minutes.

#### 6.5.4.2.5 *Science Espressos*

A science espresso is a short talk (of about 10 minutes) followed by informal discussions directed to the audience. One expert briefly presents a current research or innovation topic and invites the audience (participants) to discuss. This is an informal event designed for small groups to keep a high degree of interaction. It is meant to be inclusive and initially open for the general public. The total length should not exceed 30-45 minutes.<sup>13</sup>

---

<sup>17</sup> Video about how to facilitate a world café session: <https://www.youtube.com/watch?v=bImYMj88b20>

<sup>18</sup> Sparks (2016): Sparks Handbook - A guideline of innovative formats for participatory activities & more, <http://sparksproject.eu/sites/default/files/Sparks%20Handbook.pdf>, last accessed 28.10.2020

### 6.5.4.3 Ideation

In the ideation phase, we already start to work on identified topics. Here we suggest applying brainstorming methodologies, or future scenarios and visioning methods. This section provides insight in the future scenario method, the problem reversal technique and how to do the ideation in small breakout groups.

#### 6.5.4.3.1 Future scenarios

The future scenario technique works well to pick up specific challenges or topics to address and to work on first suggestions for solutions and on concrete measures. The questions are based on the specific content of the workshop. To get to the bottom of challenges, Baumann<sup>19</sup> suggests the following structure:

Table 8 – Future Scenario 1

1. Current State <i>This needs to be outlined as detailed and specific as possible.</i>	2. What do I want to reach? <i>In this section, we need a clear outline about the goals or the future we would like to reach.</i>
3. What could be the measures to reach that? <i>In this section, we do a brainstorming about first ideas for measures. This can also be creative.</i>	4. What obstacles could arise? <i>This point addresses the obstacles which need to be addressed.</i>

This method can also be used to work on already developed ideas. Baumann provides the following example:

Table 9 – Future Scenario 2

1. What supports the implementation of idea xy in the game? <i>Describe as detailed and specific as possible.</i>	2. What impedes the implementation of idea xy? <i>Describe as detailed and specific as possible.</i>
3. What possibilities are there to implement idea xy? <i>In this section we do a brainstorming. This can also be creative.</i>	4. Which concrete implementation steps are necessary? <i>In this section, the generated possibilities are captured as concrete steps.</i>

This method can be done with all kind of different questions as long as they always go from “problem talking” to “solution talking.”<sup>14</sup>

The future scenario technique works well in small groups. Flip charts that clearly show the questions and the process should be prepared before the session starts. Future scenarios can fill full workshop days but the method can also be cut to approx. two hours.

#### 6.5.4.3.2 Ideation in small breakout groups

When working with rather big groups (more than 10) we can recommend dividing the participants in small breakout groups for the ideation process. In small groups, participants can do the brainstorming by either writing their ideas by their own on coloured cards or post-its or by right away starting to discuss about the

<sup>19</sup> Baumann, B. (2015): Blühende Workshops und Trainings mit Erfolgsgarantie. Tipps aus der Praxis für die Praxis. BusinessMind, Wien.

topic and collecting the ideas on a flip chart. The approach to first give 3 minutes to all participants to think and write down ideas by their own allows for giving everybody a voice. An effective brainstorming session will last anywhere from 15 to 45 minutes.

#### 6.5.4.3.3 *Problem reversal technique*

The problem reversal technique works well to find ideas for problem solutions. The idea behind it is to think about negative aspects, meaning to think about strategies how to avoid some things. Experience proved that this method is very popular by the participants and almost unexceptional works well.

First, participants take a challenge or a future scenario and make up their minds how to best avoid a solution or the ideal future. This need to be very concrete and detailed ideas. In the following step, the workshop participants turn these ideas around and formulate them positively. The result of this session is a first list of action steps towards a solution. This method supports out of the box thinking and is usually fun. It is advisable to schedule at least 30 minutes for this method.

Videos like [this one](#)<sup>20</sup> about the problem reversal technique may be useful for you to better understand how it can look like in one of your co-creation workshops.

#### 6.5.4.3.4 *Disney Method*

The Disney Method was developed by Robert Dilts in 1994<sup>21</sup>. It is a creativity strategy with the aim to collect ideas, further check their implementation and subsequently reflect them critically. It is important to follow this process structure and start with the dreaming phase, and at the end critically reflect, because otherwise ideas are already blighted at the beginning. Dilts explains the process as going through three rooms. The first, when collecting the ideas, is the room of the dreamer. Here is space to gather everything that comes to the participants minds, without any restrictions. Further they go to the room of the realist, where they discuss the implementation. In the next step, the group enters the room of the critic and critically reflects the ideas. This process is repeated until the group comes to a result, or rather concrete ideas to further work on.

This method takes at least 40 minutes and is conducted in small groups of 4 to 5 people. The moderation team needs pin walls with paper and pens for each breakout group. This method works well to inspire the participants for brilliant ideas. It is not as strictly structured as the scenario technique and therefore leaves more room for creative ideas. Videos like [this one](#)<sup>22</sup> about the Disney method may be useful for you to better understand how it can look like in one of your co-creation workshops.

#### 6.5.4.4 *Designing concrete concept ideas for the game paths*

Once again, the aim of the two rounds of co-creation workshops in Allthings.bioPRO is to co-develop comprehensive concepts for all four missions (incl. game elements and media formats, scope and level of content detail, award/scoring systems, interaction level with other users etc.). This section introduces methodologies on taking further and designing concrete concept ideas from the previous ideation phase. The developed mission concepts will be the starting point for the co-design phase of the serious game together with selected participants from different stakeholder groups and the game development partner NG.

---

<sup>20</sup> Video about how to implement the problem reversal technique: <https://www.youtube.com/watch?v=y5JOCuwtOUA>

<sup>21</sup> Dilts RB, Epstein T, Dilts RW (1994) Know-how für Träumer: Strategien der Kreativität, NLP & modelling, Struktur der Innovation, Reihe: pragmatismus & Tradition –, Bd 31. Junfermann Verlag, Paderborn

<sup>22</sup> Video about the Walt Disney Method: <https://www.youtube.com/watch?v=PqrfDs4BN9k>

These methods are the core piece of the co-creation workshop and need a proper introduction and moderation. Participants that are not used to creative methods may show a negative attitude at first which needs to be addressed, intercepted and solved. Usually participants start to open up and successfully participate through these methods, particularly when they are given sufficient time to adjust and when they are well guided by the moderators.

#### 6.5.4.4.1 *Brainstorming Matrix*

Here the participants are provided with a matrix with predefined rough target groups (Table 10). Participants define them more closely. For example, the target group can be women, but they can be well educated, marginalised, interested, hard to reach etc. The matrix helps the group to decide which target group they further want to address with the game concept they are about to design. The target group is just an example. The brainstorming matrix can also be used for different game concept elements like interaction and communication channels e.g. with other users, scoring systems, different games (like quizzes, puzzles etc.). Videos like this one about [how to use an idea matrix](#)<sup>23</sup> may be useful for you to better understand how it can look like in one of your co-creation workshops.

Table 10 – Brainstorming Matrix for target groups identification

<b>Brainstorming Matrix for target groups identification</b>								
	Interested	Educated	Visitors	Bypassers	Migrant	Etc. ...		
Young People								
Families								
Elderly people								
Women								
Men								
Kids								
Etc.								

#### 6.5.4.4.2 *Avatar*

As an inspiration in ideation, persona development is a method to enter the phase of understanding. Personas are the descriptions of archetypal users or stakeholders. Each persona description is based on a fictitious character whose profile represents the characteristics of an existing social group. It describes social and demographic characteristics, needs, desires, habits and cultural backgrounds.<sup>24</sup> The goals of persona development include: giving space to other perspectives and maintaining the distance to one's own perspective through empathy-understanding and enabling perspectives in the process. In a workshop session with persona development, the group discusses which persona should be addressed – e. g. representatives

<sup>23</sup> Video about Using an Idea Matrix (in Design Thinking): <https://www.youtube.com/watch?v=HwGRc3VrBmY>

<sup>24</sup> Graz READER (2016): DESIGN THINKING SUMMIT '16, 06.-08. April 2016, <http://designthinking-summit.com/#doku>

from ministry, promoter science, business or university – and the participants agree on basis of the existing expertise on a representative of a particular stakeholder group.<sup>25</sup>

Defining personas helps the team have a shared understanding of the real users in terms of their goals, capabilities, and contexts. Personas also help prevent "self-referential design" when the designer or developer may unconsciously project their own mental models on the product design which may be very different from that of the target user population. Personas also provide a reality check by helping designers keep the focus of the design on cases that are most likely to be encountered for the target users and not on edge cases, which usually will not happen for the target population.

#### Characteristics of a good persona:<sup>26</sup>

A quick checklist of what makes a good persona.

The persona

- reflects patterns observed in research
- focuses on the current state, not the future
- is realistic, not idealised
- help you understand your target group

Moreover, you think about the context, behaviour, attitude, needs, challenges, motivation and goals of our chosen persona.

#### Create your own persona:

- Choose a persona of a stakeholder group where you see certain barriers to approach them
- Give a realistic name to create a real relationship between your group and the persona
- Draw a picture of your persona
- Demographic information such as age, origin, marital status, etc.
- Occupation and tasks of his/her profession
- Goals, expectations, wishes and / or needs (with regard to the question)
- Likes and dislikes that can influence a decision
- Recreational activities of the persona
- A quote to better express the character or desirable aspect of the persona

It is quite common to see a page or two of documentation written for each persona. The goal is to bring your users to life by developing personas with real names, personalities, motivations, and often even a photo. In other words, a good persona is highly personalised. Videos like [this one](#)<sup>27</sup> about personas and how to create them may be useful for you to better understand how it can look like in one of your co-creation workshops.

#### 6.5.4.4.3 *Prototyping*

This technique comes from Design Thinking Processes<sup>28</sup> and is meant for generating ideas for very concrete tools, materials and activities.

The aforementioned brainstorming activities aim for a maximum quantity of ideas, without considering the practicality in the first instance. In a second step, the most promising idea will be built as a prototype. This could either be a model, a theatre scene or even an interactive game or other form of demonstration to make

<sup>25</sup> Köppen, E., Paulick-Thiel, C., Stövchase, S., Trübswetter, A., Shields, M., Ober, S. (2017): Dokumentation des RRI Design Sprints im Fraunhofer CeRRI.

<sup>26</sup> Ilama, E. (2015) Creating Personas, <http://www.uxbooth.com/articles/creating-personas/>, last accessed 25.10.2020

<sup>27</sup> Video about personas and how to create them: <https://www.youtube.com/watch?v=GNvLpfXCge8>

<sup>28</sup> Plattner, H., . Meinel, C, Weinberg, U. (2011): Design Thinking: Innovation lernen - Ideenwelten öffnen. Nachdr. München: mi-Wirtschaftsbuch.

the idea tangible and for others immediately and easy to understand. In the case of Allthings.bioPRO, the most promising ideas for the four mission concepts within the serious game will be prototyped in this phase. This prototype will provide the basis for the virtual co-design process.

To prototype, participants are provided with a variety of materials starting from pens and coloured cards, through cords, pins, and placing pieces, to other creative materials such as play dough. These materials support a creative out of the box thinking and support participants in visualising places, activities, stakeholders and also processes. As the methods name already let us assume, the result of this method is a first prototype, which should be tested afterwards.

The prototyping is usually done in small breakout groups. It is important to allocate sufficient time for this task, as not all participants might feel comfortable in using these materials from the early beginning on. Experience shows, that as soon as one person starts to model something other join and the process runs its course.

When the first prototyping work is done, it is useful that each group receives feedback from the other groups. Therefore, a feedback loop is applied, where one person per group stays at the table while the others split up and visit other groups. The person staying at the table explains each detail to the visitors and gathers their feedback and ideas. After this process, each group has another 15 minutes to adapt or add ideas to their prototype. Videos like [this one](#)<sup>29</sup> about prototyping may be useful for you to better understand how it can look like in one of your co-creation workshops.

#### 6.5.4.5 *Closers and energisers*

In this phase it is important to appreciate the achievement of the participants in the workshop and complete the workshop with so-called closers.<sup>30</sup> Closers shall guarantee that participants keep the workshop and discussed content in good memory. Some closers can also be used between the workshop phases to end a specific phase but also as energisers in between. They allow a repetition of the content, are creative and are supposed to be funny.

##### 6.5.4.5.1 *Alphabet*

This method serves also as energiser helping at the same time to repeat all insights or most important topics. It can also be used for introducing a specific topic. You divide the group in small groups (3-4 persons) and ask them to write the alphabet letters vertically on a flipchart (probably in two columns, a-m and n-z). After that, the small groups shall list all terms, words and associations that were used in the workshop or regarding a specific topic as fast as possible. The fastest group wins a small price (chocolate for example). Videos like [this one](#)<sup>31</sup> about the alphabet game may be useful for you to better understand how it can look like in one of your co-creation workshops.

##### 6.5.4.5.2 *Drawing the learnings*

This method is actually based in trainings and supports neuro-didactic learning. In this method you ask the participants to draw what was most important for them or what was the take away message for them. However, it is also possible to draw feedback to the workshop.

---

<sup>29</sup> Video about Prototyping in Design Thinking: <https://www.youtube.com/watch?v=Q4MzT2MEDHA>

<sup>30</sup> Baumann, B. (2015): Blühende Workshops und Trainings mit Erfolgsgarantie. Tipps aus der Praxis für die Praxis. BusinessMind, Wien.

<sup>31</sup> Video about the icebreaker/energiser “The alphabet game”: <https://www.youtube.com/watch?v=JS1J-2QYB-Q>

#### 6.5.4.5.3 *Ball of wool*

This method is very effective in gathering feedback and stimulating closing thoughts and sharing learnings from every individual participant of the workshop. You will need a big ball of wool for this activity. In turns every participant is asked to share his or her thoughts and learnings, while holding the ball. Once they are finished they throw the ball to a random other participant, letting it unroll, while it flies through the air. This is to be continued until everyone has had a say, resulting in a hug web that has formed in between the participants. This method aims to show that despite the various backgrounds and opinions that were represented in the workshop, together they make for a good and strongly interlinked network.

#### 6.5.4.5.4 *Fishbowl*

This method is good for a workshop in which the participants have worked together in different groups. First, each group has to select a representative, who is then going to discuss in their sense. Each representative will get a chair in the “fishbowl”, a circle of chairs in the middle of the room, to discuss outcomes, learnings, etc. of the various groups. To start the discussion you may want to prepare some initiating questions. There will also be an extra chair available for others to jump into the discussion, offering the possibility to get additional input, but leaving it open to the participant on how long he or she wants to be in the discussion. In this method, saying and sharing closing thoughts, learnings or key outcomes is not mandatory for every participant while still providing a good summary and wrap up due to the representatives. Videos like [this one](#)<sup>32</sup> about the fishbowl method may be useful for you to better understand how it can look like in one of your co-creation workshops.

#### 6.5.4.5.5 *TV news*

This is a very fun and limbering up closing method. Divide the group in small groups (editorial teams) and ask them to prepare a news story or a TV-spot. They have 25 minutes to prepare and should include all what normally is included in news. Questions such as what happened, what did get out of it, what was particularly exciting, what will stay in our memory, what have we developed and what do we expect to reach, etc. There are no creative boundaries there. The elaboration of the news-spot provides already a good reflection on the workshop. After the presentations you can discuss overlaps and where the experiences were different and why. It is advisable to make videos and/or many pictures during the presentations.

#### 6.5.4.5.6 *30 Seconds of Feedback*

This method is a fun and energising method to close a workshop. Every participant has to give feedback within 30 seconds not more and not less.

#### 6.5.4.5.7 *Closing words*

In this last phase of the workshop, it might also be important to decide and talk about the role of the group after the co-creation workshop and the future if another meeting is planned. If everything has gone well workshops result in a feeling of solidarity or team spirit and participants may want to continue with their collaboration.

## 6.5.5 Reflection

The workshop can and mostly should be concluded with a reflection round to share specific learnings and take home messages. Participants reflect on their experiences, discuss what worked and what did not work and why, and discuss further options and ideas for improvement.

The reflection tackles the following questions:

---

<sup>32</sup> Video about the fishbowl method: <https://www.youtube.com/watch?v=azUm8f5G300>

- How was your experience?
- What worked?
- What did not work?

It is also possible to let participants reflect and note their reflection on a prepared table by themselves and later discuss in groups. They can also reflect in pairs or groups of three.

## 6.5.6 Moderation sheet

This section provides a moderation sheet for a co-creation workshop. This sheet (Table 11) also shows which materials are needed for the different methods. The regional partners can take this example and adapt it to their specific needs.

Table 11 – Moderation Sheet

Moderation Sheet								
Start	End	Duration	Topic	Goal of the subtopic	Details	Method	Who?	Materials needed
09:00	09:15	00:15	Welcome		Host welcomes participants and introduces the goals and not-goals of the workshop and the agenda. Brief introduction of project.	presentation	Host	Projector for presentation, or prepared flip charts.
09:15	09:35	00:20	Getting to know each other	<b>People know each other, and break the ice between them</b>	Participants position in the room according to questions: - Where are you from (European map) - Stand in a row according to first letter of first name - Stand in a row according to size/shoe size/ .. - How much pre-knowledge do you have about bioeconomy? (theoretical and practical in two steps)* - How experienced are you in science communication?  * Facilitator asks some of the participants, why they stand there, what they do, examples, and who of them undertakes outreach activities.	Sociometry	facilitator	Enough space in the room. Can also be outside. Put tables and chairs on the side.
09:35	10:00	00:25	Finding commons	<b>People know each other, and break the ice between them</b>	3 min: introduction in the process 20 min: Visualise commons and individualities 3 min: 1 min elevator pitch per group Participants build groups of 4-5 people (if there are people who already know each other, they should split in different groups). Each group has a poster and should visualize what they have in common but also what are their	Common poster		3-4 Flip Charts (for each group one), Flip Chart pens in different colours

					individual skills/characteristics/background			
10:00	10:30	00:30	Introduction round	<b>Each participant know everybody's background and reason why to be here</b>	In circle of chairs, all participants take place. With the help of talking object, which is passed around in the circle, everybody has the room to introduce his/herself. They should introduce: <ul style="list-style-type: none"> <li>- their name</li> <li>- Background and affiliation</li> <li>- Why they are here</li> </ul>	Dialogue in a circle		Sufficient room for a chairs circle. Talking object.
10:30	10:50	00:20	Coffee break					
10:50	11:20	00:30	Defining Bioeconomy	<b>Entering the topic. Open the thoughts.</b>	Groups of 4, maximum stakeholder mix. Each group discusses the following question: <ul style="list-style-type: none"> <li>What does bioeconomy contain? (Blue cards)</li> <li>What does bioeconomy not contain? (Red cards)</li> </ul> and notes the single aspects on the cards accordingly. Only one aspect per card! Note: no definitions, but single elements/activities/aspects (Blue card: e.g. plastic made out of bio-based materials; red card: e.g. vegane nutrition)	Discussion in breakout groups		Sufficient blue and red cards for 4 groups. Sufficient pens.
11:20	11:30	00:10	Defining Bioeconomy	<b>Visualisation of bioeconomy aspects</b>	Plenary discussion. Facilitator clusters aspects of each group in one big picture.	Clustering		Pin Wall, pins, coloured cards in a third colour for clusters, pens in different colours
11:30	11:50	00:20	Defining Bioeconomy	<b>State of the art of bioeconomy</b>	One Allthings.bioPRO expert on bioeconomy presents the Allthings.bioPRO understanding of bioeconomy.	Presentation		projector

11:50	12:30	00:40	Defining Bioeconomy	<b>Common picture</b>	Moderated plenary discussion. Reorganisation of big picture according to the discussion. Shifting cards according to three circles (definitely part of bioeconomy, partly part of bioeconomy, and definitely not part of bioeconomy)	Panel discussion		Three coloured pens, for three circles.
-------	-------	-------	---------------------	-----------------------	---	------------------	--	---

## 7 Further Readings

- On the [RRI Tools Website](#) you can find more than 1000 resources, inspiring practices, projects and library elements to implement Responsible Research and Innovation
- In the [GreenSAM](#) project a useful [toolbox](#) for filtering and finding the best engagement tools has been developed
- The [Engagement 2020 Toolkit](#) gives detailed information and step by step instructions for a variety of engagement methods and tools
- The [SPARKS Toolkit](#) is a playful toolkit of activities to engage citizens in Responsible Research and Innovation
- [The SPARKS Handbook](#) is a guideline of innovative formats for participatory activities and more
- To choose a convenient tool the [Action Catalogue](#) - an online decision support tool developed by the Engage 2020 project – can help to find the method best suited for the specific regional partner's needs
- The [BigPicnic](#) project is working with co-creation tools as well
- The WAAG Society developed an online [Co-creation Navigator](#), a co-creation toolkit guiding through the different stages of co-creation, from preparation to execution (beta version)

# 8 Conclusions

## Objectives of the project and the guidelines

In Allthings.bioPRO we strive to foster citizens' awareness, participation and co-creation of the future of bioeconomy on four carefully selected themes (Food packaging, Textiles and Fashion, Kids and Schools and Jobs and Career), representing a variety of daily life activities and settings of European citizens connected to the bioeconomy and bio-based industry.

For real knowledge sharing for the future bioeconomy and bio-based industry to take place, the individuals and organisations involved in Allthings.bioPRO will be brought together around the common goal of creating a serious game and a smartphone app along the named four missions.

This document supports all project partners, who are included in the co-creation phase of the gamification ecosystem, with useful guidelines and methods for carrying out the co-creation process.

## The project's approach to co-creation and Responsible Research and Innovation (RRI)

Co-creation follows an approach involving different perspectives and collaborative design tools, materials, processes, activities or strategies. This working objective concerns building identity among existing communities, uniting these communities in strategic ways and forging new partnerships among stakeholders in the bioeconomy environment and along the value chains as well as in RRI and related concepts, along the lines of this strategy.

Allthings.bioPRO will support the change from a triple helix model to a quadruple helix model of interaction, which adds civil society actors, specifically citizens to research, industry and public authorities.

## Stakeholder identification and selection

The aim of the mapping is to give a clearer picture of which specific stakeholders within each group will be targeted users of the respective game mission within the serious game and which stakeholders within each group should be invited to the focus groups, the co-creation workshops and the design meetings to co-develop the concept and content for the game and the app. It will also give an initial understanding of the users' needs and the kind of issues to be expected when engaging in greater depth within the consultations and co-creation processes.

The selection of stakeholders strongly influences the outcomes of any engagement. It thus needs an effective representation of stakeholders including those who are highly interested even with low power as well as strategic stakeholders with high influence, power and means.

## The right balance between openness and frame during the co-creation phase

The project team aims at keeping the direction and results of the co-creation process as open as possible to ensure real citizen/stakeholder-led content development, which meets the need of the target groups. To ensure achieving the project goals, delivering the promised results and to allow regional mission partners to work aligned, effectively and confidently, an overall framework is needed in which the partners can operate.

## The co-creation design

1. First Focus Group: familiarise with mission and related content
2. First Co-Creation Workshop: answer arising questions and develop initial mission ideas
3. Second Focus Group: embed content in a story
4. Second Co-Creation Workshop: develop final mission idea
5. Co-Design process starts

## Focus groups

The qualitative method allows the participants to develop and express their opinions in a more 'natural' social context, which may be closer to the ways people form their opinions in everyday contexts. Focus

groups can create deeper insights on the participants' attitudes, ideas, preferences and concerns than other methods as it allows for direct observation of the participants' immediate reaction as well as it highlights people's reasoning and thoughts underlying their expressed opinions.

### Co-creation workshops

The methodology of co-creation emerges from transformative processes in the entrepreneurial world and aims at generating new products and services.

This guideline will help the regional partners to design the most appropriate workshops and to choose most fitting methodologies to reach their goals. Therefore, besides background information on co-creation, its potential and general information about organising such workshops, this section provides also practical support for a selection of co-creation methods and an example of a co-creation workshop moderation sheet, which can be modified and used.



**AllThings.Bio PRO**

This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 887070.