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

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

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

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

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

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

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1. EXECUTIVE SUMMARY

The **BIORITIES gamified co-creation experience**, designed and implemented in BIOBRIDGES, will serve as an innovative activity to be used during the Biobridges' stakeholders events to stimulate the discussion toward the most urgent challenges to be tackled for the three categories of stakeholders: **bio-based industries, brand owners and consumers' representatives**.

This process will enable diverse groups to diverge, create and finally converge on delivery solutions to the most relevant challenges. The co-creation experience through the gamified approach will also enable the perspective switch among the participants during the activity.

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REVISION HISTORY

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2. Introduction

This deliverable aims to present the concept and design of the first version of the BIORITIES gamified co-creation experience T4.3b, that is part of T4.3 “Development of digital media and serious game” (WP4).

The concept of a co-creation experience is an elaboration and a more complete process compared to a serious game. This is the reason why we are going to present the BIORITIES gamified co-creation experience instead of a serious game.

BIORITIES will be used as an activity to support the co-creation processes during the Biobridges workshops.

In **chapter 3** this deliverable provides:

- background information about gamified approach for co-creation activities,
- the concept of the BIORITIES gamified co-creation experience,
- the validation of the identified challenges to feed BIORITIES scenarios during one workshop (Biella, Italy),
- the validation of the gamified experience concept during the Focus Group (Brussels, Belgium) and
- the lesson learned that will feed the elaboration of the final release of the BIORITIES gamified co-creation experience.

In **chapter 4** this deliverable provides 3 different scenarios as part of the BIORITIES gamified co-creation experience namely:

- “Switch the shoes” scenario
- Real case scenario
- The value chain puzzle

Conclusions is the last session described in **chapter 5**.



3. The BIORITIES gamified co-creation experience

BIORITIES stands for “Bioeconomy priorities” and is the co-creation gamified experience that will be delivered during the BIOBRIDGES co-creation activities, where the three categories of stakeholders, namely **Consumers**, **Bio-based Industries** and **Brand Owners**, will be involved in an engaging exercise.

3.1. Gamified approach to co-creation with consumers

In numerous businesses, co-creation is an established approach for the integration of external actors into a firm’s new product development process. One of the greatest challenges of this collaboration is the **stimulating, attracting and ensuring the consumers’ permanent involvement**. As a consequence, the success of co-creation initiatives is strongly dependent on the extent to which consumers perceive the activity as **challenging** and **entertaining**. This so-called ‘gamification’ approach does not only lead to a higher willingness to participate in co-creation and to better results, but also strengthens the emotional bond between consumers and the brand.

For today’s businesses, designing and developing products in collaboration with consumers is the rule rather than the exception. Such ‘co-creation’ initiatives are no passing fad but an essential component of the innovation mix. In this sense, consumers create value for companies and products by expressing their needs, proposing creative ideas or co-deciding on product solutions.

In order to get consumers interested in co-creation, the joint innovation process should definitely be one thing: fun! Füller and colleagues (2011), for instance, found that the fun factor in crowdsourcing contests has a significant influence on the amount and quality of submitted ideas. Consequently, **an entertaining and playful joint innovation process increases the motivation as well as the creativity of participants**.¹

This concept applies also in the bioeconomy sector where Bio-based industries and Brand Owners are highly interested in exchanging ideas and collect feedbacks about the consumer’s interests, to tailor their bio-based products to the civil society’s needs.

¹ [Innovation is the Aim of the Game: Using Gamification when Co-creating and Co-selecting \(Maja Birke, Volker Bilgram and Johann Füller\)](#)

The use of a gamification approach and role-play serious game (where the roles are exchanged among participants) can help to unfold the different stakeholders' perspectives that can lead to interesting point of discussion and innovative solutions.

3.2. The BIORITIES concept

The concept of the **BIORITIES gamified co-creation experience** is based on the identification and analysis of the cooperation challenges among consumers, brand owners and bio-based industries identified and analyzed during the first phase of the project (activities under WP2).

The different challenges identified, are categorized as *cross-sector challenges* hindering the collaboration among the key actors in the value chain, i.e. Feedstock Suppliers, Industry & Clusters, Market and Consumers and *supporting environments challenges* where the Research & Education and Policy actors are also engaged (Figure 1).



Figure 1 – Cross-sector and supporting environment challenges

The aim of BIORITIES, is to engage the three categories of stakeholders in a co-creative gamified role-play experience to:

- Raise awareness of other stakeholders' challenges and priorities
- Prioritize and highlight the challenges from the most pressing ones in their context (e.g. sector, region, interests),
- Create a fertile ecosystem to encourage the collaboration between the engaged stakeholders,
- Promote and support the creation of new cross-sector value chains and
- Accelerate the bio-based product market up-take.

3.3. BIORITIES – first version

To design a gamified experience suitable to the project objectives, the **preliminary concept of the gamified experience** has been validated and fine-tuned in the context of two events organized by Biobridges.

The first event **“Bioeconomy as an opportunity to boost local development based on territorial resources”** has been organized on the 9th of April 2019 in Biella, Italy,

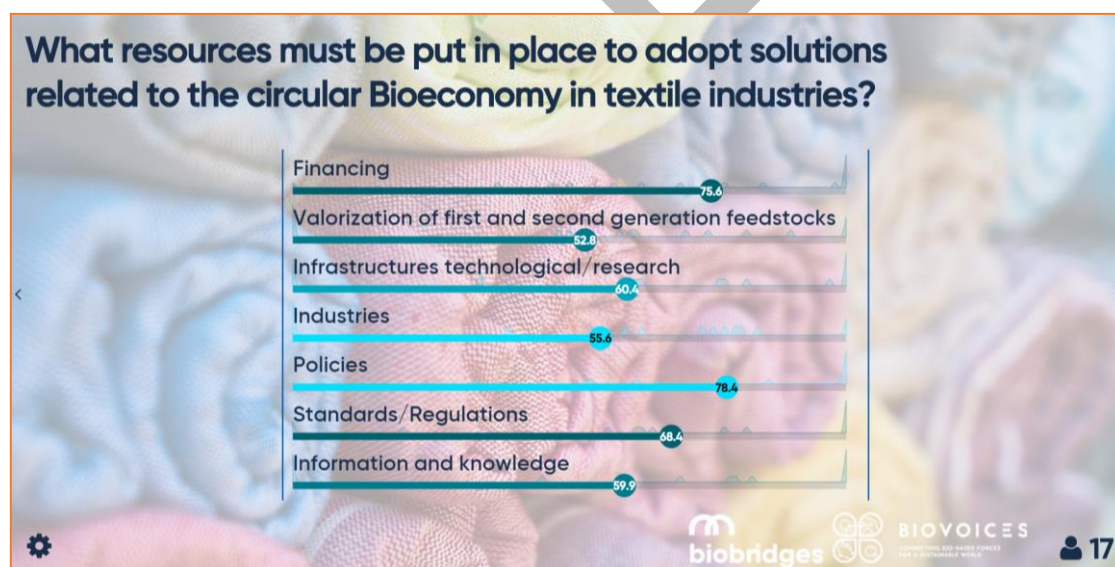
involving the stakeholders representing the Quadruple Helix concept (government/policy, business, research and civil society), to address the most relevant challenges to boost bioeconomy and the Bio-based market uptake.

The event was organized together with the Horizon 2020 BIOVOICES project (<https://www.biovoices.eu/>), in collaboration with the Chamber of Commerce of Biella and Vercelli, CNR National Research Council, the European Bioeconomy Network, Chimica Verde Bionet and Onda Verde Civica.

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

In the context of the co-creation working sessions the Biobridges moderators have presented the draft of the most relevant challenges for the market uptake of the Bioeconomy, fundamental element of the BIORITIES gamified co-creation experience, to collect suggestions and insights from the different stakeholders and to validate them (Figure 3).

To collect feedback the Biobridges partners have implemented different engaging interactive sessions, with the support of the online tool Mentimeter². The tool has been used by the moderators of the two tables to stimulate the discussion and collect participants' contributions related to the identified challenges (Figure 2).



² [Mentimeter: Interactive presentation software](#)

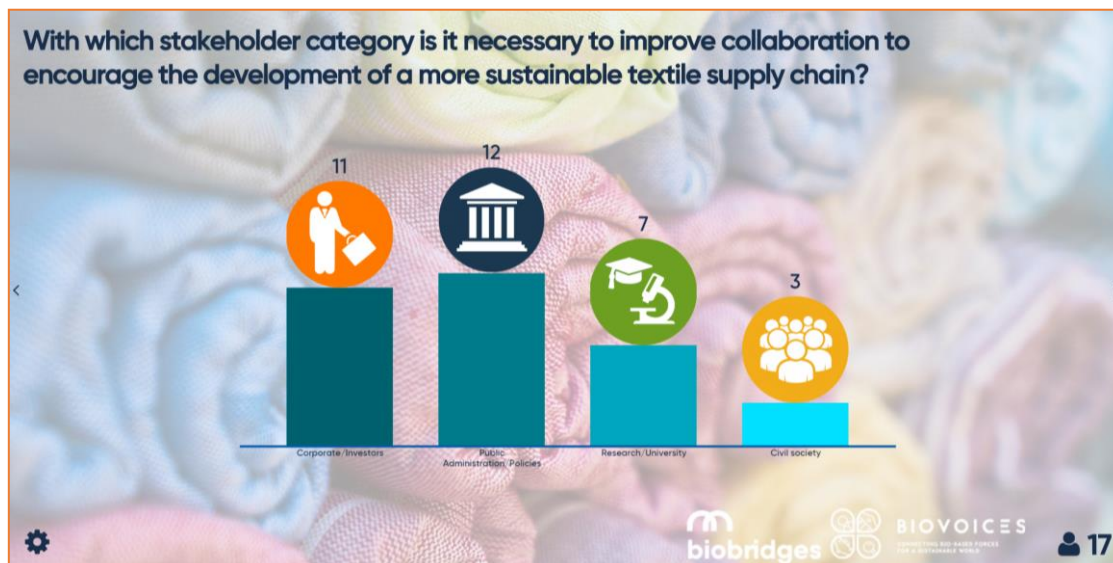


Figure 2 – Mentimeter sessions for the Biella's event



Figure 3 – The Biella's co-creation workshop

The second event has been organized in the context of T2.3 *Validation of Biobridges challenges*, where the challenges identified in WP2 have been validated from the Biobridges Focus Group. The BIOBRIDGES Focus Group co-creation workshop took place in Brussels on the 12 of June 2019 in the SLORD (Slovak Liaison Office for Research and Development) premises (Figure 3).

The aim of the workshop was to:

- Validate and enrich the results of the BIOBRIDGES analysis on the cooperation challenges among consumers, brand owners and bio-based industry;
- Discuss on the bioeconomy sectors that could benefit from a multi-stakeholder cooperation;
- Share ideas on best practices and lessons learnt for establishing new cross sectoral partnerships boosting the uptake of bio-based products and
- Formulate key messages and design of well-targeted activities to inform, motivate and engage bioeconomy actors in forming new cross-sector value chains.

The FG workshop was the occasion to test and validate the first version of the BIORITIES gamified co-creation experience concept and contents.

At the beginning of the FG workshop, an interactive session with all the participants took place (supported by mentimeter online tool), to understand the most mature bioeconomy sector (Figure 4). The scope of this exercise was to assign a sector to each working group. The most mature sectors that came out from the session were:

- Food packaging, disposable products for catering and events
- Personal care and cosmetics, health and biomedical, Nutraceuticals
- Sports, accessories and toys

In the second part of the workshop, three working tables were created and the three most mature bioeconomy sectors, identified in the interactive session, were assigned to each group (Figure 5).

A poster with all the challenges, identified in WP2, were given to each group. Each stakeholder type had different adhesive coloured markers.

The briefing was to stick the coloured marker on the most urgent challenges for each stakeholder type (Consumers, Bio-based Industries, Brand Owners and Feedstock providers).

The second part of the working session was to find a shared vision and a consensus on how to overcome the challenges.

After the groups' working session the moderator (Biobridges partners) of each table presented their results.

A final plenary session was conducted by the Biobridges facilitators to stimulate the discussion and capture additional contributions from the participants.

For the full FG interactive presentation results see ANNEX 1 at the end of this deliverable.

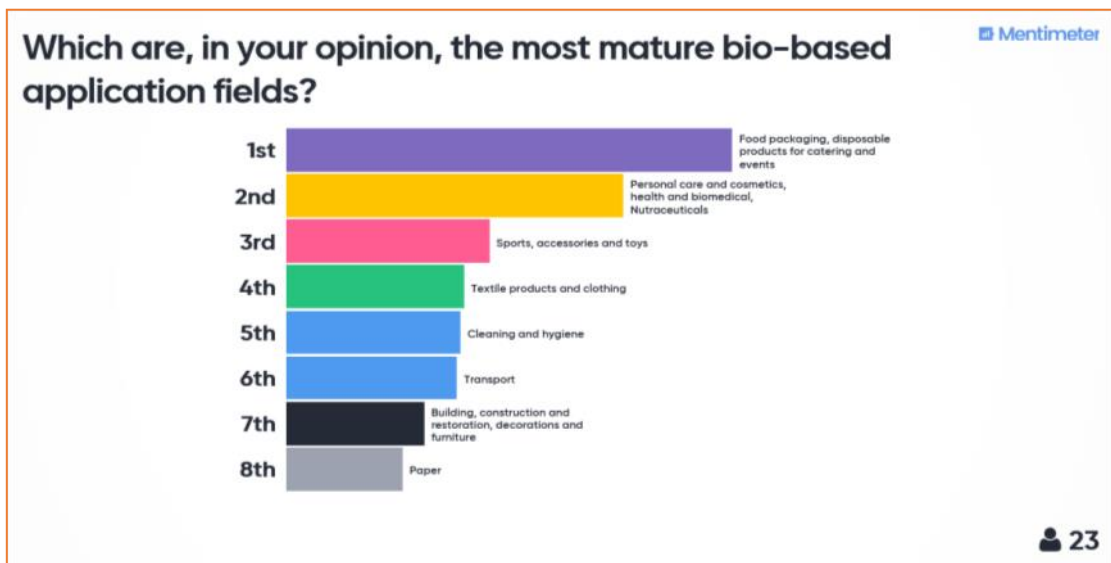


Figure 4 – Focus Group plenary session interactive mentimeter presentation



Figure 5 – The Focus Group workshop

The FG event outputs validated the final structure of the BIORITIES design concept and the most urgent challenges (Figure 6) in the bioeconomy sector.

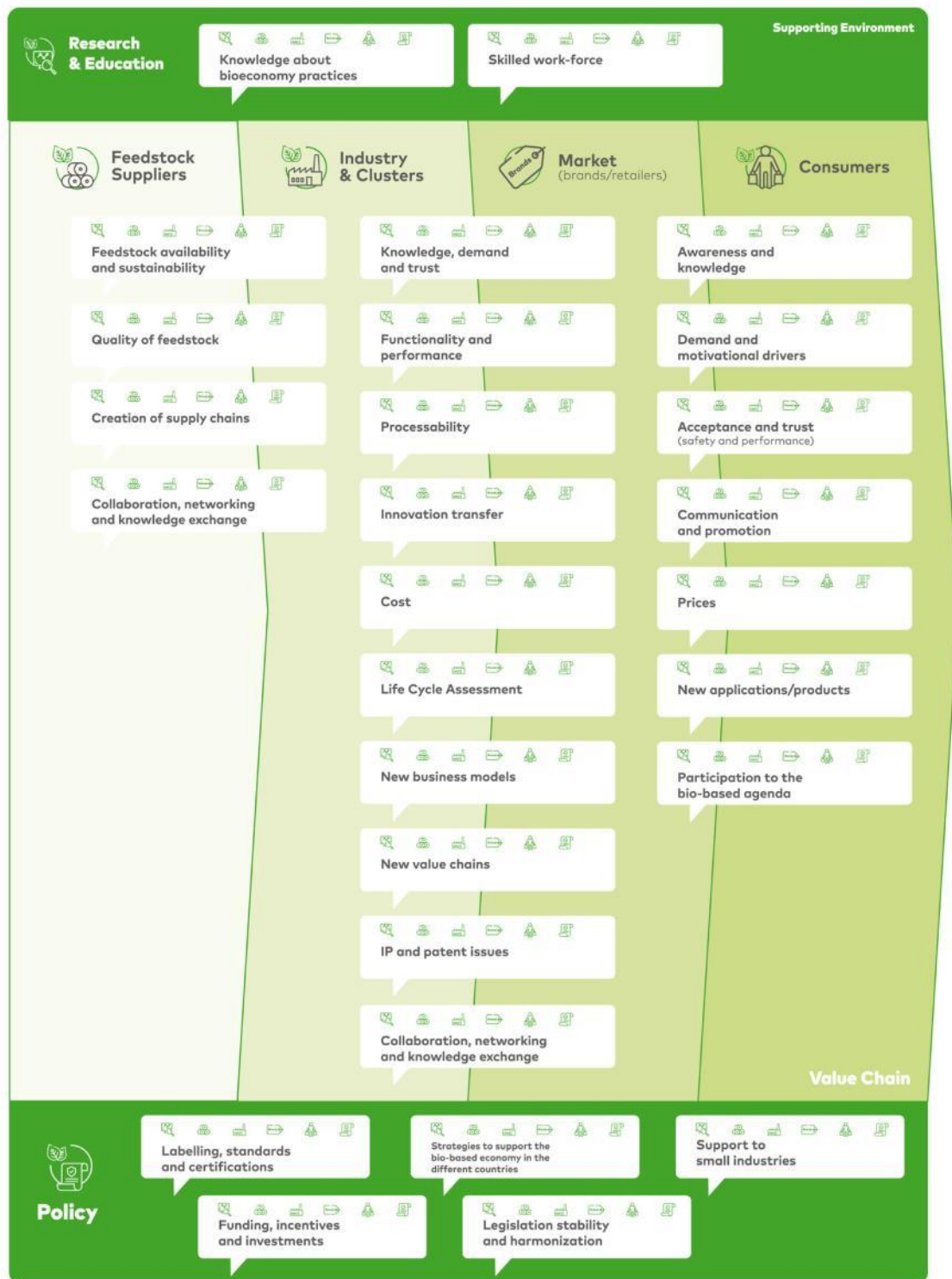


Figure 6 – Challenges validated by the BIOBRIDGES Focus Group (T2.3)

3.4. BIORITIES lesson learned

The final structure of the most relevant challenges identified will be used to make a step forward during the Biobridges future activities. The intention is to elaborate and improve what we have learned from the work done with the Bioeconomy experts (FG, Biella's event bioeconomy experts, interviews with experts) and to:

- Involve the three categories of stakeholders to prioritize the challenges from the most urgent to the less urgent
- promote the collaboration between the stakeholders along the value chain in order to find solutions to overcome the challenges
- create connections and collaboration between the categories of stakeholders and to highlight the priorities of the challenges

From the lesson learned we have identified a 4th stakeholder category that has to be included in the process; The **feedstock supplier**.

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4. BIORITIES next steps

Based on the first version of the concept, the BIORITIES co-creation gamified experience will be elaborated and adapted for three type of co-creation activities:

- **“Switch the shoes” scenario** (business model oriented) where mixed groups of the participants will be formed and they have to wear the other stakeholders’ shoes to identify the most urgent challenges to be addressed from a specific stakeholder perspective
- **“Real case” scenario** (brand owner specific) will be driven by a detailed scenario proposed by the brand owner/s to the industries/researchers and consumers
- **“The value chain” puzzle** will be related to a specific identified value chain to find opportunities, challenges and barriers, and cross connections with other value chains.

All the BIORITIES gamified co-creation experiences are composed of 3 phases (Figure 7):

1. **Briefing**
2. **Gamified co-creation activity**
3. **Debriefing.**



Figure 7 – The BIORITIES phases

4.1. “Switch the shoes” scenario

The goal of this type of activity is to engage the participants in a role-play experience to help **designing a business model** for a bio-based sector based on a proposed scenario.

Plenary phase: The activity will start with a plenary interactive activity (using mentimeter) where the Biobridges facilitators will show the participants the challenges identified (Figure 6) and ask the participants to contribute to the definition of the final list by confirming, removing or adding the challenges. The identified challenges will be the foundation for the next step of the activity.

Briefing phase: Biobridges facilitator creates four groups of stakeholders (feedstock suppliers, industries, brand owners and consumers), composed by a mix of stakeholders’ type. After the group creation, the facilitator will provide the scenario of

the game, the background information and the scope of the activity. Each group will play the role of one of the four categories (Feedstock suppliers, Bio-based industries, Brand Owners or consumers).

Following is the content of the scenario that will be distributed to the groups for the activity. The scenario can change accordingly, based on specific needs.

Scenario example

The European multi brand company SELLWELL has the headquarter in Dublin (Ireland) and branches in almost all the main cities in Europe.

Based on new mega trend coming from the media and from consumers about sustainability for the environment SELLWELL CEO, Albert Walsh, wants to switch all the packaging in all the sectors (textile, cosmetics, toys, furniture, etc.) from fossil-based material to bio-based, not later than year 2022.

A big number of international brand owners have already a business model to switch to bio-based.

*To make the transition smoothly Albert Walsh has given clear directives to the board of directors who have involved SELLWELL new business management team to implement a strategy for the transition. The team has agreed to involve a task force of experts from the **industry/research, brand owners and associations of consumers** to understand their needs, possible barriers and provide insights to implement a new bio-based business model.*

OUTCOME:

Provide concrete suggestions and insights to design a possible business model based on the challenges and priorities.

Gamified co-creation activity phase: The three groups start the co-creation activity. They have to move the different challenges to prioritize them from the most urgent to the less urgent. To reach a consensus about the priorities, the groups have to discuss these before confirming the final priority list. They are requested also to reinforce the prioritization with a strong explanatory motivation and find solutions to balance the pros and cons for each challenge.

Gamification tip: To increase the engagement of the stakeholders during the experience, the three groups can switch and analyze, confirm or disconfirm the priorities of the challenges set by the previous group based on the different perspective.

Debriefing phase: At the end of the gamified co-creation activity phase the moderators of each table present the results to all participants of the working session, trying to provide concrete suggestions from the stakeholder's perspective to help SELLWELL company to elaborate a business model.

All the other participants will play the role of the SELLWELL board of directors, asking questions and highlighting possible problems.

This interaction will be moderated by the Biobridges facilitators.

At the end of the session the facilitator opens a plenary discussion with the groups about the priority list and the related motivations. In this phase the facilitator stimulates the discussions to see if there are some additional contributions. An interactive

presentation system is used to capture relevant insights about the activity before closing the session.

A networking event will be organized after the activity to stimulate collaboration between the participants (industry and brand owners).

OUTCOMES OF THE ACTIVITY

- A shared vision about possible solutions to overcome challenges from the different perspectives (Bio-based industries, Brand Owners or consumers).
- A stimulus to investigate new cross value chains between the different participants of the three stakeholders type.

4.2. Real case scenario

This type of activity targets a **specific real case scenario request by a Brand owner** (i.e. Barilla, P&G, etc.). The brand owner is requested to formulate a scenario, based on real needs for a transition from fossil-based to bio-based products and to validate/add/remove the BIORITIES challenges.

Preliminary phase: In the preliminary phase the brand owner/s presents to the participants the scenario and the expectations from the working session.

Briefing phase: Biobridges facilitator creates two groups of stakeholders; one composed by feedstock suppliers and industries/researchers and the second by consumers. The brand owner/s will be the customer that will evaluate the presentations by the feedstock providers/industries/researchers. If the stakeholders' participants are balanced between bio-based feedstock providers/industries and consumers, the two groups will be stakeholder's specific. If the participants are unbalanced the groups will be a mix of different stakeholders.

The brand owner/s present to the two groups the scenario and the specific goals they would like to reach in the bio-based sector.

Gamified co-creation activity phase: The two groups start the co-creation activity. They have to move the different challenges and prioritize them from the most urgent to the less urgent. To reach a consensus about the priorities, the groups have to discuss about the final priority list before confirming. They are requested also to reinforce the prioritization with a strong explanatory motivation and find solutions to balance the pros and cons for each challenge.

Debriefing phase: At the end of the co-creation activity, one of the participants from the feedstock providers/industries/researchers' group will present the strategy to the brand owner/s to overcome the challenges. In this phase the consumers group will integrate questions for the industries/researchers adding the consumer perspective to the brand owners' questions.

After the interaction between the different stakeholders, the facilitator opens a plenary discussion with all the groups about the priority list and the related motivations. In this phase the facilitator stimulates the discussions to see if there are some additional point of discussion. An interactive presentation system is used to capture relevant insights about the activity before closing the session.

A networking event will be organized after the activity to stimulate collaboration between the participants (industry and brand owners).

OUTCOMES OF THE ACTIVITY

- A shared vision, which considers different perspectives (Bio-based industries, Brand Owners or consumers), about possible solutions to overcome **real** challenges proposed by the brand owners.
- A concrete possibility to establish cooperation between brand owners and industries/researchers with a possibility to explore and create new cross value chains.

4.3. The value chain puzzle

This type of activity targets a specific value chain scenario that will be identified as a potential one in the context of the future Biobridges activities. An example of value chain, that will be elaborated for one of the next Biobridges workshops, will target the wool value chain.

Plenary phase: The activity will start with a plenary interactive activity (using mentimeter) where the Biobridges facilitators will ask the participants to contribute to the creation of the different steps of the selected value chain (i.e. wool feedstock production, wool collection from farms, wool washing process, carding process, combing, fabric spinning, etc.) from the feedstock production to the final products. The identified value chain elements will be the foundation for the next step of the activity.

Briefing phase: Biobridges facilitators creates groups of mixed stakeholders (feedstock suppliers, industries, brand owners and consumers) of maximum 10 participants and provides them empty puzzle pieces of different colours.

Each type of puzzle piece represents a different element in the value chain. Following is a draft version of the graphical representation of the type of the pieces:

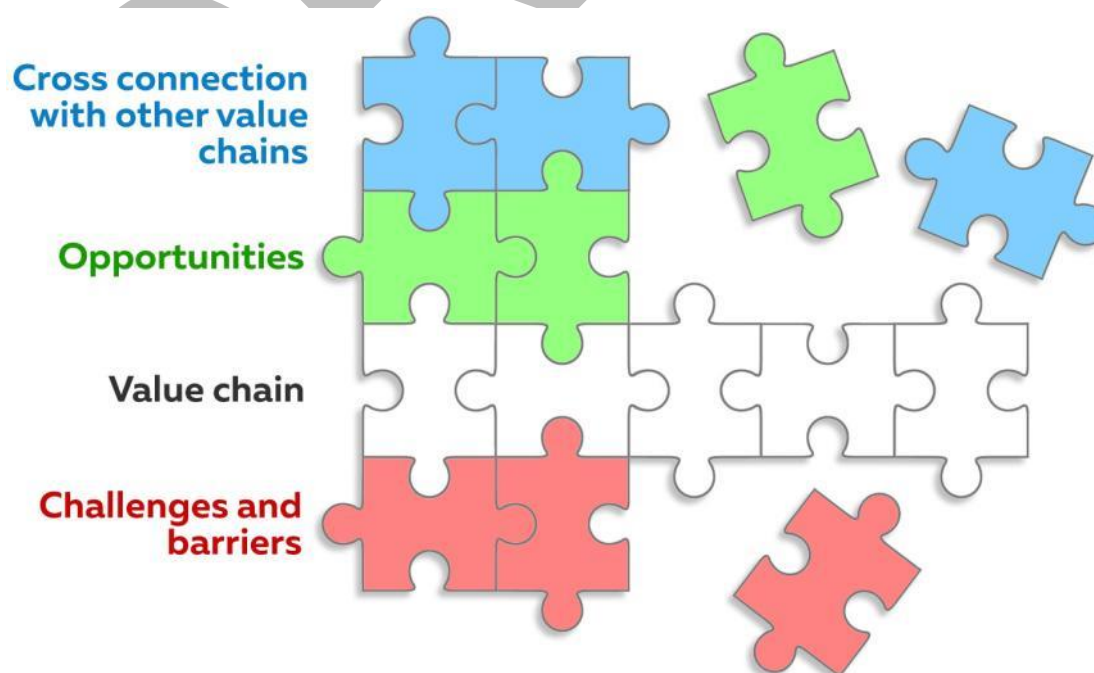


Figure 8 – The puzzle elements

Starting from the value chain elements, in the first 15 minutes the groups are asked to write on each piece of the puzzle (the white pieces), an element/step that is part of the specific value chain, identified during the plenary session and connect them in the right order. For the next hour the groups have to add for each value chain a puzzle piece (that represents the different steps) the opportunities, challenges and barriers and cross connections with other value chains. The facilitator will engage the groups by telling them that the puzzle that is the most complete will win.

Gamified co-creation activity phase: The groups start the co-creation activity. After the value chain setup, they have to build the puzzle and write on each piece the opportunities, challenges and barriers and cross connections with other value chains using the coloured puzzle pieces. The Biobridges moderators stimulates the groups to discuss, find and connect new puzzle pieces.

Debriefing phase: At the end of the co-creation activity a delegation of each group (nominated by the group) will present the puzzle. The group that ends up with the puzzle that is most complete will be the winner of the activity. The facilitator will stimulate a discussion between the groups about shared elements of the puzzle and possible refinements toward an integrated version of the value chain puzzles.

A networking event will be organized after the activity to stimulate collaboration between the participants (industry and brand owners).

OUTCOMES OF THE ACTIVITY

- A shared vision about opportunities, challenges and barriers and cross connections with other value chains from the different perspectives (Bio-based industries, Brand Owners or consumers).
- A concrete possibility to co-design a new value chain and stimulate the cooperation between the stakeholders involved.

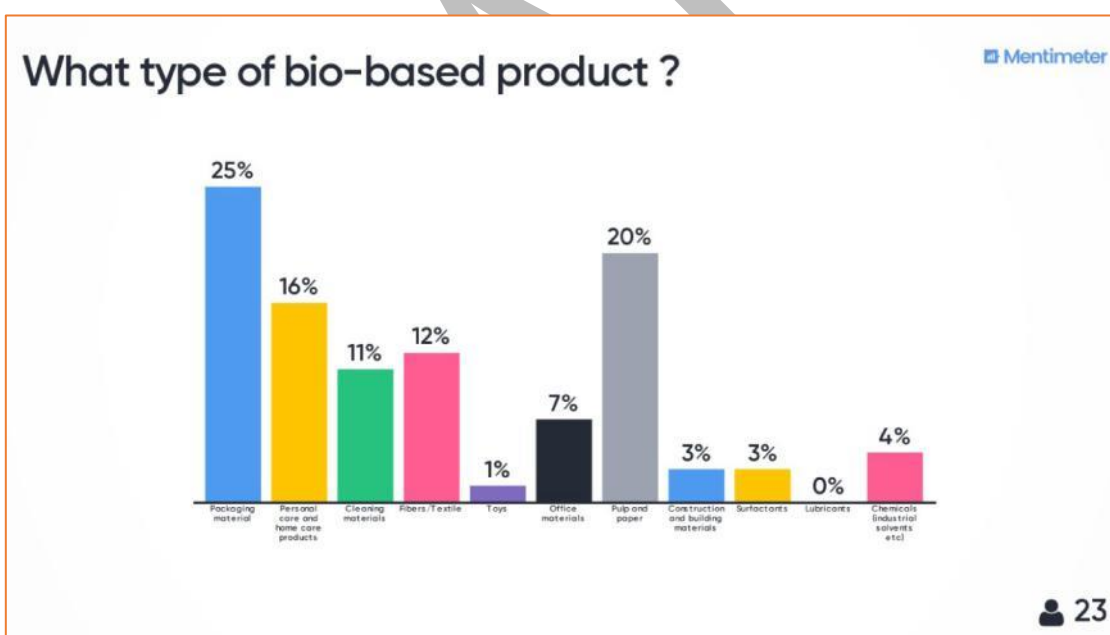
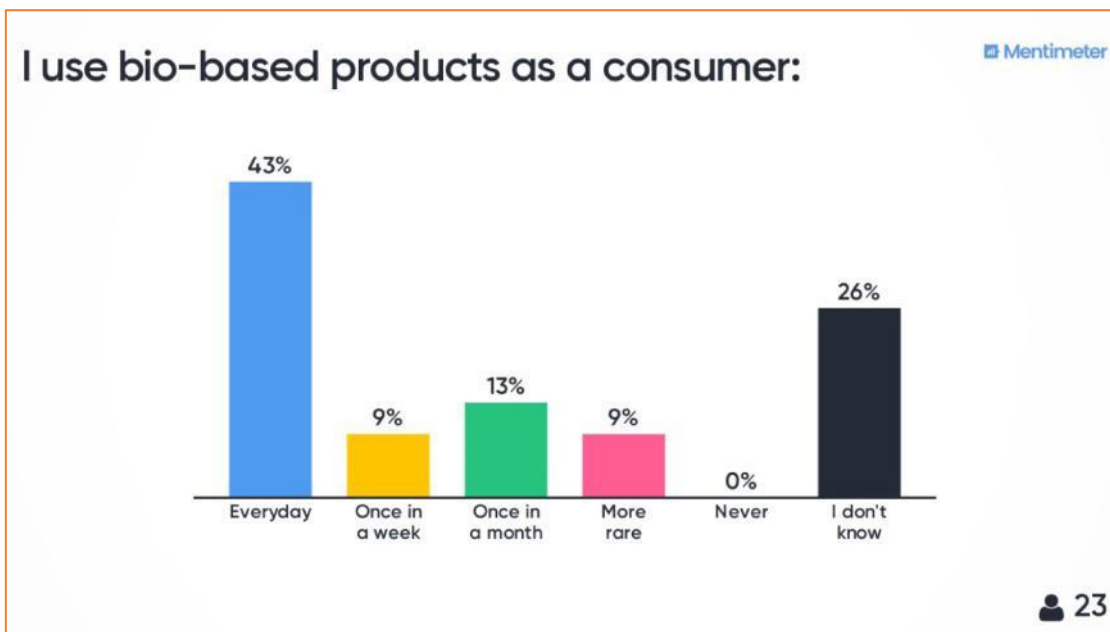
5. Conclusions

In the coming months the final version of the BIORITIES gamified co-creation experience will be implemented delivered and tested within the future activities. The BIORITIES gamified co-creation experience will be composed by a mix of supporting tools (traditional and IT). Experienced Biobridges facilitators will deliver the co-creation activity and will collect user feedbacks for the fine-tuning of the BIORITIES gamified co-creation experience.

D4.8 (Serious game – Final Version) will include the elaborated version of the experiences based on user feedbacks and a detailed manual (or short video tutorial) to enable future projects/initiatives to play the gamified co-creation experience without the intervention of Biobridges partners.

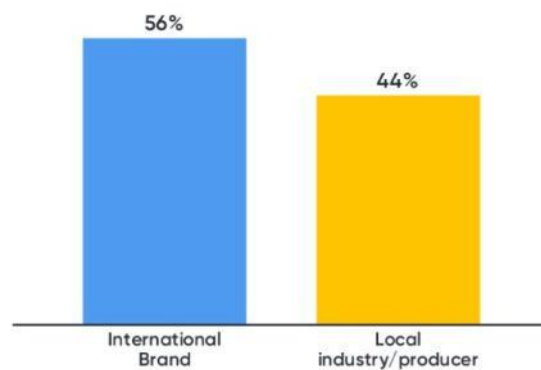
We envisage that in the next activities, this type of experience can bring interesting outputs and stimulate the creation of new collaborations between the different actors involved, and a possibility of exploring new cross value chains in the bioeconomy sector.

6. ANNEX 1: Focus Group interactive presentation results



The bio-based products that you purchase are produced by:

Mentimeter



23

Do you purchase them by:

Mentimeter



22

What are the motivational drivers for INDUSTRIES to switch to bio-based?

Mentimeter



81

What are the motivational drivers for BRANDS/RETAILERS to adopt bio-based products?

Mentimeter



33

What are the motivational drivers for CONSUMERS to purchase bio-based products?

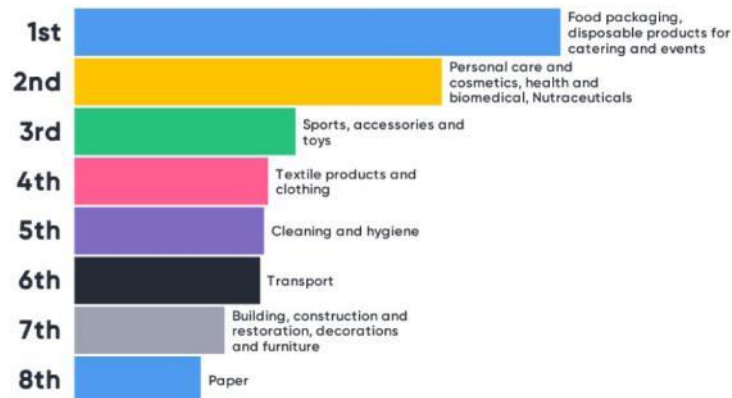
Mentimeter



41

Which are, in your opinion, the most mature bio-based application fields?

Mentimeter



23

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