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BIOVOICES

CONNECTING BIO-BASED FORCES FOR A SUSTAINABLE WORLD

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Connecting Biobased Forces for a Sustainable World

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TABLE OF CONTENTS

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LIST OF TABLES

LIST OF FIGURES

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SUMMARY

The European Commission has identified a number of challenges with regard to the bioeconomy in Europe, which are outlined in the EC's bioeconomy strategy 2012 and reiterated in the update from late 2018 (European Commission and Directorate-General for Research and Innovation, 2018). The strategy states that there is first and foremost a lack of awareness among consumers with regard to the existence and benefits of bio-based products, along with numerous other challenges regarding for instance standards and labeling, land-use and feedstock related issues and development concerns (ibid.). The "innovation tandem" of industry and academia often works in isolation, leaving out policy actors and customers (and civil society), which provide the necessary framework conditions and essentially buy and consume bio-based products and services respectively.

The BIOVOICES project aims to bring together businesses, academia, policy makers and civil society (the quadruple helix) to identify possible solution pathways to the identified challenges by stimulating multi-actored and inter- and transdisciplinary dialogue between all the involved actors. In this, the project aims to mobilize the quadruple helix groups and stimulate mutual learning among them – in the frame of Mobilization and Mutual Learning (MML) workshops.

Mobilizing the quadruple helix and facilitating a process of mutual-learning requires a thorough appreciation of the context in which such exchanges takes place. The scope, the target groups, as well as the format of the designed interaction have a large impact on the success of any MML event. Bringing together a variety of stakeholders with different starting points, level of knowledge, as well as understanding of topic represents a great challenge. BIOVOICES wishes to overcome these challenges and bring the discussion to the next level, enabling a positive environment for a multi-stakeholder exchange to co-create actionable solutions to accelerate Europe´s bio economy.

To this end, the BIOVOICES project has developed a methodology, which takes into consideration the specific challenges faced by stakeholders at different levels (local/regional/national/international) (i.e. framework developed in BIOVOICES WP3 and validated in WP4). This document provides guidance on how to design MML events that are informed by validated challenges (WP3/WP4) to co-create actionable, acceptable and responsible outcomes (i.e. in WP6) that support the uptake of innovative boil-based solutions.

The methodology delivers on four overall objectives:

- ***To support the BIOVOICES project objectives**, which include the implementation of about 70 MML Workshops throughout the years 2019/20 having as outcome the development of policy recommendations for the European Commission and national policy stakeholders.*
- *To provide **guidance on how to design, implement and evaluate successfully a MML event**, taking into account specific challenges, methods and lessons learned, drawing upon innovation theorists (c.f. for instance Geels, 2011; Hekkert et al., n.d.; Overbeek et al., 2018; Sterrenberg et al., 2007) as well as existing and institutional knowledge on co-creation and*

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mutual learning (Giorgia Rambelli and Rothballer, 2014; Mauser et al., 2013; Nielsen et al., 2003; Scholz, 2000; Vilsmaier et al., 2015).

- *To contribute to accelerating the multi-stakeholder (quadruple helix) dialogue needed to boost the European bioeconomy.*
- *To contribute to further establish and **make known citizen-centred quadruple helix models** to address sustainability and innovation research and dialogue.*

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1 INTRODUCTION

The bio-based economy relies on the conversion of renewable natural resources such as wood, crops, algea and animal protein into products and materials. The materials can be used in a wide range of sectors, including construction, paper and paperboard, textile and chemicals, as well as energy. Biomass (such as starch, sugar, cellulose, lactic acid and protein) is plant material (of maize, beet, sugar cane, wood (chips), potato and algae), which can be used both for food and non-food applications, the so-called “bioeconomy”.

In late 2018, the European Commission has provided an updated strategy for the bioeconomy in Europe, giving emphasis to the importance of bio-based innovations to meet the grand challenges. In line with the UN’s Sustainable Development Goals (SDGs) (United Nations, 2016) the bioeconomy is envisioned as a circular economic system based on renewable resources that promises growth, job creation and poverty and hunger reduction, while staying within the limits of our planetary boundaries (c.f. Clift et al., 2017) and even increasing the regenerative capacity of the planet’s ecosystems and to mitigate climate change (European Commission and Directorate-General for Research and Innovation, 2018). To achieve this, the EC’s strategy focuses on five priority areas for implementation: (1) Ensuring food security; (2) managing natural resources sustainably; (3) reducing dependency on non-renewable resources; (4) mitigating and adapting to climate change and (5) strengthening European competitiveness and creating jobs (ibid.).

In this, biomass plays an increasing role as raw material in meeting the global challenges of a rapidly growing world population, the depletion of fossil fuels, environmental degradation and climate change (United Nations, 2016). Despite well grounded concerns over a bio-based imperative claiming key environmental, social and economy fixes (Huesemann, 2003; Krausmann et al., 2008; UNEP, 2011; Weldu and Assefa, 2016), there is increased consensus among researchers that bio-based solutions may take place under certain conditions, entail net environmental benefits across the board, while creating jobs and contributing to climate change mitigation (de Besi and McCormick, 2015; Dubois and Gomez San Juan, 2016; European Commission and Directorate-General for Research and Innovation, 2018). Hence it is not surprising that biomass, or bio-based products, are increasingly penetrating new markets (Efken et al., 2016).

According to the EC, the EU circular bioeconomy generates around 2.3 trillion € in value added, which represents 17% of total GDP (European Commission and Directorate-General for Research and Innovation, 2018). The share of the circular bioeconomy in the total economic activity differs substantially among different EU Member States and is as low as 5-8% in Germany and in other countries. Moreover, EU employment in the circular bioeconomy is at 18 million in 2015, however, with more than 75% being employed in the agriculture, food & beverage and tobacco sectors – high-skilled, high-paying jobs in the circular bioeconomy are still rather the exception than the norm (ibid.). The EC also shows that is a significant gap between concentration of jobs and value generation within the national bioeconomies in Europe, i.e. high value generation coincides with low share of bioeconomy-related employment and vice-versa (ibid.).

However, despite a considerable level of consensus over the benefits of BBPs, there are numerous challenges that prevent bio-based products (BBP) from growing in market share (Albertini et al., 2018).

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But how can these challenges be tackled? How can circular bioeconomy contribute to the SDGs without causing any trade-offs or contradictions? How can new and innovative value chains from renewable materials be created and supported? How can related market challenges be overcome? How can be ensured that BBPs are sustainable and indeed the better option over conventional, non-renewable products? How to create a favourable supportive environment (legislation, standards, incentives, infrastructures, multi-stakeholders' collaboration, etc…)

In this context, the EC funded project BIOVOICES aims at encouraging the quality, the relevance, the awareness and knowledge and the social acceptability of BBP aiming at promoting prosperous and sustainable bioeconomy, thus responding to the outlined environmental, societal and economic challenges in Europe. The development of the circular bioeconomy depends on the active collaboration of a broad range of stakeholders, namely those present in the so-called 4-helix model (c.f. Robert Arnkil et al., 2010) — business (industry, agriculture and business players), policy (public authorities and policy makers), researchers and civil society. BIOVOICES' main goal is to ensure the engagement of all these relevant stakeholder groups through a platform that will involve a plurality of voices with different perspectives, knowledge, and experiences whilst also animating open dialogue, co-creation and mutual learning among them through its Mobilization and Mutual Learning (MML) approach.

Within this scope, this document presents a methodology that supports the design of MML events to discuss the challenges for the European circular bioeconomy identified and validated through the BIOVOICES project, including event design, implementation and evaluation. **The methodology is targeted at primarily (not exclusively) at BIOVOICES consortium partners to deliver on their objectives and is structured as follows:**

What:
This chapter will establish the strategies to transform the challenges, opportunities and barriers identified in WP3 into contents driving the co-creation in WP6.

- *Frame the challenges at different levels (economical, environmental, societal);*
- *Identify subjects and topics relevant for the quadruple helix stakeholders;*
- *Creating a narrative: showcase opportunities and share solutions.*

Who:
This chapter will establish the strategies for ensuring main stakeholders, participation and engagement in BIOVOICES MML events. The chapter will:

- *Identify the adequate stakeholder group to focusing on subjects that are relevant for them;*
- *Define the procedures to select and engage the participants;*
- *Stimulate the potential participants' interest to co-create and mutual learn in an innovative setting provided by BIOVOICES at international, national and local level;*
- *Design strategies to motivate the participants to be engaged in co-creation events.*

How:
This chapter will draw an Action Plan aimed at shaping BIOVOICES events to address the challenges of the D3.3 and validated by the Advisory Board in WP4.

This task will strategically plan the MML events to be organized in WP6 by implementing the following actions:

- *Support the partners in selecting topics of each MML at local and national level.*
- *How to compose the participants based on the topics.*
- *How to set-up and organize co-creation events.*
- *Ensure the processes to enable and support co-creation (formats, exercises and activities).*

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- *Create the conditions to generate outcomes that are actionable and acceptable across stakeholder groups (to feed D6.4).*

2 WHAT

One of the first steps for the MML event design is defining the scope and target, which is essentially "what", will shape the contents to be addressed . In order to set the scope and targets, the methodology advises on the following **3 steps**:

- ***Frame the challenges*** *across different sustainability pillars (environmental, societal, economic), also taking into account their specific shaping at local/regional and national level.*
- *Identify subjects and topics relevant for the quadruple helix stakeholders.*
- *Showcase opportunities.*

To start, a few **key questions** can be useful to start gathering factors that will determine the content of the MML event:

- ***What do we want to achieve?*** *I.e. what is the outcome that is intended? This answer should be content based, e.g. "exploring feedstock related issues with local farmers and waste managers". Defining this, will already provide a hint as to what abstract objective the event aims to accomplish (i.e. explore, build consensus, brainstorm etc.), which in turn can point to what format and exercises may be useful to use in the MML event (see chapter 4).*
- ***Which challenges are we addressing?*** *I.e. selecting the BIOVOICES challenge, or challenge cluster, that is intended to be addressed by the MML event. The challenges selected determines the design of the MML event by providing useful information as far as the challenge, its innovation phases and associated key questions to ask, and why.*
- *Which are possible solutions pathways to discuss?*

The answers to these scoping questions should be systematically collected and documented and provide the basis for shaping the contents of the MML event as well as for attracting participation (see chapter 3) and support the selection of a suitable MML format and activities/exercises (see chapter 4).

2.1.1 Framing the challenges

BIOVOICES has identified a number of barriers and opportunities with regard to bio-based products' production, marketing and consumption (see BIOVOICES D3.1 Overbeek et al., 2018), which have been confirmed on a local and national scale by bioeconomy practitioners from the quadruple helix (see BIOVOICES D3.2 Diogo and Urze, 2018). A cluster of the challenges is outlined in the BIOVOICES deliverable D3.3 (Albertini et al., 2018). The challenges were validated at the BIOVOICES Focus Group Meeting in November 2018 (Tsagaraki and Delioglanis, 2018).

In the preparation for an MML workshop it is important to have clear goal and topical area, which then needs to be further specified to be able to develop potential solutions for. Moreover, the topic needs to be broad and complex enough that it requires quadruple helix dialogue in order to make progress. Once the challenge is further diferentiated, it needs to be contextualized to the specific geographical level and socio-demographic context, i.e. whether participants comprise of mainly local, regional, national or international stakeholders as well as with regard to three pillars of sustainability (environmental, social, economic). This is essential in order to make the agenda relevant and stimulating for the targeted stakeholders and to derive actionable results, i.e. outcomes. For this purpose, **the following simple steps need to be followed:**

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- ***Generate an understanding of the problem**. In this, it is crucial to gather knowledge on the local/regional conditions and challenges, which pertain in a specific community or regarding a specific subject. It is recommended to use so-called "problem owners" as the starting point to start generating the design of an MML event. This can be done either through desk research or through accessing the partners' existing network or the BIOVOICES community. In additional partners can send a questionnaire to potential stakleholders to pre-assess their interests and issues (an example for such questionnaire for the "go-to-market" innovation phase, can be found in ANNEX B). Problem owners could be e.g. policy makers who want to implement a circular bioeconomy action plan but face constraints from the community, or a start-up, which has developed an innovative bio-based product and would like to establish a collaboration with potential buyers.*
- ***Identify the BIOVOICES challenge cluster(s) to be tackled**. D3.3 as well as D4.3 provide an overview on the challenges cluster as well as corresponding innovation phase and key questions/problems that can be asked to address them. From this, one or more challenge clusters can be chosen, to which the perceived real-life issues correspond. Please note that alternatively, the selection of the BIOVOICES challenge can be the first step, followed by the contextualization of the issues within the local/regional/national context.*
- ***Framing the challenge.** The local/regional/national issues, which have been perceived and understood by the partner that is organizing the MML, need to be mapped with the BIOVOICES cluster to derive tangible questions. Real-life issues are sometimes too complex and disperse to be tackled in systematically in an event. The BIOVOICES challenge clusters can help to break-down and to simplify the perceived real-life issues.*
- ***Finalize target and scope.** As a result, the targets and the scope for the MML event can be set according to the framing exercise that is based (1) on the perceived real-life issues and (2) on the selection of corresponding BIOVOICES challenge clusters.*
- ***Make a connection between target & scope and intended outcome.** After having framed the local/regional/national specific challenges with the BIOVOICES challenges cluster, it is advised to consider the intended outcomes/products of the MML event, or the MML series in the country. Such outcomes may be policy recommendations, MoUs, formation of topical working groups which continue after the MML event(s), business networks and other (for examples on outcomes, see also chapter 4.6) – all with the ultimate aim to the BIOVOICES feed into deliverable D6.4.*

2.1.2 Identifying relevant topics and key questions

In order to attract participation from all quadruple helix stakeholders, targets and scope as well as key questions, need to be conceptualized and formulated in a way that they appear relevant to all. For this, it is key:

- *To **know the interests/stakes** of all quadruple helix groups regarding the identified topics to be addressed. In this regard, the step undertaken to generate an understanding of the problem (see above), can be helpful.*
- *To **break down the identified topics** in terms of environmental, social and economic challenges. This way, it can be ensured that all stakeholders' interests concerning the particular topics are covered and are in the position to fruitfully engage in the discussions.*

2.1.3 Showcasing solutions

In order to enrich the MML event, the showcase of innovative solutions and bio-based products is advised whenever possible. Hands-on examples and solutions can stimulate and focus the dialogue, particularly concerning the quadruple helix group of civil society and the public.

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The showcase can be implemented either through classic exhibitions stands or through introducing elements within the MML event in terms of impulses or narratives (e.g. story telling).

When choosing a solution, be it a technological solution or a narrative, it is recommended to ensure that it is relatable in place, size and scale.

It can be useful also to foreseen a series of pitches presenting the current status of innovation in the targeted areas. These case studies will raise awareness, inform, create the ground for potential collaboration among stakeholder and stimulate the following discussion. It is important to foreseen a balanced number of case studies among the stakeholders, to represent the different perspectives and interests. These pitches should be short (5/6 minutes each), to be considered as "seeds" for the further phases of the MML.

3 WHO

The selection and composition of participants for the MML event is an essential task, which needs to be considered carefully in order to have a meaningful dialogue and to generate actionable outcomes. In particular, the following elements need to be considered:

- *Make sure that the participants are representative of the quadruple helix stakeholders.*
- ***Select and group participants** to be engaged in thematic workshops focusing on subjects that are relevant for them. In this, it is helpful to map participants' interests and background with the topics intended to address.*
- *Define the **procedures to select and engage** the participants. Partners are advised to set up a procedure to select and invite participants. The selection can either be based on the knowledge generated at the beginning of the process based on the perceived issues (i.e. problem owners, concerned communities and affected stakeholders), or based on a top down process, i.e. inviting all concerned stakeholder groups to a certain problem that has been researched by the consortium partner. In case the MML event takes place in the frame of e.g. a fair where control on participation is limited, this step becomes obsolete.*
- ***Stimulate the potential participants' interest to co-create and mutual learn** in an innovative setting provided by BIOVOICES at international, national and local level. Besides choosing the right MML formats and exercises that suit the given spatial and participatory circumstances (see chapter 4.5), this can be ensured for instance by making clear in the design of the events' announcement materials, the intend to make everyone's voice heard. This way, potential participants feel that their opinion counts and will be more open to make contributions.*

Additional important elements to consider regarding participation are the group size and the composition of the group regarding the quadruple helix stakeholders' representation and level of expertise. The following **guiding questions** that can be asked:

- ***What is the group size?** Thinking about the number of expected participants is crucial for selecting the adecuate MML format and exercises/activities.*
- ***Which stakeholder composition is expected/intended?** Scoping the expected group composition, i.e. quadruple-helix representation is crucial for the MML event design. Note: although, the MML approach by definition aims at a full quadruple-helix representation in an MML event, there may be exceptions, either due to organization realities and difficulties, or intentional, where a non-complete quadruple-helix representation is given. In any case, the*

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balance between different quadruple helix stakeholder groups should be the goal in the preparation of the MML event. However, in reality, representation may in cases be more uneven, leading to homogenous groups. In any case, at least some representation of all quadruple helix stakeholders needs to be ensured.

- ***Which stakeholders will need to be involved and at which level?*** *Thinking about the levels of experience brings up two important considerations. (1) The overarching premise is to invite the people with the right level of epxertise and at the right position within their organizations to tackle the topics to be addressed in the MML (e.g. if the intent is to discuss the political framework conditions for bio-based standardization, it is necessary to invite decision makers at national level and from standardization bodies). (2) Particpants' level of expertise and position should ideally not differ susbtantially in order to avoid hampered communication due to cultural-professional obstacles.*

Generally, it is recommended to **engage a bio-based economy "problem owner**" for the MML events who's problem is broad enough that it is recognised as a shared problem among the quadruple helix. As such it makes sense to have a policy maker(s) who is responsible to stimulate the bio-based economy in his or her region as a problems owner. Other participants may have more specific bio-based economy issues that fall under the scope of the policy maker, making it a shared problem. Examples of specific bio-based issues that might trigger participants to attend the MML events are (Hoes and Overbeek, 2018):

- *a bio-based application start-up who is seeking for ways to launch the product;*
- *a brand owner who wants to be less dependent on fossil based materials;*
- *farmers who want to invest in supplying products for the bio-based value chain but don't know where to start;*
- *waste manager who is seeking for ways to re-value rest streams or for ways to process bio-based products;*
- *citizen(s) who want to buy and use bio-based applications (for example to build an eco-friendly house) but doesn't know where to start;*
- *researcher(s) who want to further the science based facts, expertise and knowledge about the bio-based economy but are in search for a specific case to study and research funding;*
- *policy makers, businesses, citizen(s) and researchers who want to contribute to the bio-based economy but don't know where to start (Hoes and Overbeek, 2018).*

In addition to a problem owner it is wise to have some figure heads present what can contribute meaningful input (have expertise and/or experience). These figure heads highlight the importance of the MML workshop and can encourage other invitees to join the MML workshop. The other people who attend the MML workshop need to have some form of action potential of otherwise be able to contribute. This can be information, experience, perspectives on the topic at hand, network, or other resources. On the other hand, a plurality of voices also means a good mix of people in terms of age, gender, level of education, political preferences, etc is also important (Hoes and Overbeek, 2018).

In order to recruit participants, it is recommended to make use of bio-based network, ongoing events and conferences as well as of relationships with key individuals or insititutions in the bioecoomy. Proposition of an attractive workshop with clear objectives and agenda is crucial. Include attractive agenda items such as tour/excursion, inspiring figure heads, nice venue and good food. Moreover, it is recommended to specify the invitations for each helix group respectively.

Finally, involving local actors, networks and associations and co-organizers of the event will ensure that the challenges are correctly framed and relevant for the territory, will attract and involve the relevant stakeholders and will help in decreasing barriers and favour trust and engagement during the discussion.

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4 HOW

This chapter will provide guidance aimed at shaping BIOVOICES MML events to address the challenges outlined in Deliverable D3.3 and validated by the Advisory Board and Focus Group in Work Package 4.

This task will strategically plan the MML events to be organized in WP6 by implementing the following actions:

- ***Support the partners*** *in selecting topics of each MML at local and national level*
- *How to* ***compose the participants*** *based on the topics*
- *How to* ***organize an MML event***
- *Ensure the processes to* ***enable and support co-creation*** *(formats and exercises.)*
- *Create the conditions to* ***generate outcomes that are actionable*** *and acceptable to all quadruple helix groups (to feed D6.4).*

4.1 SUPPORT PARTNERS IN SELECTING TOPICS

As outlined also above in chapters 2 and 3, selecting the right topics that correspond to the most urgent challenges at local, regional and national level of the partner's countries, is essential for both engaging participants and achieving actionable and sustainable outcomes. To capitalize on partners' experience both topical and in facilitating MML events, a party who wishes to design and MML event has the following options for consultation and support in developing:

- *From generating an understanding of the problems/issue (also outlined in chapter 2 above), it is possible to understand also the level at which they occur and at which they need to be tackled. The problem and potential solution may be found at different levels.*
- *Consult BIOVOICES Deliverable D3.3 to inform the decision on topics to be tackled at different levels.*
- *Consult partners' experience in designing and implementing MML events (MML reports and fact sheets), stored on the BIOVOICES google drive. Other BIOVOICES partners may have gathered valuable experience in this regard.*
- *Bilateral consultations with partners may also be an option, specifically on EU and national policy issues and market development, which can drive the development of topics.*

4.2 HOW TO COMPOSE PARTICIPANTS BASED ON TOPICS

BIOVOICES MML workshops are quadruple helix events in which approximately 40 people participate. As each participant needs to have something to contribute to the workshop and because the workshops are on a voluntary basis, it needs to be stressed again that it is crucial that the topics discussed are relevant for all groups in the quadruple helix. For some topics the ideal distribution of 10 participants from government, 10 from business, 10 from research and 10 from research civil society is ideal. However, for other topics, it makes more sense to have another distribution of representatives of the quadruple helix as some helix groups have more interest and more to contribute to the topic of the dialogue than others. In principle, each helix is present but the distribution of helixes does not need to be equal (Hoes and Overbeek, 2018).

As a principle "thumb rule", it can be noted that the goal should be to ensure sufficient participations from those groups, which suffer most from a given issue and those that are primarily engaged in the

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development of potential solutions. It is clear that quadruple-helix stakeholders dont have the same stakes for all the topics/challenges/issues. Understanding the right composition is essentially based on thourough analysis and understanding of the topics addressed at the event.

4.3 HOW TO SET-UP A MOBILISATION AND MUTUAL LEARNING (MML) EVENT

Setting up the infrastruture and logistics for the MML event is a key part of the overall event design, especially in terms of resources used and has an overarching effect on the quality of the event – starting from first contact with invitees until the generation of impactful outcomes. The set-up comprises of nine key steps:

- ***Darft a quality programme.*** *The development of a programme for an MML event is the first step and is essential to engaging the right quadruple helix stakeholders for the event. The programme should contain at least (1) a small paragraph regarding the objectives of the BIOVOICES project, (2) a small paragraph outlining the issue/challenges to be addressed in the event, (3) an outline of the objectives of the MML event, (4) the key guiding questions and (5) an agenda, including information on the venue and the catering if applicable.*
- ***Develop invitations and communicate with invitees.*** *MML workshops are usually not open events in the sense that everyone can simply join without registration beforehand. For most MML workshop events participants will be invited. In some cases, participation of citizens (not in form of an organized, representative insititution) might be needed, which then in turn requires a more open registration approach to attract them. Moreover, an online call can be posted for which people need to register (Hoes and Overbeek, 2018).*

  In order to send out invitations, there are in principle two options: (1) sending out an Email to the own network and the selected local/regional/national stakeholders, and /or (2) advertising the event on the BIOVOICES social platform. Ideally, both options should be used in conjunction, especially at the begininng/middle of a project when the network is yet to be developed as well as social media.

  The invitation should at least contain: (1) the link to the registration form in the BIOVOICES platform, (2) an engaging invitation text and (3) the programme in pdf. An event flyer and fotos are advised can additionally attract participation for the event.
- ***Select at least two appropriate facilitators.*** *In this, make sure the facilitator has sound understanding of the issues to be discussed as well as experience in facilitation and is familiar with the formats and methods selected. The facilitator's competences are on of the primary factors to determine the success of the event in terms of flow and outcome. It is recommended that the tzwo facilitators split roles – one being the principal moderator leading the discussions, while the other one assumes the role of a rapporteur and supports facilitation. In some cases it may be advised to have an addtional person supporting the documentation of the discussion*
- ***Find an attractive and functional venue.*** *The venue provides for the physical sourroundings of where the mutual learning will take place and thus needs to reflect that. Hence, it is recommended to find a venue that is sufficiently large to accomodate for the number of people attending, but not too dispersive. The lighting should be sufficient but pleasant for people, ideally even natural. Ideally there would be sofas or other assecoires that make people feel comfortable, depending largely also on culturally determined preferences. Each country partner should decide what a "pleasant room atmosphere" means in his or her national context and act accordingly.*

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- *In general it is recommendable to align your MML workshops to ongoing events and networks (i.e. as satellite event of a conference). The benefits of such alignment are bigger chances of attracting a high quality and quantity of participants. The downside of aligning to ongoing events and networks are that the set-up of the workshop needs to be condensed depending on the given conditions, as well as the set-up and needs of the network/event. This situation constitutes is a balancing act between being able to implement the ideal MML workshop and being realistic and pragmatic about which strategy is most wise in terms of attracting high quality and quantity of participants (Hoes and Overbeek, 2018).*
- ***Set-up chair order to engage.** Based on the venue space and the selected workshop format and exercises, the tables and chairs should be set up to allow for maximum participation and optimized mutual learning throughout the event.*
- ***Ensure facilitation and engagement tools are in place and work.** Having moderation and engagement props at the event venue on time in in good shape is key for a smooth flow of the event. These may include posters, post-its and in sufficient quantity as well as outreach material such as posters and roll-ups and all the necessary digital features such as presentations and engagement and plling software that may be used (e.g. Mentimeter). Make sure to develop a participants list and have it signed by all during the event.*
- ***Regarding all outreach material and encouragements** to sign up for the BIOVOICES social platform, make sure to adhere to the EU GDPR that reflected in the BIOVOICES ethics requirements.*
- ***Select delicious and sustainable catering.** If time and budget allows, an adequate caterer should be hired to provide for hot drinks and refreshments as well as food during the event. Innovative solutions are especially encouraged, e.g. caterers who use bio-based packaging and vegan or vegetarian choices to demonstrate the committment of the project and to "green the event".*
- ***Use the check list provided in ANNEX C** to make sure all key aspects of organizing an MML event are covered.*

4.4 ENABLE AND SUPPORT CO-CREATION – SELECTING THE RIGHT METHODS

This chapter will provide guidance (for BIOVOICES project partners and beyond) on how to select the right formats, exercises and activities for the MML event in order to capitalize best on given determining factors of the event such as group size, group composition and topics/challenge to be addressed. The guidance is based on a simple tool in form of two matrices (see below). The guidance tool supports BIOVOICES partners and others seeking to find engaging workshop methods and exercises in:

- *The **selection of appropriate event format**, based on key aspects such as target group size and composition as well as circular bioeconomy challenges to be address;*
- *The **selection of adequate activities/exercises** as elements of the different phases of the selected workshop format.*

While the tool aims to give an overview on existing methods as well as assistance in methods selection, it is not intended or capable to be used as sole source of information, but needs to be viewed as an additional consultation tool in the design of an MML workshop – be it for the BIOVOICES project, or for another sustainability context.

There is not a unique valid MML workshop format – instead, there are a few formats and activities that could enhance the effectiveness of the event depending on the specific goals set by the organizers.

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To sort out the most suitable according to the existing circumstances, there is a series of questions that need to be answered as a first step for a successful MML event design.

- ***Which is the appropriate format for the selected topics/challenges to be addressed in the MML event?***
- ***Which is the appropriate format for the group size and composition that is expected?***
- ***Which are suitable exercises/activities, which can be implemented and which correspond to respective goal, group size and challenge to be addressed?***

The tool developed aims to help to answer these questions and facilitate the selection of both format of the events and potential activities/exercises to be included. The underlying validation and score is based on extensive literature research as well as experience and knowledge from the authors. A detailed distribution of related literature can be found in ANNEX A of this document. Chapter 4.4.3 explains the tool and offers step-by-step guidance on its use. **The tool is based on two matrices.** Matrix A is meant to be used in the first place, to find the right format for the known determining factors. Matrix B can be used in a subsequent manner to find exercises and activities that correspond to the determining factors highlighted there.

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TABLE 1: WORKSHOP FORMATS SUITABLE FOR AN MML CONTEXT AND BEYOND

MML Event Format				
Unconferences / Open Space conferences	**Peer reviews**	**Future workshops**	**Working groups**	**Study visits**
				
They enclose a variety of gatherings, all of them based in high levels of participation and attendee-driven, where participants shape the agenda and are required to participate one way or the other. Unconferences are "designed on the go", basically based on attendees' interests and particular needs. They usually follow the principles of the Open Space Technology, which according to Owen (2008) is based on four principles: 1)	In this case – also known as peer assessment- both learning and assessment are integrated (Trahasch, 2004). Following the principles of collaborative learning, peers comment and provide feedback on each other's cases, projects or ideas. Moreover, it is a technique for the exchange of good practices among different actors. According to Wisser & Siebel (2016) at the heart of a peer review is a good practice, which is understood as "a concrete,	This is a type of workshop where participants are encouraged to develop imaginative, unconventional solutions to existing issues and challenges, by means of an atmosphere designed to promote creativity. The ultimate goal is to help participants finding what their ideal solution would like, but on the process current problems are analyzed, future scenarios are considered and ways on how to eliminate problems are evaluated (Vidal, 2006). It emphasizes	Working Groups (also known as task forces, community action networks or strategy teams among others) are a small group of people (ideally, between 15 – 20 people) who come together with a common goal/deliverable, acting as representatives (backbone staff) of the larger organization. These groups are at the heartbeat of collective impact, defining strategies, setting concrete action plans to bring goals to life (Jennings, 2007). Ideally, working groups	Study visits are based on the premise that the combination of mutual and experiential learning is potentially transformational and leads to deep learning (Martin, n.d.). They are based on the principle of peer-learning, providing an opportunity for key stakeholders to learn relevant, good development practices from their peer. It is a connotative type of learning that consciously uses the social process to increase learning success, and is based on the

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Whoever comes are the right people, 2) Whatever happens is the only thing that could have happened, 3) Whenever it starts is the right time and 4) When it's over, it's over. Unconferences are attractive formats for brainstorming, networking, exploring topics of interest and clearing doubts and they result especially useful when participants have a high level of expertise or knowledge in the main field or topic of the event (Greenhill & Wiebrands, 2008). Although they are also suitable for big audiences, they work particularly well when the discussion groups are relatively small, creating a flexible, creative and conductive environment for exchanges (Budd et al. 2015). These characteristics allow shorter periods of planning time and tighter budgets than regular conferences.	well-documented and assessed policy measure/initiative which: a) proved to be a success and to exercise a positive impact; b)illustrates an approach that inspires others; and c)allows others to capitalize on the experience. Participants often pair or work in small groups to maximize the level of interaction. They could be grouped based on similar level of experience – where participants act as critical friends – or configuring groups where those more experienced could adopt a mentoring position.	aspects such as critic thinking, learning, team work, democracy, and empowerment, focusing on facilitated and participative group processes to deal with real-life problems (Vidal, 2006). It is encouraged for small groups, and for any kind of complex problem that requires many stakeholders' involvement. The most suitable themes are those with community knowledge and experience, and those that call participants to take responsibilities for action. It is not a good idea to choose projects that are far away from the experience and the knowledge of the participants. It is not recommended that number of participants exceeds 8-10 persons, but in case of having bigger groups, these can be clustered (Lauttamäki, 2014).	organise around three actions: 1) setting the scope grounding on data of the current situation, 2) developing strategies and 3) driving the implementation of the strategies. It is essential that the components of the working groups have similar level of first-hand experience on the issue to be tackled. It is also encouraged that they represent different departments or divisions within the company, organization or consortium under the theory that their diversity of skills and backgrounds will result in a more well-rounded solution.	needs of the learner.' Study visits consist on a visit by an individual or small group to one or more countries/areas for knowledge exchange. More concretely, they enable peers to work together during the visit, reflecting together on various job-related issues, sharing points of view, discovering other ways of seeing things and approaching problems (Soller and Lesgold, n.d.). With all, it is an effective tool for knowledge sharing, problem solving and international cooperation. Peer exchanges can be most beneficial among peers who are part of the same "community of practice," peers who share similar job roles or functions although in some cases, an exchange with peers in an entirely different field creates opportunities to learn new ways of working (Martin, n.d.).

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4.4.1 Determining and non-determining factors for choosing MML method

As mentioned above, the matrices are based in a series of determining factors that will set a ranking for each one of the choices. The determining factors are explained as follows:

- ***Group size:*** *It is probably one of the most determining factors when choosing a format or an activity, since it will influence the level of interactivity among participants. Here we set three different sizes: <10 individuals, 10 -40 individuals and >40 individuals*
- ***Group composition:*** *With reference to the quadruple helix, where we understand that:*
  - *Uneven quadruple-helix composition = homogeneous group*
  - *Even quadruple-helix composition = heterogeneous group*
- ***BIOVOICES challenges*** *(Albertini et al., 2018): We have used the five challenge clusters identified within the scope of BIOVOICES as factors influencing the design of a MML workshop.*
  - *Market Development: this cluster deals with the creation of markets between business that produce BBP, be it supplied for first customers, for niches interested in unique selling points of sustainable innovations, or to find input streams that are available in large quantities and constantly.*
  - *Awareness and trust: trust building among users through improved communication, both among interested businesses and consumers as well as among less interested target groups that might be relevant to later collaborate with.*
  - *Supporting strategies, regulatory frameworks legislation and standards: this cluster concerns the development of European and national supporting strategies (incentives), regulatory frameworks legislation and standards to stimulate the use of bio-based products*
  - *Supporting environment (infrastructures, intermediaries, new business opportunities): supporting environment such as infrastructures to increase 2G bio-based feedstock, improvement of resources and intermediaries to reach new users and to develop new business opportunities.*
  - *Regional/local development: related to regional/local deployment and circular economy.*
- ***Goals:*** *Based on literature review (Barkley et al., 2014) and professional experience we have identified these abstract goals – or purposes- to be the most relevant while designing a MML event:*
  - *A: Networking: aims at fostering informal interaction andice-breaking, setting the scene, building trust, creating a friendly, inclusive, safe atmosphere that facilitates discussion.*
  - *B: Engagement: fosters conversation and dialogue, enables people to express their thoughts, increases commitment and empowerment of the audience, and builds alignement.*
  - *C: Exploration: collects ideas on a topic, explores different options and scenarios, and facilitates sharing of different experiences and points of views.*
  - *D: Analysis: involves problem solving, item-mapping, explores cause-effects, interlinkages of items.*
  - *E: Evaluation: involves actions to provide and gather feedback on a specific topic, prioritize items, enables decision-making.*

4.4.2 Non-determining factors for choosing MML methods

In addition to the determining factors, there are a number informational items about the event, which do not necessarily determine the choice of format or exercise, but are important factors when

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designing an MML event. The matrix B below will provide a score on these factors that enables the user to see how well certain exercise works given these factors. This should then be mapped against the reality of the event by the user and can inform the decision making. These non-determining factors include session format, complexity (preparation and facilitation) and experience level of participants and are summarized below:

- ***Session Format:*** *In the activities decision-matrix, we have also added a section on session format, where three main formats are indicated:*
  - *World Café: separate tables are scattered around the room, to provide different working stations. The audience is separated in sub-groups that rotate from one station to another in different rounds. It is useful to maximize dialogue and engagement, brainstorm in small clusters and then transfer the information gathered to other groups.*
  - *Marketplace: different stations are set around the room, usually displaying different types of information. People are able to freely roam from one to the next. Additionally, some kind of structured roaming can be provided, in the form of guided tours or lightning pitch programmes. It is useful to display large amounts of information in reduced space and short time.*
  - *Plenary: One of the most common configuration styles of conferences. The audience is seating together in a room, facing to the speakers or presenters.*
- ***Complexity*** *(preparation and facilitation). The level of complexity of the particular exercise/activity is understood in terms of preparation prior to- and facilitation during the event and is coined as follows.*
  - *Low*
  - *Medium*
  - *high*
- ***Experience level of participants***
  - *Comparable: members of the audience have similar level of expertise.*
  - *Divergent: the audience is composed by people with different levels of expertise and backgrounds.*

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TABLE 2: WORKSHOP ACTIVITIES/EXERCISES SUITABLE FOR AN MML EVENT AND BEYOND

ACTIVITIES/EXERCISES	
SETTING THE SCENE	
Speed-dating	It is a simple team-building exercise frequently used at an initial stage of the event. It is encouraged for medium – large sized groups as it generates multiple brief one-on-one interactions usually in short periods of time. It allows individuals to learn about each other, quickly identifying interests or points in common which could potentially lead to more in-depth conversations throughout the day, therefore showing a potential for engagement. Conceived as a means for structured networking, it gives shy individuals a chance to interact –while also contributing to a light-hearted atmosphere. It could be as simple as letting participants stand up and walk around until a signal (i.e. a phone ring, a bell) determines the moment when they have to stop and interact with the closest person. The facilitator will set the duration of these meetings, depending on the size of the group. For larger groups, duration of 3-4 minutes is encouraged to promote interaction among a higher number of individuals. There are simple variations of the speed-dating such as the buzz groups, where people may interact with the surrounding persons, in small groups, and frequently without abandoning their seats for which they may result interesting during plenaries.
Lightning talks	Lightning talks are as the name suggests very short presentations on a particular topic, followed up by a round of Q&A. They are conceived to transfer the most essential pieces of information in a concise and dynamic way, rarely lasting more than 10 minutes. There is even a shorter variance, the elevator pitches, which are not meant to last more than a minute. These techniques are frequently used to catch the listener´s attention, stimulating their curiosity and sparking l future talks. Normally, they are delivered by different speakers in a single session. Since presentations are not mandatory (and frequently not encouraged) these activities are adaptable to different settings and session formats, such as panels, fishbowls, marketplaces and World Cafés.
Digital audience response	The digital audience response is based on basic software that allows presenters or event organizers to interact with the audience via polls, text responses, or multiple choice questions displayed through their mobile devices. This tool is believed to enhance active listening and participation among the audience, adding up an interactive element to the session while allowing the presenters/organizers to collect valuable input about a question or topic of their choice from a large range of individuals in a short time. Although applicable to different group sizes, it is encouraged to be used with large groups to maximize its potential. Facilitating both the reinforcement of concepts and the “learning by doing format”, the Digital Audience Response is frequently based in anonymity, encouraging thus the participation of a broader public. This tool can be used at an initial point of an event to gather input on a specific topic, concern or belief, or used at a final stage with evaluation purposes. As technology develops, there are increasing apps and tools available in the market – some of them free to use. As examples, Mentimeter and Live Insights are mobile voting and polling apps that allow presenters show the results live with real-time graphs and charts.

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Role play	Both role-plays and simulations are an opportunity to enact a scenario, practice skills around it, and explore emotional reactions to it. Participants can test "what if" ideas; they can try out new skills; or they can put themselves in the shoes of characters they're role-playing, thus gaining insight (and compassion). It is useful to prepare a team for difficult situations. You can also get a sense of what other people are likely to be thinking and feeling in the situation. It can be equally useful to spark brainstorming sessions, to improve communication between team members, and to see problems or situations from different perspectives. It works properly in small groups, or even one-to-one.
WORKING PHASE	
Idea-mapping	Idea-mapping, also called mind-mapping is a visual thinking tool – usually following up a brainstorming session- that helps structuring information for its better comprehension. It uses color, key words, and images to generate ideas and summarize, sort, and retain information on any topic. It also allows a user to visualize a complex system of interrelations. It is frequently used in breakout sessions, working groups or world cafés to summarize small group's discussions. Used for creative-problem solving it can ultimately help in decision-making.
Fishbowl	It is a method to organize presentations and group dialogues that offers the benefits of small group discussions – most notably, a spontaneous, conversational approach to discussing issues – within large group settings. This is done by arranging the room so that the speakers are seated in the center of the room (the fishbowl) with other participants sitting around them in concentric circles. It is frequently used in events such as unconferences, as it allows bigger participation of the audience, whose members can join the "fishbowl" whenever they feel they have something to say and as long as there are free seats. Normally, in this configuration, a few chairs are left free by the speakers for whomever to join. The person joining can abandon the fishbowl when desired, leaving a free space for some other to partake. It is encouraged for large groups. It also lessens distinctions between the speakers and the audience.
Reality Tree	Current reality tree (CRT) is designed to accommodate multiple related problems and non-linear processes, revealing hidden causes and uncovering problems that were not so obvious. Through a CRT a cause and effect network diagram is created that provides an overview of the undesirable effect and the root causes of a complex problem. At the top of the tree, there is one or many undesirable effects, below them there are intermediate effects and at the bottom of the tree the root causes. Basically, it is used to build a chain of cause-effects. CRT includes a prioritization and aims at providing clarity to facilitate well-thought through decision making.
Ice-berg	This exercise builds on the premise that what one sees above the water is only the tip of the iceberg; the larger foundation rests below the surface. It is a frequently used tools for system-thinking, as a way of approaching problems that asks how various elements within a system - which could be an ecosystem, an organization, or a project - influence one another. There are many variations of this visualization, but normally the very first level of the iceberg is the tip of the iceberg and it's called the event level. Below the event level, and now less visible and obvious as it's under the water so-to-speak, is the pattern level – a trend, a tendency-. Below the pattern level is the structure level, where to identify what's the underlying cause of the pattern. The lowest level is the Mental model level, and will be used to sort what is behind the cause. This technique can also help participants with identifying the long term vision and specific next steps or deliverables that participants can take. Since it involves certain level of brainstorming, it may be good for small-medium sizes, and could fit a variety of formats.

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WRAP UP	
High five	A simple evaluation technique in which participants are invited to take a moment and reflect upon the event, thinking about the next situation and formulating next steps. It basically consists on the following: participants are asked to take 5 minutes to answer a set of questions. Each question corresponds to one hand's finger. The participants make notes to themselves. Then the facilitator ask them if they want to share the things that they wrote, finger by finger.
Dot ranking	Dot voting and ranking are similar techniques to prioritize ideas in a descending order. The highest number represents the idea with the highest priority; the lowest number represents the idea with the lowest priority. To minimize group think or strategic ranking, you can number the ideas and ask people to write down their ranking individually, before sharing the results.

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4.4.3 How to use the tool: paring of determining and non-determining factors

As discussed, the pairing tool developed within the scope of this guidance is based in two interfaces, i.e. matrices, to be used consecutively, and that complement each other. Together, they are meant to offer the user guidance on the design of a MML event, addressing both optimal formats and combination of activities.

Matrix A helps the user to choose a suitable format according to the identified targets and scope. The targets and scope are described by a series of key determining factors (y-axis of the matrix, while the MML formats are displayed on the x-axis of the matrix.

A score (1-4 points) has been allocated to each MML format proposed, in relation to its performance against the identified determining factors. The allocation of the score follows extensive literature review available in the ANNEX.

By selecting the factors relevant to the event in Matrix A, the user will be able to compare the performance of different MML formats, and will be able to identify the highest scoring ones, with the format(s) with the highest score being the most suitable given the determining factors. .. However, it must be noted that no weighting of determining factors is undertaken.

Matrix B is similar in architecture; its purpose is to support the selection of MML activities/exercises, which can be used in any MML format given specific determining factors. The activities/exercises are categorized along different phases of an MML event, i.e. setting the scene, the working phase and the wrap-up phase. The determining factors are on the y-axis, while the grouped activities/exercises are displayed on the x-axis.

As in Matrix A, the selection of determining factors is the first step. The tool will provide the highest score(s) for each row of selected factors per MML workshop phase, providing one or more MML activity/exercise suitable for each workshop phase, according to the determining factors provided.

The non-determining factors (session format, complexity and level of experience) in Matrix B provide for additional information, which may be helpful in giving further shape and structure to the MML event, e.g. if the activity/exercise calculated works well with divergent or comparable levels or experience of participants.

Each of the formats and activities/exercises in Matrices A and B were selected based on literature research and institutional experience. In both cases, formats and activities are ranked with color dots, from one (very low level or compatibility) to four (expressing maximum compatibility). Each color corresponds to one format in matrix A and to one exercise/activity in matrix B, in order for the user to be able to better distinguish them.

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	MMLformat		Conference	Unconference	Working group	Study visits	Future workshops	Peer reviews
Determining factors	Group size	>40	●●●●	●●●○	●○○○	●○○○	●○○○	●○○○
		10 -40	●●●○	●●●●	●●●○	●○○○	●●○○	●●○○
		<10	●○○○	●●○○	●●●●	●●●●	●●●●	●●●●
	Group composition	Heterogeneous	●●●●	●●●○	●●●●	●●○○	●●●●	●●○○
		Homogeneous	●●●●	●●●●	●●○○	●●●○	●●○○	●●●○
	BIOVOICES Challenge Cluster	A	●●○○	●●●○	●●●●	●●●○	●●○○	●●●○
		B	●●●○	●●●○	●●●○	●○○○	●●○○	●●●○
		C	●●○○	●●●●	●○○○	●●●●	●●○○	●●●●
		D	●●●○	●●○○	●●●○	●●○○	●●●○	●●○○
		E	●●○○	●●○○	●●●●	●●○○	●●●●	●●○○

Figure 1: Matrix A, *selecting a suitable MML format*. The figure shows a schematic overview of the architecture and mode of operation of part 1 of the tool. BIOVOICES Challenge Cluster A-E corresponds to the BIOVICES challenge cluster outlined in chapter 4.4.1.

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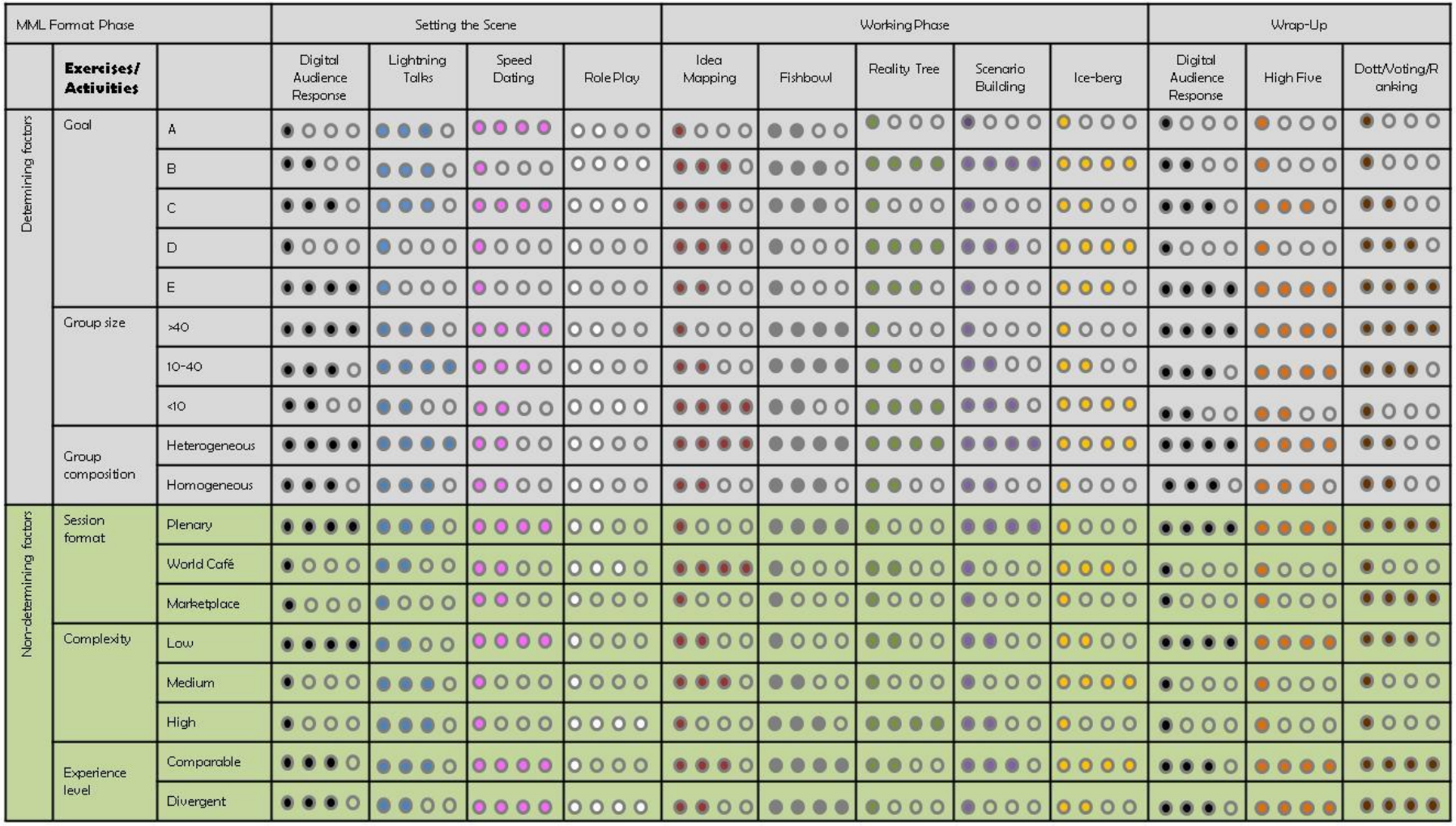

Figure 2: Matrix B, selecting the coresponding MML activitiy/exercise. The figure shows a schematic overview of the architecture and mode of operation of part 2 of the tool. Goals: A=networking, B=engagement, C=exploration, D=analysis, E=evaluation

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The matrices be used to include other factors and find the best ranking exercises overall – including all factors. These recommendations should be understood as such, as there is no clear one-size-fits-all approach to organize an event: issues such as venue (e.g. size of the room, fixed or movable furniture, staging, open space), uneven composition among stakeholders (e.g. 70% civil society, 10% policy makers, 10% businesses and 10% academia), language (e.g. in international events, or in areas with more than one official language), cultural background can widely affect the format of the MML event and of the types of actions included.

Experience, understanding of the context and common sense should always prevail when making an assessment of how to organize an MML workshop, taking into consideration crucial sociological and environmental aspects in the final assessment.

4.5 SUPPORT GENERATION OF ACTIONABLE AND ACCEPTABLE OUTCOMES

In the preparation, the implementation as well as the post-event work (i.e. evalutation, MML report writing – see chapter 4.6), it is crucial that the intended outcomes are always considered. This means for instance that:

- The objectives of the event need to be fomulated in a way that the ***intended outcomes are clear to participants from the beginning***. This should be reflected in the event programme.
- The event is ***implemented and facilitated in way that it produces tangable outcomes.*** This includes, for instance, systematic and thourough documentation of table discussions as well as propoer analysis of discussion results by participants, followed by conclusions, i.e. what the results mean for developing outcomes.
- ***Post-meeting analysis*** of event materials by the the organizing partner, including drafting of an MML Workshop Report. During this analysis, it is recommended to draw some conclusions with regard to the development of policy recommendations (i.e. to develoop BIOVOICES Deliverable 6.4).
- ***Follow-up with participants***. It is recommended to follow-up with MML participants by sending them e.g. the MML Workshop Report or some parts of it as well as fotos and other BIOVOICES information material (inclduing encouraging them to join the BIOOVICES social platform).

The outcomes of the MML event will inform development of deliverable 6.4 and may for instance comprise of:

- *The formation of working groups, iniative etc. from any quadruple-helix group that has agreed to conitnue working on the issues.*
- *An agreement between BIOVOICES partners and participants (or among participants) to cooperate in the future on the issues, i.e. in the frame of future MML events, MoUs, projects or bilaterally.*
- *The development policy recommednations to local/regional/national levels.*
- *The development other kind of recommendations and agendas, e.g. business cooperation strategies, research- and civil society agendas.*
- *An initiation of policy processes as a results of the event, e.g. at the local level.*
- *Other possible outcomes which impact on the project objectives.*

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4.6 EVALUATION

Evaluation and verification is an integral part of any policy relevant project, process or indeed a workshop or a conference (Garzillo and Kuhn, 2007). Hence, it is crucial that any MML event goes through an evaluation and verification process to (1) ensure that the outcomes of the event are reported and validated in terms of impact, in particular those with policy relevant. This may for instance include insurance that discussions held in the MML workshop are taken further within the specific local/regional or national context. Intended impacts may also include for instance a contribution to local policy documents, processes or the creation of working groups which are initiated at the MML event. The ultimate aim of the BIOVOICES MML workshop series is to generate a policy brief that captures all these initiatives and outcomes and formulates tangible recommendations at the local, regional and national levels

Another important aim of the MML evaluation is to collect feedback to improve the MML undertaken, improve their design and conduct – both for the BIOVOICES consortium and beyond. This means that the MML Methodology as well as other BIOOVICES deliverables are not static, but to be viewed as living documents, open for constant improvement in the way they are applied throughout the BIOVOICES project and beyond. Specific MML workshop evaluation documents include:

- *MML Workshop Reporting Guide – providing specific and insights and guidance on how the MML reporting needs to be done;*
- *MML Workshop Report Template – providing the user with a template that contains all the important items relevant for MML reporting, including those that relevant to assess the impact and outcomes of the event;*
- *MML Workshop Feedback Form – providing the user with a ready-to-use feedback form that should be filled in by participants of an MML event. The results should be used specifically to improve MML workshop design and implementation throughout the project, but also to strengthen the impact.*

5 LESSONS LEARNED SO FAR FROM THE IMPLEMENTATION OF MML WORKSHOPS

Between May 2018 and the issuance of this report in February 2019, the BIOVOICES consortium has conducted 5 MML workshops in Belgium and Italy generating valuable experience, which can and should be taking into account when designing and implementing an MML event. Some of the most important lessons learned are shown in Table 3 below. Lessons are classified according the different phases of an MML event – from preparation and planning to results synthesis.

TABLE 3: LESSONS LEARNED FROM IMPLEMENTATION OF MML EVENTS

Lessons learned (max. 3 sentences per lesson)	Preparation	Implementation	Results/Content
Ensure clear distribution of responsibilities when planning an MML event	X		
Include gamified components in the MML	X	X	

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event as much as possible. This keeps the attention of people and generates valuable polling content			
Each MML event should end with the section called: "What follow up activities are you considering to take after this event"?	x	x	x
After each MML event, the newly designed feedback form should be filled in by the participants	x	x	x
Qualitative interview should be conducted in case the actionable knowledge was not clearly identified. The basis for the interview are the questions presented in the feedback questionnaire.		x	x
All partners need to ensure that each event pays appropriate attention to ensuring the creation of a useful Evaluation Report (see the MML reporting guide)			x
Problems and resources should be introduced to the participants in the first phase of the Regional MML. Present short pitches of good practices, problems and barriers at local level to stimulate the further MML discussion.	x	x	x
Increase awareness and active knowledge of bioeconomy terminology, develop a common language, an universal terminology to increase the dialogue between all the stakeholders and allow everyone to understand.	x	x	x
Increase the collaboration with relevant stakeholder using social media. For instance tagging them before, during and after the MMLs will help them to share, retweet and be connected with the project channels.	x	x	x
The list of invited participants should be much longer than the foreseen participants in order to avoid last minute not show and enriched through specific research of contacts in the sector of the MML organised	x		
The participants should be invited at least one month and half in advance	x		
The MML should be contextualised through two/three speeches that can kick the discussion of the MML.		x	
Should be clear since the beginning (from the preparatory phase) what is the expected results (not the content)			x

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It is crucial that the MML setting takes into account cultural and organizational-cut differences in different countries, companies or industries in order to get everybody involved.	X	X

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6 RECOMMENDATIONS AND CONCLUSION

Drawing upon innovation – and transition theory as well as existing literature and institutional knowledge on co-creation and mutual learning, the BIOVOICES MML methodology provides both a tool as well as guidance on how to design, implement and evaluate an MML Workshop using a variety of methods. It provides a thorough overview of workshop formats, methods, exercises/activities, that are suitable to stimulate an open and multi-stakeholder dialogue as well as tool on how to the select the most suitable for the intended event. Moreover, it provides guidance on how to select and frame challenges and topics for the MML event, on who to involve as well as on how the process works from planning to implementation and evaluation.

Below, a number of final important recommendations conclusions as far as usage, scope and objective of this report are summarized:

- *When implementing the BIOVOICES MML workshops, partners are encouraged to keep track of the high-level, overarching objective, namely to contribute to an uptake of BBP in Europe and thus to an improved climate and environment as well as job growth and innovation. This means, that topics discussed- and contents generated in MML events, need to be aligned with these objectives. Furthermore, it means that organizing partners and other organizations, are encouraged to identify and avoid any bias between these goals and possible other goals, for instance induced by cooperation with other events that have different objectives.*
- *When designing and implementing MML events, partners/organizations are encouraged to conduct them in a manner as to be able to extract usable and clear policy recommendations from them. It is important to keep in mind that the ultimate objective of the MML is to mobilize and mutually share to induce transformation and change. The macro topics outlined in D3.3 under the form of challenge clusters, shall thus be adapted to local needs in order to draw workshop topics ensuring high engagement of participants.*
- *Although, this report is designed to support the implementation of BIOVOICES MML Workshops, it is envisioned to also serve other project settings supporting quadruple-helix driven sustainability research and dialogue.*
- *It is clear that the MML formats, activities/exercises and guidance presented in this document is by no means an exhaustive list of possible setting that can be used to drive a multi-stakeholder dialogue. It appears crucial to the authors that a validation of the methodology i.e. the design of the MML must be taking into account by the participants of the event in order to co-create and further develop this approach.*

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7 REFERENCES

Albertini, S., Overbeek, G., Hoes, A.-C., 2018. Persisting challenges to the European bioeconomy. A Cluster appraoch developed by the BIOVOICES project (Project Deliverable No. D3.3), Work Package 3. FVA New Media Research.

Barkley, E.F., Cross, K.P., Major, C.H., 2014. Collaborative Learning Techniques: A Handbook for College Faculty. John Wiley & Sons.

Billsberry, J., Kenworthy, A.L., Hrivnak, G.A., Brown, K.G., 2013. Daring to be different: Unconferences, new conferences, and reimagined conferences. Sage Publications Sage CA: Los Angeles, CA.

Bradley, D., Schneider, H., 2004. Participatory approaches: A facilitator's guide. VSO. Retrieved on July 10, 2012.

Clift, R., Sim, S., King, H., Chenoweth, J., Christie, I., Clavreul, J., Mueller, C., Posthuma, L., Boulay, A.-M., Chaplin-Kramer, R., Chatterton, J., DeClerck, F., Druckman, A., France, C., Franco, A., Gerten, D., Goedkoop, M., Hauschild, M., Huijbregts, M., Koellner, T., Lambin, E., Lee, J., Mair, S., Marshall, S., McLachlan, M., Milà i Canals, L., Mitchell, C., Price, E., Rockström, J., Suckling, J., Murphy, R., 2017. The Challenges of Applying Planetary Boundaries as a Basis for Strategic Decision-Making in Companies with Global Supply Chains. Sustainability 9, 279. https://doi.org/10.3390/su9020279

de Besi, M., McCormick, K., 2015. Towards a Bioeconomy in Europe: National, Regional and Industrial Strategies. Sustainability 7, 10461–10478. https://doi.org/10.3390/su70810461

Diogo, M.P., Urze, P., 2018. Interviews Data Analysis. Identification of Stakeholders' Interests and Motivations in the Bioceconomy. (No. D3.2), Work Package 3. NOVA ID.

Dubois, O., Gomez San Juan, M., 2016. HOW SUSTAINABILITY IS ADDRESSED IN OFFICIAL BIOECONOMY STRATEGIES AT INTERNATIONAL, NATIONAL AND REGIONAL LEVELS. An overview.

Efken, J., Dirksmeyer, W., Kreins, P., Knecht, M., 2016. Measuring the importance of the bioeconomy in Germany: Concept and illustration. NJAS - Wageningen Journal of Life Sciences 77, 9–17. https://doi.org/10.1016/j.njas.2016.03.008

European Commission, Directorate-General for Research and Innovation, 2018. A sustainable bioeconomy for Europe: strengthening the connection between economy, society and the environment : updated bioeconomy strategy.

Garzillo, C., Kuhn, S., 2007. The Aalborg Committments Implementation Guide. A 5-step approach.

Geels, F.W., 2011. The multi-level perspective on sustainability transitions: Responses to seven criticisms. Environmental Innovation and Societal Transitions 1, 24–40. https://doi.org/10.1016/j.eist.2011.02.002

Giorgia Rambelli, Rothballer, C., 2014. Covenant Capacity: Capacity SEAP Training Booklet.

Gottdiener, M., Budd, L., Lehtovuori, P., 2015. Key Concepts in Urban Studies. SAGE.

Greenhill, K., Wiebrands, C., 2008. The unconference: a new model for better professional communication, in: Greenhill, K. <http://Researchrepository.Murdoch.Edu.Au/View/Author/Greenhill, Kathryn.Html> and Wiebrands, C. (2008) The Unconference: A New Model for Better Professional Communication. In: LIANZA Conference 2008: Poropitia Outside the Box, 2-5 Nov. 2008, Auckland, N.Z. Presented at the LIANZA Conference 2008: Poropitia Outside the Box, LIANZA, Auckland, N.Z.

Hekkert, M., Negro, S., Heimeriks, G., Harmsen, R., n.d. Technological Innovation System Analysis 16.

Hewlitt, A., Lamoureux, L., 2011. Introducing Knowledge Sharing Methods and Tools: A Facilitator's Guide. New Delhi, India and Rome, Italy: IDRC (Canada's International Development ….

Hoes, A.-C., Overbeek, G., 2018. Guidelines for the design of the BIOVOICES mobilisation and mutual learning approach (No. D3.4), Work Package 3. Wageningen Research.

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Huesemann, M.H., 2003. The limits of technological solutions to sustainable development. Clean Technologies and Environmental Policy 5, 21–34.
Jennings, M., 2007. Leading Effective Meetings, Teams, and Work Groups in Districts and Schools. ASCD.
Jungk, R., Müllert, N., 1987. Future Workshops: How to create desirable futures. Institute for Social Inventions London.
Kaner, S., 2014. Facilitator's Guide to Participatory Decision-Making. John Wiley & Sons.
Kooloos, J.G.M., Klaassen, T., Vereijken, M., Van Kuppeveld, S., Bolhuis, S., Vorstenbosch, M., 2011. Collaborative group work: Effects of group size and assignment structure on learning gain, student satisfaction and perceived participation. Medical Teacher 33, 983–988. https://doi.org/10.3109/0142159X.2011.588733
Krausmann, F., Erb, K.-H., Gingrich, S., Lauk, C., Haberl, H., 2008. Global patterns of socioeconomic biomass flows in the year 2000: A comprehensive assessment of supply, consumption and constraints. Ecological Economics 65, 471–487. https://doi.org/10.1016/j.ecolecon.2007.07.012
Mauser, W., Klepper, G., Rice, M., Schmalzbauer, B.S., Hackmann, H., Leemans, R., Moore, H., 2013. Transdisciplinary global change research: the co-creation of knowledge for sustainability. Current Opinion in Environmental Sustainability 5, 420–431.
Nielsen, J., Dirckinck-Holmfeld, L., Danielsen, O., 2003. Dialogue Design-With Mutual Learning as Guiding Principle. International Journal of Human–Computer Interaction 15, 21–40. https://doi.org/10.1207/S15327590IJHC1501_03
Overbeek, G., Hoes, A.-C., van Leeuwen, M., 2018. Synthesis of market perspectives to develop bio-based value chains (No. D3.1), Work Package 3. Wageningen Research.
Robert Arnkil, Järvenisu, A., Koski, P., Piirainen, T., 2010. Exploring Quadruple Helix. Outlining user-oriented innovation models.
Roper, S., Love, J.H., Bonner, K., 2017. Firms' knowledge search and local knowledge externalities in innovation performance. Research Policy 46, 43–56. https://doi.org/10.1016/j.respol.2016.10.004
Scholz, R.W., 2000. Mutual learning as a basic principle of transdisciplinarity. Transdisciplinarity: Joint problem-solving among science, technology and society. Workbook II: Mutual learning sessions 13–17.
Sterrenberg, L., Grin, J., Rooy, P.V., 2007. Towards a governance perspective on the dynamics of reflexive modernisation: Lessons from sustainable water management.
Tsagaraki, E., Delioglanis, I., 2018. BIOVOICES Focus Group Report (No. D4.1), Work Package 4. Q-Plan International.
UNEP (Ed.), 2011. Decoupling natural resource use and environmental impacts from economic growth. Kenya, UNEP.
United Nations, 2016. Sustainable Development Goals.
Vilsmaier, U., Engbers, M., Luthardt, P., Maas-Deipenbrock, R.M., Wunderlich, S., Scholz, R.W., 2015. Case-based Mutual Learning Sessions: knowledge integration and transfer in transdisciplinary processes. Sustain Sci 10, 563–580. https://doi.org/10.1007/s11625-015-0335-3
Weldu, Y.W., Assefa, G., 2016. Evaluating the environmental sustainability of biomass-based energy strategy: Using an impact matrix framework. Environmental Impact Assessment Review 60, 75–82. https://doi.org/10.1016/j.eiar.2016.05.005
Wolf, P., Hansmann, R., Troxler, P., 2011. Unconferencing as method to initiate organisational change: A case study on reducing CO2 emissions of a university. Journal of organizational change management 24, 112–142.

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8 ANNEX

8.1 ANNEX A: LITERATURE VALIDATION FOR THE MML SELECTION FACTORS

Factors for the design of MML workshop	Validated literature ***Assumptions on score of certain formats/exercises used in the MML Workshop Tool (also see matrices A and B), are based on the following literature as well as institutional knowledge and assumptions by the authors'.***
Group Size	(Barkley et al., 2014; Billsberry et al., 2013; Gottdiener et al., 2015; Jennings, 2007; Kooloos et al., 2011)
Group Composition	(Jennings, 2007; Mauser et al., 2013; Vilsmaier et al., 2015; authors' experience)
BIOVOICES challenge cluster	Author's experience
Goal	(Barkley et al., 2014; Bradley and Schneider, 2004; Hewlitt and Lamoureux, 2011; Kaner, 2014; Mauser et al., 2013; Roper et al., 2017; Wolf et al., 2011)
Format	(Billsberry et al., 2013; Gottdiener et al., 2015; Greenhill and Wiebrands, 2008; Hewlitt and Lamoureux, 2011; Jungk and Müllert, 1987; Wolf et al., 2011; authors' experience)
Complexity	(Jennings, 2007; Mauser et al., 2013; Vilsmaier et al., 2015; authors' experience)
Experience level	(Barkley et al., 2014; Bradley and Schneider, 2004; Kaner, 2014; authors' experience; Roper et al., 2017)

8.2 ANNEX B: EXAMPLE QUESTIONS TO THE 4-HELIX ACTORS

Greet Overbeek, Wageningen Research

Businesses (manufacturers)

- *Have you organised yourself as interest group of manufacturers of bio-based products?*
- *Do you sell your product supply together with other bio-based manufacturers (e.g. in one shop)?*
- *Do you communicate your product supply under the umbrella of a natural/bio-based brand?*
- *Do you perceive norms, prices that disfavour bio-based products compared to fossil-based products?*
- *Do you sell your supply within mega-stores with both bio-based and fossil-based products?*
- *Do you prescribe the required bio-based resources (waste, cultivations) to suppliers?*
- *Do you have contacts with user groups?*

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- *(as some conclusion) Which of the aforementioned factors is most important for you to improve?*

Policy makers (implementation)

- *Does your organisation have a plan implemented to reduce CO2-content/contribute to the circular economy?*
- *Do you stimulate/reward submitting tenders with bio-based solutions?*
- *How do you perceive the supply of bio-based products? Did you search for/test products?*
- *How you consider the accessibility of bio-based products?*
- *Is the use of bio-based products stand-alone or part of a greater investment in your organisation?*
- *Which level takes the initiative to buy bio-based products? What is the yearly amount?*
- *(as some conclusion) Which of the aforementioned factors is most important for you to improve?*

Civil society (implementation)

- *Could you explain your focus areas to reduce CO2-content/contribute to the circular economy?*
- *Could you explain whether the focus is at non-use, re-use, degradation/recycling or renew?*
- *Does your organisation have a cascading strategy as a guide to (dis)favour some bio-based products?*
- *Do you know and communicate the personal benefits of the concerned bio-based products?*
- *Do you know and communicate the social and environmental benefits of the bio-based products?*
- *Do you perceive and value land changes due to cultivation of new bio-based resources?*
- *(as some conclusion) Which of the aforementioned factors is most important for you to improve?*

Research (implementation)

- *Do you compare the demand of innovators/niches and early adopters of bio-based products?*
- *Do you test the personal benefits of the concerned bio-based products (e.g. health, damp-open)?*
- *Do you test the social and environmental benefits of the bio-based products?*
- *Do you perceive and value land changes due to cultivation of new bio-based resources?*
- *Do you compare norms, prices that disfavour bio-based products compared to fossil-based products?*
- *Do you test bio-based brands?*
- *(as some conclusion) Which of the aforementioned factors is most important for you to improve?*

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8.3 ANNEX C: CHECK LIST FOR THE ORGANIZATION OF MML EVENTS

TABLE 4: MML EVENT CHECK LIST

PHASE	TASK	STATUS	COMMENTS
Phase 1 – Preparation	Generation of understanding on the problem at sector level (environmental, social economic) and at administrative levels (local/regional/national)		
	Framing the perceived problems/issues using the BIOVOICES challenge cluster		
	Selecting topics that respond to the identified issues and are relevant for all the quadruple helix stakeholders		
	Developing a quality programme, including BIOVOICES project objectives, specific MML event objectives (including framing of intended outcomes), key questions and an agenda		
	Conduct first scoping exercise of potential participation (e.g. group size and potential composition)		
	Select MML format and exercises/activities		
	Choose an experienced facilitator that is familiar with the topics to be discussed, format and exercises		
	Find a functional and attractive venue		
	Select delicious and sustainable caterer		
	Set-up an online registration form for the event		
Phase 2 – Implementation	Finalize list of potential participants		
	Develop and send out invitations, including to external speakers if applicable (using own network, the BIOVOICES social platform and social media)		
	Compose topical working groups using list of potential participants		
	Finalize list of participants and external speakers (if applicable)		
	Prepare all digital and non-digital items needed to hold the event (outreach, pens, posters, presentations, digital audience response features etc.)		
Phase 3 – Post meeting analysis	Conduct first sighting and analysis of workshop results		
	Draft MML workshop report (using the associated BIOVOICES template)		
	Develop facts sheet providing key messages and insights from the event (using the associated BIOVOICES		

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	template)		
	Provide post meeting content and messages to be published on the BIOVOICES Social Platform and other social media		
	Follow-up with participants by sending them some results as well as on future collaborations if applicable		

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