



Europe 2050

Preparing a Research & Innovation Roadmap for Raw Materials

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VERAM Experts Workshop

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VERAM R&I Roadmap 2050 structure: 4 Pillars and 10 Research & Innovation Areas

PILLAR 1: FOSTERING A SUSTAINABLE RAW MATERIAL SUPPLY TO FEED ALL VALUE CHAINS

- 1.1 New mining, exploration and harvesting technologies for sustainable supply
- 1.2 Mobilising an increased raw material supply from EU sources

PILLAR 2: RESOURCE EFFICIENT PROCESSING AND REFINING OF RAW MATERIALS

- 2.1 Developing resource efficient processing and refining technologies
- 2.2 Valorisation of production residues

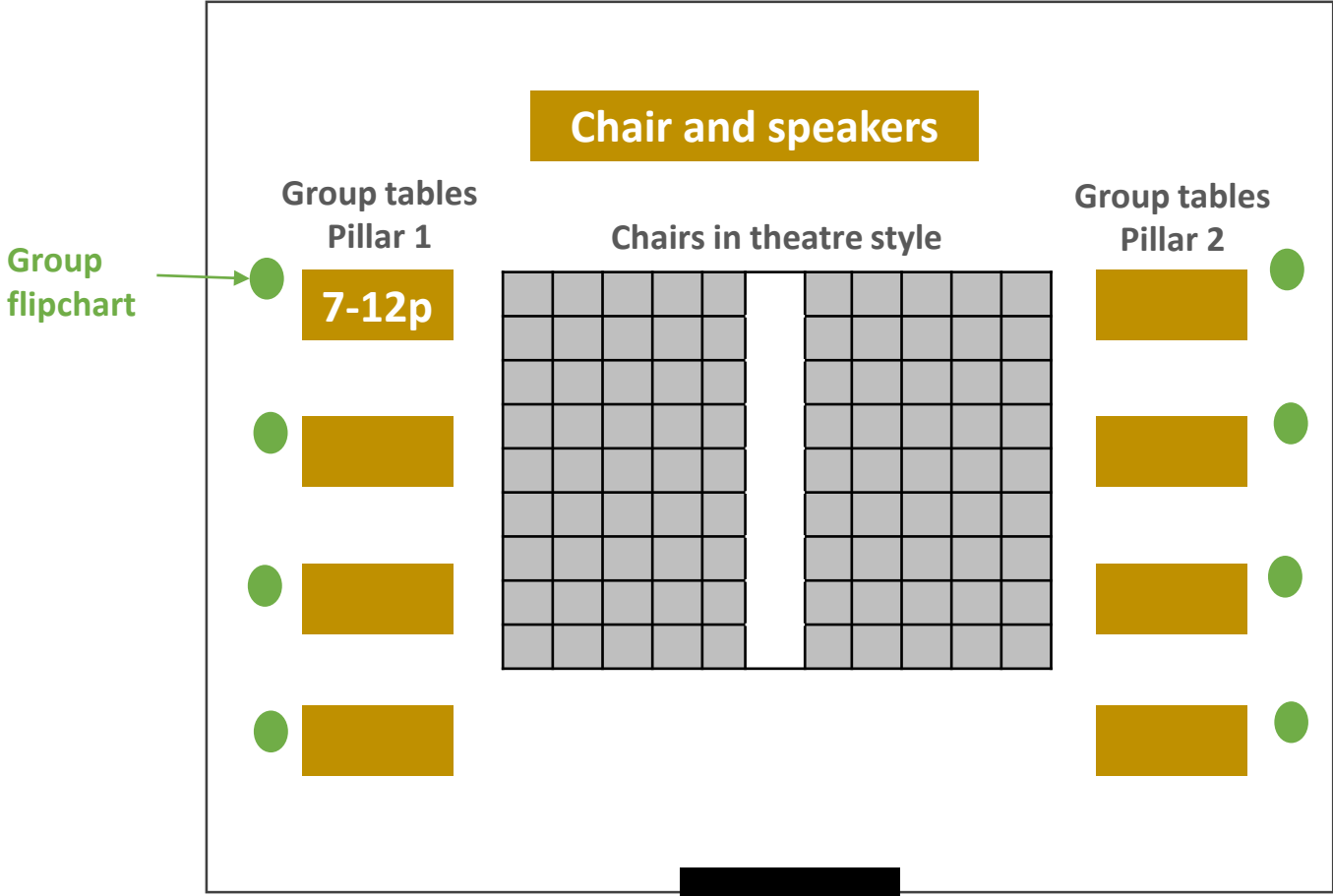
PILLAR 3: MAXIMISING MATERIAL CLOSED LOOPS BY RECYCLING OF CONSUMER PRODUCTS, BUILDINGS AND INFRASTRUCTURE

- 3.1 Increasing collection by efficient detection, sorting & separation
- 3.2 Recycling technologies for complex, durable, miniaturized and material-efficient products
- 3.3 Developing and integrating methods for assessing and optimising cost & benefit in Recycling

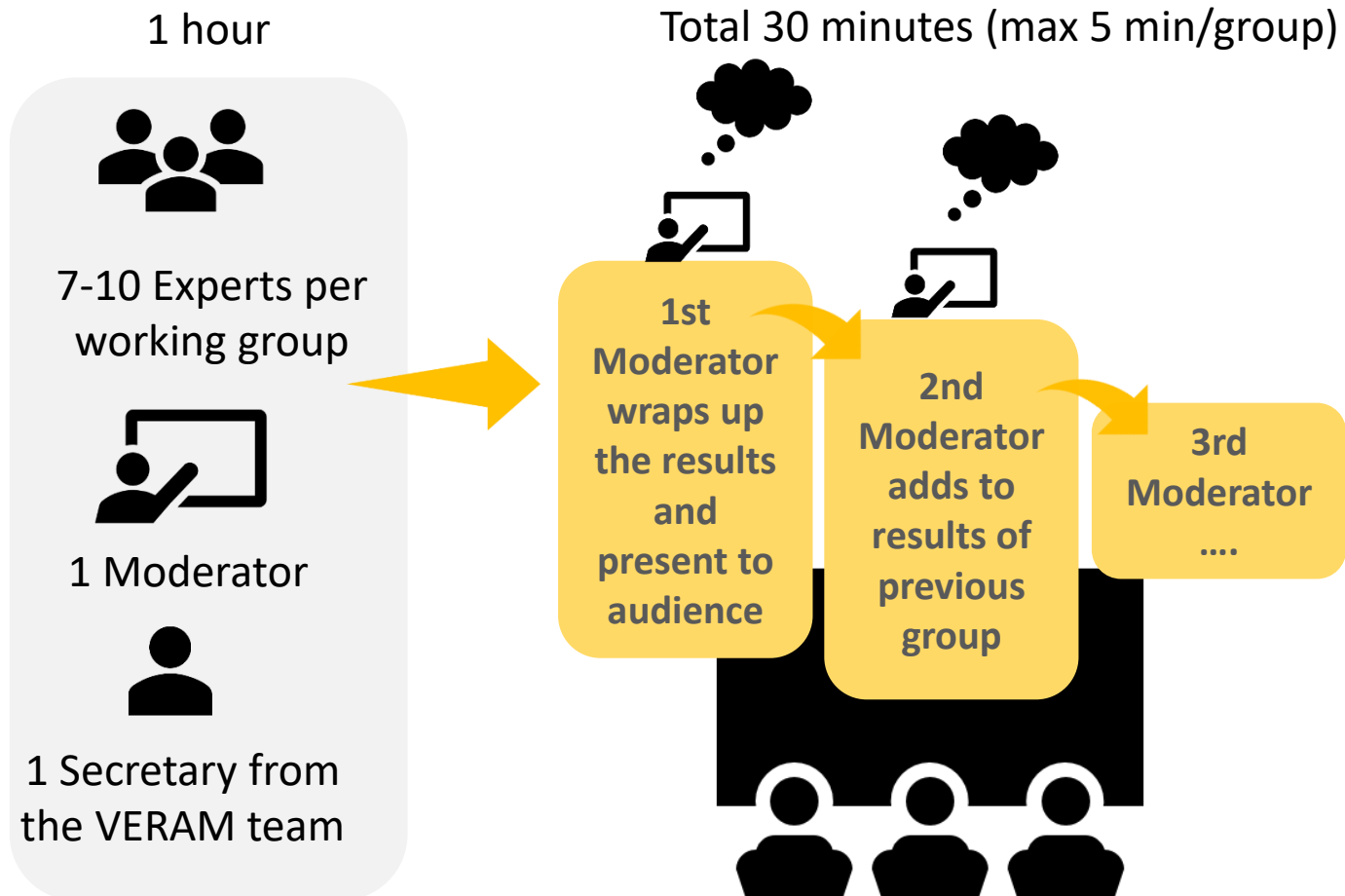
PILLAR 4: RAW MATERIALS IN NEW PRODUCTS AND APPLICATIONS

- 4.1 Substitution of critical raw materials
- 4.2 Development of new biobased products
- 4.3 Raw materials for hybrid and composite material and applications

Group work: organization of the room



Group work: Sessions and the role of moderators



The task of the Group and suggested working order

- All: Round table introduction of participants (max 5 mins)
- Moderator/Secretary: shortly describe the scope of the Pillar
- All: Based on the lists of Research & Innovation Activities, discuss the following:
 - 1) Revise and help to prioritise the R&I activities: which activities are achievable and desirable by 2030 and 2050?
 - 2) Can synergies be found and bridges built between the abiotic and biotic sectors?
 - 3) What are the remaining challenges and potential gaps?
 - 4) Suggest deletions

What do we mean with a Research & Innovation Activity?

- A succinct description of an activity that is crucial to making progress in the Research Area/Pillar
- Short, one sentence if possible
- Avoid being too specific, but be clear and try to agree on as simple words and language as possible
- Clarification: The Activity is not a "Call Topic" and not a project

Group work: activities with experts

If possible: It will help if your group place the Activities on the flipchart according to the expected time frame (2030 or 2050) and relevance (priority, needed, less relevant).



Activity description
#1.1A
"Sic transit gloria mundi"

2030	2050
Priority → #1.1A	Priority
Needed	Needed
Less relevant	Less relevant → #1.1A

After the Workshop

The VERAM team

- Process the information and comments received and prepare the next Roadmap version for public consultation

We wish to keep you as experts throughout the roadmapping process

Communication

- Follow up with feedback



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