

Introduction

- ☸ Climate change mitigation: A more efficient use of resources in the construction sector is required [4]

→ Mycelium-Bound Composites (MBCs)

+ Substrate can be made from agricultural or residual waste (e.g., rice straw, cornhusk, sawdust, and waste wood) [1, 3]

+ The production process has been calculated to emit extremely low levels of CO₂ on a laboratory scale [6]

+ Offer a wide range of application areas at various price segments (e.g., substitute for polyurethane and polystyrene) [1]

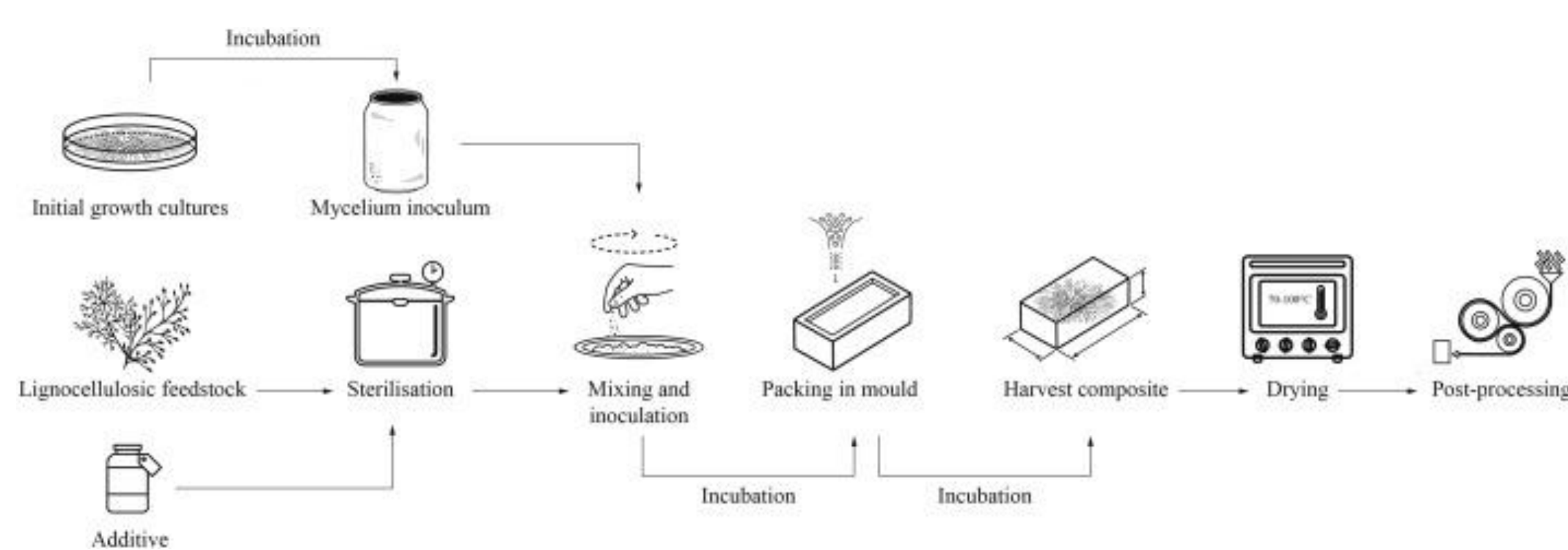


Image Source: © Elsacker et al., 2020 [1]

- ☸ Research problem: Question which MBC-based applications are most likely to gain consumer acceptance are to date underexplored due to the materials' limited market availability and lacking consumer' knowledge [3]

→ Exploratory Focus group research for solving this question

Methods

- ☸ Sample: Seven Focus Groups in different German regions with n = 56 consumers
- ☸ Material: semi-structured interview questionnaire and two different samples of MBC in its early stage of development (consisting of beach chips and the white rot fungi types *Deaddalena quercina* [A] versus *Trametes Pubescens* [B])

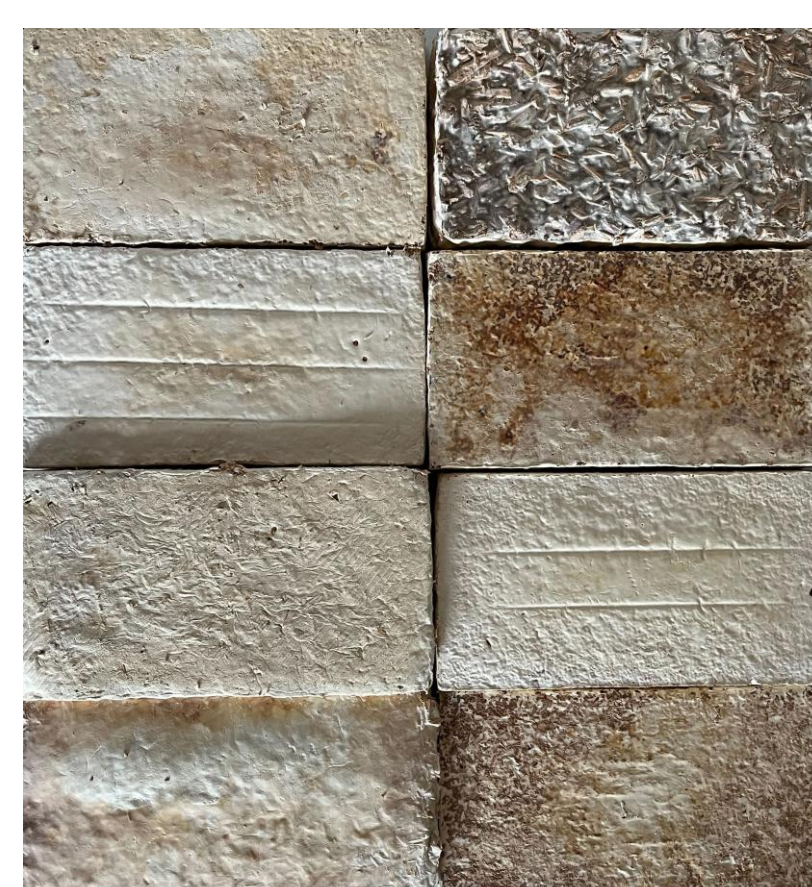
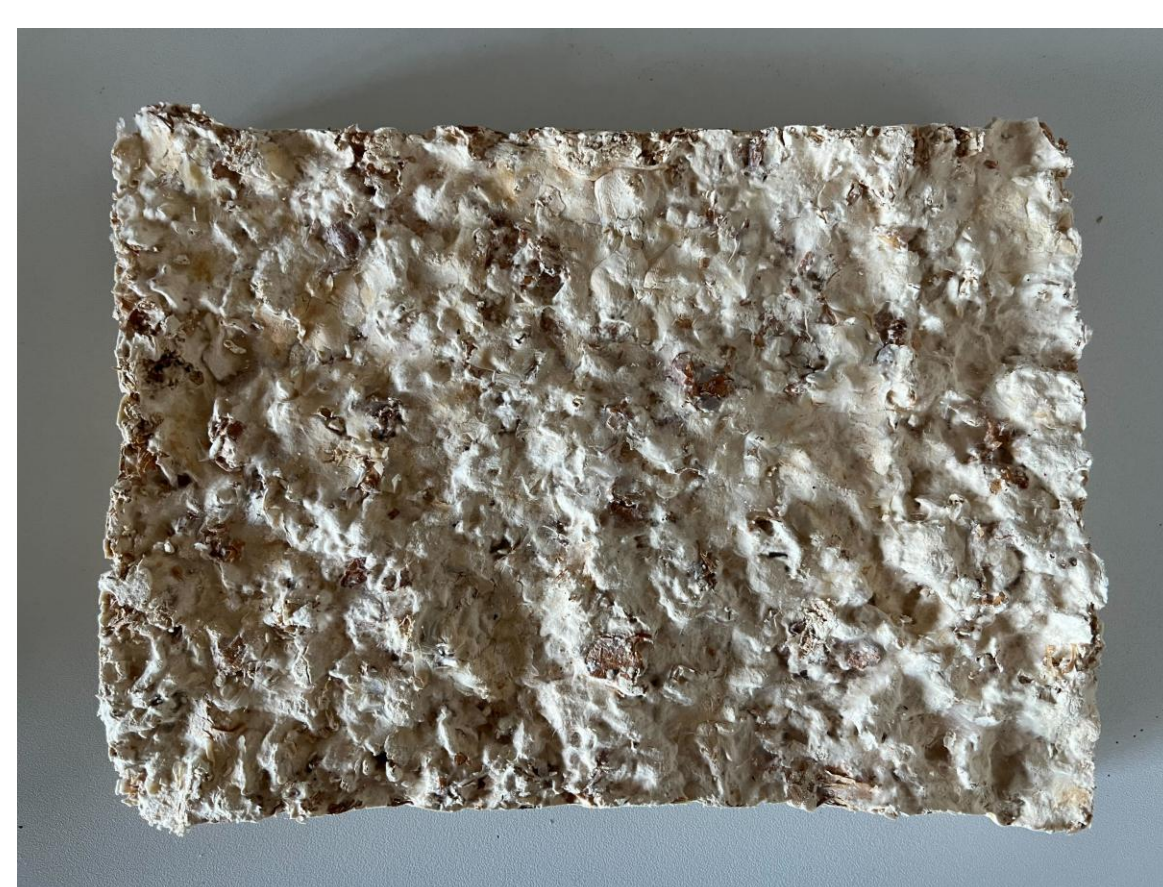
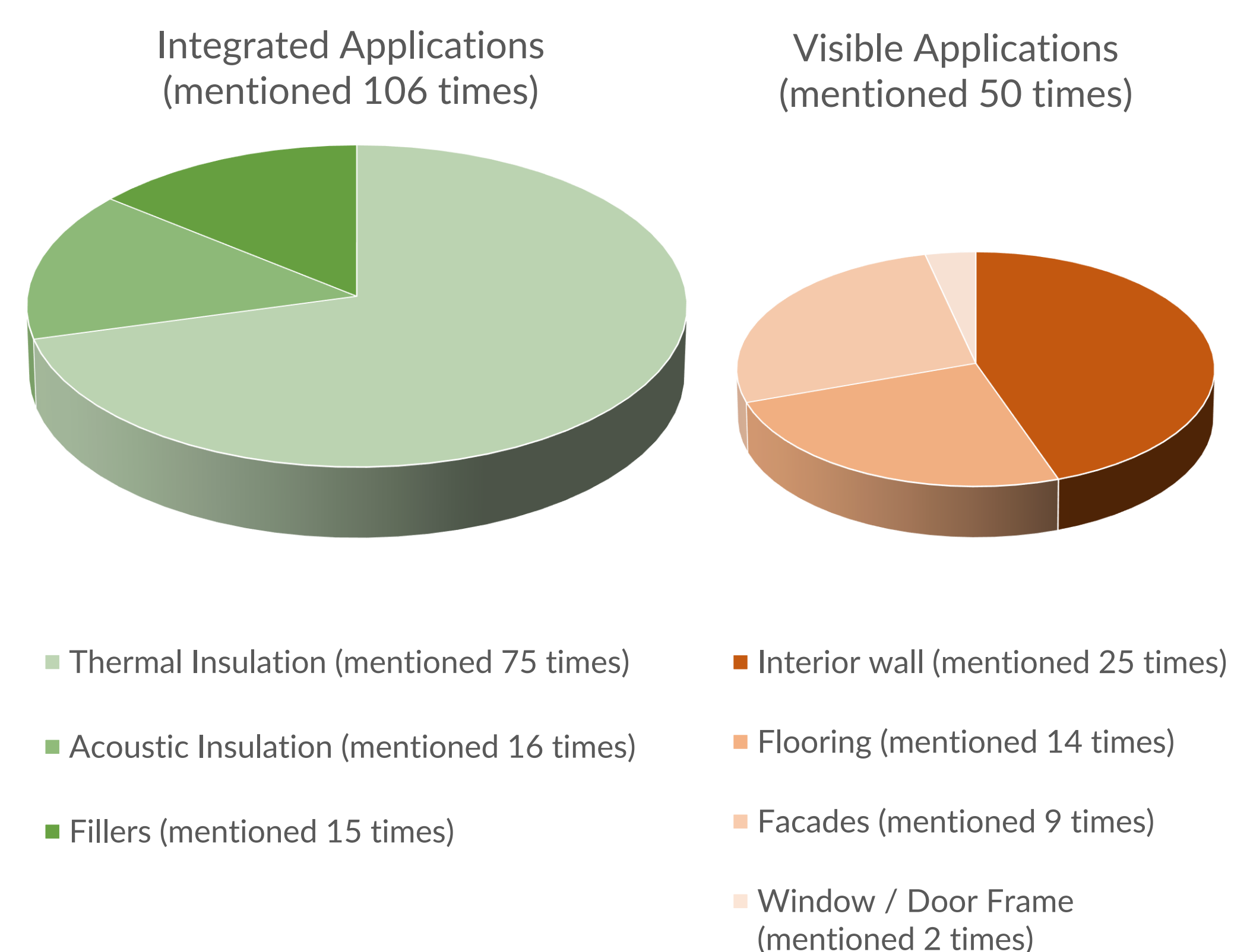


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- ☸ Focus group interviews were transcribed and analyzed qualitative-empirically using software MaxQDA [2]
- ☸ Focus on the frequencies of mentioned applications

Results

- ☸ Building products emerged as the most frequently mentioned products (followed by furniture and packaging)
- ☸ Consumers' responses in relation to building products can be segmented into integrated and visible applications



Conclusion

- ☸ Highest consumer demand for using biobased MBC as substitutes for conventional insulation material
- ☸ Integrated MBC applications are preferred by consumers over visible building products from the material
- ☸ Recommendation for product developers: terminating visual attributes of the material
- ☸ Recommendation for marketers: Communication of health benefits deriving from white-rot fungi [5] to increase the acceptability of MBC-based visible products

References

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- [4] Ness, D.A., Xing, K., 2017. Toward a Resource- Efficient Built Environment: A Literature Review and Conceptual Model. *J of Industrial Ecology* 21, 572–592.
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