

Orchestrating Sustainable User-driven Bioeconomy: Policy, Transformation and Benefits (ORBIT)



The overall purpose of ORBIT project is to orchestrate multidisciplinary research on end-user driven systemic development and promote growth of sustainable and diversified forest-based bioeconomy. Our research agenda is organized under four WPs, which focus on: WP1) Grand societal challenges and related policy drivers, WP2) Changing consumer behavior and consumer-driven business models, WP3) Bioeconomy industry transition and business networks, WP4) Orchestrating user-driven sustainable forest-based bioeconomy. As a consortium, in addition to individual WP level analysis, we have done extensive collective work. The common denominator in ORBIT is the combination of both quantitative economic and statistical econometric modelling and a range of qualitative methods to the topical problems of industry and consumer behavior and by addressing the means of policy measures. We also use various and largely participatory futures research methodology tools as a cross-cutting approach. As a result of this, an evolutionary and systemic view on possible future developmental pathways is built together with providing information on the related bottlenecks that may influence to this development.

Based on our research on WP1 and WP4, there are different characteristics across different levels of forest bioeconomy value-pyramid, particularly for a) new uses of wood in the multi-story construction; b) fiber-based packaging, c) biochemical and biorefineries. The role of regulation in accelerating transition towards sustainable bioeconomy is found to be eminent, and also acknowledging an ongoing circular economy development, that has taken a more dominant seat in comparison to bioeconomy at both European and national level (WP1). We identified various policy instruments supporting the creation of new and the destruction of old practices in the circular bioeconomy transition, enabling us to discuss the motivation of increasing the interaction in the business and consumer interphase especially for the case of multi-story wood construction, integrating to the work done at WP2 and WP3. Our results concretize the importance of seeking possibilities to also integrate new actors (e.g. consumer-citizens) into industry renewal processes: not limited to only being targets of

marketing for demand growth, but they also as actors contributing to development of innovations with prominent market opportunities.

Finally, using a participatory backcasting approach in WP4, during 2020 this consortium jointly set out to understand how stakeholders in Finland articulate core priorities for envisioned transition pathways to bioeconomy of 2060. In particular, we build on the perspective drawn from two global drivers of change: climate change and biodiversity loss that have utmost importance for the use of forests in boreal region. More specifically, our work is ongoing regarding to what extent do stakeholders' priorities differ for the three different value and whether notable differences can be identified between medium-term (2040) and long-term (2060) priorities.

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