Embedding a sustainability focus in packaging development processes

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Abstract

Despite packaging sustainability aspects often being embedded in companies' strategic aims, the structured implementation of such targets is limited at the operational level, where a product's commercial viability (strategic fit, business case feasibility, and a limitation of commercial risks) and development aspects (timing issues, material use, and supply chain efficiency) are prioritized over desired sustainability goals. Packaging acts not as an isolated entity but as a part of a symbiotic product-packaging combination, of which the development is the shared responsibility of stakeholders with different backgrounds and interests. With the development and design process of product-packaging combinations being a concatenation of decisions made by multidisciplinary teams in various organizations, the structured integration of sustainability-related considerations in product-packaging development can benefit from a synthesized focus on development teams' efforts, decision-making processes, stakeholder interaction and dynamics, and trade-offs.

This research addresses a vision on an approach to explore, understand, and analyze this field, specifically its key characteristics that act as enablers and barriers of product-packaging sustainability. This is targeted by interactively modelling the decision-making processes of product-packaging development, both within multidisciplinary development teams, companies, and product-packaging chains, by means of a collection of interactive tools. Key within these tools is the ability to address the multidisciplinarity of stakeholders, the decision-making processes within and beyond development teams, and the proposed and realized inclusion of sustainability-related considerations, all within a framework of tacit and explicit knowledge.