



Journal of Product Innovation Management Special Issue Call for Papers:

“Innovation Management for a Circular Economy”

Submission deadline July 31, 2023

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Motivation for the Special Issue

The environmental challenges that the world has been facing in the past few decades call for a change in the societal, institutional, and business behavior, as well as for adoption of new sustainable practices. This special issue aims to create new insights into how circular economy (CE) principles can be implemented by firms, both in terms of processes and strategies, and in pursuit of circular-oriented innovations and Cradle-to-Cradle™ (C2C) products. To date there has been very little research on CE implementation at the firm level, therefore generalizations on how processes within the firm should be managed for a transition toward circularity are limited. By addressing this research gap, we will contribute theoretical, practical, and policy implications on how to effectively support circular-oriented innovation in firms.

A CE represents a closed-loop system where elements and materials ideally are ongoingly renewed in endless lifecycles (Kirchherr et al., 2017). The CE largely tackles current problems of finite resources, decreased product lifetimes, and waste management. Although the CE is broadly understood as bringing transformation by addressing sustainability issues within the entire economy, scholars emphasize the importance of achieving such transformation through a bottom-up process, which must start at the organizational or firm level (Hansen & Revellio, 2020). An organization can transform either through changing existing products or through innovation. Nevertheless, there remains a challenge regarding which aspects to consider in an innovation process moving toward a CE. The already established movement toward finding environmentally friendly solutions to decreasing material resources also needs innovation. However, due to the complexity of the environmental problems, circular-oriented innovations are more challenging than other types of innovation (Hall & Vredenburg, 2003). In implementing a transition to the CE on the firm level, organizations need to collect and analyze complex data to form a holistic view of the firm’s products, production processes, and thereby develop overall solutions on a systemic level.

A healthy CE is promoted by innovations that circularly renew without being limited to using waste as a resource in recycling but that make circular design principles an integral part of the early innovation phases. This happens, for example, when organizations follow C2C product design principles and the related standard which allows for effective product and material cycles (Braungart et al., 2007). Certification bodies, such as C2C certifying offices, have an important role in building a circular innovation ecosystem (Konietzko et al., 2020). Companies with CE strategies need to engage in wider

collaboration and innovation activities at the front-end, thereby improving their value chain and inspiring institutional partners to create truly circular solutions (Hansen & Schmitt 2021; Saari et al., 2021).

The front-end innovation (FEI) phase is crucial in designing circular products, because critical decisions that impact the whole life cycle need to be made regarding the product and production processes (Koen et al., 2001). This is especially important in the case of CE or C2C products, where the scope of the product's life cycle is more far reaching than for conventional products. To ensure the viability of these products on the market, they need to fulfil the traditional project requirements of economic sustainability (Eling, Griffin, & Langerak, 2016). At the same time, developing a new product concept according to CE principles in the FEI process is challenging, thus we need diverse kinds of knowledge from different disciplines and understanding on multiple levels (Eling & Herstatt, 2017) to develop innovative solutions for a systemic change and bring technological transition to a more sustainable society (Geels, 2005). This calls for research on how general innovation processes and new product development (NPD) in firms should be changed when they start developing circular oriented products.

When market services change, customers and users must be adequately involved. This applies in principle and to the realization of closed-loop products. Regarding users' involvement, and especially their use of creative potential and the acceptance of market solutions, very little research is available to date (Amend et al., 2022). Also, we have no findings on the question whether innovative users (lead users) play a special role in developing closed-loop products and disseminating their solutions. Firms that already implement C2C and CE-solutions tend to offer products that are more sustainable than conventional products; however, externally they often look the same, and (environmentally less aware) consumers thus do not necessarily recognize them. Therefore, there is a need for research on the intersection between consumer and innovation research to find suitable solutions of (better) communicating circular product innovation, e.g., when it comes to labeling (Taufique et al., 2019).

By ensuring that consumers can extend the lifespan of products through reusing, sharing, and an easy-to-repair-approach, as well as by developing sustainable business models (SBMs) (Bocken et al., 2014), CE adoption could capitalize on the material throughout the firm. Business models based on circularity (Lüdeke-Freund et al., 2019) are perceived as contributing to reach sustainability goals (Mont et al., 2019) and to change toward service-based societies constituted by keen believers in sustainable solutions (Tukker et al., 2015). However, successfully innovating business models for circularity is often challenging at the point of practical implementation (Jaeger-Erben et al., 2021). Also, product-service systems might not always be oriented to sustainability, CE, or incorporating the two together (Kjaer et al., 2019). It is necessary to adopt a systemic view to identify best practices on how to reach a synergy between firms implementing CE principles in their business models and their customers' sustainable behavior. Thus, the real potential of reducing an environmentally negative impact by implementing CE in firms and entire ecosystems, could be unlocked.

Specific Focus of the Special Issue (Suggested Topics and Research Questions)

In this special issue, we welcome contributions to innovation research that analyze CE at the firm level from a range of perspectives (strategic, organizational, process, customer-based) and methodological approaches. Possible topics of interest include, but are not limited to, the following:

- *Measurement methods*: How can we measure whether strategies, processes, etc. are circular or not? How can we ensure that how firms implement circular strategies is environmentally and financially sustainable? How does radical innovation become manifest in new circular products?
- *Process and front-end perspective of innovation*: How can front-end and innovation processes be aligned with the CE? What changes can be expected in terms of innovation process design?
- *Methods*: Which methods and tools support the change processes toward a CE, and which (new) competencies are required in organizations to implement the outlined transformational challenges?

- *Competence level*: How can organizations develop the competencies required to ensure that closed-loop solutions are created without the external support of, e.g., consultants and certification bodies?
- *Intellectual Property Rights*: (How) do property rights and data hinder or enable circular innovation as, e.g., in relation to the development of new materials in various industries?
- *Customer and user perspective*: (How) are customers or users involved in the development of circular innovations? How transparently do companies communicate product changes toward circular solutions to customers, and how do customers, in turn, receive and accept such changes? Are there innovative users or lead users who develop independent circular solutions to problems? Do such lead users also act as entrepreneurs and offer their solutions to markets? How does customer responsibility enable circular economy strategies (take-back strategies)? How do pre-existing direct customer relationships help introduce CE solutions to the market, and how do they ensure customer adoption?
- *Business models*: Do circular solutions require new business models, and what do they typically look like for various types of products? How do companies develop and test such new business models? What circularity-related effects allow new business models for innovating companies?

Submission Deadline and Anticipated Publication Timeline

Milestone	Date
Submission deadline	July 31, 2023
Paper Development Workshop (for invited authors)	TBD
First round decisions	October 31, 2023
First revision due date	April 30, 2024
Second round decisions	July 31, 2024
Second revision due date	September 30, 2024
Final editorial decision	December 31, 2024
Anticipated publication date	Spring 2025

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Guest Editors Bios:

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