Unlocking the Potential of Digital Technologies to Support Industrial Symbiosis: A literature review.

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Abstract

Digital technologies (DTs) play a major role in supporting the transition towards a circular economy (CE). Simultaneously, industrial symbiosis (IS) is a strategy that has emerged to support the practice of developing circular economy (CE) ecosystems. It is a form of mutually beneficial relationship among cross-sector industries aiming to achieve competitive advantages based on the reuse and exchange of waste, byproducts, and materials. However, the implementation of (IS) strategy is complex and requires collaboration and the exchange of information between different stakeholders. (DTs) such as blockchain and artificial intelligence can play a detrimental role in this matter. However, there is currently very little research on using both (DTs) for industrial symbiosis. To fill this research gap, this paper explores the intersection of (IS) and (DTs) concepts. First, it provides systematic literature based on the selection of specified keywords and search parameters in the Scopus database. Finally, it proposes a research agenda for researchers and practitioners interested in this field.

Keywords

Industrial symbiosis, Digital Technology, Blockchain, Artificial Intelligence and Circular economy.

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