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## Abstract

This chapter will explore the contributions that Blockchain may offer to the societal challenges of realising sustainable development and a circular economy. More specifically, we address the question on how Blockchain can be used to develop a hybrid, transactional values-system using multiple values (e.g., electricity, mobility, assets, etc.) simultaneously between various actors. We do so by conceptually exploring the concept of circularity and sustainability in addition to typifying the characteristics of Blockchain technology. To frame this exploration, we first specify three distinct, yet coherent levels of development it: accounting, contractual, and community. Each of these levels will be illustrated by examples. Next, we confront these developmental levels of Blockchain with three levels of societal challenges, namely (i) servitisation and dematerialisation, (ii) life-cycle extension, and (iii) recycling, conversion, and substitution. Confronting Blockchain levels with the levels of societal challenges leads to a possible conceptualisation of the application of Blockchain technology in relationship to the societal challenges. In conclusion, we state that this debate is still in its infancy and that we have only superficially investigated this intriguing issue.

**Keywords:** blockchain, circularity, sustainability, societal challenges