Chapter 17
From Assembly to Reassembly:
Ikea's Circular Design for a Sustainable Future

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ABSTRACT

In a world fraught with environmental concerns, the furniture sector contributes significantly to waste generation and pollution. Knowing this critical issue, IKEA, a global leader in furniture retail, has embraced circular economy concepts to design and produce furniture that promotes durability, simplicity of disassembly, and recyclability. This case study looks at IKEA's circular design strategy and how it has the potential to improve the environmental effect of the furniture sector. The concept of sustainability stresses meeting current needs without risking future generations' ability to meet their own. In this environment, the circular economy arises as a production and consumption model aimed at eliminating waste and pollution by extending the life of resources. This case study, in a transformative analysis of sustainable business practices, reveals IKEA's detailed techniques for building a more eco-conscious and circular approach to furniture and retail. This study, based on three fundamental principles—design for longevity, design for disassembly, and design for closed-loop recycling—delves into IKEA's commitment to creating furniture of lasting quality, engineering for easy disassembly, and actively utilizing recycled materials. What distinguishes IKEA is the breadth of its circular design approach, which includes the

DOI: 10.4018/979-8-3693-2346-5.ch017

full product lifespan from conception to end-of-life management. IKEA's strategy, based on an in-depth analysis of customer behavior, ensures that its goods meet user preferences while also contributing to a circular economy. In addition to its dedication to circular design, IKEA has set lofty environmental targets, intending to create a circular business by 2030. This dedication is further proven by IKEA's significant investments in R&D, concentrating on breakthrough circular design solutions. Furthermore, IKEA aggressively interacts with suppliers and partners to integrate circular economy ideas across its supply chain, thereby multiplying the impact of its initiatives. IKEA's transition to a circular economy serves as an example for other businesses, showcasing the transformative power of circular design principles in tackling sustainability issues and building a more sustainable future for all.

THE IMPERATIVE FOR CIRCULARITY: CURRENT ENVIRONMENTAL CHALLENGES AND THEIR IMPACT

The world is reaching a turning point. There has never been a more pressing need for sustainable practices considering growing issues like resource depletion, pollution, climate change, and biodiversity loss. Global warming is exacerbated by the alarming levels of greenhouse gas emissions, which highlights the necessity of policies in line with the Sustainable Development Goals of the UN. This change is supported by the Ellen MacArthur Foundation, which emphasizes how it can improve resource use and build economic resilience to lessen reliance on outside resources and increase employment (Ellen MacArthur Foundation, 2015). The "take, make, waste" paradigm of the conventional linear economy is out of date, necessitating a critical paradigm change to the circular economy. The circular economy is becoming more and more popular, with government and corporate boardrooms adopting it as a game-changing strategy (Lewandowski, 2016). The European Union is aggressively moving away from linear systems and toward circular ones, seeing trash as a valuable resource (European Commission, 2014). The circular economy idea, which has its roots in Germany and Japan, seeks to establish a closed-loop society (Wang et al., 2004). Products in a circular economy are made to have several uses or lifetimes, which is in line with environmental objectives (Rashid et al., 2013). The need to embrace circular ideas for a resilient and sustainable future is highlighted by this worldwide trend.

The Rise of the Circular Economy and Its Potential

The circular economy has gained popularity as a sustainable substitute for the conventional linear economic model, and it has seen a significant upsurge in the last several years. Although there is not a single, succinct definition for a circular economy (CE), it can be nicely described as an economy that is purposefully built for regeneration and restoration (Kirchherr et al., 2017). The Paris Agreement aims to prevent dangerous climate change by keeping the increase in the average global temperature below 2°C over preindustrial levels and aiming to keep it below 1.5°C (United Nations 2015). Maintaining materials, components, and products at their highest usefulness and worth over the duration of their lives is the main objective. In essence, a CE embodies an economic model centered on the mindful reduction, reuse, and recycling of resources consumed in economic activities (Ellen MacArthur Foundation, 2015). To permanently change the trajectory of emissions, UNEP emphasizes the necessity of transformative policies and initiatives. From now until 2030, emissions must be rigorously reduced by 7.6% annually to meet the 1.5°C target. This indicates the urgent need for significant and ongoing efforts (UNEP 2019).