

# EXPLORING THE ROLE OF CIRCULAR ECONOMY PRINCIPLES IN THE AUTOMOTIVE INDUSTRY: A FORESIGHT ANALYSIS OF SUSTAINABLE BUSINESS MODELS FOR AUTOMAKERS

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A circular economy is a system that is regenerative by its intention and design. It shifts “end-of-life” concept towards the use of renewable energy, reduces the use of toxic chemicals, and aims for the elimination of waste through the superior design of materials, products, systems, and business models [1].



Figure 1. Circular Economy Model Diagram

The automotive industry is facing increasing pressure to become more sustainable, particularly in light of the growing concerns around climate change and resource depletion. The transition to a circular economy requires companies to evaluate their resource flows, supply chains, and business models and to question the ways in which value is created. [2]

Circular economy principles have the potential to transform the automotive industry, promoting resource efficiency, reducing waste, and driving innovation. In particular, closed-loop recycling and remanufacturing have shown promising results in reducing waste and extending product life cycles. Moreover, product-as-a-service models can reduce resource consumption by promoting access over ownership, and incentivizing manufacturers to design for durability and longevity.

## References:

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