

Six features of circular economy business models

Process model features

1 Circular value chain

Production cycles aim to close the loop across the entire value chain. They use fully renewable, recycled and/or recyclable or biodegradable materials that can be used in consecutive lifecycles to reduce costs and increase predictability and control. Products are designed efficiently, minimising material use without affecting performance. Low toxicity materials selected where possible; biological and technical materials are easily separated and recovered or renewed.

2 Recovery and collection including industrial symbiosis

The focus is on production and consumption systems in which everything that was previously considered as waste is retained for other uses through tracing and recovering products at the 'end of their life'. This feature also includes reclaiming waste and by-products from the production process, and incentivised return systems. The recycling process can include both up-cycling (into higher value) and down-cycling (into lower value).

Lifecycle extension model features

3 Durability, modularity with repair services

The focus is on increasing or extending the life of products across the whole product lifecycle. This could be by maintaining and improving products through repairs, upgrades, refurbishment, remanufacturing or remarketing. The effectiveness of this feature is impacted on through the design process with a focus on design for disassembly; modular design; material selection for durability and design for repair.

4 Personalisation, made to order and lock-in

This is about building a more personalised, longer-term relationship with the customer. By doing so, it becomes easier to close loops, recover materials/products and reduce resource use. Made-to-order production minimises material requirements and avoids potential losses from overstocking. Businesses that directly 'lock in' consumers can circumvent the need for a separate retailer, and enable greater insight into the potential demand for the product itself or, where relevant, the product refill.

Service model features

5 Product service systems & dematerialised services

The manufacturer or retailer bear the 'whole cost of ownership' with a subsequent focus on the durability, longevity and reliability of the product along with usage rates and reusability. Also, dematerialised services such as Netflix, Spotify and cloud computing play a big role. Here the business provides access to a service for the customer, rather than the product itself.

6 Collaborative/sharing economy

Digital technology is used to create new relationships and business opportunities for consumers, companies and micro-entrepreneurs to rent, share, swap or lend their idle goods. Fewer resources are required to make products that are infrequently used, and consumers have a new way to make and save money. This feature requires the platform, and the users of the platform, to function effectively.

Models referenced in the development of this matrix include those created by Accenture; Forum for the Future; WRAP and the British Standards Institute.

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