

The Circular Economy as an Economic Opportunity



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Introduction

The circular economy — finding value across a resource's entire life cycle by reusing and recirculating goods — is a powerful lever for environmental goals. It preserves nature by reducing pollution, minimizing waste and minimizing new resource extraction. Accordingly, regulators, consumers and other stakeholders are advancing circularity throughout the world.

At the same time, the circular economy is emerging as an opportunity for businesses to achieve financial goals. Businesses are increasingly looking toward the circular economy as a business opportunity and are implementing innovative business models that both reduce waste and create financial returns. Doing so takes advantage of macro trends toward circularity, advanced by regulators, consumers and other stakeholders.

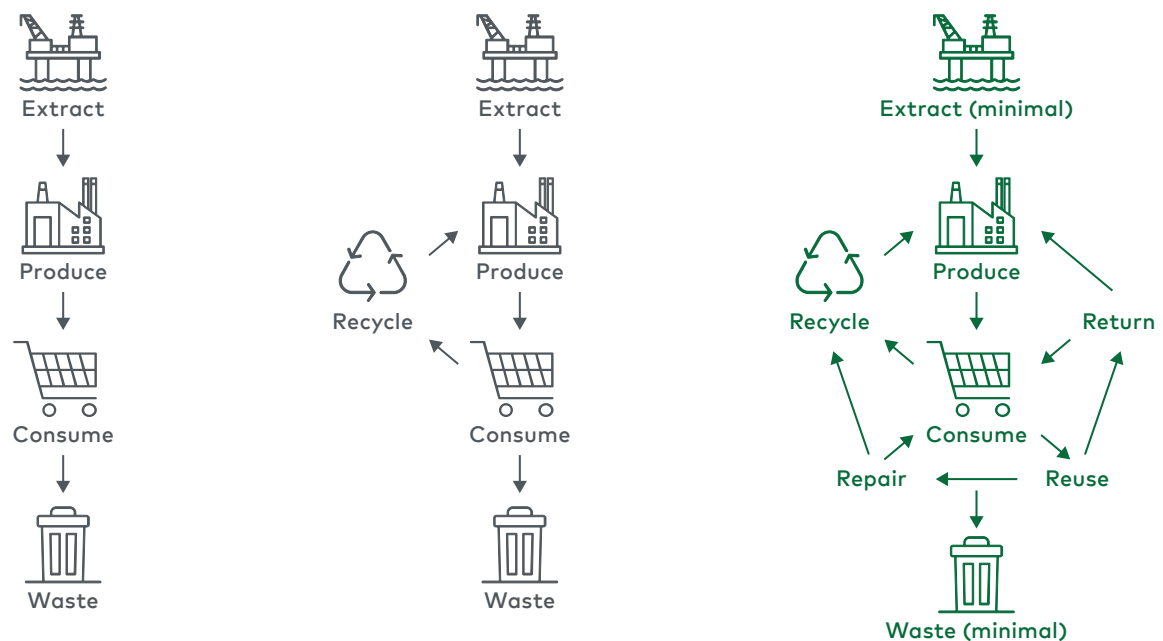
In this Special Report from L.E.K. Consulting's Sustainability Centre of Excellence, we detail how businesses are converting the transition toward circularity into economic opportunity and the challenges they have faced, and set out a step-by-step progression that businesses can use to engage with circularity themselves.

The circular economy is critical to sustainable economic growth

Transitioning to a circular economy improves resource utilization. In contrast to the linear economy, where goods are produced, consumed and disposed of at the end of their useful lives, the circular economy seeks to reduce disposal by extending resources' useful lives. Furthermore, as shown in Figure 1, while recycling is an important element, the circular economy is broader than recycling alone; it is a fundamental reorientation of the economy to minimize new resource extraction.

Figure 1

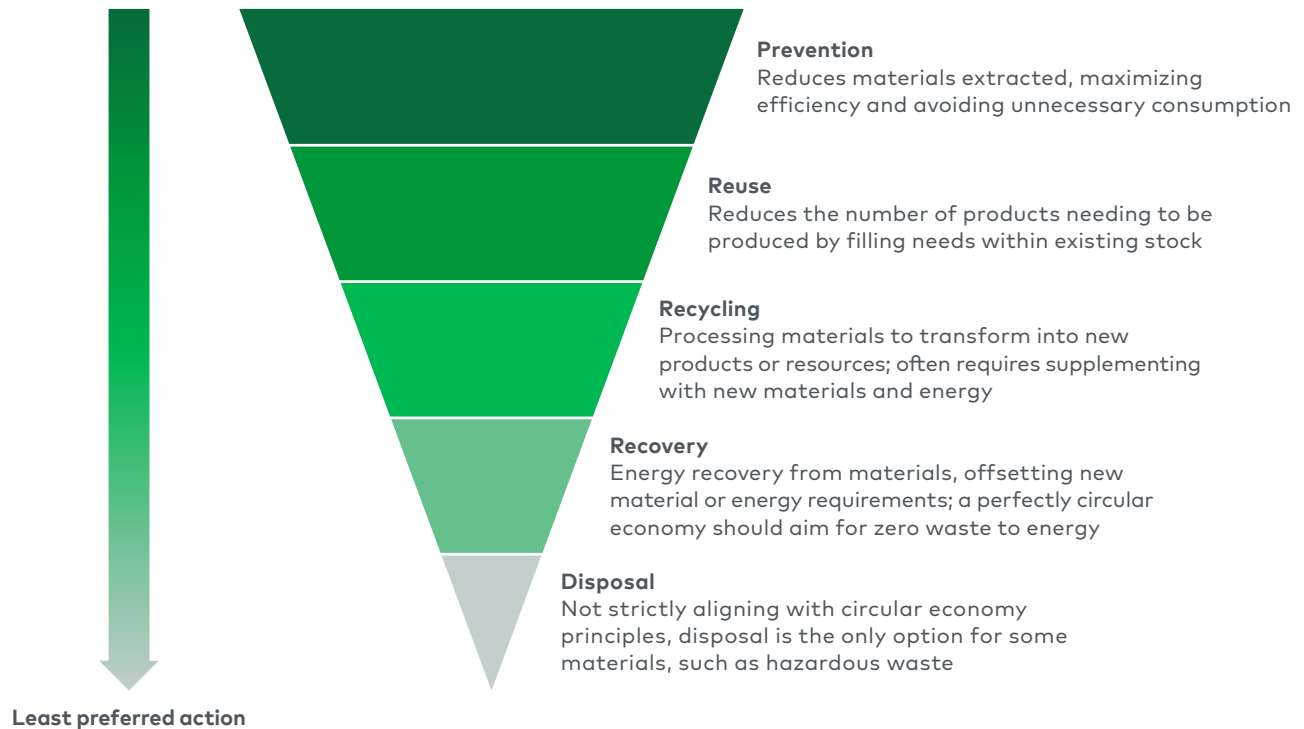
Linear, recycling and circular economy models



Source: L.E.K. Sustainability Centre of Excellence; L.E.K. research and analysis

In the circular economy, certain actions are preferred because they have greater potential to avoid new resource extraction than the others do. The waste hierarchy can be a useful model to understand these preferences (see Figure 2). Accordingly, the hierarchy involves the following principles, from most to least preferred: prevention, reuse, recycling, recovery and disposal.

Figure 2
Waste hierarchy



Source: L.E.K. Sustainability Centre of Excellence; L.E.K. research and analysis

In the waste hierarchy, the most preferred principles have the greatest ability to avoid resource extraction. So, the first two principles (prevention and reuse) are preferred to the next two principles (recycling and recovery) because they avoid the need for products to be produced at all. Disposal, the final principle, does not strictly align with a circular economy, so it is avoided as much as possible. Importantly, although recycling and recovery are less preferred than prevention and reuse, they should not be disregarded; recycling and recovery are useful for the transition and significantly contribute to reducing environmental impact. Each principle, except disposal, minimizes the need for new resource extraction, reducing pressure on the planet's long-term sustainability and enabling sustainable economic growth.

We are increasingly transitioning to a circular economy

Globally, we are steadily and increasingly shifting toward circularity. Evidence for this transition can be seen in the proportion of waste recycled or composted across Organisation for Economic Co-operation and Development (OECD) countries, which has increased on average by more than 10% from 2000 to 2020.¹ Some OECD countries have made immense progress, with the largest change occurring in Europe — recycling and composting rates increasing by about 20% on average — followed by the Asia-Pacific (APAC) region.² The Americas lag in recycling and composting rates, but we can expect progress. Just as Europe made significant progress with regulatory focus, in the Americas, regulators are increasingly concerned about circularity³ — the U.S. Environmental Protection Agency began a series of initiatives to build a circular economy last year.⁴ Further evidence for the transition is the myriad of waste prevention and reuse initiatives that not only are captured in those statistics but have also been implemented.⁵

So far, the transition has been driven by a range of pressures. We have identified four: regulatory requirements, voluntary commitments, stakeholder pressures and economic pressures (see Figure 3). Each of these four forces is gathering momentum, indicating that businesses will face increasing pressure to transition in the coming years.

Figure 3

Emerging commitments and pressures advancing the circular economy



Note: ESG=environmental, social and governance

Source: L.E.K. Sustainability Centre of Excellence; L.E.K. research and analysis

First, regulatory pressure is building. Chatham House's circular economy policy map and waste dashboard indicates the number of countries with national circular economy policies more than doubling from 2010 to 2020.⁶ Moreover, there is movement at the global level toward circularity: Negotiations have started for a new global treaty to end plastic pollution and are expected to be finalized by the end of 2024.⁷ These regulatory policies have implications for companies — for example, in June 2023, the Australian federal and state governments passed mandatory standards for recycled content in plastic.⁸ Furthermore, new disclosures will provide public accountability; the environmental disclosure system of the Carbon Disclosure Project has now been extended to plastic pollution.⁹

Second, voluntary commitments continue to gain momentum. One example is the Ellen MacArthur Foundation and UN Environment Program's "Global Commitment 2022," which has more than 500 members, representing more than 20% of all plastics produced.¹⁰ Each member aligns with ambitious 2025 targets to tackle plastic waste.

Third is stakeholder pressures. Various stakeholders are increasing their commitment to circularity. For example, financiers are increasingly interested in circularity: BlackRock has launched a circular economy fund,¹¹ and BNP Paribas started a circular economy-related exchange-traded fund (ETF) in 2019.¹²

Finally, economic pressures are also increasing. Regulators looking to disincentivize waste have often used economic pressure in conjunction with other regulatory requirements. For example, Australia increased landfill gate fees to improve circularity.¹³ And the United Kingdom's recent extended producer responsibility laws, which make producers responsible for the costs of dealing with packaging waste, were implemented to encourage producers to improve recyclability and reduce the amount of packaging on the market.¹⁴

Although these pressures encourage businesses to transition toward circularity, they can also be viewed as an opportunity. In fact, some businesses are driving circularity forward themselves, capitalizing on its economic and environmental benefits.

The circular economy as a business opportunity

While the circular economy can bring significant opportunity for businesses, sectors will be affected differently by the transition. A range of factors will determine the transition's effects, including regulatory focus, the monetizability of waste streams and the technological possibility of valuable material extraction from waste streams. The following case studies spotlight major businesses in the manufacturing and consumer goods sectors that have set up circularity strategies and initiatives in recent years:

Renault has set up a new entity, "The Future Is Neutral," with the goal of embedding circularity throughout the automotive value chain. In the manufacturing sector, recirculating technical goods is often possible, so Renault's new entity extracts and uses resources from discarded cars while extending the life of already-created cars.

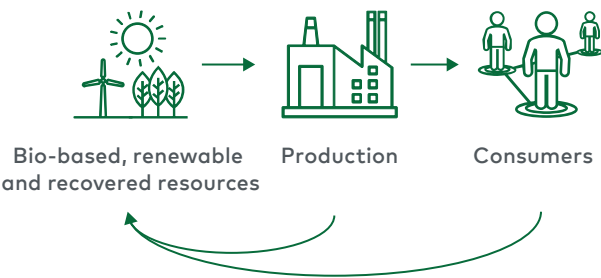
Recirculating technical goods often has financial benefits. In 2021, the entity had revenues of 750 million euros, and it has ambitious goals of 2.3 billion euros in revenue by 2030. Not only does the entity have ambitious revenue goals, but the financial benefits of circularity will also allow the new entity to have higher operating margins, targeting 10% by 2030 — more than double Renault Group's average operating margin.

Packaging is the subject of increasing regulatory focus, with particular effects in the consumer sector. In response, AB InBev, the multinational Belgian beverage company, aims to have 100% of its products in returnable or majority-recycled packaging by 2025. The company is tracking well toward its goal, reaching nearly 80% in returnable or majority-recycled packaging in FY2022. It has taken a range of actions to achieve its target, including technological innovation through a dedicated accelerator program and the strengthening of local recycling programs.

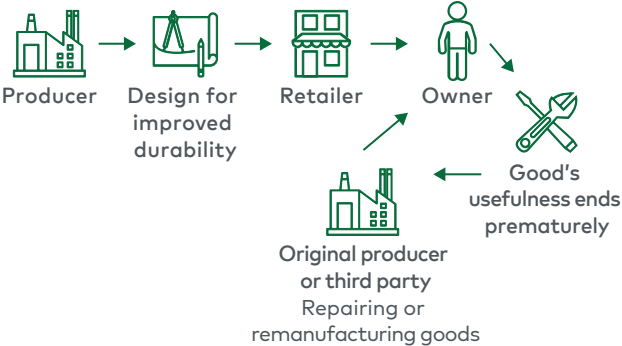
Businesses seeking to capitalize on economic opportunities have shifted their focus toward circularity. Below, we highlight four business models that are emerging as alternative ways for businesses to marry their environmental and economic goals (see Figure 4). We will then take a closer look at each of those models in turn.

Figure 4
Circular economy business models

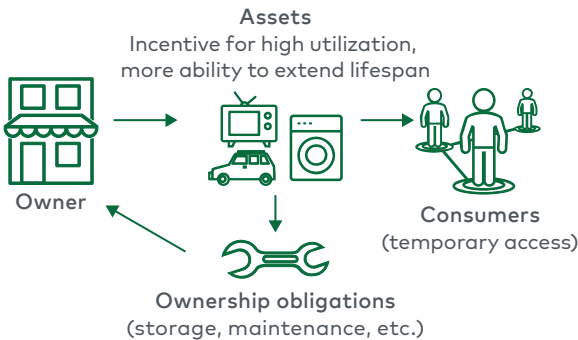
Circular supply model



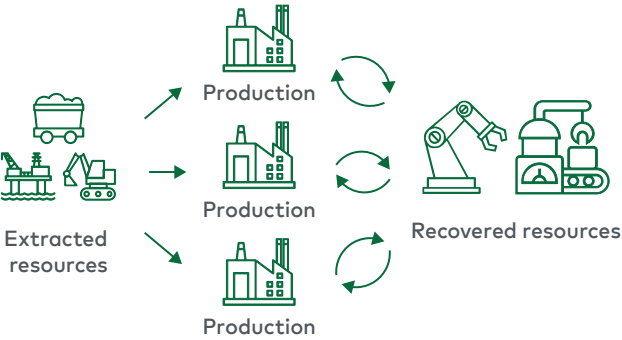
Product life extension model



Product service systems model



Resource recovery model

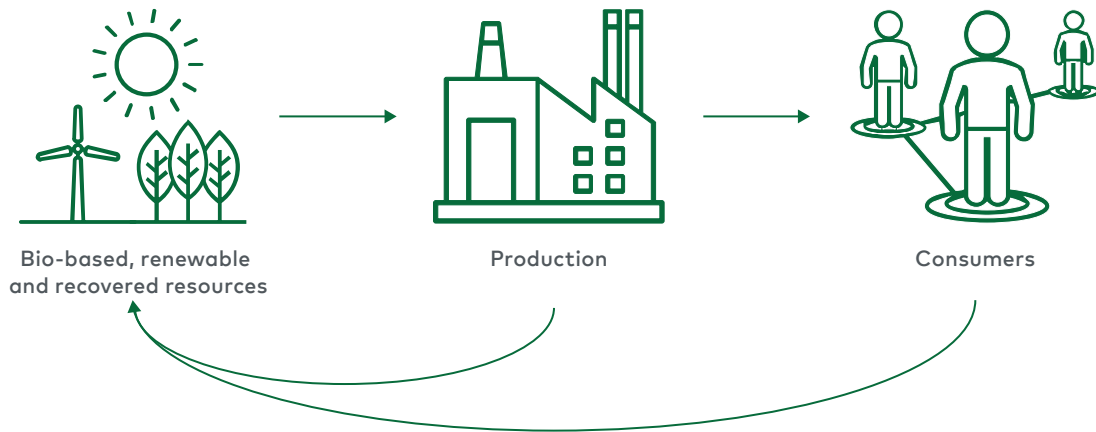


Source: OECD: Business Models for the Circular Economy – Opportunities and Challenges for Policy; Protix; L.E.K. research and analysis

The circular supply model

Traditional material inputs are replaced with bio-based, renewable or recovered materials (see Figure 5).

Figure 5
Circular supply model



Source: OECD: Business Models for the Circular Economy – Opportunities and Challenges for Policy; Protix; L.E.K. research and analysis

Circularity impact: Using bio-based, renewable or recovered materials minimizes new resource extraction by offsetting material requirements and prolonging extracted materials' useful lives.

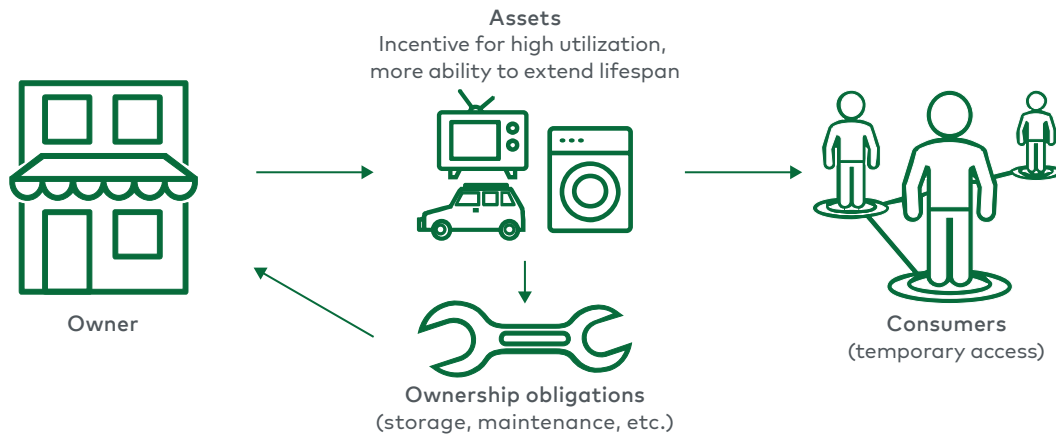
Economic value proposition: Swapping materials can offset supply chain risk, reduce material costs in some cases and act as a competitive differentiator to drive customer loyalty.

Example: In South America, Coca-Cola introduced "universal bottles," which are bottles that can be reused across a range of brands. This program reduced the production of plastic bottles by 1.8 billion in Brazil in 2019 and Coca-Cola found that customers using them had a 15% higher likelihood of repurchase.¹⁵

Product service systems model

Ownership of the product remains with the service provider. Consumers pay for temporary access to the product rather than buying it outright (see Figure 6).

Figure 6
Product service systems model



Source: OECD: Business Models for the Circular Economy – Opportunities and Challenges for Policy; Protix; L.E.K. research and analysis

Circularity impact: Packaging a product alongside a service creates incentives to improve asset utilization, durability and efficient service delivery.

Economic value proposition: Product service systems allow businesses to reach customers who may not traditionally be served because they do not want to purchase a good outright.

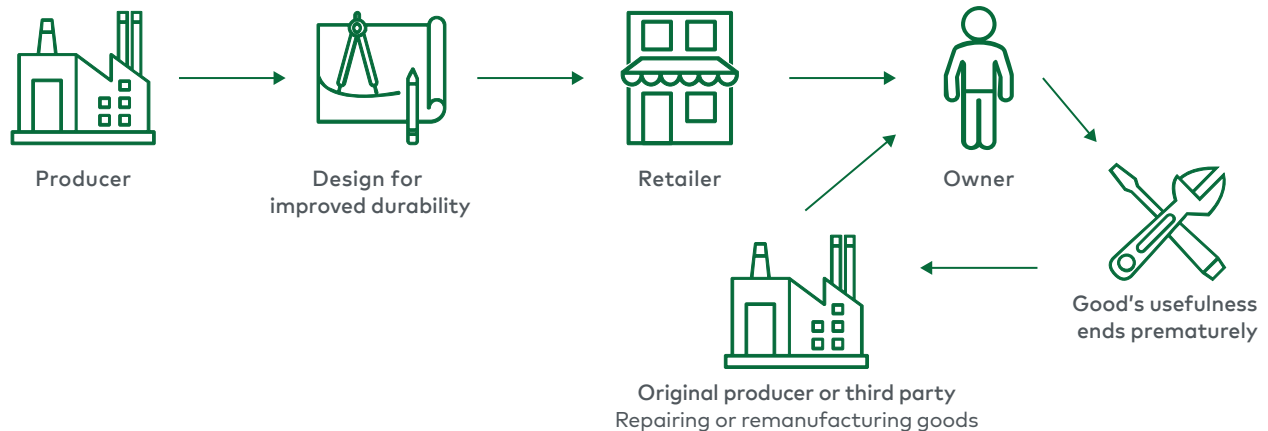
Example: Carsharing services improve cars' utilization by sharing access among consumers. The improved utilization per vehicle means that fewer vehicles need to be produced. Some estimates suggest that one carsharing vehicle takes 10 privately owned vehicles off the road.¹⁶

Product life extension model

This model involves either design or material changes that improve durability or create a second-use phase by repairing, refurbishing or remanufacturing the good to extend its usefulness (see Figure 7).

Figure 7

Product life extension model



Source: OECD: Business Models for the Circular Economy – Opportunities and Challenges for Policy; Protix; L.E.K. research and analysis

Circularity impact: The product life extension model extends a product's utilization by keeping it in the economy for longer, avoiding the need for new products to be produced.

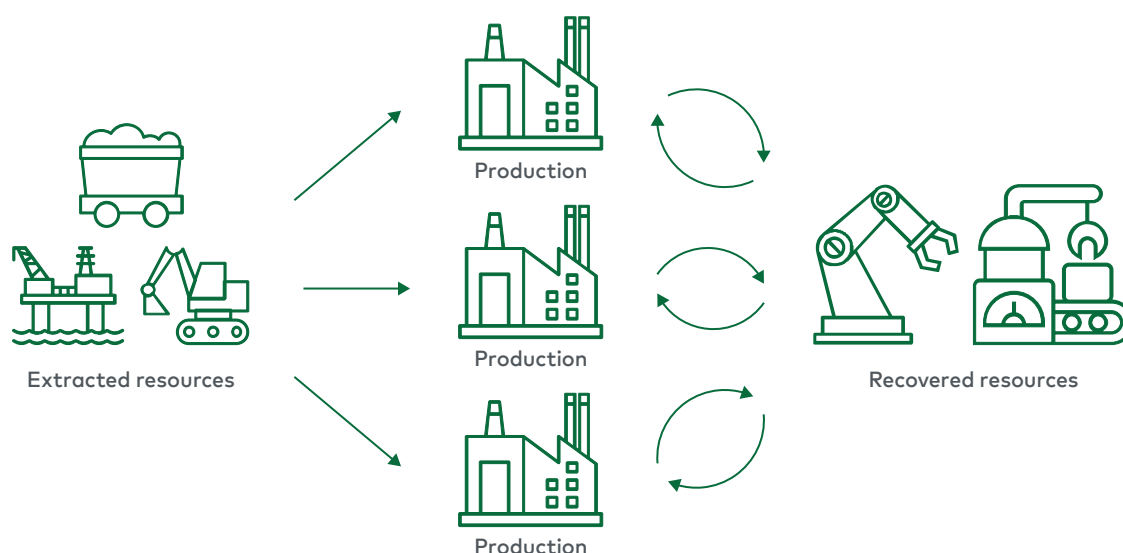
Economic value proposition: Improved durability or second-use lives can be powerful product differentiators.

Example: Caterpillar, the construction equipment manufacturer, provides customers with remanufactured goods at a lower cost than new goods. But the remanufactured products also cost less to produce, improving profitability, and operate as a sales and revenue driver.¹⁷

Resource recovery model

This model comprises waste-to-value initiatives that seek to divert waste streams by extracting materials from them to be reused in other goods (see Figure 8).

Figure 8
Resource recovery model



Source: OECD: Business Models for the Circular Economy – Opportunities and Challenges for Policy; Protix; L.E.K. research and analysis

Circularity impact: Resource recovery keeps resources in the economy for longer because recovered resources are sold as commodities or inputs into other goods, offsetting new material requirements.

Economic value proposition: Resource recovery transforms the cost of disposal into a new revenue stream, or an input into production, which offsets material costs.

Example: Quantafuel, a waste-to-value business, uses chemical recycling to convert plastic waste into new plastic production, thus offsetting virgin plastic production. Quantafuel has plants across Northern Europe, with plans to expand globally.¹⁸

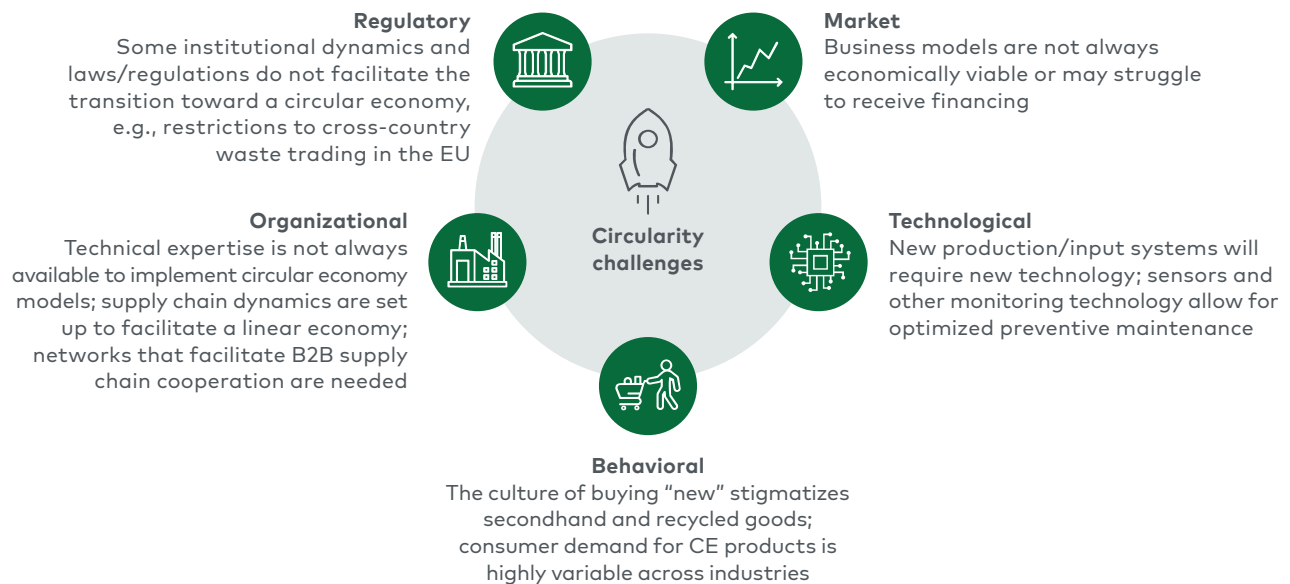
Where to start

To take advantage of the financial and environmental benefits of circularity, as the business models highlighted above do, businesses should start developing their circularity strategy now. By starting now, leaders can shape the operating context to benefit the environment and create competitive advantage for their businesses. Furthermore, leaders will have first mover advantage, with the opportunity to proactively enter markets, rather than being forced into a free-for-all between competitors. However, the other side of the coin also applies. Businesses that delay may one day be forced to act and find themselves unprepared.

Transitioning toward circularity is a complex undertaking, and businesses will need to contend with a range of challenges. Five of the most significant are regulatory, organizational, behavioral, market and technological. Figure 9 illustrates and expands on them.

Figure 9

Five significant challenges in transitioning to a circular economy



Note: EU=European Union; B2B=business to business; CE=circular economy

Source: L.E.K. Sustainability Centre of Excellence; L.E.K. research and analysis

To navigate circularity's challenges, a business will need a circularity strategy. A circular economy strategy will need to consider each business's unique goals and circumstances. However, while strategic direction is important, the movement toward circularity can be progressive. Transitioning toward circularity will likely require three steps:

1. First, the key building block is developing an understanding of current waste upstream, within the business and downstream.
2. Second, after the current levels of waste have been understood, small-scale initiatives to prevent and repurpose waste can be implemented to introduce and orient the organization toward circularity.
3. Finally, as momentum toward circularity builds, larger-scale repositioning of the business to operate in a circular economy can be implemented.

At each stage of progression toward circularity, and depending on their unique goals and context, businesses will probably find themselves with several key questions. The questions will likely change as businesses make progress; we have highlighted some key dimensions for businesses to consider when they work toward circularity:

1. **Catalog:** How much and what types of waste are we currently producing?
2. **Implication:** How will relevant regulatory commitments, voluntary commitments, stakeholder pressures and economic pressures impact our business?
3. **Prevention:** How can we redesign our products/processes to prevent or reduce waste?
4. **Value extraction:** What value can be extracted from the waste produced, or how can it be reused in our processes?
5. **Value chain engagement:** How can we engage with our value chain to form partnerships that create resource loops?

These questions will be increasingly important for businesses to answer as the circular economy continues to rise on both corporate and stakeholders' agendas. Businesses that start now can take the opportunity to thoughtfully craft a circular economy strategy, taking full advantage of the financial upside. At the same time, circularity provides businesses with the opportunity to marry those financial goals with environmental benefit.

For more information on the circular economy, please visit [L.E.K.'s Sustainability Centre of Excellence](#) or contact [Rebecca Scottorn](#), [Clayton Souza](#), [Alastair Phillips](#) or [Amy Darvill](#).

Endnotes

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