

# Building a circular supply chain

**The circular economy:**  
a framework for resilient  
supply chains

**Supply chain disruptions and environmental pressures are showing that a supply chain reconfiguration is urgently needed.**

The circular economy offers an opportunity for supply chain professionals to carry out such a redesign and address their core priorities:



#### **Increasing resilience**

*BBB Industries* aims to decouple the electrification of the economy from the extraction of increasingly scarce critical raw materials by extending the life of EV batteries through TerrePower.



#### **Reducing costs**

Leveraging *Rheaply's* re-commerce platform, RUSH University Medical Center saved over USD 244,000 by reusing just over 1,000 pieces of workplace and office furniture.



#### **Reducing GHG emissions**

In 2022, *Volvo Cars* saved over 4,800 tonnes of CO<sub>2</sub> by remanufacturing over 33,000 parts.

**Supply chain leaders:**  
critical players in the circular  
economy transition

**Supply chain leaders are fundamental in the circular economy transition as they are responsible for the sourcing, movement, and transformation of the 100 billion tonnes of materials that enter the global economy each year.**

Traditional supply chains have been built to support a linear 'take-make-waste' model. To create a resilient system that is good for business, people, and the environment, a shift is needed to a circular economy that:

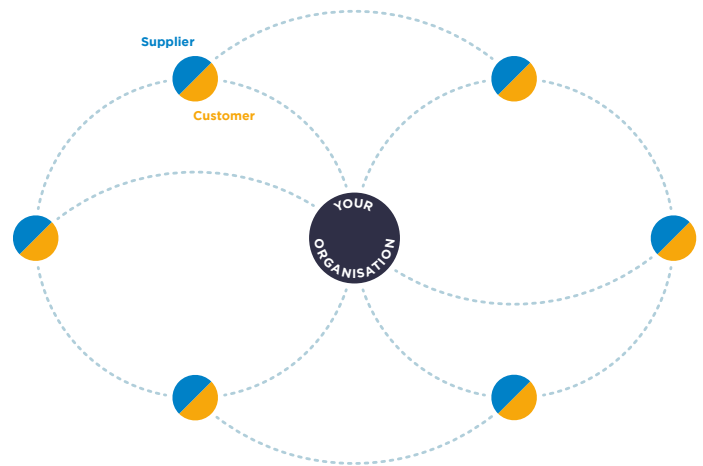
- **Eliminates waste and pollution**
- **Circulates products and materials**
- **Regenerates nature**

Such a paradigm shift has implications for all aspects of business, including the way supply chains are designed and managed.

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# A circular supply chain...

# 1.



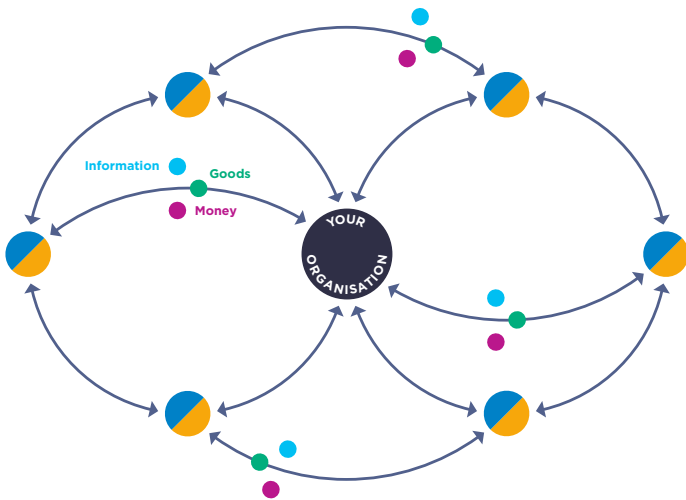
**Consists of a distributed and interconnected network of partners...**

Leveraging a mix of local and global partnerships, where customers or industry peers often become suppliers of circular inputs or partners for circular processes. This allows for cost and environmental benefits as well as greater resilience and strategic autonomy.

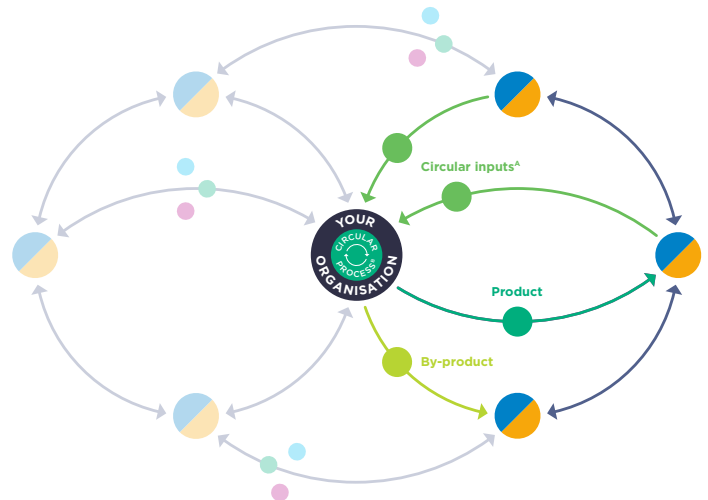
## EXAMPLE

SOJO, a London-based fashion-tech platform, provides local door-to-door repair and alterations services via their in-house tailoring studio.

2.



3.



## Requires multidirectional flows of information, goods, and money...

Exchanging data between partners to facilitate access to crucial information like the location, material composition, or disassembly options of an item – enabling the effective circulation of products and materials at their highest value.

### EXAMPLE

*HP* and *Sinctronics* partnered to create a reverse logistics system for electronics in Brazil that leveraged cross-company information flows to ensure up-to-date knowledge on disassembly reached all relevant stakeholders.

## Delivers and captures value using circular inputs<sup>A</sup> and processes<sup>B</sup>...

By generating value for customers through keeping products and materials in use at their highest value, as well as valorising unavoidable process by-products. This can help displace the need for new extraction and production, and avoid the associated impacts of these activities on the environment.

### EXAMPLE

*Ahrend*, a Dutch furniture manufacturer, leverages design and supply chain capabilities to disassemble, repair and upgrade items – so that products can have multiple lives.

<sup>A</sup> secondary (i.e. non-virgin) and/or regeneratively grown products and materials that can be circulated within the economy or safely returned to nature.

<sup>B</sup> actions done to inputs to allow their (re)introduction to the value chain and the retention of the maximum amount of their embedded value (i.e. maintenance, repair, refurbishing, remanufacturing, and, as a last resort, recycling).

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# Nine focus areas for supply chain leaders to accelerate the transition to a circular supply chain

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## Areas supply chain teams can directly address

### 1. People & Structure

**Develop organisational structures** and equip supply chain teams to excel in a circular supply chain

### 2. Network design

**Optimise network designs** for cost-effective reverse flows that prioritise the maximum retention of the value embedded in products and materials

### 3. Supplier engagement

**Engage, support, and incentivise suppliers** to adopt circular economy practices

### 4. Data & Quality

**Deploy technological solutions**, or adapt existing ones, to facilitate circular flows of information, materials, and products

### 5. Metrics & Performance management

**Adjust performance measurement** and align employee incentives to support the shift to circular supply chains

## Areas requiring collaboration with other teams

### 6. Business models & Product design

**Influence business model and product design** to ensure the efficient and effective flow of products and materials in a circular supply chain

### 7. Customer engagement

**Engage with customers** beyond the point of sale and leverage them as critical partners in the circular supply chain

### 8. Financial resources

**Mobilise investment** for the deployment of circular supply chain initiatives and infrastructure

### 9. Policy & Legislation

**Inform legislation** affecting the movement and exchange of circular materials and products within and across borders



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white paper