

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 CO₂ 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.

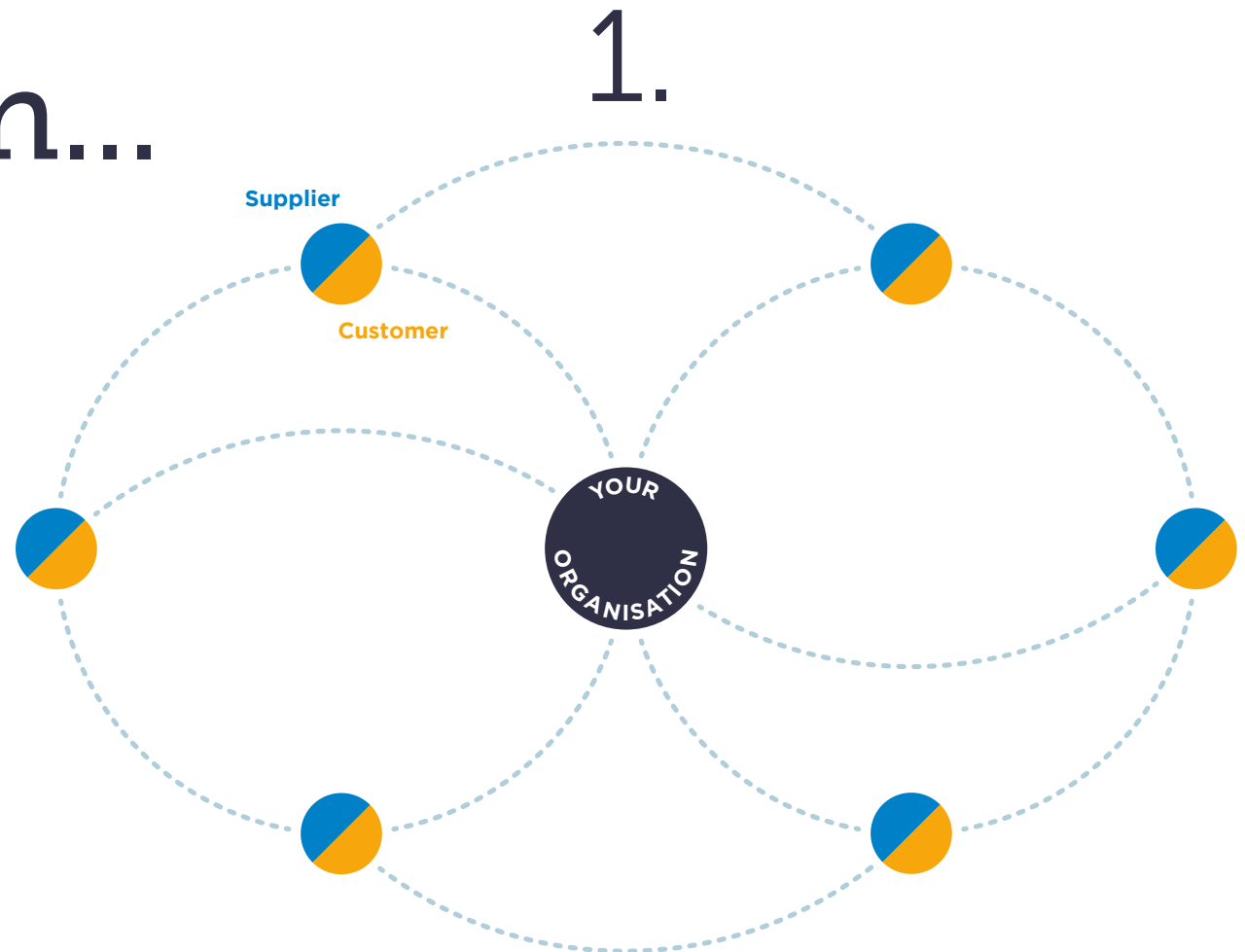
A circular supply chain...

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 in delivering 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.

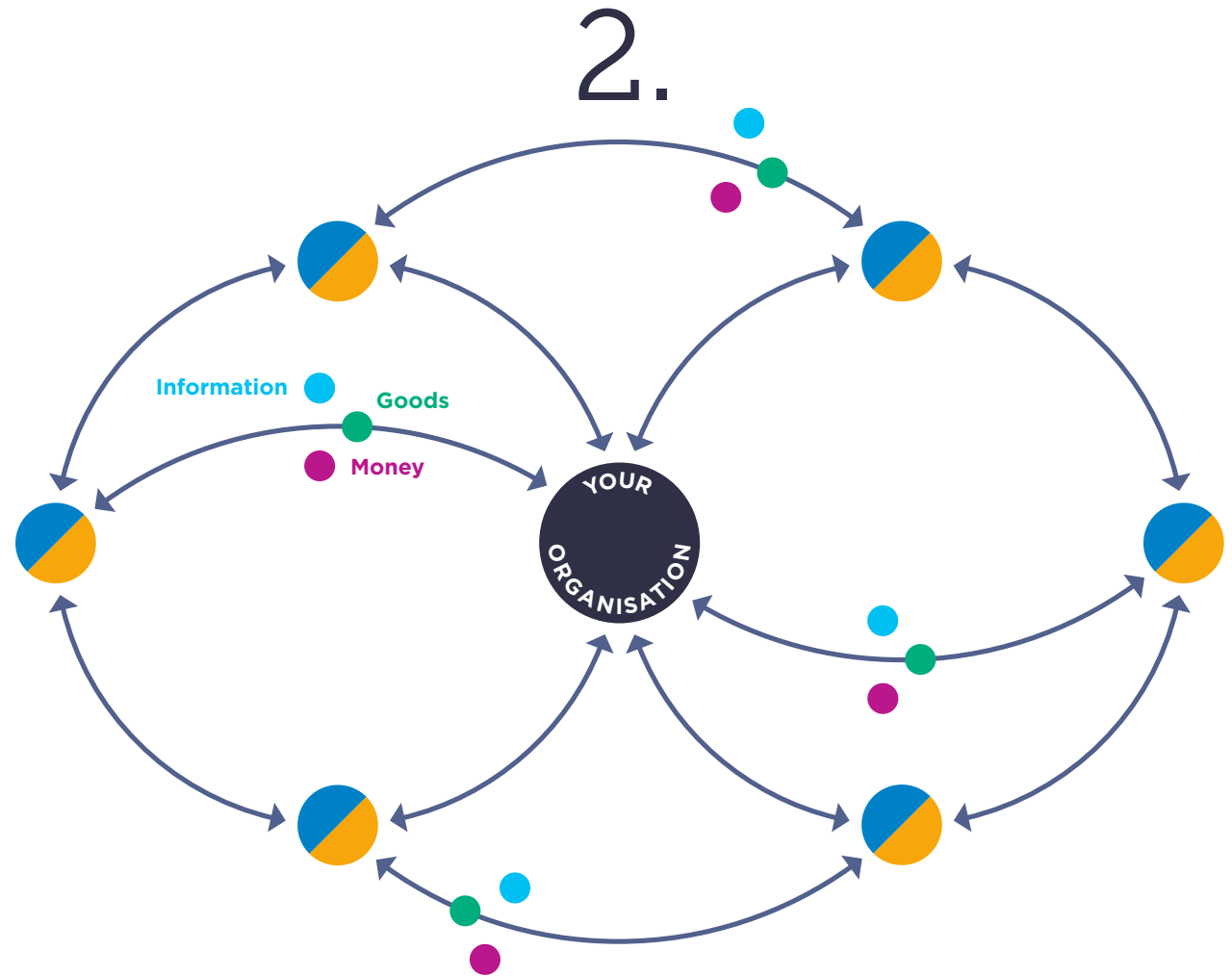


Requires multidirectional flows of information, goods, and money...

To facilitate access across partners 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.

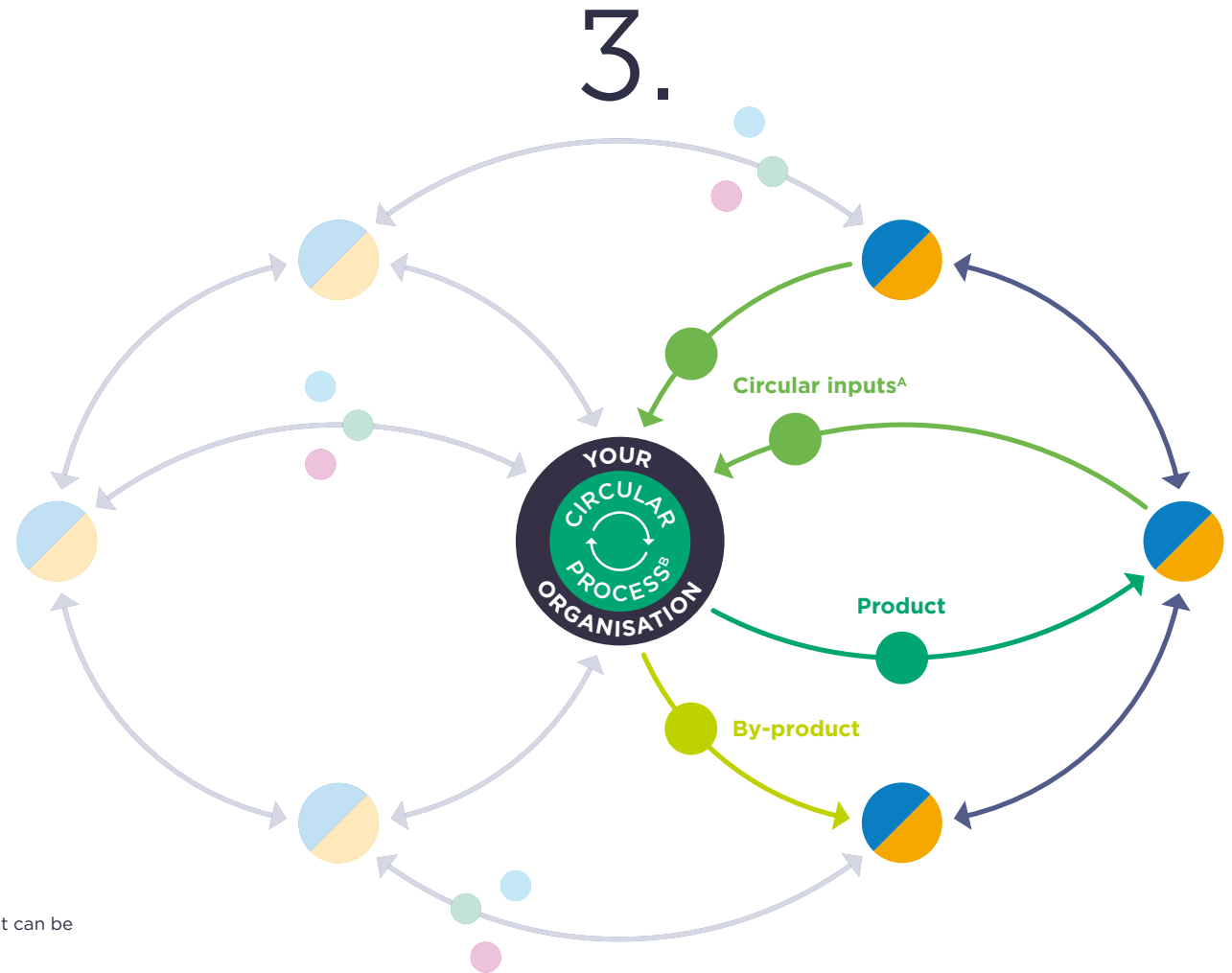


Delivers and captures value using circular inputs^A and processes^B...

Generating customer value through keeping products and materials in use, 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.



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

^B 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).

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



Please scan to read the full white paper

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