Guide to the Circular Economy

The Role of Procurement

CIPS Switzerland
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The World Business Council for Sustainable Development is a global, CEO-led organization of around 200 forward thinking businesses working together to accelerate the transition to a sustainable world.

Our **mission** is to accelerate the transition to a sustainable world by making more sustainable business more successful.

Our **vision** is to create a world where more than 9 billion people are all living well and within the boundaries of our planet, by 2050.

- 200 member companies
- US$8.5 trillion in combined revenues
- 19 million employees
- 60+ Global Network partners

**Making more sustainable business more successful**
WBCSD’s Approach

We target the realization of the Sustainable Development Goals (SDGs) through five work programs to achieve systems transformation.

As global business faces new and complex challenges and opportunities, our science-based approach and targeted business solutions aim to scale up business impact.
Become ‘the’ global business voice for circular economy through partnerships, platforms and policy recommendations to accelerate action.

Build a critical mass of engagement within and across businesses to move the circular economy from the early adopters to the early majority.

Implement a program that penetrates into the heart of business leadership and practice.
Factor10 Members

accenture

Apple

ARCADIS

ArcelorMittal

BASF

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Dow

DSM

Enel

ExxonMobil

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Navigant

Novartis

Philips

PwC

Rabobank

Renault Nissan Mitsubishi

Rubicon

Sabic

Saint-Gobain

SCG

Solvay

StoraEnso

Veolia

Yara

Yokogawa
Everyone has a role to play in moving towards a circular economy.

Depending on your role within your company, there are various circular practices that you can implement.

The Practitioner Guide is designed to help you accelerate your transition towards the circular economy.
Overview

- 125+ definitions
- 100+ resources & tools
- 75+ strategies
- 30+ examples
- 8 business cases
- 6 functions
The Practitioner Guide to the Circular Economy has received funding from the European Institute of Innovation and Technology (EIT). This body of the European Union receives support from the European Union’s Horizon 2020 research and innovation program.

The companies indicated above contributed to the development and/or content of the Practitioner Guide. Their input is greatly appreciated.
If you work within the **Procurement** department, consider these practices to move your company towards the circular economy:

- Bio-based resources
- Biodegradable resources
- Compostable resources
- Secondary critical raw materials
- Secondary rare earth metals
- Reclaimed resources
- Recycled resources
- Renewable resources
- Reused/ reusable resources
- Safe chemicals
- Services (not products)
Buy strategies

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Bio-based resources

- Bio-based materials are those that are partially, or entirely made of biomass.
- The key element is that the carbon with which is used in the manufacturing process is derived from a renewable, biological process.
- Biomass can be used to create a range of material inputs, such as biopolymers, biofuels and bio-based chemicals.
- Note: Bio-based materials are not the same as biodegradable, compostable, or renewable resources.
Stora Enso’s Sunila Mill in Finland is the world’s first integrated lignin extraction plant to produce dry kraft lignin and fire it directly in the mill’s lime kiln and replace fossil-based fuel.

70% of the natural gas in the lime kilns replaced with lignin

27k tons of avoided CO2 emissions
Compostable materials can be deposited with biological content and decay into nutrient-rich material without leaving harmful residues.

Materials may only be considered compostable if they:
- Disintegrate and biodegrade rapidly in a composting environment
- Do not devalue the organic component of the soil
- Leave no eco-toxicity

Note: Compostable materials are not the same as biodegradable, bio-based or renewable resources.
Secondary critical raw materials

- Critical raw materials are minerals that:
  - Have high supply risk due to high concentrations in specific countries
  - Are vital for key sectors in the economy
- These elements are not “critical” due to low supply available in nature
- Economic sectors that rely heavily on critical raw materials include: automotive, metals, consumer electronics, renewable energy and medical devices
- Each country will have variations in the critical raw materials list depending on their economy
Recycled resources

- Recycled content is the portion of a product that is made from recovered or secondary materials.

- There may be limits to the percentage of recycled content that can be used as a material input.

- Greater demand for recycled content (including by-products and secondary raw materials) is needed to create the economic pull for secondary materials.

- Company benefits:
  - Reduce material costs
  - Minimize environmental impacts
  - Implement environmentally preferable purchasing policies
  - Satisfy consumer demand
  - Meet regulatory standards
  - Mitigate supply chain risks through diversification
Renault has implemented circular strategies at all stages of the vehicle life cycle, including dematerialization through design as well as end-of-life vehicle collection and dismantling, reuse, remanufacture and recycling.

15% Cost savings by using recycled plastics
Safe chemicals

- Smart and safe use of hazardous chemicals is essential for the circular economy
- Source an alternative, less hazardous material or substance
- Green chemistry and engineering aim to provide safer alternatives to today’s hazardous options
- If not processed properly, products or materials containing hazardous substances may contaminate other materials
- Segregation of these types of materials is critical to ensure the quality of secondary raw material streams
Purchasing services instead of products may be a financially attractive strategy that also results in less resource consumption for you and the supplier.

There are multiple business models: pay-for-performance and pay-per-use.

In the service model, the service provider is typically responsible for installation, maintenance and take-back of the product.

In pay-for-performance, the provider has incentive to provide the best service to its customers.

It is important to establish a performance metric that aligns objectives of both the service provider and customer.
Michelin solutions, one of Michelin’s business units, offers a Fleet Tire Management solution called EFFITIRES™ in which customers pay a monthly fee for traveled kilometers (or miles) instead of tires.

320k Vehicles under EFFITIRES™ contract today
Thank you
• Biodegradable materials organically break down into natural elements relatively quickly.

• Not all biodegradable materials can degrade in all environments.

• Depending on design, the materials may biodegrade more effectively in treatment plants while others may do better in soils.

• It is important to consider how these materials will be handled at end-of-life and whether they will end up in an environment that promotes biodegradability.

• Note: Biodegradable materials are not the same as compostable, bio-based or renewable resources.
Reclaimed materials are recovered and used in another process or product, requiring only minor alterations and or refinishing.

Reclaimed materials are typically used for a different purpose than originally made for, differentiating it from “reuse.”

The building design and construction sector frequently sources reclaimed materials from old structures or resellers for installation in new projects.

For example, a furniture designer may create desks from old wooden doors.
Secondary rare earth metals

- Rare earth metals are a group of 17 elements that are economically difficult to extract due to low concentrations in nature.
- These metals are typically used in electronics and advanced technology components.
- Electric and hybrid vehicles (batteries), wind turbines and smart phones all require multiple rare earth elements.
- With growing demand for the products and services that these metals contribute to, concerns are growing about future supply and prices.
Renewable resources

- Renewable resources are those materials, energy and water sources that can quickly replenish after human exploitation.

- Renewable examples include:
  - **Materials**: wood, bamboo, cork, straw, linseed, linoleum, cotton, soy, wool, etc.
  - **Energy**: solar, wind, geothermal, hydro, biomass, wave, etc.
  - **Water**: rainwater, replenishing aquifer, treated wastewater, etc.

- You may also consider “rapidly renewable materials” which are renewable materials that replenish within 10 years.
Resource reuse means using a discarded product, component or material for the same function it originally served, with minimal processing. When purchasing a material, identifying those that have been used or those that are reusable may reduce the environmental impact of your product.

Products, components, materials, packaging and even equipment can all be reused. Depending on the function and design criteria of the product, significant cost savings may be collected by not purchasing new products or virgin materials.

Reused resources are typically used for the same purpose as it was originally made for, differentiating it from “reclaimed” resources.