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Global Circularity: Walking the Talk

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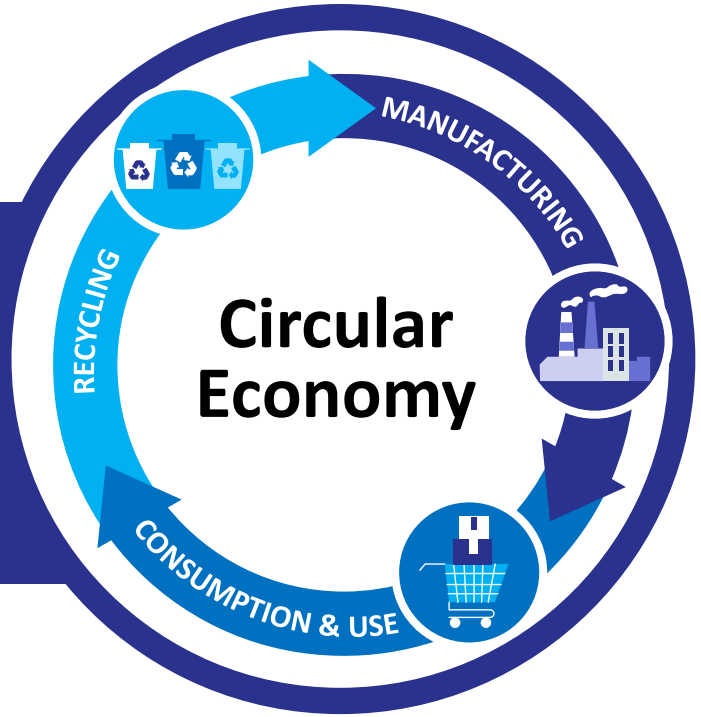
Why Circularity?

WHAT IS CIRCULARITY?

In circularity or a circular economy, products and materials are designed for reuse, recycling, recovery, or remanufacturing to maximize their lifespan, minimize waste, and reduce GHG emissions and natural resource depletion.



The circular economy is based on three principles

- Eliminate material wastage
- Circulate products and materials (at their highest value)
- Regenerate nature

WHAT IF WE ACHIEVE 100% CIRCULARITY?

1. Addition of up to **$4.5 Tn** in global economic value by **2030**
2. Creation of **7-8 Mn new jobs** by 2030
3. A **40%** reduction in global GHG emissions by 2050
4. Drop in municipal **waste generation to under 2 Bn tonnes** by **2050**, compared to a projected **3.8 Bn tonnes** in the current trajectory
5. Reduction in direct municipal solid waste management costs to **$255 Bn**, down from the expected **$417 Bn** under current trends

Sources: WeForum, Ellen MacArthur Foundation, International Labor Organization, Circularity Gap Report 2023

Is Global Circularity Progressing or Regressing?

Global Circularity Rate

Although discussions, debates, and articles on circularity have tripled over the past five years, the global circularity rate has dropped from **9.1% in 2018** to **7.2% in 2023**, marking a **21%** decline.

Material Consumption

During this same period, **global material consumption has surged to 500 gigatonnes**; equivalent to total consumption throughout the 20th century.

High-income countries like the USA, Japan, the UK, and Canada account for **25%** of this consumption, despite accounting for only **~7%** of the population.

Virgin Material Extraction

The extraction of virgin materials is growing at **2X the rate of global population,** straining the planetary resources.

Sources: Circularity Gap, UN Stats, World Bank, UNEP, Circularity Gap Report 2023, World Bank(2)

Frontrunners and Laggards in the Race of Circularity

Frontrunners

Most EU countries such as **Germany, the Netherlands, France, and Italy**, along with Asian nations - **Japan and China**, are already experiencing the positive impacts of circularity. These include:

- **Higher recycling rates**
- **Higher resource productivity**
- **Reduced waste management costs**
- **Reduced land usage**
- **Reduced energy consumption**

Laggards

Whereas, the developed countries, including the **USA, UK, Australia and New Zealand** as well as developing nations like **India, Brazil, Saudi Arabia and South Africa**, are **still in the implementation phase** of circular economy practices.

Sources: Circularity Gap, UN Stats, World Bank, UNEP, Circularity Gap Report 2023, Ministry of Business, Innovation and Employment

Key Stakeholders and Their Challenges

Stakeholders

Policy Makers

Setting up regulations, providing incentives, and creating frameworks that encourage businesses and consumers to adopt circular practices

Industries

Manufacturing, procurement, distribution and packaging with longevity, recyclability, and resource efficiency

Consumers

Buying choices and usage behaviors influence demand for sustainable products and services, for responsible consumption

Challenges

	Policy Makers	Industries	Consumers
1	Lack of strict policies for promoting circular economy	High upfront costs in new technologies, especially for SMEs	Lack of awareness amongst consumers
2	Insufficient financial incentives	Complex supply chains involving coordination across global supply chains	Higher cost of recycled products
3	Infrastructure gaps in recycling systems	Resistance by consumers to pay extra for recycled products	Consumer behavior w.r.t. waste segregation and disposal

Sources :CEPS, Science Direct, World Business Council for Sustainable Development, Springer Link

Circularity Practices by Policy-makers Across Countries

Investments

European Commission

€15 Mn for a new EU Circular Economy Resource Centre with Belgium and Finnish agencies

€40 Mn for over five years to SWITCH to Circular Economy

Netherlands

Investments worth **€1 Bn** so far on circularity

France

€500 Mn allocation to Circular Economy Fund between 2020 and 2022

China

Over 10 Bn Yuan investments on circular economy initiatives such as Eco-industrial parks

Japan

2 Tn JPY investments to cut GHG emissions and support circular economy

Incentives

Italy

A **tax of €0.45 per kg** on single-use and semi-finished plastic products

36% tax credit for expenses on recycled, biodegradable, or compostable packaging products

France

Anti-Waste Law banning destruction of unsold non-food items

Repairability index for electronics

Netherlands

Environmental Investment Allowance for extra deductions on eco-friendly investments

Arbitrary Depreciation for flexible write-offs of up to 75%

Grants and Strategies

Germany

Funding for SMEs for R&D in circular economy

France

Funding and grants for sustainability and circular economy startups

Netherlands

Kopgroep Circular Financing 2030 partnership for circular financing

China

Dual Circulation Strategy prioritizing domestic consumption and balancing international trade

Supporting the **second-hand and remanufacturing industries**

Japan

Organizations like **Circular Economy Japan** and **Circular Economy Hub** are raising consumer awareness

Sources: Taxmann, EU-Japan Centre For Industrial Cooperation, Science Direct, Acatech, The National Circular Economy Strategy

Circularity Practices by Leading Organizations

Patagonia

- 'Worn Wear program' to repair, reuse, and recycle garments, offering store credits for trade-ins
- Uses recycled materials and organic cotton in its clothing, extending product lifespans

Unilever

- Using sustainable ingredients, such as ethically-sourced palm oil
- Recycling program to boost education and recycling rates
- Testing reuse and refill models globally

Renault

- 'The Future is Neutral' subsidiary advances the automotive circular economy through material recycling, parts remanufacturing, and ELV management, supporting industry-wide resource neutrality

H&M

- Cradle to Cradle Certified Gold collection, featuring fully compostable garments
- Garment collection program of used clothing for recycling or repurposing

Adidas

- 'Made to be remade' program, launching the FUTURECRAFT.LOOP shoe in 2019
- Repairs and rental programs at stores in Munich and Berlin
- Participation in EU-funded projects T-REX and New Cotton for textile recycling
- Collaborations for sorting frameworks and shoe recycling solutions

IKEA

- Take-Back program for repurposing or recycling furniture
- Offering rental and refurbished items
- Designing all products with circular capabilities
- Assessing over 9,500 products for circularity, and providing 23.16 Mn assembly parts in FY23

Consumer Technology Circularity Initiative (CTCI)

- Launched by Consumer Technology Association (CTA), which focuses on reducing consumer electronics waste through improved recycling, reuse, and repair practices
- Founding members include Lenovo, Samsung, Panasonic, and Sony

Sources :IKEA, CTA, Unilever, Renault, H&M, Adidas, Sustainability Magazine

Circularity Practices by Consumers

Repair Cafés

Community-driven events in the Netherlands where individuals can bring broken items to be repaired by volunteers, helping to extend the lifespan of products

Sustainable Fashion Movements

Consumer-led movements such as Fashion Revolution advocate for transparency and sustainability in the fashion industry

Community-Based Recycling Programs

Many countries have established local recycling programs that encourage residents to participate actively in recycling efforts

Community Swap Events

Individuals can exchange items they no longer need, such as clothing, books, and household goods, promoting reuse and reducing the demand for new products

Eco-Friendly Product Choices

Opting for products with minimal packaging or those made from recycled materials

Online Platforms for Sharing and Renting

Platforms like Fat Llama and ShareGrid allow consumers to access products without the need for ownership, thereby reducing overall consumption and waste

Sources: Springer Link, Circle Economy, TreePeople, European Environment Agency, Fat Llama, ShareGrid, Green.org

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