

# From linear to circular, the future of business and the economy

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Switching to the **circular economy** from the take-make-consume-dispose model — also known as the linear model — **helps reduce waste, improve efficiency, reduce costs, and enhance long-term value creation.**

The World Economic Forum projects that, by 2025, **recycling, reuse, and remanufacturing** could help the economy unlock USD **1 trillion per year** of untapped resource savings<sup>1</sup>.

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In the final instance, the circular economy is a powerful tool to tackle climate change. Circular economy strategies can **reduce global greenhouse gas emissions** by an estimated 39% since about 80% of a product's environmental impact is determined during the design phase<sup>2</sup>.

**Changes in consumers' values** and increasing **regulations** at a global scale, led by the EU, are driving this transition, which should benefit companies with circular business models.



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# What is the circular economy?

The circular economy is a model of consumption and production that disconnects economic growth from resource use by extending products' overall life cycle through sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products over a long period of time<sup>3</sup>. Circular models can increase resilience while reducing risk and negative environmental impacts through diversification of business models and better anticipation of ESG regulations.

## The three principles of the circular economy<sup>4</sup>

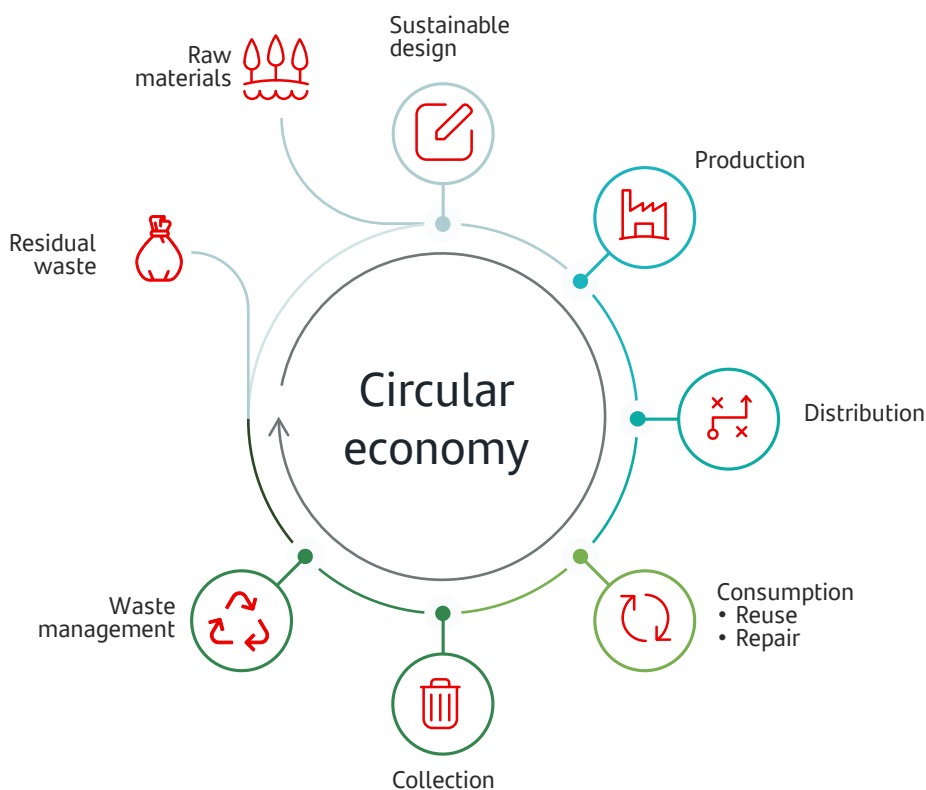
**01** Eliminate waste and pollution, by designing out the negative impacts of economic activity that damage human health and the environment.

**02** Regenerate nature, by avoiding non-renewable resources and fostering the use of renewable sources.

**03** Circulate products and materials for a long period of time.

Figure 1. The circular economy model: less raw material, less waste, fewer emissions

Source: European Parliament Research Service



3. The circular economy in detail. Ellen MacArthur Foundation. <https://ellenmacarthurfoundation.org/the-circular-economy-in-detail-deep-dive>

4. Circular economy: definition, importance and benefits. European Parliament. <https://www.europarl.europa.eu/news/en/headlines/economy/20151201ST005603/circular-economy-definition-importance-and-benefits#:~:text=The%20circular%20economy%20is%20a,reducing%20waste%20to%20a%20minimum>

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The adoption of circular economy models can help drive green growth, providing a dual dividend that benefits the environment and the job market<sup>5</sup>. According to the World Bank, the circular economy can help create between six and twenty million jobs worldwide.

The principles of the circular economy influence almost all industries and their global value chains.

The potential of a business to transition to a circular economy should be considered when investing, for three reasons:<sup>6</sup>

- 01 It can create value and growth and improve the competitive positioning.
- 02 It can help manage the risks of the linear economy, such as physical and transition risks from climate change, regulatory changes, and negative outcomes such as biodiversity loss.
- 03 It enables companies to stay ahead of consumer demand.

Figure 2. Addressing high-impact product value chains to reduce negative sustainability outcomes.

Source: Principles for Responsible Investment (PRI)

High-impact product value chains

- Packaging
- Textiles
- Automobiles
- Electronics
- Buildings
- Renewable energy technologies
- Food



Reduced negative outcomes

- Waste
- Pollution
- Climate change
- Biodiversity loss
- Overexploitation of natural resources (and shortages)
- Human rights and inequality

Directly supported goals



Target 8.4



Targets 12.2, 12.3, 12.4, 12.5

Indirectly supported goals



Target 3.9



Targets 6.3, 6.4



Target 9.4



Target 11.6



Target 13.2



Target 14.1



Targets 15.3, 15.5

5. Putting young people at the center of the circular economy. World Bank. <https://blogs.worldbank.org/jobs/putting-young-people-center-circular-economy>  
 6. Closing the loop: Responsible investment and the circular economy. PRI. <https://www.unpri.org/sustainability-issues/environmental-social-and-governance-issues/environmental-issues/circular-economy>



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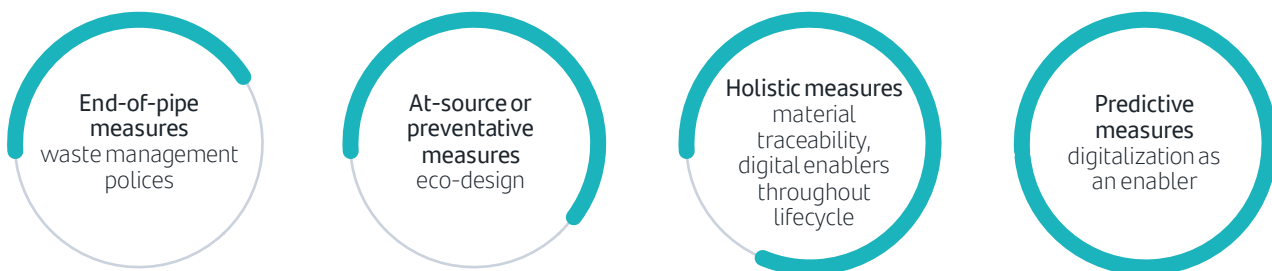
## 02

# Regulatory landscape that benefits the adoption of a circular economy model

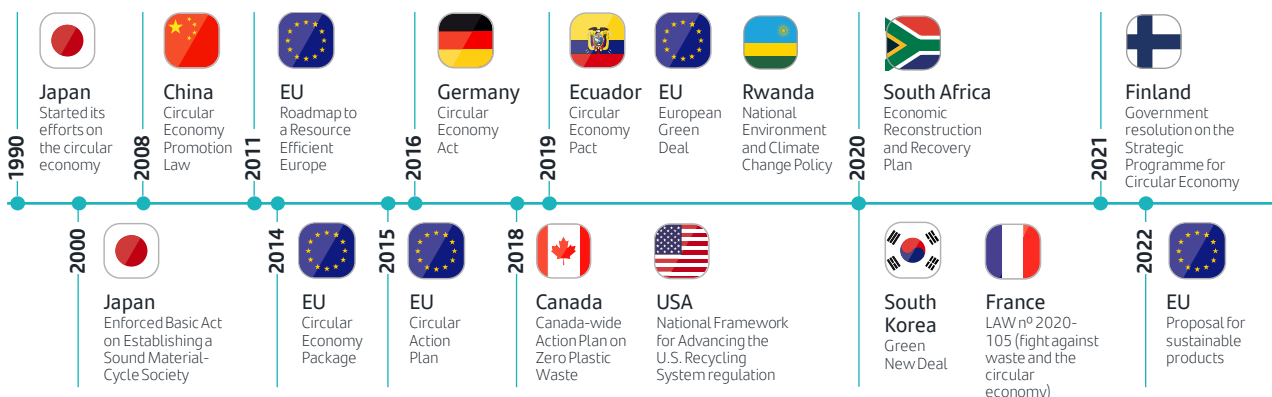
In March 2020, the European Commission launched the “Circular Economy Action Plan”, which is one of the main building blocks of the **European Green Deal**, Europe’s agenda for **sustainable growth**<sup>7</sup>. There are already **specific policies** on plastic pollution reduction, waste and recycling, repair of goods, critical raw materials, and industrial emissions, among others.

On a global scale, **regulation** is expected to increase over the coming years. Specific global actions that promote the circular economy include the **Global Alliance on Circular Economy and Resource Efficiency**, which was initiated by the European Commission and the United Nations Environmental Program (UNEP), in coordination with the United Nations Industrial Development Organization (UNIDO)<sup>8</sup>.

There is also an increasing policy shift from end-of-pipe measures to predictive measures that focus more on the sustainable design of products<sup>9</sup>



## Timeline of regulations concerning the circular economy<sup>9</sup>



7. Circular economy action plan. [https://environment.ec.europa.eu/strategy/circular-economy-action-plan\\_en](https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en)

8. Circular economy. [https://environment.ec.europa.eu/international-cooperation/circular-economy\\_en](https://environment.ec.europa.eu/international-cooperation/circular-economy_en)

9. EY. Regulatory landscape of the circular economy. [https://www.ey.com/en\\_us/chemicals/circular-economy-navigating-the-evolving-global-policy-landscape](https://www.ey.com/en_us/chemicals/circular-economy-navigating-the-evolving-global-policy-landscape)

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## Main areas of innovation within the circular economy<sup>10</sup>



**1**  
Remanufacturing and repair

**Remanufacturing** consists of returning a used product to its original performance, ensuring that it is equivalent to, or better than, the newly manufactured product. Remanufacturing is expected to become a very important aspect of manufacturing industry and has the potential to reach a market size of EUR 90 billion in the EU alone by 2030<sup>11</sup>.



**2**  
Waste management systems

Companies in the **waste management sector** can create new business models that minimize the quantity of waste produced. There is also an opportunity for waste management companies to invest in **waste-to-energy plants**, which burn municipal solid waste (MSW) to produce electricity<sup>12</sup>.



**3**  
Ecodesign

**Ecodesign** is characterized by minimizing the environmental impact during the product life cycle, using reusable and recyclable materials, saving resources, and ensuring ecological traceability. In 2018, packing and packaging represented 39.9% of all plastic used in the EU<sup>13</sup>. There is a great opportunity to design reusable packaging and **packing and to use reusable and recyclable** components in product design. **Fashion** is also a clear case of an industry that can benefit from transitioning business models from linear to circular.

10. Circular Economy and Innovation. EIT Raw Materials. <https://eitrawmaterials.eu/circular-economy-and-innovation/>

11. European Remanufacturing Network. <https://www.remanufacturing.eu/>

12. Biomass explained. <https://www.eia.gov/energyexplained/biomass/waste-to-energy-in-depth.php#:~:text=Waste%2Dto%2Denergy%20plants%20burn,and%20products%20made%20from%20wood>

13. Plastics Europe. Plastics – the Facts 2018. An analysis of European plastics production, demand, and waste data, 2019.



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## Case study of a circular economy model adoption

### Cross Textiles



After making a commitment to redesign jeans to meet the Jeans Redesign guidelines, garment manufacturer Cross Textiles is embracing circular design principles and stressing the shift in mindset towards designing circular clothes<sup>14</sup>. They are also applying the circular economy principles beyond jeans in the non-denim area.

The Jeans Redesign project requires jeans manufacturers to use at least 98% cellulose-based fibers and avoid the use of harmful chemicals in the finishing process. According to the most recent data from the United States Environmental Protection Agency (EPA), 66% of all garments produced in the US are sent to landfills<sup>15</sup>. This is often because clothes are made of complex yarns whose recycling is very complex due to a lack of processing technology or infrastructure.



By designing garments to be long-lasting, able to be deconstructed, and made from sustainable materials, Cross Textiles is an example of a circular business model for fashion, one of the industries that emits most greenhouse gas emissions<sup>16</sup>.

This case study was adapted from the Ellen McArthur Foundation.

<sup>14</sup> Circular example. Cross Textiles. Ellen McArthur Foundation. <https://www.ellenmacarthurfoundation.org/circular-examples/cross-textiles>

<sup>15</sup> Textiles: Material-Specific Data. EPA. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/textiles-material-specific-data>

<sup>16</sup> How Much Do Our Wardrobes Cost to the Environment?. The World Bank. 2019.

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## Conclusion

The transition towards a **circular economy** could generate **USD 4.5 trillion of additional economic output by 2030 and USD 25 trillion by 2050**<sup>17</sup>. Furthermore, the adoption of the circular economy at a global scale has the potential to generate millions of jobs while reducing companies' environmental impact.

The circular economy represents a great opportunity for businesses, investors, and governments to tackle the environmental crisis and generate economic growth. The switch from the linear model, based on the take-make-consume-dispose model, to the **circular economy**, where products are kept in the economy for as long as possible, **helps reduce waste, improve efficiency, reduce costs, and enhance long-term value creation**.

The widespread increase in **regulations** regarding the circular economy at a global scale will positively affect the transition to a circular economy model. The EU is leading the way in the regulatory landscape, but other countries such as the USA and Japan are in the process of catching up<sup>18</sup>. The **regulatory drive** should **benefit companies** that position themselves as practitioners of the circular economy in their business models.

There is a wide array of sectors that can benefit from the circular economy, including **remanufacturing and repair, waste management, and ecodesign**. Well-positioned companies that are able to tap the circular economy opportunity should reap the benefits of this very necessary transition.

17. The Circular Economy Could Unlock \$4.5 trillion of Economic Growth. Accenture. 2015. <https://newsroom.accenture.com/news/2015/the-circular-economy-could-unlock-4-5-trillion-of-economic-growth-finds-new-book-by-accenture>

18. EY. Regulatory landscape of the circular economy. [https://www.ey.com/en\\_us/chemicals/circular-economy-navigating-the-evolving-global-policy-landscape](https://www.ey.com/en_us/chemicals/circular-economy-navigating-the-evolving-global-policy-landscape)

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