



Finding value in a world of waste

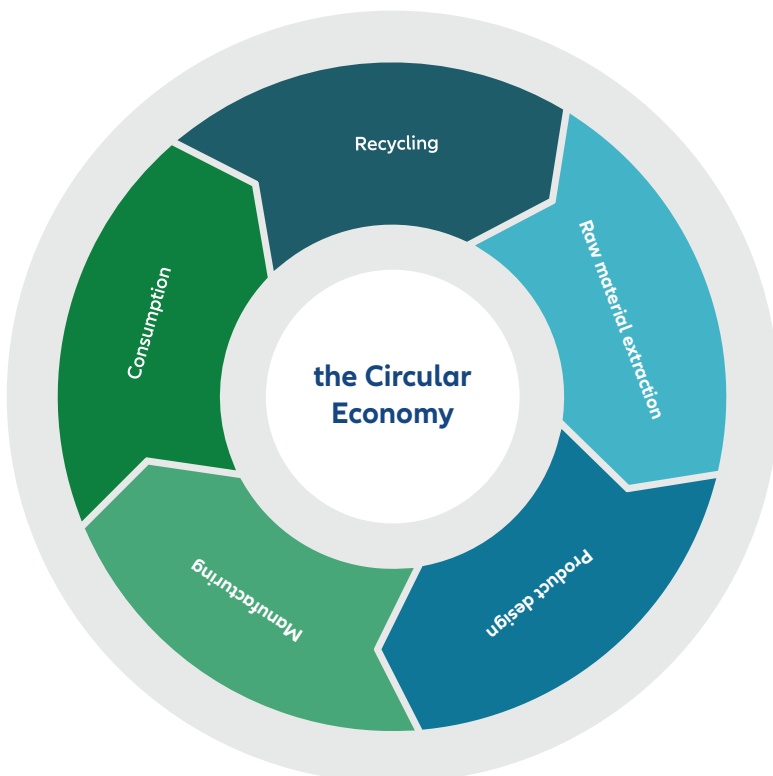
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World Earth Day 2022 “Invest in our planet”

The first Earth Day rally in 1970 encouraged environmental protection for the planet but the message requires greater urgency for Earth Day 2022 as earlier this year it was announced that the world has already “exceeded the safe planetary boundary for pollutants¹.” Of the millions of tons of waste humans produce annually, less than 20% is being recycled and the volume is growing, yet a sustainable planet requires sustainable growth². An emerging solution is the transition towards a circular economy which supports global targets for climate neutrality and halting biodiversity loss, while presenting a growing opportunity for long-term investors.

Key takeaways

- Earth Day 2022 reminds us of the startling statistic that only 20% of waste created by humans is recycled.
- Given that the planet has finite resources, the so-called circular economy is crucial for the world’s future stability.
- New technologies and design solutions will play a key role — such as biodegradable plastics created from the seeds of plants like canola and soy to help reduce public waste.
- These challenges also create significant investment opportunities: the European Commission’s Circular Economy Action Plan could increase EU GDP by an additional 0.5% by 2030 and create approximately 700,000 new jobs.



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The good news is that companies are increasingly considering the long-term implications of not addressing the risks that threaten our planet, while at the same time understanding where new opportunities exist for sustainable growth. Participating in the circular economy is becoming a necessary move for companies of all sizes in solving the threat that waste pollution poses to our environment. It is a shift that has become possible through alignment of business objectives and environmental targets.

From linear to circular

Many resources are finite. Global population growth of 25% by 2050 and a rising middle class with changing consumption patterns threaten to exacerbate this problem of scarcity.³ Rethinking how we obtain, use, reuse and optimise the world's resources remains crucial for the future stability of businesses in sectors as diverse as food production, construction and electronics.

Progress requires disruption of the traditional linear pattern of consumption known as "make – take – waste" and a move towards a circular process involving the reduction of excessive waste, emphasis on reuse, remanufacturing and repair, and recycling of the materials we use every day.

The circular economy is based on three major principles which should be driven by design: elimination of waste and pollution, circulation of products and materials, and regeneration of the current ecosystem. Enablers of the circular economy transition include urbanisation, digitisation, consumer demand and consumers' awareness of social and environmental issues. Furthermore, regulation has started to play a role. In 2020, the European Commission (EC) recognised the importance of this evolution to new production and consumption models through adoption of the Circular Economy Action Plan, which became a key pillar of the European Green Deal. Moreover, contributing to several of the UN Sustainable Development Goals (SDGs) including SDG 12 – responsible consumption and production – the circular economy



is considered the second most important technology innovation space for the SDGs after Big Data⁴.

Innovative entrepreneurs and large corporations are developing new ideas for the circular economy, such as the use of renewable resources or taking advantage of the value of waste. Going beyond the limitations of recycling, new technologies and design solutions will play a key role in enabling future products to be fit for a circular economy.

Waste not, want not

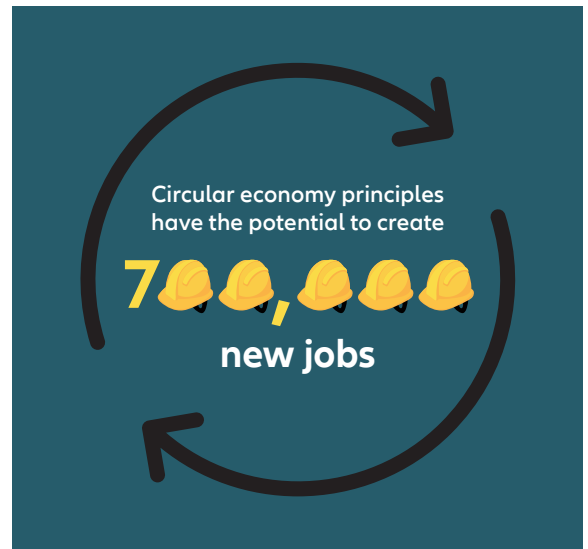
Improved waste management is critical to circular consumption. Addressing the problem of plastic packaging for example could help eliminate one of the largest sources of waste in the world. While it is cheap and effective for many purposes, only 14%⁵ is collected for recycling and plastic is difficult to recycle multiple times. A broad-based global move towards more sustainable packaging has begun reducing waste and increasing efficiency. For example, the provision of products without packaging in some European supermarkets requires shoppers to use their own reusable bags. Such initiatives are in line with several of the SDGs which target a cleaner planet, and are supported by mounting consumer demand, and legislators increasing commitments for environmentally sustainable packaging.

To tackle the electronics industry, the World Economic Forum (WEF) began an initiative to reduce waste from electronics⁶ calling for better product tracking and take-back campaigns to improve global circular value chains. According to WEF estimates, electronic waste could be worth USD 57 billion annually but only 20% is currently being recycled⁷. In particular, extracting copper from used electronic components could reduce CO₂ emissions by around 63% compared to the process of copper mining⁸. Essential steps in progressing towards a circular model in this sector require material efficiency, improved recycling infrastructure and scaling up the volume and quality of recycled materials.

Future value creation

Establishing solutions for sourcing, recycling and revitalising used products – and transforming them to create further value in these sectors and others – will become increasingly important. The potential for value creation includes boosting GDP and significant job creation. The EC's Circular Economy Action Plan has predicted that the application of circular economy principles has the potential to increase EU GDP (Gross Domestic Product) by an additional 0.5% by 2030, creating approximately 700,000 new jobs⁹.

Of the USD 103 trillion¹⁰ of total public assets under management at the end of 2020, assets managed in investment strategies contributing towards circular economic models are relatively small at USD 2 billion¹¹. This is, however, a six-fold increase since the start of 2020 – which underlines the potential benefits of investing in the planet.



Examples of emerging technologies in the circular economy

Collection and recycling metals and other materials:

A company in Belgium has succeeded in collecting and recycling about 30 precious and non-ferrous metals from industrial residues, as well as using electronic scrap, batteries, automotive and industrial catalysts and more. The recycling process involves complex waste streams containing precious and other specialty metals.

Furthermore, related services are available in Germany, where a company is offering a system for collecting and recycling hazardous steel dust and aluminum residues and reintroducing valuable materials back into production processes. Electric arc furnaces produce a dust classified as hazardous waste that cannot be disposed of in landfills, but which instead is collected for a fee and the valuable material such as zinc is recycled. This solution implemented by one company alone prevents around two million tons of residue from reaching landfills each year.



Innovative technology solutions improve recycling capabilities:

In Norway, modern recycling solutions are bringing sensor-based sorting technology to modern recycling plants. An innovative holistic resources system aims to close the loop, cut global annual CO₂ emissions, and reduce waste. Sensor technology allows for scanning and identification of different materials faster and more accurately than either previous solutions or manual sorting by humans. The broad range of sorting solutions addresses construction waste as well as ordinary waste collected by municipalities. The result of this technology is the ability to recover various ranges of materials from different sources of waste arising from packaging, paper and household waste.



Renewable and sustainable biopolymers:

A US company has developed innovative solutions aimed at achieving a circular use pattern for biodegradable plastics created from the seeds of plants such as canola and soy. Instead of the plastic litter that often ends up in the sea, on beaches or waterways, plastic products are developed that are biodegradable – i.e. compostable – enabling their return to nature rather than creating pollution and waste.



For more information, please contact your local AllianzGI representative or visit allianzgi.com



- ¹ Safe planetary boundary for pollutants, including plastics, exceeded say researchers, Stockholm Resilience Centre, January 2020
- ² Statista, Global waste generation, February 2022
- ³ Population Reference Bureau, 2020 World Population Data Sheet, July 2020
- ⁴ Chatham House, Financing an inclusive circular economy, July 2021
- ⁵ Ellen MacArthur Foundation, The New Plastics Economy: Rethinking the future of plastics, 2016
- ⁶ World Economic Forum, A New Circular Vision for Electronics, Time for a Global Reboot January 2019
- ⁷ World Economic Forum, Will your next phone be made from recycled materials? September 2020
- ⁸ Reuters.com, Metals recycling to be a key plank for cutting emissions, July 2021
- ⁹ European Commission, Circular Economy Action Plan, March 2020
- ¹⁰ Boston Consulting Group, Global Asset Management 2021 – The \$100 Trillion Machine, July 2021
- ¹¹ Ellen MacArthur Foundation, 2020

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