

# Growth needs a new way of using resources

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We are projected to require nearly four earths to sustain the production and consumption patterns of the nearly 10 billion people we will have on Earth by 2050. Therefore, it is necessary to move away from the linear «take-make-dispose» to the Circular Economy model.



In order for plastic bottles to be brought back into the same cycle, recycling must already be considered during product development.

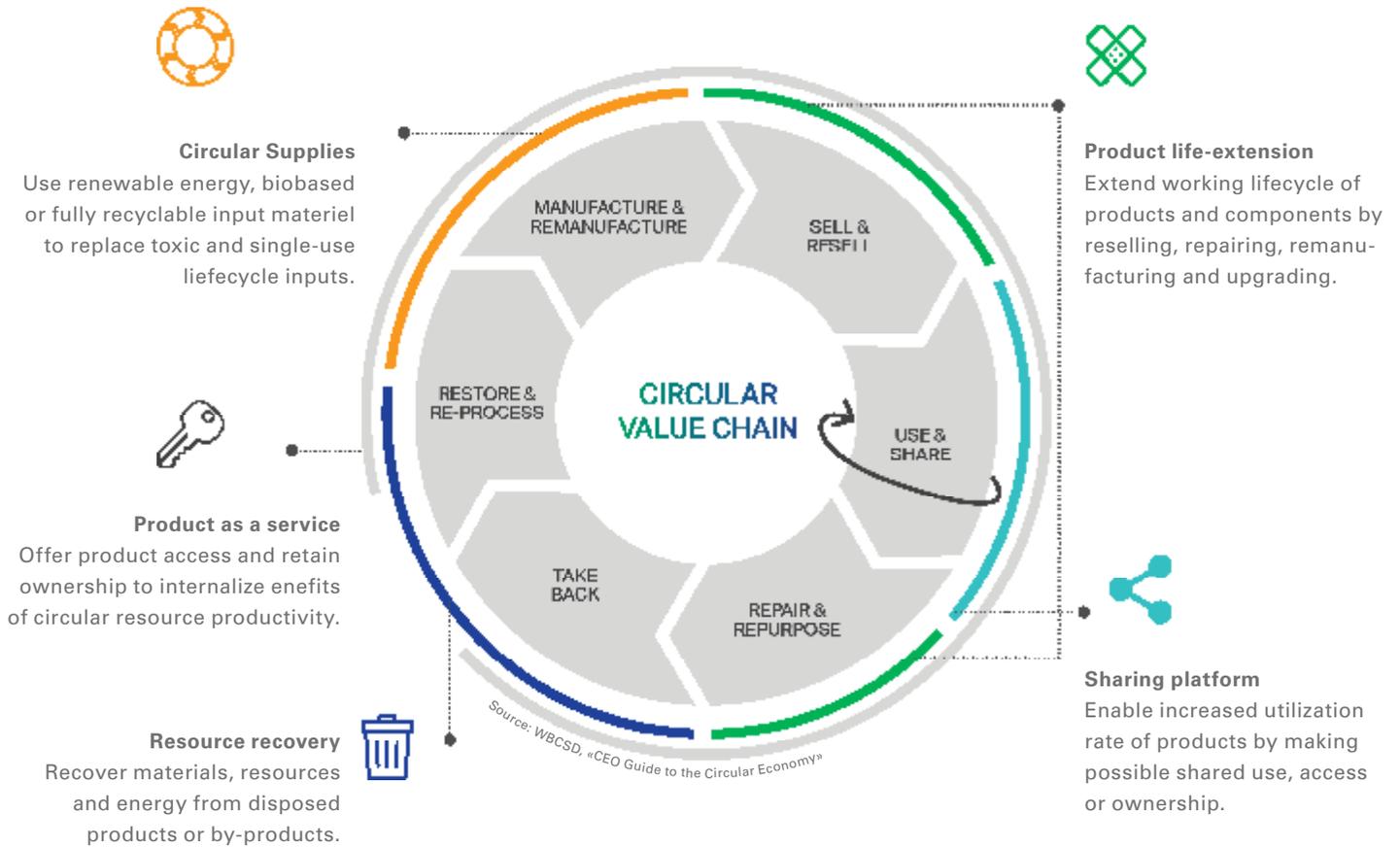
It is expected that the world's population will reach 9.8 billion by 2050 and half of this growth will be concentrated in just nine countries: India, Nigeria, the Democratic Republic of the Congo, Pakistan, Ethiopia, the United Republic of Tanzania, the United States of America, Uganda and Indonesia. In parallel, every year around 140 million people will join the middle class, which will total over 5 billion by 2030.

## **We have used up a year's worth of resources by May 10th**

As the global population expands, development rises, and more people join the middle class, we know that the consumption of goods and services also grows, utilizing more of the earth's precious resources. Today, we are consuming the biological resources of 1.7 planets – meaning we use more than what the earth can regenerate, creating a

resource-deficit. In fact, May 10th was Earth Overshoot day in Europe. This means that by this date we've already used up a year's worth of resources in just over four months and the rest of the year we will be living outside the planetary boundaries. By 2050, we are projected to require nearly four earths to sustain the production and consumption patterns of the nearly 10 billion people we will have on Earth.

Accenture estimates in the publication «Waste to Wealth» that today's business practices to sustain our existing production and consumption patterns will create a global gap of eight billion tons between the supply available and demand needed for natural resources by 2030. This translates to USD 4.5 trillion of lost economic growth by 2030 and as much as USD 25 trillion by 2050.



**Waste is built-in’ feature of the current economic model**

And yet, even though we overconsume the earth’s resources, we cannot currently meet the basic human needs of the entire population. For example, globally one-in-nine people currently go to bed hungry, while one-third of food produced is actually wasted. Waste is a «built-in» feature of the current economic model. For much of the last half of the 20th century, the real price of commodities fell despite rising demand, resulting in various forms of waste that Accenture identifies as: wasted energy and materials that are only used once, wasted lifecycles where products are thrown away after a short time, and wasted assets, such as cars, that stand idle most of the time. However, since the year 2000, commodity prices have become more volatile, reflecting the uncertainty of supply of many natural resources caused by the growth of the global population, the consumer economy and urbanization.

**Circular Economy wants to eliminate the concept of waste**

Over recent years, a new economic model has been gaining ground – and this one moves away from the traditional linear «take-make-dispose» model to one that is circular and regenerative by design. The goal of a Circular Economy is to eliminate the concept of waste, and therefore to retain as much value as possible from resources, prod-

ucts, parts and materials to create a system that allows for long life, optimal reuse, refurbishment, remanufacturing and recycling.

A transition to a Circular Economy will also contribute to reaching the globally-agreed United Nations Sustainable Development Goals (SDGs) and the Paris Agreement on climate change. Circular business models have the potential to be instrumental in the mitigation of climate impacts, given that 63 percent of global greenhouse gas emissions are related to the extraction, processing, and manufacturing of goods to serve societal needs. The Circularity Gap report indicates that the global economy is only 9 percent circular today, therefore moving to a Circular Economy presents the biggest opportunity to transform production and consumption since the First Industrial Revolution 250 years ago.

The five business models that will help unlock innovation and drive the Circular Economy are:

- Circular Supply Chains allow suppliers and partners to use bio-based and/or fully recycled materials repeatedly, saving costs and bringing predictability to supply chain. Examples include Renault creating a new supply chain for recycled plastics to utilize in their automobile manufacturing.
- Resource Recovery models recover useful resources out of materials, by-products or waste, and saves costs and

reduces the volume of waste and landfill. Examples include Toast Ale, a company brewing beer from surplus bread, or The Renewal Workshop, a company taking discarded apparel and textiles and turning them into Renewed Apparel, upcycled materials, or recycling feedstock.

- Sharing Platforms use digital platforms to connect product users to one another and encourage shared use and access to enable the increased utilization of underused assets, such as hotel rooms, clothing, vehicles or consumer goods. Examples include Airbnb and Rent the Runway.
- Products-as-a-Service replace ownership-based models with usage based services, such as selling driving time instead of selling cars, or lumens instead of lightbulbs. These encourage companies to maintain products for longer, strengthen relationships with customers, and expand service offerings, such as predictive maintenance or fuel efficiency support. Examples include Mobility and Philips Lighting-as-a-Service.
- Product Life Extension extends product life cycles through innovation and product design to improve durability, and providing repairing, upgrading and reselling services to give products a longer life with existing or new customers. Examples include Loop, a circular shop-

ping platform providing consumers access to their favorite products in durable, long-lasting packaging.

### Scale and accelerate the pace of change

This transition will not be simple. Shifting legacy industries and traditional business models will require unprecedented collaboration across value chains and the shifting of mindsets. As more and more companies confront the «linear risks» of staying in the current economic model; price volatility, supply chain failures, and changing legislation will increase. Barriers are also faced in providing access to capital to help scale new solutions and requires the investment of financial capital into business practices that are restorative and rehabilitate natural and social capital. Innovative SMEs are in the lead by moving in to capture value through harnessing these business models, developing disruptive circular solutions, and finding ways to utilize new technologies that will scale and accelerate the pace of change.

The transition towards a Circular Economy is a USD 4.5 trillion opportunity that is possible. By getting in the «circular mindset», we can drive innovation, grow businesses, help meet global development goals and stay within the means of one planet.

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