

# Background: Joint Solutions

## Innovative Recycling



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Global economy only nine percent circular

### **Jointly developing innovative recycling**

#### **Using plastic waste as a valuable resource**

Plastics are almost everywhere in modern life. We need them to cope with many global challenges such as securing food supply for the growing world population, creating habitable cities and advancing new forms of mobility. The other side of the coin is the alarming amount of plastic waste: 4.9 bn. tons of it ended up in landfills and the environment as waste from 1950 to 2015. Without countermeasures, another 1.3 bn. tons could be added by 2040.

This has to do with a serious underlying problem: global waste management and recycling systems are still too underdeveloped, particularly in developing and emerging countries. Today, the global economy is only 8.6 percent circular. That is to say, no more than 8.6 billion of the 100 billion tons used in the global economic system in 2020 were recycled, according to the Circularity Gap Report.

This must and can be changed by implementing the circular economy on a global scale: using goods longer and more often. Avoiding waste. Utilizing old products and waste as a resource instead.

#### **High expectations for chemical recycling**

For this, we need to broaden the option space – in particular through technological solutions. For example, there are high expectations for chemical recycling, which is still in its infancy, as a complement to established mechanical recycling. In fact, it is the only possible recycling method for certain plastics. Here, Covestro has developed an innovative process for the chemical recycling of flexible polyurethane foam from used mattresses. Since the beginning of



2021, the company has been operating a pilot plant at its headquarters in Leverkusen, Germany to advance the new technology.

A prerequisite for this is that the different foams contained in mattresses are effectively separated. To this end, Covestro has developed an intelligent, algorithm-based sorting solution together with the companies Recticel and Redwave.

Regarding mechanical recycling, Covestro has entered into a partnership with the beverage manufacturer Nongfu Spring and the recycling company Ausell in China. They change used water bottles into high-grade plastic components for electronic and household appliances as well as for car parts. The goal is to recycle one million such polycarbonate containers per year.

#### **About Covestro:**

With 2020 sales of EUR 10.7 billion, Covestro is among the world's leading polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative, sustainable solutions for products used in many areas of daily life. In doing so, Covestro is fully committed to the circular economy. The main industries served are the automotive and transportation industries, construction, furniture and wood processing, as well as electrical, electronics, and household appliances industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. At the end of 2020, Covestro has 33 production sites worldwide and employs approximately 16,500 people (calculated as full-time equivalents).

Find more information at [www.covestro.com](http://www.covestro.com).

#### **Forward-looking statements**

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