



LIFE CYCLE ASSESSMENT



# REAL CIRCULARITY DRIVES A SUSTAINABLE FUTURE

It's time to change the way we think about packaging. We must examine the long-term impact of the choices we make. And we need to use materials that can be – and actually are – used again and again. That will put us on the path to Real Circularity. And that's how we rebuild our economy and tackle some of the biggest environmental challenges we face.

## CHALLENGE

### A GLOBAL PACKAGING POLLUTION CRISIS

We consume more than the planet can sustainably provide – our global footprint is nearly **1.75** planets

Humans generated **2.01B** tons of solid waste in 2016

Packaging is responsible for **50-70%** of the world's plastic pollution

In Brazil, only **55%** of plastic packaging waste was recycled in 2019

Only **40%** of glass packaging, important to the Brazilian beer sector, is recycled



of solid waste generated by humans in 2016

## SOLUTION

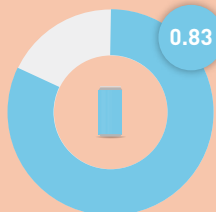
### CIRCULAR MATERIALS THAT BENEFIT THE PLANET

A new comparative Life-Cycle Assessment (LCA) developed by Sphera is revealing deeper insights about the circularity of common single-use packaging choices.

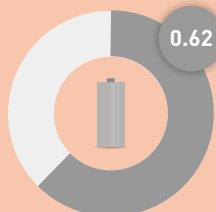
Infinitely recyclable with high recycled content and higher recycling rates,

**ALUMINUM PACKAGING HAS THE HIGHEST MCI SCORE**

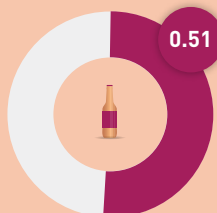
473ml aluminum can



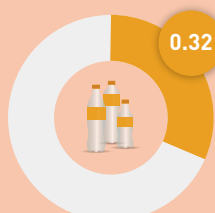
1L beverage carton



355ml glass bottle



250ml, 510ml & 600ml PET bottles



of all aluminum ever produced is still in use



Aluminum has the lowest

**CO2e**

emissions of all packaging

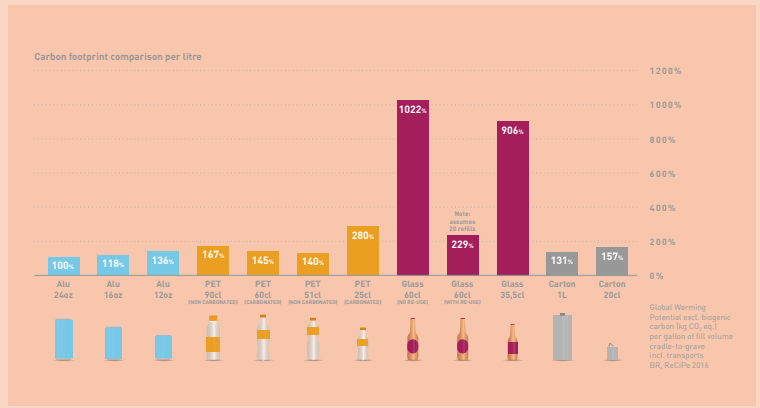
The Material Circularity Indicator (MCI) methodology uses a scale of 0 to 1, with 1 being a perfectly circular product. MCI includes non-recycled renewable fibres as circular. Other methodologies do not.

# WE CAN AND MUST IMPROVE THE CARBON FOOTPRINT OF PACKAGING

Aluminum's high recycling rates dramatically reduce the carbon footprint of cans

(not true for plastic or cartons)

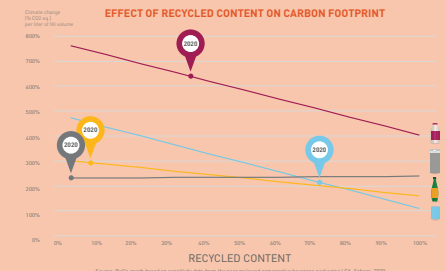
Cans have the best MCI for single use packaging and also beat returnable glass in CO<sub>2</sub>e emissions



**97%** of aluminum cans are recycled in Brazil

Increasing renewable energy use in manufacturing, combined with increases in lightweighting and recycled content, could help cut the carbon footprint of 12 oz. cans **33%** by 2030

**33%** reduction in cans' carbon footprint achievable by 2030



## IMPACT

# A BOOST TO THE ECONOMY

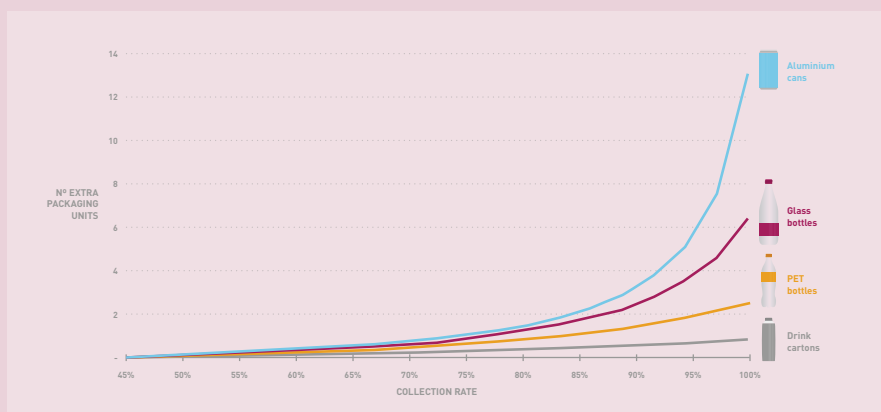
Aluminum cans are the most valuable recycled packaging material in Brazil, yielding income to recyclers nearly **400%** higher than PET and **6,000%** higher than glass (on average per tonne of UBCs)

The high value of UBCs helps support **800,000** recycling jobs in Brazil

Low yield loss means more containers can be made from the same material remaining in the loop – making aluminum more circular and even more valuable as recycling rates increase



**6000%** higher income for recyclers from aluminum



**MORE CIRCULAR = MORE VALUABLE**



FOR SOURCING AND MORE INFORMATION:  
**BALL.COM/REALCIRCULARITY**