CASE STUDIES

GIRO'S SILO
Introducing a plant-based revolution in helmets

NEED

In 2015, GIRO was developing the design of Silo, a revolution in urban helmet construction, featuring an exclusive E-PLA (**Expanded Polylactic Acid**) liner made from plant biomass. At the end of the road, when the helmet is damaged or ready for replacement, all components can be disassembled and recycled or composted, minimizing the environmental impact.

Before launching Silo into the market, GIRO decided to investigate the new helmet' life-cycle, involving the new material/technology provider as well as all components manufactures in a life-cycle-assessment (LCA) exercise to calculate the environmental burden of both traditional and innovative solutions.

RESPONSE

LCE has assisted GIRO in **defining the best environmental profile of its product** Silo by providing strong and reliable evidences to guarantee a sustainable design, marketing and advertising of the new helmet solution.

Silo shows a lower environmental burden respect to traditional solutions.

OUTCOMES

Each component of Silo has been carefully designed to reduce potential environmental impacts. Compared to traditional helmets, **Silo uses fewer non-renewable resources and has a lower global warming potential**, yet it performs like EPS when managing impact energy.

SILO was officially launched on September 2015, and it is **actually sold worldwide**.

GEOGRAPHICAL COVERAGE

Coordination and eco-design issues with the US Headquarter

New materials/technologies development data collection with GIRO industrial partners worldwide

Manufacturing processes data collection with GIRO suppliers