The microfactory has see-through sides to create excitement and raise awareness among passers-by | Photo source Circular Economy Manufacturing

PORTABLE MICROFACTORY RECYCLES SINGLE USE PLASTICS

SUSTAINABILITY

The solar-powered microfactory is waste-free and produces no toxins

Spotted: New York-based Circular Economy Manufacturing has designed a recycling microfactory made from a used shipping container. Dominated by a rooftop solar array, the portable microfactory has see-through siding to make the recycling process transparent, interesting and accessible to the casual passerby. Viewers can see single use plastics being fed into the shredding machine where the used products are turned into flakes. A washer then cleans the tiny pieces for use in a rotating mould.

Energy from the solar panels is stored in a set of batteries located alongside one wall of the microfactory. Once the moulding machine starts, only the mould itself heats up. This design innovation saves significant amounts of energy when compared to the sizeable ovens often used to melt plastics elsewhere.

The project is still at the proof-of-concept stage, and the initial product produced by the microfactory is a hollow spherical ball, known as the GI globe. The company's team of designers are working on a number of different options for future items that could be produced using the technology.

The microfactory is located on Governor's Island in New York City. Circular Economy Manufacturing buys post-consumer plastic from the recycling centre located just across the water on the mainland. The company envisions that, in the future, the portable production design will create jobs and reduce waste around the world.

Making concepts usable early on in their development can help in the iteration process, as the designs are strengthened and improved. Similar innovations recently spotted by Springwise include

DIY recycling machines and an open knit project that creates clothing from a digital file.

Written by: Keely Khoury

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Email: info@CircularEconomyMfg.com
Website: circulareconomymfg.com

Takeaway:

Innovators that designate their ideas and designs as open source encourage creativity by bringing exciting new ideas to wider audiences. And the increased accessibility opens the door to truly functional, locally-designed solutions. The micro movement contributes similarly by creating new opportunities to learn by introducing cutting-edge concepts to communities that may otherwise lack the resources to get involved. Designing innovations such as the Circular Economy Manufacturing microfactory to be accessible, makes it more likely that the spark for the next influential idea will be lit by the inspiration.