The Polyfloss Factory can turn plastic waste into cotton-candy-like fibers.

The Polyfloss Factory has invented a new technology to transform plastic waste into fibers through hot centrifugation. It allows the use of plastic waste as new raw material to create circular economies on a local scale.

La Courneuve, France / May 9th, 2022 | The Polyfloss Factory is the initiative of a group of engineers and designers who want to make a change.
Taking inspiration from the technology used by cotton-candy machines, the company has invented a new machine to recycle plastic waste through hot centrifugation, creating plastic fibers that can be used in a wide range of applications, from textiles, insulating panels to molded objects. Special interest lies in the insulating properties the fibers have, which led the company to team up with various NGOs to implement the technology in humanitarian contexts to provide solutions for hot and cold climate environments.

Today, there is 400 millions tons of virgin plastic being produced every year. However, only 12% of it is being incinerated and only 9% is being recycled. Recycling plastic rather than producing new is a necessity, which the Polyfloss Factory is trying to tackle at a local scale. Most of the mishandled plastic waste is located in developing countries or in regions where industrial recycling is impossible. The need to provide a small scale and field-friendly solution to handle these waste is urgent. Additionally, we can witness a growing demand for a green shift in humanitarian response, to reduce its environmental impact. The Polyfloss machine is easy to transport, versatile and simple to use, allowing to facilitate the implementation of circular economy models in humanitarian and development contexts.

Adding to the benefits of local value creation in circular business models for manufacturing and supporting livelihood programs, it also lessens the need for long distance transport of materials and resources. The fibers created can be used for textile, insulation products, packaging materials and combinaisons of all these.

About The Polyfloss Factory
The Polyfloss Factory was founded by a team of engineers and designers who initially met during the IDE Master's program at the Royal College of Art and Imperial College in London. For more than 6 years, the technology has been mostly used for educational workshops, exhibitions and tests - while upgrading the machine gradually over time.
In 2018, the company started teaming up with several NGOs, such as Norwegian Red Cross, engineers without borders Norway, Field Ready or Acted to explore the potential of the technology in humanitarian and development contexts. From there, the potential of the machine regarding its capacity to support livelihood programs and carbon reduction became apparent.
We have now finished designing a more performant machine, to accompany our client in setting up the best recycling ecosystem in humanitarian contexts.

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