

Innovation Barn takes Charlotte Recycling Initiatives to the Next Level

Nestled in the North Davidson “NoDa” district of Charlotte, North Carolina, is a bright white building surrounded by outdoor social areas, sculptural art from reclaimed materials, and rooftop gardens. From the outside, one might think it to be a hot spot for leisure, and it is. However, within the walls of the [Innovation Barn](#), exciting and environmental educational programming takes place. Their motto: "Innovation through Experimentation."

Local initiatives communicate a greater vision.

The Innovation Barn has connections to the non-profit organization Circular Charlotte, which aims to bring Charlotte into the circular economy by offering zero-waste initiatives and creative recycling-focused events. The building itself is divided into multiple “zones,” which focus specifically on areas of waste and sustainability. From composting food waste using black soldier flies to aquaponic indoor garden spaces, to a café and craft beer bar, Innovation Barn has it all. Educating the public on the circular economy in a hands-on, personal way is the goal of Envision Charlotte, which manages the day-to-day operations of the location itself. The building is owned by the City of Charlotte and supported through various community initiatives, government grants, and corporate partnerships.

Collection programs encourage proper recycling.

Utilizing the city’s ever-present waste stream is vital to the perpetuity of the circular economy. A collection program was established for recyclables like aluminum cans, plastic bottles, and bubble wrap, to name a few. Nearby residents can register to receive unique bags that are tagged and registered to their household or business. They can fill these bags with sorted, clean materials that will be picked up as needed and delivered to the Innovation Barn for further recycling. If any contaminated or unsorted materials are found in the bags, the program will reach out to the household and remind them of the best way to recycle their products. After these reminders, if the contamination continues, the household will be unenrolled from the



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program. This program aims to educate the community and get them involved in embracing sustainability—and the citizens of Charlotte have been very receptive to this process!

On-site collection bins allow for more product to be reclaimed

In conjunction with the bagged recycling program, community members are invited to drop off accepted recyclables 24 hours a day at either of the drop-off locations. There are bright pink collection bins outside of the Innovation Barn for this very purpose. According to Daniel Heaton, who is on staff at [Envision Charlotte](#), the community has been excellent so far at cleaning and sorting these materials prior to drop-off. This makes it much easier for the staff to continue the recycling process once the materials are brought inside the warehouse.

WEIMA and Innovation Barn

Envision Charlotte had initially equipped the [Plastics Lab](#) portion of the facility with a small, hand-fed pre-shredder to grind up the collected takeout containers. The material was then extruded in a tabletop extruder, and the product of this process was used as the filament in a 3D printer. That filament was used to create bricks that could be used in lieu of cinder blocks in some applications. The goal was to show a working example of how one plastic product can be reimaged into another useful plastic product, thus giving the takeout containers a second life as well as a purpose.

“We are so excited to partner with WEIMA to help us advance our circular economy goals! One of our priorities is to divert as much plastic as we can from the landfill and having a shredder like this allows us to turn high volumes of #5 plastic into flake that can be used to extrude, mold, or even turn into filament for 3D printers. We have been engaging the public, involving local companies, and hosting events to collect these materials, and with the help of WEIMA we are making a difference!”

- Amy Aussieker, Executive Director of Envision Charlotte

Pandemic plastic pile-up

During the pandemic, schools, hospitals, and nursing homes in the area began serving multiple meals each day in take-away containers for the safety of those populations. This meant that these containers began to pile up in landfills. Multiple organizations washed and collected the used containers, and Innovation Barn began to take on the task of shredding them and recycling



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them on-site. The WEIMA granulator was a huge help in this process, as the tabletop shredder was unable to handle such a large volume. Now that the shredder is installed, the stored containers are being shredded into reusable flakes much more efficiently.

A solution to maximize plastics processing

In the summer of 2021, WEIMA America partnered with the Innovation Barn to make the Plastics Lab more efficient by lending the facility a granulator with a sound enclosure. This meant that the lab could process significantly more plastic containers within the facility while continuing to educate school groups and Charlotte citizens about the process of reimagining plastic waste.

“We knew immediately upon entering the Innovation Barn that WEIMA absolutely wanted to be a part of making Charlotte a greener city. Our company’s core values truly align with what Envision Charlotte is doing here, and we knew we could make the process easier by placing a granulator in the Plastics Lab. The impact of this project will be monumental and far-reaching, even beyond Charlotte. Other cities are modeling their own recycling programs by learning from what Envision Charlotte is doing. We’re extremely proud of this partnership and excited to see where it’s headed.”

-Audrey Brewer, North American Marketing Manager, WEIMA America, Inc.

Although WEIMA’s North American headquarters is located on the NC/SC border in Fort Mill, South Carolina, its proximity to Charlotte makes Fort Mill a suburb of the big city. Partnering with like-minded organizations moves everyone closer to realizing WEIMA’s mission: a world without waste.

About WEIMA:

More than 40,000 machines sold worldwide! WEIMA has been manufacturing robust shredders, briquetting, and drainage presses for the disposal and processing of all types of waste for more than four decades. Our machines include single-shaft shredders, four-shaft shredders, cutting mills, briquette presses, packaging, and draining presses. The popular blood orange machines are used in the wood, plastics, paper, packaging, metal, and waste-to-energy industries.

Made in Germany. Built for the world.

Shredders, briquette, and drainage presses from WEIMA are exclusively made in Germany and come from production plants in Saxony-Anhalt and Baden-Wuerttemberg. Every year, more than 300 employees work on around 1,200 customer solutions from around the globe. We have long-standing sales and service locations in the USA, Poland, India, and China. More than 80 representatives supplement this global presence.

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High-resolution imagery and video can be found here for download: [Canto link](#)

Characters (without spaces): 5,173

Word count: 971