

Problem Statement

An upcycled bottle chip melter is a device that melts plastic chips from recycled bottles and convert the chips into a plastic sheet that can then be vacuum formed into useful products. The current melter has several undesired attributes including inconsistent distribution of heat, and issues with mold alignment and quality.

The goal is to modify the current prototype to produce 12" x 12" plastic sheets from the chips for new products, while being ergonomically safe and small scale. The resulting design and prototype must be able to be run by a small business with low startup costs. With the success of this project will come a user friendly, cost effective, and eco-friendly device that will create a cleaner environment and stimulation of the local economy in El Sauce, Nicaragua.