



*High School Division- Nānākuli High, Oahu*

*Scrappahz Union 96792*

*Nov 4, 2022*

### **Executive Summary**

1. Briefly describe the product or service:

The product is a prototype of a mobile cardboard shredding system that processes cardboard or paper into three distinct byproducts:

1) mulching materials - a compost ingredient, 2) packaging material for trade businesses and 3) compostable planter pots (1&3) for nurseries, farmers, and anyone who wants to be better stewards of the 'āina and limit their plastic consumption.

2. Why do you think the product or service is a good idea?

Our team has developed a viable prototype for community-level, organics recycling through the use of compost, packaging material and planter pots. It supports community building initiatives while lowering our carbon footprint.

3. Why do you think it will be successful?

Cardboard recycling in Hawai'i is costly and creates a high carbon system due to its internal and external transport. The three most significant solutions for management of waste in Hawai'i are export, incineration, and landfill. Organics, including paper and cardboard, make up a significant amount of the waste stream and therefore makes an impact on Hawaii's carbon footprint. Meanwhile, our food and agricultural inputs are imported as people are facing even greater food security issues post-COVID. We are subsidizing the export of usable resources while paying the high cost of continual imports. People are hungry and facing even greater risk due to climate changes.

### **The Business**

1. Name: Scrappahz Union 96792 (SU).

The local term “scrap” (fight) holds a negative connotation to describe the people and communities on the Westside of the island. The outside communities associate this term as westsiders always wanting to fight. The students have taken that term “scrap” and flipped it to encourage a more positive outcome of the term’s use. As we gain momentum for a school composting club, students, through their actions have made a positive impact. “Yes, we like scrap, we like your food scraps, paper, and your cardboard!”

2. Mission: Production of the Scrappahz Union 96792 shredding system’s goal is to educate, engage, and empower the youth of Wai‘anae to practice and teach sustainable solutions through resource recovery. Through this goal, this Union intends to heal the land, generate income, and improve the health of their community. Organized and runned by students, these leaders volunteer during their lunch break to divert school cafeteria food waste into a compostable product. Nānākuli High School is dedicated to reducing food waste through bokashi composting, food recovery, and education. Our composting program engages and educates people in food systems, environmentally-focused thinking, and community sustainability. Composting and managing food waste more efficiently diverts food waste from landfills, provides an alternative to chemical fertilizers, improves soil quality and carbon retention, and reduces greenhouse gas emissions.

3. Vision: The students envision Nānākuli High & Intermediate as being at the forefront of zero-waste schools, not only on the West Side of the island, but on all of O‘ahu. They hope to create a community composting hub on the westside that supports not only their community but that of the island of Oahu.

4. Objectives: Scrappahz Union 96792 (SU) aims to create sustainable environmental solutions through kuleana (responsibility), kōkua (to help) and kaiāulu (community). A "sustainable community" concept is often defined by the needs and culture of a specific community which addresses the economic, environmental, and social well-being of that particular area/environment. It is prudent to recognize that the economics, environmental health, and social well-being of any particular community work in synergy.

#### SU’s Commitment to Economic Sustainability:

SU strongly believes that if a community does not have a strong economy, then it cannot be healthy and sustainable over the long term.

#### SU’s Commitment to Environmental Health:

SU believes a community can be sustainable over the long term only if it is not degrading its environment or using up natural resources.

#### SU’s Commitment to Social Well-Being:

SU is committed to the health of the environment as a crucial component in addressing social issues of any given community.

#### **The Product or Service**

1. The Hibiscus Lady Nursery reached out to us knowing that we already shred cardboard and asked if we could create a compostable pot for her. Our friends over at Maona Community Gardens in Kona, sent her our contact info. Maona Community Gardens has played

a big part in our learning multiple ways of composting. Our Kumu flew over to Kona and took several pictures of the pot and we mastered their prototype making it our way.

2. Biodegradable pots make so much sense when you're starting from premature plants or in this case hybrid plants. Instead of moving a small, vulnerable plant into a bigger container or a spot in your garden, you just plant the entire pot into the ground. This means less disturbance to your new plant overall. The cardboard will start to become soft and weak during the first 2 weeks. Therefore the customer will have 2 weeks of water time before it needs to go into the ground. While in the ground, the cardboard will further break down allowing roots to grow through the perforated area within 3-6 months. Adding cardboard compost creates more structure to the soil.

3. Market Research: Currently, Home Depot, Lowe's, and Amazon are our main competitors. However, there is no one currently making these types of pots.

How did you determine who they were? Working with possible clients, like The Hibiscus Lady, allowed us to do market research. Jill (The Hibiscus Lady) helped us by identifying where she currently goes to purchase pots.

### **Marketing Plan**

#### 1. Target Market:

Nursery owners, farmers, and anyone who wants to be better stewards of the 'āina and limit their plastic consumption.

#### 2. Marketing Strategies

A. Product : Describe the product or service (how it works, features, packaging design). What makes the product or service great or different?

a. The fact that we are practicing resource recovery through recyclable planter pots makes it a great product.

B. Price: how much will you sell your product or service for?

a. \$.25 per biodegradable pot

C. How does it compare to competitors?

a. There is no one on the market making these types of pots. There are similar variations but these are quite different. They allow for natural aeration of the soil and roots to grow through the perforated areas of the cardboard.

D. Promotion: How will you attract customers?

a. Customers will be introduced to Scraphz Union 96792 through student presentations and community outreach workshops. SU will also be shared via Social media posts, and flyers. SU will also be promoted at Community neighborhood board meetings and presentations through the Hawai'i Farmers United Union O'ahu Chapters.

E. Placement: Where will you sell your product or service?

a. Direct sales, and perhaps farmers markets.

### **Finance**

1. Startup Costs: How much will it cost to start up your business?

We have the necessary supplies such as (2) cardboard shredders, glue and clips. The cardboard is free and is collected through our monthly sustainable Saturday events. *(As part of our mission to reduce greenhouse gasses and divert cardboard waste from entering landfills, students organize community cardboard shred days which are called Sustainable Saturdays. Community members drop off cardboard and students shred it creating mulch for local farmers. Local farmers exchange fresh produce with us for the mulch and the produce is then given away to community members who drop off cardboard. It's a WIN-WIN for everyone while closing the loop and turning rubbish into a resource. Students earn community service hours while feeling good about what they are doing for climate change, the farmers and their community.)* Local businesses and church food distribution sites work in collaboration with our events. Students participate in Sustainable Saturdays and earn community service hours, therefore the labor part of the project is completed monthly.

2. Source of Financing: Where do you plan on getting the funds needed to start?

Funds needed will be to expand what we are already doing. Community outreach is critical, (you don't know what you don't know). Doing community outreach is important, it enables us to vertically align the project with elementary schools in our district.

3. Cost Per Unit: What are all the different elements needed to create your product or service? How much does each unit cost?

Labor: Students participate in Sustainable Saturdays to earn community service hours at no cost.

Supplies: collected at Sustainable Saturdays.

4. Profit: How much will your profit be per unit?

The cost of the pot, 25 cents.

How did you decide on the profit per unit?

We consulted with the prototype nursery, Hibiscus Lady Nursery

What will you do with the profit?

Make a plan for spending, saving and sharing. Profits will help to pay for a composting machine such as the one at Full Circle Farm in Waimāna lot. Last year we visited the farm and learned about their machine, its cost and what it can produce. There is only one of these on the island and we're hoping to have the 2nd one on-island. The cost of the machine is \$75,000, and it will enable us to compost school waste business at a faster rate with a higher output.

5. Sales Projection for Year 1: How many units or services will you sell in the first year? One customer has anticipated that her nursery will need approx 50 pots per month.

$$50 \times .25 = \$12.50$$

$$\$12.50 \times 12 = \$150.00 \text{ per long term customers}$$

How much profit will that give you?

Profit is subjective. We see our project as a profit to the ‘āina, to our community and to each other. The SU wish to strengthen a sustainable value system that measures a communities “wealth” by the health of the land, air and water. Measuring success by the quality of our relationships and time afforded to nurture should be the standard. And the concept of building economic strength should be measured by whether all of us can thrive, not just by how well the rich are doing. Considering we already have all the supplies, we will profit 100% every year. As we learn more about creating sustainable solutions in reducing plastic use, we have started to develop a plan to harvest a natural glue from the native Pāpala Kēpau trees. The native Hawaiians used the sap from this plant to catch native birds, secure their feathers then release them. By making cultural connections to native fauna and Hawaiian lifeways, we can learn to practice these old traditional ways in the 21st century.