Team 12: buh-lah-kay

「LUPÉ」

Executive Summary

To ensure the health of individuals during the pandemic, using hand sanitizers is an effective method to prevent the spread of coronavirus. The demand for hand sanitizers during the pandemic increased by 1400%[1]. Furthermore, with numerous experts and scientists predicting that the coronavirus will become seasonal flu, the hand sanitizer market is expected to grow by 22% in the next six years[2].
However, most of these hand sanitizers are one-time-use products and are made of environmentally harmful materials like plastic and require regular shipping of the products. These plastic bottles last for 400 years or more[3]. This leads to plastic pollution, which threatens food safety, human health, and marine life.
Furthermore, ethanol production requires resources like corn and sugarcane, the [4]most harvested commodity in the agricultural sector, which release significant amounts of CO2.

Mission

Our business aims to create a self sufficient and self supplying hand sanitizer dispenser, Lupé. The tremendous waste created by hand sanitizer whether from its production to the packaging is detrimental to the environment. Our revolutionary technology synthesizes ethanol using CO_2 efficiently, sustainably generating hand sanitizers for customers.

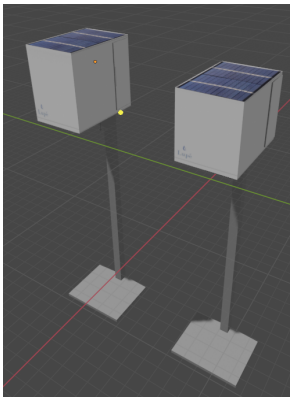
Description of Product

Our product will enable businesses to establish a more eco-friendly and cost-effective method of dispensing hand sanitizers to their customers with the self-sustaining technology integrated into the Lupé. The user fills in an internal tank with ordinary tap water, which must be recharged when it empties. This water is then purified via the use of Peltier module[4] to heat the water. This purified water travels to a reservoir where it is stored until the ethanol runs out. When the ethanol runs out, it will be electrolyzed into 2H2 and O2. Then, the battery, powered by solar panels, will ionize hydrogen which passes through a Cobalt Nickel catalyst where the CO2 is taken from the atmosphere. The output of the reaction will be ethanol. The ethanol mixes with the tap water in a designated mixture which gets dispensed for usage. With the product's lifetime being decades and operation being self-sufficient, Lupé will cut down on the plastic waste produced from hand sanitizer bottles and the pollution caused by the transportation of the bottles.

Target Customer

Our target customers are big corporations, hospitals, small businesses, and public institutions looking to go green and become economically efficient in a society where the coronavirus will still be prevalent.

Understanding that there are different businesses, the Lupé comes in two sizes to accommodate different needs. Small and Large. The Small model is smaller in capacity but more affordable, adequate for smaller businesses. The Large model is designed to accommodate as many people as possible in a small time frame, sufficient for larger companies and corporations. The two types will allow businesses of all sizes to utilize hand sanitizers in an environmentally friendly way.



←Models of Lupé dispenser

Marketing/Industry Analysis

(i) Industry Analysis

Our industry analysis concludes that our product will be in demand for an extended period. Our ability to keep Lupé cheap and available at a low threshold for as many businesses as possible will keep us as competitive as possible against other similar products that manually hold ethanol.

(ii) Marketing

We plan to advertise our products with a combination of online advertisements and showcasing our products in conventions. We will advertise our product through paid advertising and target blogs and websites often visited by small business owners. We will also showcase our products in tech conventions, such as CES to reach large corporations. We will also partner with the government and supply our products to hospitals.

Financial Plan

Amount in US$	Year 1	Year 2	Year 3
1. Revenues	207,810	2,078,100	3,117,150
# of products sold	450	4,500	6,750
price/product (Small Ver)	334	334	334
price/product (Large Ver)	547	547	547
2. Production Cost	120,400	1,229,000	1,843,500
Unit Cost (Small)	145.00	145.00	145.00
Unit Cost (Large)	238.00	238	238
Labor costs	40	45	45
# of product to produce (Small)	200	2,000	3,000
# of product to produce (Large)	300	3,000	4,500
3. Expenses	180,000	504,000	752,000
Staff expenses	160,000	480,000	720,000
Sales/Marketing	20,000	24,000	32,000
4. Profit/Loss before Tax	-92,590	345,100	521,650
5. Income Tax	0	89,381	175,222
6. Net Profit/Loss	-92,590	255,719	346,428
7. Start Up Cost	40,000	0	0
8. Capital Investment (Office cost)	10,000	20,000	40,000
9. Free Cash Flow	-142,590	235,719	306,428
10. Funding Required	20,000	0	0
11. Loan Required	130,000	0	0
12. Repayment of Loan	0	47,667	47,667
13. Dividend for shareholders	0	0	500
14. Cash Balance	7,410	188,052	258,261

Initially, we will be restricted by our small budget due to our ambitious idea. Since this is a pioneering idea and non-existing industry, there is no clear price point. The first 2-year period, we will focus on improving our product and then in the 3rd year, we will open up the company to the stock market with 1000 shares, paying out every fiscal year at 50 cents per share. As our company earns more profit, we will increase the amount of dividend that we pay out so more shareholders will buy our stocks. This will allow us to use the capital to improve our product.

Bibliography

1https://www.beautypackaging.com/contents/view_breaking-news/2020-05-14/demand-for-hand-sanitizers-increases-by-1400/

2https://www.globenewswire.com/news-release/2021/01/21/2162308/0/en/Hand-Sanitizer-Market-to-Garner-Growth-21-75-by-2027-Precedence-Research.html

3https://pelacase.com/blogs/news/does-plastic-degrade

https://www.cuidevices.com/blog/how-to-select-a-peltier-module

4https://beef2live.com/story-top-25-produced-foods-world-124-107239