



FLORIDA INSTITUTE OF TECHNOLOGY, MELBOURNE
[Batch 2022-2024]

TECHNOLOGY COMMERCIALIZATION STRATEGIES
[ENM5420]

Project Report

On

“GREENFLOW BOTTLES”

(A better future in every sip)



Submitted by:

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Submitted to:

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COMPANY PURPOSE

1.1. INTRODUCTION

Company Name : **GREENFLOW BOTTLES LLC**

(A better future in every sip)

Board of Directors : Jagadish Ravulapalli (Founder&CEO)

Product Portfolio : Paper pulp water bottles

Factory Location : Rajahmundry, Andhra Pradesh, India



Mission

Our mission is to manufacture high-quality paper pulp water bottles that are environmentally friendly, biodegradable, and safe for both people and the environment. We want to reduce the environmental impact of plastic waste by offering a better alternative to single-use plastic water bottles. We strive to create a future where responsible consumption is the norm and everyone can access clean, safe, and sustainable drink containers through our commitment to innovation and customer satisfaction.

Vision & Values

Our vision is to transform the beverage industry by offering sustainable and environmentally friendly alternatives to single-use plastic water bottles. It is to inspire a shift toward a more conscious and responsible consumer culture by creating a world where people can enjoy their drinks without harming the environment.

1.2. Broad Purpose Of Greenflow Bottles LLC

With the growth of the population around the world and a rise in demand for packaging products, plastic pollution is one of the most common and hazardous issues. The accumulation of this plastic in our environment has started to create problems for wildlife and human populations. Plastic is a polymeric material, has very large molecules, constituting long chains made up of a series of interconnected carbon links making it way more complex to break them into smaller molecules and making them degradable.

Today, on average, consumers utilize all kinds of plastic materials extensively. Synthetic plastics are non-biodegradable, and they tend to persist in the environment for a longer time. This brought up an idea to resolve this issue to an extent where people can use an alternative to plastic that is safe for mankind as well as for mother nature.

Greenflow Bottles are made from recycled waste paper. The cap section of the water bottle is made from sugarcane pulp, which is also a biodegradable material. These bottles can withstand cold temperatures and moisture and are ideal to store in a refrigerator. Unlike plastic bottles, they can be reused at least thrice and can be recycled as they are bio-degradable in nature.

1.3. Motivation Behind Enterprise

Considering it to be a great domain of my interest/passion, motivated me to consider this as an opportunity to offer a good chance to build an enterprise where I would contribute my best efforts toward a substantial livelihood. This will not only reduce plastic pollution and usage but will also help in the protection of the environment through the cheapest medium.

1.4. Product and Manufacturing

Greenflow Bottles are beverage containers made completely of paper pulp. It is an environmentally friendly alternative to standard plastic water bottles, which can take hundreds of years to degrade and contribute to the worldwide plastic pollution disaster.

Manufacturers begin by locating and gathering recycled paper resources to make a paper pulp water bottle. The paper is then cut into small pieces and combined with water to form a slurry.

Using sophisticated technology, this slurry is then squeezed and molded into the required bottle form. The result is a strong, long-lasting container that can hold liquids such as water.

One of the key benefits of paper pulp water bottles is that they are environmentally friendly. They are entirely recyclable and biodegradable, which means they may degrade into natural components without causing harm to the environment. Furthermore, compared to standard plastic bottle manufacture, the creation of paper pulp bottles needs substantially less energy and resources, making them a more sustainable option.

Another advantage of paper pulp water bottles is that they may be used with food and beverages. The bottle's components are non-toxic and free of dangerous chemicals, making them a safe alternative for customers.

1.4.1. Product Material and Design:

Raw materials used in Paper pulp water bottles: *Recycled paper, sugarcane fiber*

Bottle dimensions:

500ml(16oz)

Height: 200-220mm (7.87-8.66 inches)

Diameter: 70-75mm (2.76-2.95 inches)

Neck diameter: 28mm (1.10 inches)

1000ml(34oz)

Height: 240-260mm (9.45-10.24 inches)

Diameter: 80-85mm (3.15-3.35 inches)

Neck diameter: 28mm (1.10 inches)

1.5. Business Model

The company's business model can be built around the following components:

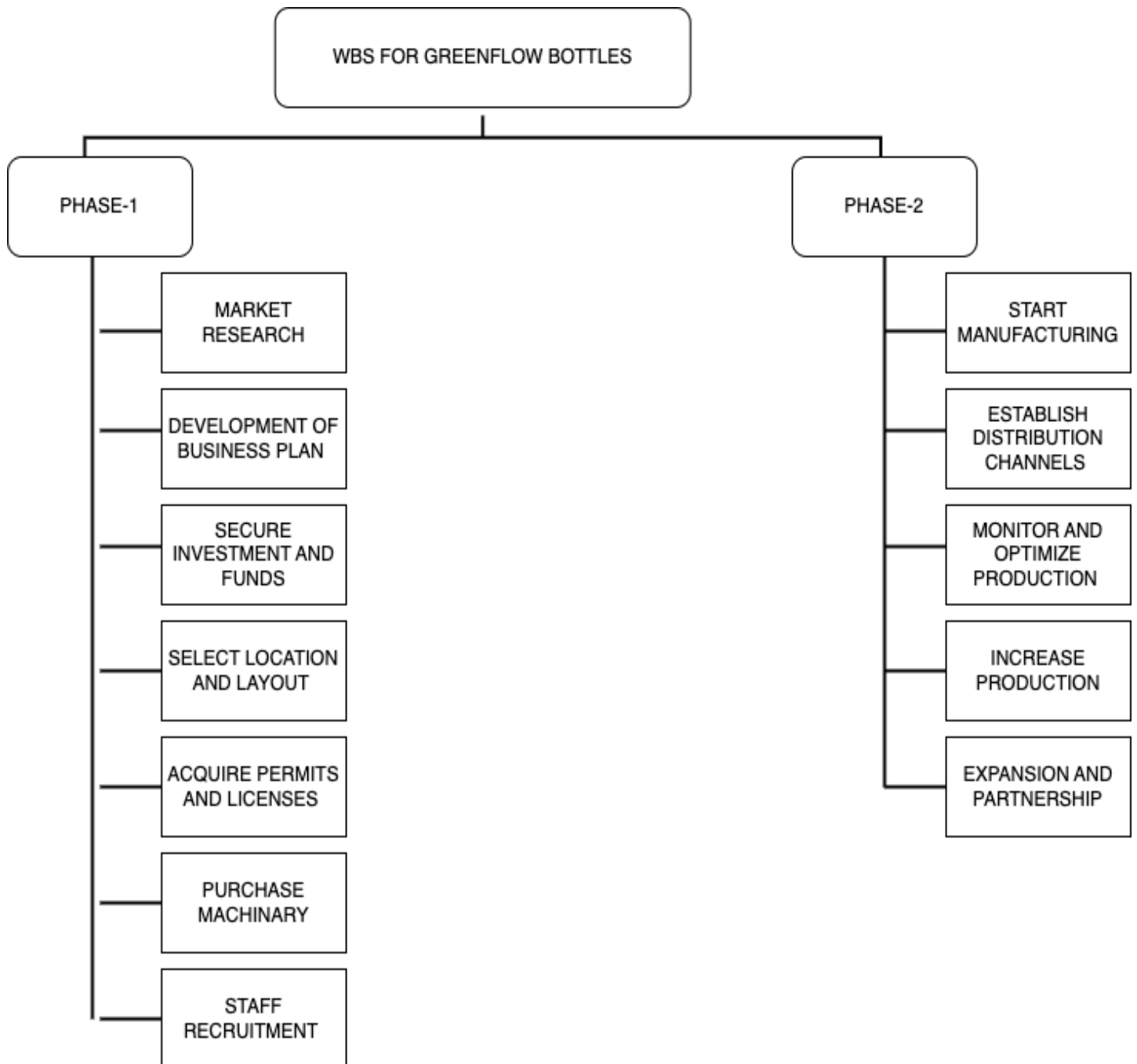
- **Product Development:** The company will concentrate on researching, developing, and manufacturing high-quality paper pulp water bottles that meet customers' needs and expectations. The bottles will be made of environmentally friendly and biodegradable materials.

- **Manufacturing:** The company will establish a manufacturing facility to mass-produce paper pulp water bottles. The facility will use low-cost, environmentally friendly manufacturing processes.
- **Sales and Distribution:** To sell its products, the company will target various channels such as grocery stores, online retailers, and beverage companies. In order to reach a larger market, the company will also form partnerships with distributors.
- **Marketing and branding:** To raise awareness about the benefits of paper pulp water bottles and differentiate its products from plastic alternatives, the company will create a strong brand identity and marketing strategy.
- **Financial Sustainability:** To remain competitive, the company will implement cost-effective strategies to reduce production costs and maximize profits, while also investing in R&D. It will also take into account environmentally sustainable business practices that can reduce costs while also having a positive impact on the environment.

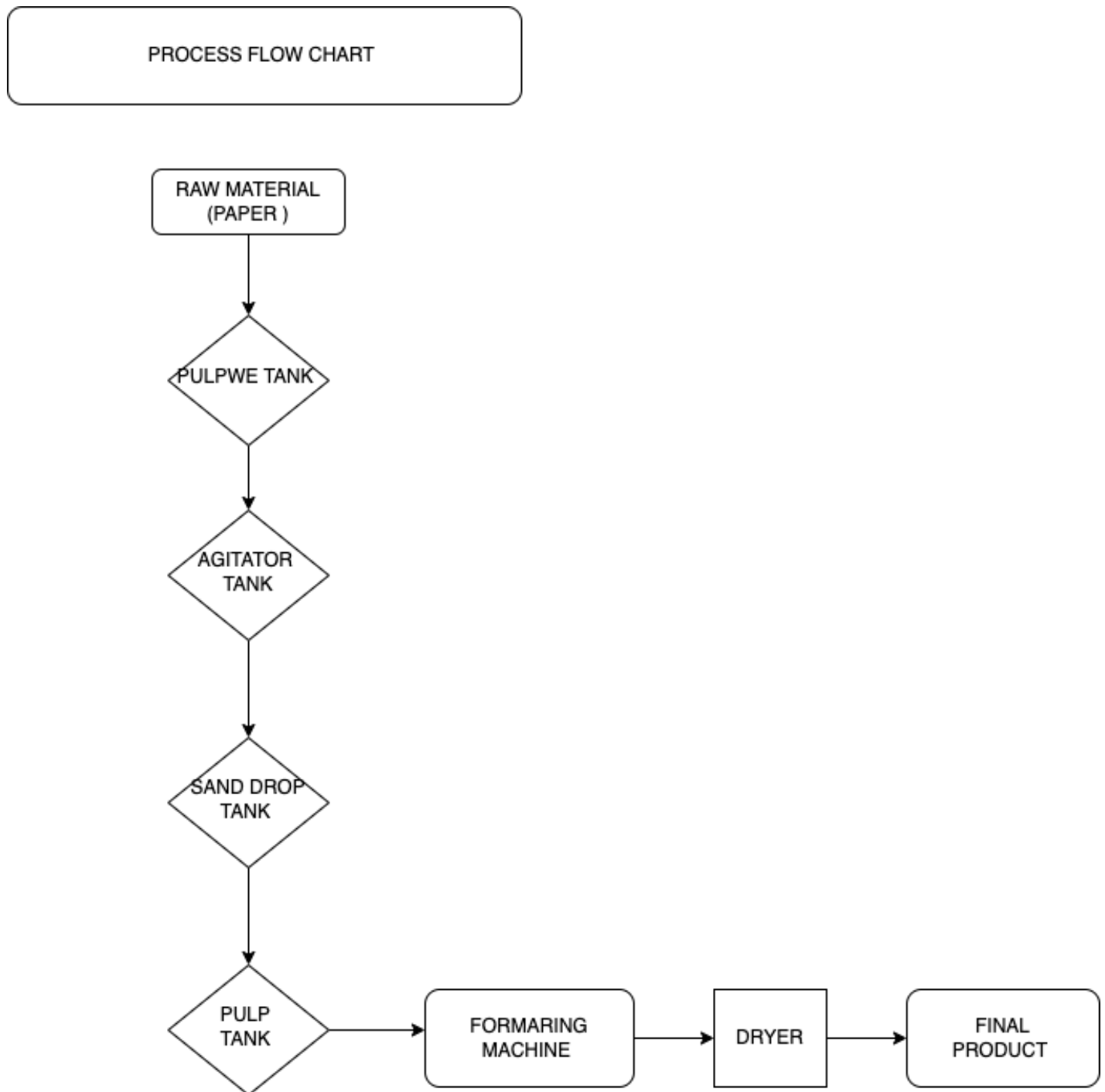
Overall, the business model will be based on producing high-quality, environmentally friendly, and biodegradable products while focusing on profitability and customer satisfaction.

1.6. Project Plan

1.6.1 Process Flow:



1.6.2. Process Flow Chart :



1.6.3. Machinery Details:

S. No.	Particulars	No./rate(\$)	Value in \$
1	<p>Fully Automatic rotary type Pulp Molding machine with: moulds</p> <ul style="list-style-type: none"> • Eight faces, each face to mount 4 bottle moulds • Computer programmed control panel with parameter inputs • Mitsubishi make PLC, HMI and VFD • Pulp tank, Rotor, Platens, Pipes and Pipe fittings made of 304 grade stainless steel • Automatic tray washing system • Automatic mold washing system • Automatic counting system • Automatic grease lubrication System • Stainless Steel Body 	1*27454.93	27454.93
2	Hot press	2*7321.31	14,643
3	pressure pump for mould washing with 2hp motor	2*976.18	1952.35
4	<p>Agitators for stirring pulp, with:</p> <ul style="list-style-type: none"> • Reduction gearboxes • 2HP motorsShafts • SS Blades 	2*976.18	1952.35
5	Pulp Pump with 5 HP motor	1*610.11	610

6	Vacuum pump with 50 HP motor, vacuum tank and silencer	1*5490.99	5,491
7	Air-Water Separator pump set 2 HP	1*366.07	366
8	Screw type Air compressor with 30 HP motor and air tank	1*4880.88	4,881
9	Electric control panel for Pulping System	1*1220.22	1220.22
10	Hydra Pulper Assembly box with 25HP motor	1*1830.33	1,830
11	Bottle moulds (32 Forming Moulds 4 Transfer Moulds)		20,256
Total			\$80,656.50

1.6.4. Power Load For Machines:

S.no	Machine	Power load	
1	Forming Machine (Full Rotary)	5hp	5
2	Pulper	15hp	15
3	Vacuum Pump	50hp	50
4	Air Compressor	15hp	15
5	Pulp Pump	3hp	3
6	Agitators (2hpx2)	4hp	4
7	Air-Water Separator Pump	2hp	2
8	Hot Press	3hp	3
	Other	10hp	10

MARKET / CUSTOMERS / OFFERING

2.1. Market Potential

The rising customer demand for sustainable and eco-friendly packaging solutions has increased the market potential for the paper pulp water bottle business. As consumers become more conscious of the environmental impact of plastic waste, they are looking for alternatives that decrease their carbon footprint and contribute to a more sustainable future.

Over the next few years, the worldwide paper pulp water bottle market is predicted to rise steadily. The worldwide paper packaging market is expected to reach *\$413.6 billion by 2025*, according to MarketsandMarkets, with sustainable packaging choices like paper pulp bottles driving most of this development.

Apart from customer demand, governmental forces are encouraging the development of sustainable packaging choices. Governments all across the world are putting in Regulations and policies aimed at minimizing plastic waste and encouraging sustainability are projected to push demand for paper pulp water bottle alternatives even further. Overall, Greenflow Bottles is poised for significant growth in the coming years as consumers and businesses alike seek out sustainable packaging options.

2.2. Target Audience

Our major market covers a target audience who are environmentally conscious and seeks sustainable alternatives to traditional plastic water bottles. Customers are people who are aware of the environmental impact of plastic waste and are looking for eco-friendly options to reduce their carbon footprint.

Individuals who are health-conscious and want to drink safe and clean water are the primary target segment for Greenflow Bottles. This includes people who enjoy fitness, hiking, and other outdoor activities. People who care about the environment and want to reduce their use of plastic would also be a key target segment.

Greenflow Bottles may also target businesses and organizations that value sustainability and want to publicize their eco-friendly initiatives. Hotels, resorts, and airlines are examples of businesses in the hospitality and travel industries. And also we can target young audiences who

fall in the age category of 18 to 15 by making them aware of the environment and the benefits of using paper pulp water bottles.

2.3. Growth In The Market

Because of the growing need for sustainable and eco-friendly packaging choices, the paper pulp water bottle business has seen consistent growth in recent years. Despite being small when compared to other beverage packaging options such as plastic bottles, glass bottles, and aluminum cans, the global paper pulp water bottle market was valued at *USD 21.6 million in 2020 and is expected to reach USD 42.2 million by 2027, growing at a CAGR of 9.5% between 2021 and 2027*. As customers become more environmentally conscious and seek sustainable packaging options, the market is likely to develop further.

Ecologic Brands, PulpWorks, and Tetra Pak are among the leading companies in the paper pulp water bottle sector. Smaller firms, on the other hand, are joining the market and delivering fresh products and solutions. The competition is set to escalate in the coming years as more businesses attempt to profit from the rising demand for environmentally friendly packaging. Despite the increased rivalry, new competitors might still enter the market and provide innovative solutions.

2.4. Goals Of The Company

The long-term goals of Greenflow Bottles are sustainability, market share, innovation, and profitability. By decreasing their environmental effect and innovating to satisfy customer expectations, the firm wants to become a leader in sustainable packaging solutions. The aim is also to enhance its market share by diversifying the offers, increasing manufacturing capacity, and strengthening the distribution network. Finally, we want to achieve long-term profitability by upgrading manufacturing methods, marketing and distribution strategies, and creating new income sources. While pursuing these objectives, organizations in this area must navigate an increasingly competitive and fast-evolving market.

2.5. Major Competitors

Greenflow Bottles LLC is still an early-age enterprise, but it is becoming increasingly competitive as more companies enter the market. Some of the major competitors in the industry include

Ecologic Brands a leading provider of sustainable packaging solutions, including paper pulp water bottles. The company uses patented technology to produce bottles made from recycled cardboard and paper and has partnerships with a number of major brands.

PulpWorks is another major player in the paper pulp water bottle industry. The company produces a range of sustainable packaging products, including paper pulp water bottles, using biodegradable and compostable materials.

Tetra Pak is a global packaging company that offers a range of packaging solutions, including paper pulp water bottles. The company has a strong focus on sustainability and has been recognized for its efforts to reduce waste and promote sustainable packaging.

Greenflow Bottles is becoming increasingly competitive, with a number of established players for market share. However, companies that are able to differentiate themselves through innovation, sustainability, and brand recognition are likely to be well-positioned for long-term success.

2.6. Build And Sustain A Competitive Advantage

Due to the special features of the product, Greenflow bottle would benefit from implementing a differentiation strategy. The company can advertise its product as a high-end and valuable alternative because these bottles are more environmentally benign and environmentally sustainable than conventional plastic bottles. This can then draw in clients who are concerned about the environment and are willing to pay more for goods that adhere to their ideals.

A differentiation approach encourages client loyalty and aids in building a strong brand identity. The paper pulp water bottle industry can build a devoted following and an excellent product portfolio that can offer a long-lasting competitive advantage by providing a distinctive and one-of-a-kind product. The technology and strategies we designed are mainly dedicated to producing new paper pulp products while outreaching our product through various mediums to the end customers in order to fulfill their demands on priority through a rapid production process. Bringing this idea into a working model, we aspire to improvise customer satisfaction and contribute a step towards sustainable development as well.

CORE COMPETENCIES

3.1. Core competencies of the Greenflow Bottles

For Greenflow bottles , potential core competencies include:

- Manufacturing expertise: The ability to efficiently produce paper pulp water bottles at scale using innovative materials and manufacturing processes.
- Sustainability: A deep commitment to sustainability and environmental responsibility, demonstrated through the use of renewable and biodegradable materials, efficient manufacturing processes, and environmentally conscious marketing and packaging initiatives.
- Innovation: A focus on research and development to continuously improve product offerings and develop new packaging formats.
- Branding: The development of a strong and recognizable brand identity, demonstrated through distinctive visual design, engaging marketing strategies, and a strong social media presence.
- Customer service: A commitment to providing excellent customer service through fast and reliable shipping, customizable packaging options, and a strong focus on customer feedback and engagement.

Of course, the actual core competencies of a specific company in the paper pulp water bottle industry will depend on its unique strengths, resources, and capabilities.

3.2. Greenflow Bottles: Realistic Self-Assessment

Every company conducts a regular assessment, and so does Greenflow Bottles. We believe that it is important to conduct self-assessments in order to evaluate our company's performance, identify areas for improvement, and ensure that it is meeting legal and regulatory requirements. It involves an objective analysis of strengths, weaknesses, opportunities, and threats (*SWOT analysis*), as well as an assessment of their environmental, social, and governance (*ESG*) performance.

Greenflow Bottles consider various factors such as the use of sustainable and renewable materials, energy efficiency, waste management practices, compliance with environmental

regulations, and efforts to reduce the carbon footprint. We also consider the social impact, including labor practices, contribution to local economies, and engagement with stakeholders. We use reliable and objective sources of information, such as independent auditors or third-party certifications. We also engage with stakeholders, including customers, employees, and local communities, to gather feedback and incorporate perspectives into our assessment.

3.3. Factors To Achieve Long-Term Market Goals

Some potential areas of deficiencies that we recognized in the Greenflow Bottles which may need to address to achieve its long-term market goals include:

- ***Cost-effectiveness:*** The production of paper pulp water bottles is more expensive than traditional plastic bottles, which could limit the competitiveness in the market. We may need to find ways to reduce production costs, by increasing efficiency, streamlining processes, or finding more affordable raw materials.
- ***Infrastructure:*** Since our domain of industry is quite new and may not have the same level of infrastructure and supply chains as the plastic bottle industry. We may need to invest in developing infrastructure, such as recycling facilities and transportation networks, to support the growth of the industry.
- ***Consumer Education:*** The general public may not be familiar with paper pulp water bottles and may not understand their benefits. So, we may need to invest in consumer education and marketing to raise awareness and promote the use of paper pulp water bottles.
- ***Scalability:*** Our industry is still in its initial phase of development and may not yet have the capacity to produce enough bottles to meet demand. We may need to invest in scaling up the production capabilities to achieve economies of scale and make the industry more viable in the long term.

Hence, as an early-age enterprise, we may need to address deficiencies in areas such as cost-effectiveness, infrastructure, consumer education, and scalability in order to achieve our long-term market goals.

3.4. Personnel And Resource Management Strategies

Attracting and retaining personnel and critical resources is important for the success of any company. Greenflow Bottles as a company focuses on retaining our manpower and provides support and relaxation through effective resource management strategies.

Greenflow Bottles plans to retain the personnel by offering competitive salaries and benefits, opportunities for career growth and development, and a positive work culture that values and supports employees. Moreover, we plan to acquire critical resources through acquisitions, partnerships, or other strategic collaborations.

Effective personnel and resource management in the paper pulp water bottle industry requires a focus on sustainability, innovation, and efficiency. We plan to invest in research and development to create new and innovative products that meet the needs of consumers and also which are more environmentally sustainable. Our strategy is to attract and retain personnel and other critical resources, we must adapt to changing market conditions and regulatory environments and stay up-to-date with emerging trends and technologies, willing to invest in new initiatives to remain competitive.

3.5. Critical Processes And Value Web Management

In Greenflow Bottles Industry, critical processes include the production of high-quality paper pulp, the manufacturing of water bottles from the pulp, and the management of the value web, which includes suppliers, distributors, and customers.

To develop and improve critical processes, Greenflow Bottles must invest in research and development to identify new and innovative methods for producing high-quality paper pulp and manufacturing water bottles. We must also focus on continuous improvement, using metrics and data analysis to identify areas for improvement and implementing changes to increase efficiency and reduce waste.

Effective management of the value web requires a focus on collaboration and communication with suppliers, distributors, and customers. We must establish strong relationships with their partners and work together to optimize the supply chain, reduce costs, and improve overall

efficiency. We must also be responsive to the needs and preferences of customers, using feedback and market research to adapt to changing trends and preferences.

In addition to developing and improving critical processes and managing the value web, Greenflow Bottles must also prioritize sustainability and environmental responsibility. This includes using renewable and sustainable materials, reducing waste and energy consumption, and complying with environmental regulations.

Hence, effective development and improvement of critical processes, including management of the value web, is essential for the success of Greenflow Bottles in the paper pulp water bottle industry. This requires a focus on research and development, continuous improvement, collaboration and communication with partners, and a commitment to sustainability and environmental responsibility.

FINANCIAL PERFORMANCE

4.1. Finance Overview Of Greenflow Bottle LLC

Product	Total production capacity	Production in no of bottles @95%	Sales price / Bottle	Totals sales
Paper pulp water bottles	200,000	190000	\$1.5	\$285,000

Product	Total production capacity	Production in no of bottles @95%	Sales price / Bottle	Totals sales
Paper pulp water bottles	200,000	190000	\$1.7	\$313,500

Product	Total production capacity	Production in no of bottles @95%	Sales price / Bottle	Totals sales
Paper pulp water bottles	200,000	190000	\$2.0	\$380,000

→ Quantity And Quality Of Manpower:

Particulars	Year 1		Year 2		Year 3		Year 4		Year 5	
Administration	S	US	S	US	S	US	S	US	S	US
Manager	1		1		1		1		1	
Accountant	1		1		1		1		1	
Marketing	1		1		2		2		2	
Clerk	1		1		1		1		1	
Total	4		4		5		5		5	

→ Factory										
Production Manager cum Supervisor	2		2		2		2		2	
Storekeeper	2		2		2		2		2	
Workers	10	5	10	5	12	5	12	5	12	5
Total	14	5	14	5	14	5	14	5	14	5
Grand total for factory	19		19		19		19		19	
Grand total	23		23		24		24		24	

S= Skilled employee

US= Unskilled employee

→ **Wages Particulars (Per Month):**

S.no.	Designation	Salary
1	Manager	\$8,000
2	Accountant	\$6,000
3	Marketing	\$7,000
4	Clerk	\$4,000
5	Supervisor	\$6,500
6	Store keeper	\$4,000
7	Workers (skilled)	\$3,000
8	Workers (unskilled)	\$2,500

→ **Salary Amount For Workers:**

year one	year two	year three	year four	year five
\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
\$7,000	\$7,000	\$14,000	\$14,000	\$14,000
\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
\$13,000	\$13,000	\$13,000	\$13,000	\$13,000
\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
\$30,000	\$30,000	\$36,000	\$36,000	\$36,000
\$12,500	\$12,500	\$12,500	\$12,500	\$12,500
\$88,500	\$88,500	\$101,500	\$101,500	\$101,500

→ **Financial Analysis & BEP:**

Production and Sales:

Product Type	Year one	Year Two	Year Three	Year Four	Year Five
Paper pulp water bottle (full capacity)	200,000	200,000	200,000	200,000	200,000
Efficiency	85	90	95	95	95
No of bottles produced	170000	180000	190000	190000	190000
Price	\$1.50	\$1.50	\$1.50	\$1.70	\$2
Sales	\$255,000.00	\$270,000.00	\$285,000.00	\$323,000.00	\$380,000.00
Opening Debtor	0	\$60,000.00	\$70,000.00	\$85,000.00	\$95,000.00
Closing Debtor	\$60,000.00	\$70,000.00	\$85,000.00	\$95,000.00	\$105,000.00

Avg. Debtor	\$ 30,000.00	\$65,000.00	\$77,500.00	\$90,000.00	\$100,000.00
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→ **Budget Profit & Loss Account:**

Particular	Year one	Year Two	Year Three	Year Four	Year Five
Income					
Sales	\$255,000.00	\$270,000.00	\$285,000.00	\$323,000.00	\$380,000.00
Interest Income	\$60,000.00	\$65,000.00	\$85,000.00	\$100,000.00	\$150,000.00
Total Income	\$315,000.00	\$335,000.00	\$370,000.00	\$423,000.00	\$530,000.00
Expenditure					
Variable Cost:					
Raw material Consumed	\$90,000.00	\$110,000.00	\$120,000.00	\$120,000.00	\$120,000.00
Wages	\$88,500.00	\$88,500.00	\$101,500.00	\$101,500.00	\$101,500.00
Electricity @\$9/kwh	\$4,500.00	\$4,590.00	\$4,770.00	\$4,860.00	\$4,950.00
Maintenance & Spares	\$15,000.00	\$20,000.00	\$25,000.00	\$30,000.00	\$40,000.00
Stationary	\$100.00	\$100.00	\$110.00	\$120.00	\$120.00
Telephone	\$150.00	\$150.00	\$200.00	\$220.00	\$280.00
Total VC	\$198,250.00	\$223,340.00	\$251,580.00	\$256,700.00	\$266,850.00
Contribution	\$56,750.00	\$46,660.00	\$33,420.00	\$66,300.00	\$113,150.00

Fixed Cost:					
Depreciation	\$10,289.00	\$16,350.00	\$16,350.00	\$16,350.00	\$16,350.00
Misc. Expenditure	\$300.00	\$400.00	\$450.00	\$500.00	\$550.00
License Fee	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00
Insurance	\$10,000.00	\$10,000.00	\$15,000.00	\$15,000.00	\$16,000.00
Technical Consulting Fee	\$15,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00
Incorporation Expense	\$2,000.00	\$2,500.00	\$2,500.00	\$3,000.00	\$3,500.00
Total FC	\$39,089.00	\$32,750.00	\$37,800.00	\$38,350.00	\$39,900.00
Profit	\$17,661.00	\$13,910.00	\$(4,380.00)	\$27,950.00	\$73,250.00
	(Profit)	(Profit)	(Loss)	(Profit)	(Profit)

→ Raw material inventory:

Product (Paper pulp bottle)	Year one	Year two	Year three	Year four	Year five
Total Cost	\$90,000.00	\$110,000.00	\$120,000.00	\$120,000.00	\$120,000.00
Total Purchase	85000	90000	95000	95000	95000
RM Inventory	\$5,000.00	\$20,000.00	\$25,000.00	\$25,000.00	\$25,000.00

→ **Working Capital Calculation:**

Particular		Year one	Year two	Year three	Year four	Year five
Current Asset:						
A	Debtors	\$30,000.00	\$65,000.00	\$77,500.00	\$90,000.00	\$100,000.00
B	Stock					
	Raw materials	\$5,000.00	\$20,000.00	\$25,000.00	\$25,000.00	\$25,000.00
	Finished Goods (MTO)					
C	Cash and Bank Balance	\$60000	\$90000	\$90000	\$90000	\$90000
	Total CA	\$95,000.00	\$175,000.00	\$192,500.00	\$205,000.00	\$215,000.00
Current Liability:						
A	Creditors*	0	0	0	0	0
	Total CL	0	0	0	0	0
	Net Working Capital	\$95,000.00	\$175,000.00	\$192,500.00	\$205,000.00	\$215,000.00

Investment in ASSETS (Years 1-5):

Total investment in asset = **90,656**

→ **Financial Break Even Analysis:**

Year	BEP (in units)	BEP (in dollars)
1	4340.77	\$221,356.67
2	4847.05	\$261,929.70

3	5155.39	\$293,946.23
4	5376.31	\$349,977.15
5	5523.23	\$419,584.48

The company will achieve break even in year 3.

4.2 Location And Layout

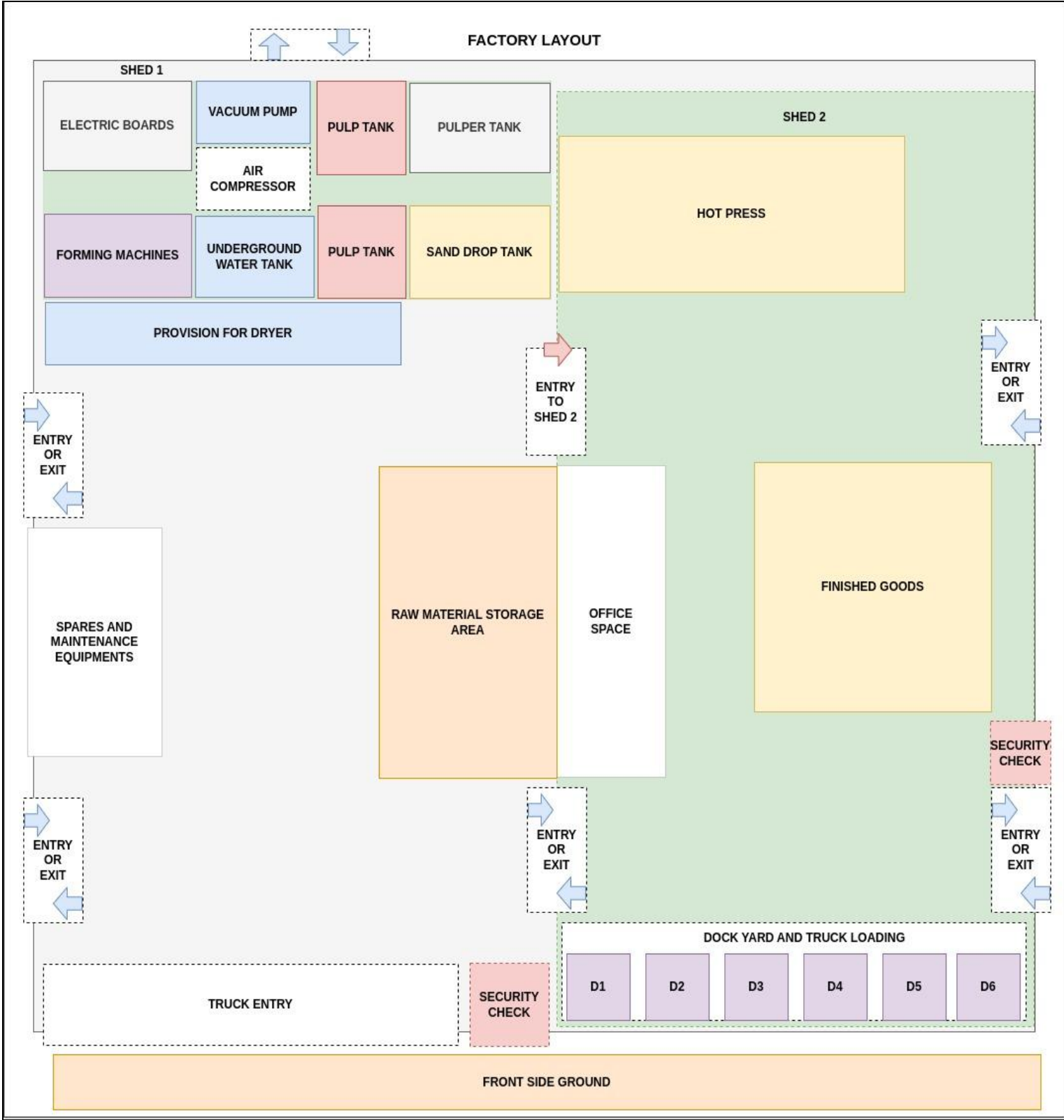
When selecting a location for an organization or manufacturing unit, various factors such as the availability of raw materials, transportation, skilled and unskilled labor, and government regulations must be considered. For my venture, Greenflow Bottles, I have carefully considered these factors and have determined that **Rajahmundry, India** is an ideal location.

One of the primary requirements for our industry is the availability of freshwater, which is abundant in this area. Moreover, Rajahmundry offers access to a good supply of skilled labor, which is essential for our operations.

The Transportation infrastructure in Rajahmundry is also excellent, with well-connected highways and railway lines, as well as a port that facilitates international trade. Additionally, the government of Rajahmundry provides a single-window portal that simplifies the process of obtaining necessary permissions and offers various schemes to promote the growth of small-scale industries. This support from the government will be invaluable to our venture.

Rajahmundry in India satisfies all of the necessary requirements for Greenflow Bottles. We are confident that we have made the right choice in selecting this location, and we look forward to a successful venture in this area.

Below is a complete layout of Factory.



SWOT ANALYSIS/STRATEGY ASSESSMENT

5.1. SWOT analysis based on preceding analytical assessments

Strengths:

- ★ Paper pulp water bottles are biodegradable and made from renewable materials, making them a more environmentally friendly option than traditional plastic water bottles.
- ★ Paper pulp water bottles are lighter than plastic water bottles, which can help with transportation and shipping.
- ★ Paper pulp water bottles can be customized with a variety of designs and shapes, making them appealing for branding and marketing.

Weaknesses:

- Water bottles made of paper pulp are less resilient than those made of plastic and therefore could be more vulnerable. When exposed to liquids, heat, and pressure, it suffers damage.
- Short shelf life: Paper pulp water bottles may not be appropriate for long-term storage due to their limited shelf life.
- Higher manufacturing costs: Paper pulp water bottles are more expensive to create than plastic water bottles because they require more ingredients and processing stages during production.

Opportunities:

- ➔ Growing demand for sustainable products: As consumer awareness of environmental issues grows, so does the demand for eco-friendly products such as paper pulp water bottles.
- ➔ Market expansion: There is an opportunity for the paper pulp water bottle business to enter new markets, particularly in areas where there is a high demand for eco-friendly goods.
- ➔ Innovation: New and improved paper pulp water bottles can be created as a result of technological and material advancements, increasing their marketability.

Threats:

- ❖ Competition from traditional plastic water bottles: Traditional plastic water bottles, which are widely available and less priced, are a competitor to the paper pulp water bottle sector.
- ❖ Lack of customer knowledge: Many consumers might not be aware of the advantages of paper pulp water bottles and may favor conventional plastic water bottles.
- ❖ Regulations: Government rules and regulations, particularly those pertaining to biodegradability and compostability, could provide difficulties for the paper pulp water bottle sector.

6. CONCLUSION

From the report we can conclude that ,the market for paper pulp water bottles is likely to grow in the next years, due to reasons such as rising environmental concerns, government restrictions on plastic consumption, and shifting customer preferences.

According to the financial analysis from the report , it is a high capital-intensive industry with large start-up expenses. However, the break-even analysis indicates that with adequate planning and management, profitability may be attained in a few of years.

The industry's major players are extensively spending in research and development to improve product quality and increase production efficiency. Collaborations and collaborations across industry businesses are also growing, which might lead to more breakthroughs and development prospects.

Overall, the paper pulp water bottle sector has substantial future growth potential Companies that can manage their operations and production expenses efficiently may enjoy substantial financial rewards while also contributing to a more sustainable future.

7. REFERENCES

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