




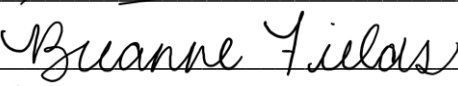
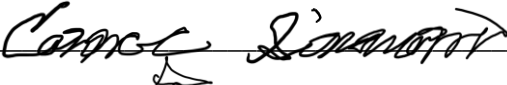


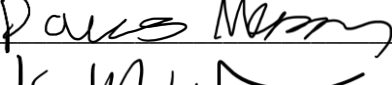

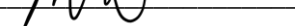
portaplant.com

(Logos / Browse Thousands of Logos Created Just for You, n.d.)

Business Plan

PortaPlant, LLC

PortaPlant; all new portable and weather-proof greenhouse for plants all around your house.

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Executive Summary

Porta-Plant LLC

Ananya Arora, Breanne Fields, Conner Simmons, David Lee, Davis Marden, Kishan Patel, Marlene Robles, Nicholas Stockel

3825 W 11th Ave, Eugene, OR 97402

Phone: [800]123-4567

E-mail: portaplantllc@jmu.edu

Management:

Titles: General Management, Marketing/Sales Manager, Operations Manager, IT specialist, Sales Associate, Marketing Associate, Customer Service Associate, Receiving/Shipping Associate, Assembly Line Associates, HR Specialist.

Industry: [332311.04] Greenhouse Manufacturers

Number of Employees: Year 1–15 FTE

Amount of Financing Sought: \$1,500,000

Investment Sources:

80% Founding Investors: \$150,000/each = \$1,200,000

20% Angel Investors = \$300,000

Use of Funds: Equipment, warehouse with storage, employee wages, assembly/packaging supplies, product supplies, marketing supplies, and other operational expenses.

Product/service selling price: \$159.90.

Business Description: Our company, PortaPlant, specializes in building portable greenhouses. We assemble high-quality greenhouses using components sourced globally, offering versatile solutions for both indoor and outdoor use in homes and professional settings.

Products/Services: We assemble and sell a portable greenhouse with a built in heater. It is made of bamboo wood and plexiglass and sold for the price of \$159.90. It is a compact solution for growing plants in harsher temperatures. COGS for our product is ~~\$68,000~~69 per greenhouse. In our first year, we hope to sell over 32,300 ~~32,300~~ greenhouses.

Competitive Advantage: We have a competitive advantage due to our product excellence in terms of product portability, durability, and space efficiency. Its lightweight, modular design ensures easy assembly and relocation while maintaining long-term reliability. PortaPlant comes with a heating component included which our competitors do not offer. For locational excellence, being on the west coast is beneficial for bamboo shipment. We operate in Eugen, Oregon, which is a state known for having one of the highest plant-owning populations. Customer excellence consists of free shipping and reliable customer service.

Markets: Our company is primarily focusing on millennials and autonomous employees living in highly populated cities in the U.S. (ages 27-45). Our millennial target has an estimated growth of 5% in five years and the autonomous employee population is expected to

Distribution Channels: PortaPlant will work as a manufacturer and will use a multichannel distribution strategy. Initially, our sales will be coming mostly from Amazon and Lowe's. To distribute to Lowe's, we will be utilizing Ship Bob, which is a fulfillment company. Our direct channel will consist of the orders placed from our online store.

Competition: VIVOSUN is our top competitor, specializing in compact growing solutions (*VIVOSUN Indoor Grow Tent*, n.d.). Our advantage over their product lies in our simple design and modern look, as well as minor differences in target markets. Additionally, we face competitors on Amazon such as Home-Complete and Nova Microdermabrasion. Both companies offer portable greenhouses, however, they are much larger, do not follow a modern design, and do not have a heating element (*Home-Complete Small Greenhouse*, n.d.) (*Amazon.Com : Nova Microdermabrasion Walk-in Greenhouse*, n.d.).

Financial Projections (Unaudited):

2024

2025

2026

2027

2028

Revenue:	\$3,718,659	\$4,200,609	\$4,659,761	\$5,164,623	\$5,856,150
EBIT	\$(3,163)	\$173,389	\$290,728	\$486,888	\$636,572

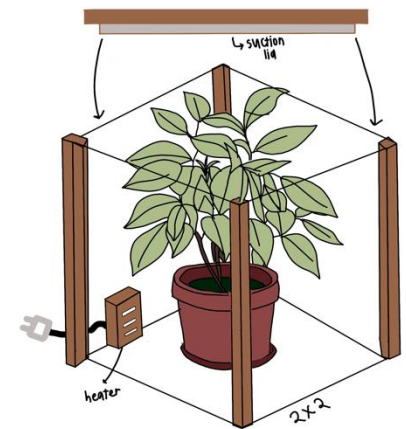
Business Description

Elevator Pitch

PortaPlant, an innovative portable greenhouse, is priced reasonably at \$129.90. With a competitive edge on portability, durability, and space efficiency, our lightweight, modular design guarantees easy assembly and relocation. Perfect for any location, our greenhouses come equipped with a built-in heater, ensuring optimal growing conditions year-round. Join us in providing your plants with a home, now with added comfort and convenience.

Product Description

PortaPlant is a portable greenhouse that promotes innovation and sustainability. Our product is designed to care for your plants year-round. We use bamboo sticks and plexiglass to hold our structure together and features a suction lid for easy access to your plants. Additionally, our greenhouse includes a heater to ensure that your plants are getting all the warmth regardless of the outside temperature. With no base, the greenhouse can be shifted from one plant to another with a simple lift, eliminating the need to move your plants. It's simple and modern design allows it to seamlessly complement any home interior.



Competitive Advantage

Although greenhouses are not new in the market, most greenhouses are big, bulky, and require a complex assembly process. PortaPlant, however, is compact and can easily fit in a corner of your home. It is highly portable and relatively cheaper than most of its competitors. Additionally, it features a heater that will keep your plants warm and prosperous regardless of the temperature outside. Our main advantage is that our product, even though priced lower than our competitors, is not flimsy. We take pride in our durability and convenience; it will be a long-lasting product that will not require much effort to use. In addition, our simplistic and modern design allows us to target a market who can admire the materials used and thought put into the development.

Value Proposition

PortaPlant's proposition is to empower individuals and communities to grow plants effortlessly in any environment. We strive to make plant care easier by providing a compact, portable solution that ensures optimal conditions for plant growth. Whether you have limited space or want to garden on the go, we provide the conditions for you to grow your plant easily anywhere. We create value by offering a differentiated design and size that are uncommon for a greenhouse.

Business Strategy

PortaPlant will follow a focused differentiation strategy.

Location and Legal Form of Business

Our company is based in Eugene, Oregon where research says it is a city filled with plant enthusiasts (*As the Ground Warms Up...*, 2023). Eugene's thriving community, business-friendly environment, affordability, and agritourism potential make it an ideal place for greenhouse entrepreneurs to start and expand profitable businesses. PortaPlant operates as an LLC, providing us with limited liability, tax advantages, and professional credibility in the eyes of our consumers.

Outsourcing

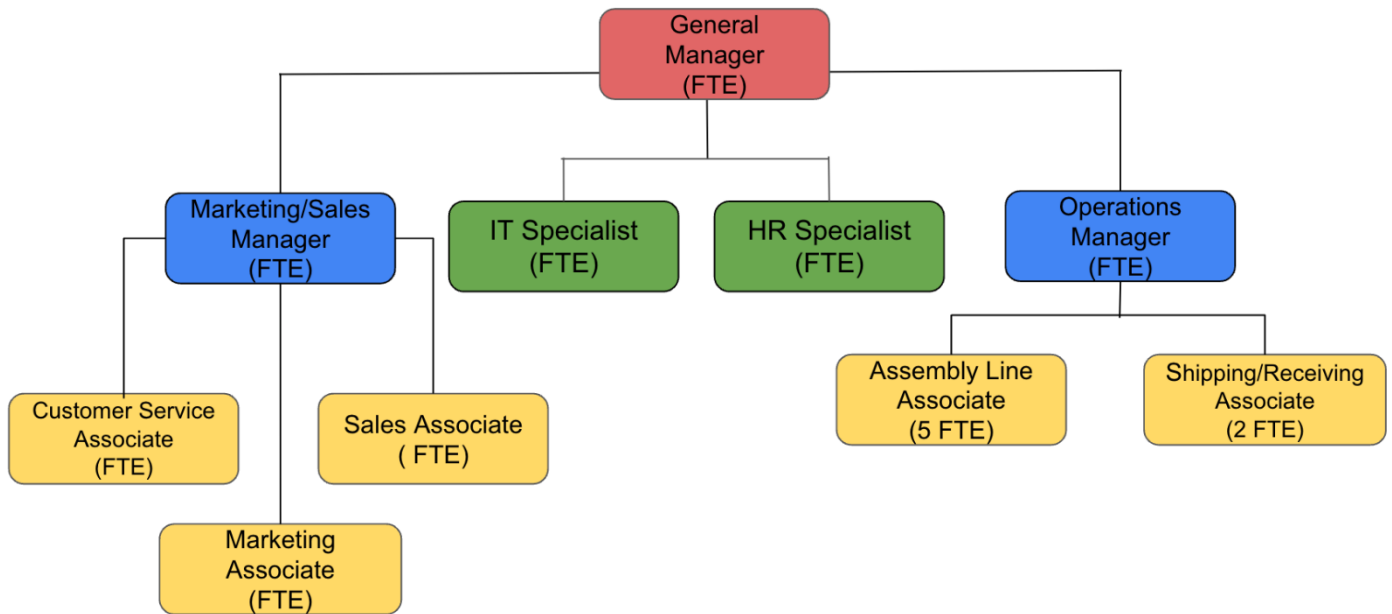
We are outsourcing accounting for \$2,500/month (*What Is the True Cost of Outsourcing Accounting Services?*, n.d.). We are utilizing shipping services, using UPS to get our direct sales to customers and Amazon fulfillment centers. Moreover, we will be outsourcing fulfillment to deliver our products to Lowe's by using Ship Bob (*How ShipBob Works*, n.d.). Our raw materials are also being shipped from China through Linyi Bluehorse international Trade CO. Shandong, China; while some other products are shipped to us such as Bamboo within the United States.

Financial Performance

PortaPlant's sales revenue is expected to be \$3,718,659 at year 1 and is projected to be \$ \$ 5,856,150 by year 5. Even though we have a net loss of \$(14,244) in year 1, net income of \$593,126 is expected by year 5. Additionally, cash dividends of \$400,000 are to be paid and no debts are existing on year 5.

Exhibit 1: Organizational Chart

PortaPlant Year 2



In year 1, PortaPlant aims to start with 15 employees. As our business progresses, we will continue adding more employees.

In year 2 [Exhibit 1], we plan on keeping our team small and continuing with the 15 employees that we have. Our utilization states that one employee can produce 15 products per hour and our demand falls under that number for the first two years.

By year 3, considering we are more visible in our market, 1 assembly line worker will be added to our team.

Entering year 4, we will continue with the same number of employees, assuming our company remains stable and continues to grow –making our team consist of 16 employees.

By year 5, when our business will be at its peak—we will be adding one more shipping/receiving associate, 1 sales associate, 1 assembly line associate and 1 more operations manager – collectively having 20 employees.

Exhibit 2: Pay, Mandatory Deductions, Benefits, Knowledge, Skills, Abilities, and Motivation

Compensation						Mandatory Payroll Deductions					Benefits					
Position (Salary/Wage - W) (Full-time Assumed, Part-time - PT %)	Salary or Wage for position)	Bonus or Commission	# for position	Projected End of Year 2 Salary or Wage including bonus/comm. Each	Projected End of Year 2 Salary or Wage including bonus/comm. all positions	FICA	FUTA*	SUTA	WC	Mandatory Deductions - Total	Benefits - Health Cost	Benefits - Retirement Cost	Benefits - Any other Benefit Cost	Benefits - Total	Total Cost per Employee	Total Cost for All Employees
General Manager	\$ 120,000	\$ 30,000	1	\$ 150,000	\$ 150,000	\$ 11,475	\$ 42	\$ 1,267	\$ 750	\$ 13,534	\$ 12,000	\$ 9,000	2000	\$23,000	\$ 186,534	186,534
Marketing/Sales Manager	\$ 95,000	\$ 9,500	1	\$ 104,500	\$ 104,500	\$ 7,994	\$ 42	\$ 1,267	\$ 523	\$ 9,826	\$ 12,000	\$ 6,270	2000	\$20,270	\$ 134,596	134,596
IT Specialist	\$ 75,000	\$ 7,500	1	\$ 82,500	\$ 82,500	\$ 6,311	\$ 42	\$ 1,267	\$ 413	\$ 8,033	\$ 12,000	\$ 4,950	2000	\$18,950	\$ 109,483	109,483
HR	\$ 70,000	\$ 7,000	1	\$ 77,000	\$ 77,000	\$ 5,891	\$ 42	\$ 1,267	\$ 385	\$ 7,585	\$ 12,000	\$ 4,200	2000	\$18,200	\$ 102,785	102,785
Operations Manager	\$ 85,000	\$ 8,500	1	\$ 93,500	\$ 93,500	\$ 7,153	\$ 42	\$ 1,267	\$ 468	\$ 8,929	\$ 12,000	\$ 5,610	2000	\$19,610	\$ 122,039	122,039
Sales Associate	\$ 40,000	\$ 2,000	1	\$ 42,000	\$ 42,000	\$ 3,213	\$ 42	\$ 1,267	\$ 210	\$ 4,732	\$ 12,000	\$ 2,520	2000	\$16,520	\$ 63,252	63,252
Marketing Associate	\$ 65,000	\$ 6,500	1	\$ 71,500	\$ 71,500	\$ 5,470	\$ 42	\$ 1,267	\$ 358	\$ 7,136	\$ 12,000	\$ 4,290	2000	\$18,290	\$ 96,926	96,926
Customer Service Associate	\$ 50,000	\$ 5,000	1	\$ 55,000	\$ 55,000	\$ 4,208	\$ 42	\$ 1,267	\$ 275	\$ 5,792	\$ 12,000	\$ 3,300	2000	\$17,300	\$ 78,092	78,092
Receiving/Shipping Associate	\$ 50,000	\$ 5,000	2	\$ 55,000	\$ 110,000	\$ 8,415	\$ 84	\$ 2,534	\$ 550	\$ 11,583	\$ 24,000	\$ 6,600	4000	\$34,600	\$ 78,092	156,183
Assembly Line Associate	\$ 50,000	\$ 5,000	5	\$ 55,000	\$ 275,000	\$ 21,038	\$ 210	\$ 6,336	\$ 1,375	\$ 28,959	\$ 60,000	\$ 3,174	10000	\$73,174	\$ 75,427	377,133
Totals	\$ 700,000	\$ 86,000	15	\$ 786,000	\$ 1,061,000	\$ 81,167	\$ 630	\$ 19,008	\$ 5,305	\$ 106,110	\$ 149,148	\$ 49,914	\$ 30,000	\$ 229,062	\$ 308,976	1,396,172

Vacation Policy and time off: 3 weeks (Vacation/PTO), 2 personal days, 12 weeks paid maternity leave, Paid Medical Leave (*Duration determined by situation)

Commission: Sales Associates will be paid an annual bonus of 5% as well as the opportunity to earn up to \$30,000 of commission for that year depending on their contribution to the company and sales.

Holidays off: New Years Day, Martin Luther Day, 4th of July, Memorial Day, Juneteenth, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Christmas Day, Employees Birthday, and Election Day.

Other Benefits: \$2,000 per employee; includes transportation reimbursements(gas, subway, bus), team dinners–happy hours, free trainings.

Knowledge, Skills, and Abilities

Position	Knowledge, Skills, Abilities Needed	Securing these KSAs and verify employee qualifications?
IT Specialist	Strong knowledge of computers, website work, troubleshooting, and business architecture understanding.	Bachelor's degree in CS/IT, and 3+ years of experience in the field. Yearly training, constructive feedback, and employee evaluations will be conducted
Customer Service Associate	Interpersonal skills communication, persuasion, and problem solving	3+ years of experience in customer service and a proficient understanding of products sold
Receiving/Shipping Associate	Reliability, punctuality, ability to lift 50 pounds and be precise when keeping track of orders	Must be 18+ years of age and be physically able to stand for long periods of time
Assembly Line Associate	Task oriented, experience with tools, ability to lift 50 pounds and able to make accurate measurements	Experienced in manufacturing and knowledgeable with tools. Must have a high school diploma or equivalent. Must be physically able to stand for long periods of time.

*All employees will be required to go through a background check.

Motivating Employees

To further strengthen our commitment to employee motivation, we will introduce weekly Friday employee lunches if our metrics have been reached as this approach will boost employee productivity. We will hold monthly employee awards ceremonies to show our appreciation to our employees.

Exhibit 3: Market Segmentation Analysis/Target Market

Segment Name	Segment size (e.g. # of Households in Segment)	Growth Projection of Segment	Segment Description	Priority level for targeting	Justification for Targeting
Segment 1: "Millennials" living in major northern cities of North America (ages 30-45)	1,083,642	5% over the next five years (<i>U.S. Population Projection, n.d.</i>)	In this segment, demographically, these are people with no children that are 30-45 years old, often called "millennials." These individuals have an above average income and tend to rent homes or apartments in northern cities of America. Psychographically, they value a healthy lifestyle where they are focused on their mental and social health. These individuals tend to follow trends and are used to change since they had to grow up when the world was rapidly changing (Nermoe, 2022). According to an article on GWI, 46% of millennials are highly interested and confident with new technology (Henderson, 2023). In an article by Jannik Lindner she writes that the top three social media platforms used by people in this age range in order are Facebook, Instagram and Youtube (Lindner, 2023) .	1	More millennials have been buying houseplants in the last few years. In this article on NBC, it mentions that millennials are more prone to buy houseplants because they feel unprepared for children or pets (Davies, 2018). They have a high growth potential due to them having the highest growth in houseplant buying in 2021 with a 65% increase (Dan, 2023). We are specifically targeting more of the millennial age range instead of that exact generation. These individuals are reachable targets through social media platforms like Facebook, Instagram, and Pinterest (Lindner, 2023) . Specifically, we are targeting individuals living in highly populated northern cities like New York City, Chicago, and Seattle, where they are most likely to live in apartments with none or minimal yard space. Having to resort to placing plants on their balcony or any small space they have outside. This would cause them to respond well to a product like ours because it would help take care of those plants that they place outside, especially in colder weather.
Segment 2: Autonomous Employees (ages 27-30)	10,897,150 HHs	1.04% over the next year (Bureau, 2023)	Demographically, these individuals range from 27-30 years old and have no children. They are people who rent apartments or houses and spend a lot of time at home due to their job. This segment consists of middle to upper class individuals who are heavy in social media usage using apps like Facebook, Instagram, and Pinterest (<i>The 2024 Social Media Demographics Guide, n. d.</i>). While working in their home may cause them to become distracted, they tend to buy things to keep them focused and feeling productive. Psychographically, they value having a fresh and comfortable home so that they can work comfortably. These individuals enjoy going out to events, doing many activities, and traveling due to them being confined at home most of the time.	1	With more workers starting to work from home permanently, rather than temporarily due to the COVID-19 pandemic, household plants, a complementary good to our product, will increase in demand (Gilligan, 2023). Taking proper care of certain plants will be an ongoing problem for this segment of the market. Our product makes taking care of plants throughout the seasons much more manageable, especially for those who work from home and want to bring a more natural feel to their work environment. They are a reachable target because they tend to buy many of their items online(PYMNTS, 2023) . Even before the pandemic, many employees switched from commuting to an autonomous workplace. Since remote employees spend most of their time at home, they tend to buy plants due to their tendency to reduce stress, purify air, and boost creativity, this correlation between owning plants and working from home was can be seen in a survey provided by the Flower Council (Flower Council, 2021) (Newsdesk, 2022).

Segment 1: We researched what the top highly populated cities are in northern U.S. For an estimate, we used the population from New York City, Chicago, and Philadelphia (200 largest cities in the United States, 2024). From there we researched through Statista and other sites what the population was in these cities for people aged 30-45. The growth projection was obtained through looking at the estimated population growth of the United States and calculating the percentage of growth (U.S. Population Projection, by Age 2015-2060, n.d.). Assuming that all our segment are not plant owners, we researched and found 1 in 3 people own a houseplant, so we applied that to get our segment size (Dan, 2023).

Segment 2: We used the Census Bureau website to find how many employees worked from home per household via Business Insider and found an estimated projected growth using these figures (Bureau, 2023) .

Exhibit #4: Market Quantification

Year	Total Market Potential (No. of Customers)*	Market Share**	Annual purchase frequency***	Total Annual Unit Sales	Indirect Channel Price: Lowe's	Indirect Channel Price: Amazon	Direct Channel (Retail) Price ^o	Annual \$ Revenue
2024	11,980,793	1.348%	0.2	32,300	\$103.94	\$111.93	\$159.90	\$3,718,659
2025	12,100,601	1.437%	0.2	34,776	\$107.19	\$115.43	\$164.90	\$4,200,609
2026	12,221,607	1.532%	0.2	37,442	\$110.44	\$118.93	\$169.90	\$4,659,761
2027	12,343,823	1.633%	0.2	40,313	\$113.69	\$122.43	\$174.90	\$5,164,623
2028	12,467,261	1.741%	0.2	43,403	\$116.94	\$125.93	\$179.90	\$5,856,150

(1)To calculate the total market potential we looked at our segment sizes. Since we have two segments with priority level of 1 we decided to combine them. This was also due to them having a similar growth rate of 1% each year.

(2)Upon conducting our survey, we received 41 responses and out of those by looking at the percentage likely to buy and likely to switch. Our market share using survey results came out to be 3%. Both 7 people answered that we will likely to buy (who answered 7) and will likely to change. This gives us $(7/41) * (7/41) * 100 = 2.89\%$, which is approximately 3%. But, as it is way too optimistic, we decided not to use 2.89%. We estimated our market growth rate to be 6.6% yearly. We decided to take a conservative approach and apply our initial market share as 1.348%.

We chose our proxy firm to be Vivosun. Vivosun provides a variety of products including greenhouse and indoor gardening. It has the most similar target market and sells a type of portable greenhouse. The greenhouse they are selling is alike to ours in terms of the size and features such as insulation. However, we cannot assume that their target market exactly falls under our target market, as they sell more diverse array of products, meaning the boundary of the market is broader than us. On top of that, the price of their greenhouse is at least \$200 more expensive than ours and has different features. The revenue of Vivosun in 2022 was 16.7 million (14). But, as Vivosun sells all kinds of gardening tools, we assumed that 33% of their revenue were sales associated with their portable greenhouses. This is coming from article stating that 1 out 3 people call themselves a plant parent, this was also used when calculating our total market potential (15). We found the total revenue of a smart greenhouse that is non-hydroponic to be one billion in 2022 (16). This is a market closely related to our proxy so we used this information to calculate the market share of our proxy in 2022. The market share for Vivosun in 2022 was 0.55%.

To find the market share through industry analysis, we used "number of nursery and garden businesses in the United States from 2013 - 2019." To get a more recent and accurate number of businesses, we took the average percent increase per year and applied that to the 2019 figure five times to reach a 2024 figure. Then, we found the percentage of small businesses and multiplied that by the 2024 figure to find the number of small businesses in that year.

Pricing

We chose our retail price by taking our total costs (VC * Unit volume + FC) and dividing it by unit volume. We then added 45 dollars to increase profit margin. Our product will be sold by Ecommerce (our own website), Amazon, and at Lowe's. For year 1, after research, we assumed 60% of our sales would be coming from Amazon, 30% from Lowe's, and 10% from our own website (11). After research it was concluded Amazon takes around 30% for selling it through their site (12). For sales on Amazon we will be getting 70% back of the total price of our product. For Lowe's we found that their markup price is around 35% meaning we are receiving 65% back of the total price of our product(13). Percent of indirect channel sales would decrease as time goes on. We expect it will at least decrease by 10% annually, and at the end of Year 5, half of our sales would come from our own website(9). We applied the average inflation rate of 2000-2023 of 3.4% to calculate the price increase (10).

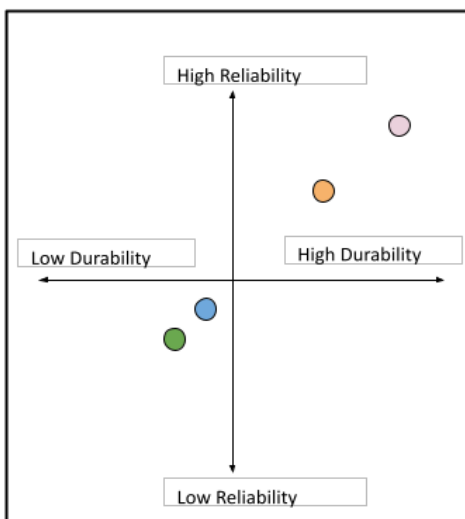
Year	Average Price	Total Fixed Costs	Unit Variable Cost	BEP in Units
2024	\$159.90	\$1,686,922	\$68	18,356
2025	\$164.90	\$1,828,132	\$68	18,866
2026	\$169.90	\$2,010,187	\$68	19,727
2027	\$174.90	\$2,138,016	\$68	20,000
2028	\$179.90	\$2,476,189	\$68	22,129

Fcst by month	Units	Revenue \$
Jun	2,153	\$342,295
Jul	2,153	\$342,295
Aug	2,153	\$342,295
Sep	3,230	\$513,634
Oct	3,230	\$513,634
Nov	3,230	\$513,634
Dec	3,230	\$513,634
Jan	3,230	\$513,634
Feb	3,230	\$513,634
Mar	2,154	\$342,422
Apr	2,153	\$342,295

Exhibit 5: Positioning/Competitive Analysis

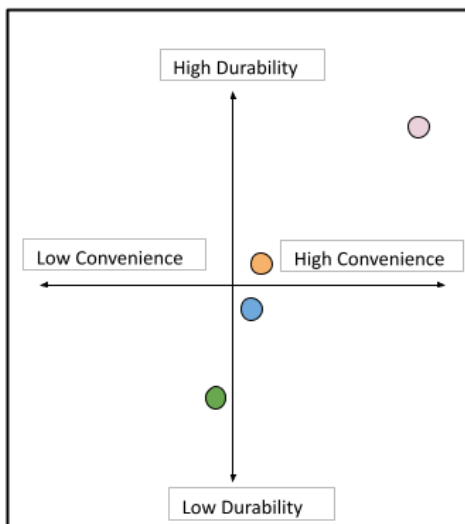
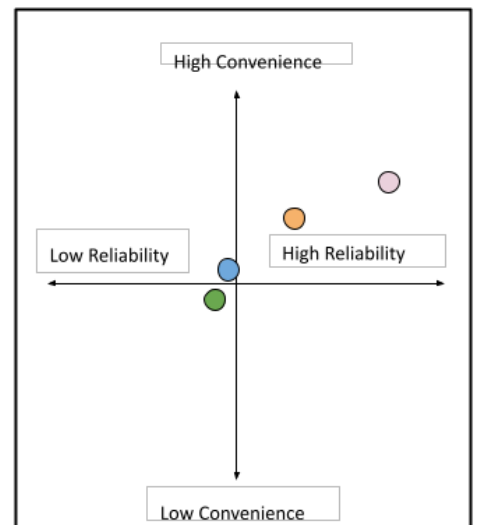
Positioning Statement: Our product, PortaPlant, introduces a new way to garden. PortaPlant gives growers the opportunity to successfully tend to their plants no matter where you live. It is small, portable, and really sets itself apart from others by offering a heating option to maintain your plant in optimal growing conditions even when placed outside in chilly weather. PortaPlant will empower individuals who may have been discouraged from planting in the past due to environmental challenges, instilling a newfound confidence in their gardening capabilities.

Perceptual Map



Nova and VIVOSUN both exhibit low durability and reliability characteristics (*Amazon.Com: Customer Reviews: VIVOSUN*, n.d.)(*Amazon.Com: Nova Microdermabrasion*, n.d.) . Despite effective marketing, their products fail to perform as claimed, resulting in lower positioning in our assessment. In contrast, HOME-COMPLETE, while not without occasional issues, is deemed reliable as it consistently delivers on its marketed promises(*Amazon.Com: Home-Complete*, n.d.) . We aim for our product to prioritize reliability, ensuring our customers trust that they will receive precisely what we advertise.

While most products offer a degree of convenience, we can enhance this aspect to simplify our customers' lives further. Nova ranks as the least convenient option, as breakdowns may cause a customer to have to repurchase the product. Our product holds a higher position due to the inclusion of a warranty that covers free repairs in case of damage. The only inconvenience may be the time required for repairs, causing a slight reduction in ranking.



Nova exhibits low durability due to a weak structure that easily breaks. VIVOSUN follows, with numerous reviews highlighting issues such as rips and breaks in the tent. HOME-COMPLETE, while not as problematic as the former two, still falls short. We are committed to ensuring the durability of our product and standing by its reliability. In the event of a rare breakage, we will investigate the cause and strive to enhance its strength for an even more resilient product.

Competitive Analysis:

- PortaPlant
- HOME-COMPLETE
- Nova Microdermabrasion Mini Walk-in Greenhouse

Exhibit 6: Marketing Mix

Product/Service Branding

The name "PortaPlant" highlights the portability, convenience, and durability of our greenhouses by providing a comfortable space for plant growth. The logo, featuring a small house with a plant, symbolizes the compact yet nurturing concept with vibrant colors and simple lines for a modern aesthetic. Made of quality-tested plexiglass and bamboo, each greenhouse includes a heater for optimal growth conditions. Easy assembly and disassembly, along with a provided canvas tote bag, enhances convenience for customers. Our minimalist design emphasizes effortless plant cultivation, aiming to enhance the aesthetic appeal of homes. Committed to excellent customer service, we address any concerns to ensure customer satisfaction.

Pricing Strategy

Our company adopts a strategic pricing approach by positioning our product alongside competitors offering basic and technologically advanced greenhouses. We have meticulously considered factors such as size, materials, and the incorporation of a heating element, resulting in a retail price of \$159.90. This allows us to cater to a discerning market seeking quality at a reasonable cost. The pricing strategy encompasses both B2C and B2B channels, with sales through Amazon and Lowe's. As previously stated in our market

	Year 1	Year 2	Year 3	Year 4	Year 5	
Key competitor customer price	\$53.98	\$55.82	\$57.71	\$59.67	\$61.70	NOVA Microdermabrasion
Key competitor customer price	\$379.99	\$392.91	\$406.27	\$420.08	\$434.36	VIVOSUN Grow Tent w/ Grow Light (Smart Grow Tent Kit, n.d.)
Key competitor customer Price	\$89.99	\$93.05	\$96.21	\$99.48	\$102.86	VIVOSUN Grow Tent (VIVOSUN 2x2 Grow Tent, n.d.)
Channel price	\$111.93	\$115.43	\$118.93	\$122.43	\$125.93	PortaPlant Amazon
Channel price	\$103.94	\$107.19	\$110.44	\$113.69	\$116.94	PortaPlant Lowe's
Retail price	\$159.90	\$164.90	\$169.90	\$174.90	\$179.90	PortaPlant Website

quantification, our channel prices were determined by deducting the markups imposed by our retailers from our total price. Specifically, Lowe's had a markup of 35%, and Amazon applied a markup of 30% (Taylor, 2016) (Bienasz, 2023).

Distribution Strategy

Our company employs a multichannel distribution strategy. This encompasses direct online sales utilizing the UPS Small Business Plan and indirect channels through key retail partners like Amazon and Lowe's (*Small Business Shipping Discounts*, 2021). We will cover the shipping fee of our direct sales so that we can lower the prices our customers pay. For Lowe's, after product approval, we will outsource fulfillment through Ship Bob, ensuring efficient inventory handling (*How ShipBob Works*, n.d.) (*Vendor Inquiries to Lowe's*, n.d.). Additionally, customers benefit from free shipping when shopping online through Lowe's (*Save While Shopping Online With Free Shipping*, n.d.). We have chosen to utilize Amazon's FBA services due to their reliability and efficiency when it comes to shipping and returns (*Is Amazon FBA Worth It?*, n.d.) (*Become an Amazon Seller*, n.d.). Our shipping associate will be responsible for getting our product to the nearest Amazon fulfillment center located an hour away. This multichannel distribution approach not only enhances cost-effectiveness, but also aligns with our goal of reaching our target audience through diverse and widely recognized platforms.

Promotional Strategy

The promotional strategy involves actively engaging the target audience on Facebook, Instagram, YouTube, and Pinterest. A bi-monthly giveaway on the dedicated PortaPlant social media account encourages participation through friend tags and mentions. Future plans include customer photo competitions and seasonal discounts. Email collection upon entering our online store sets the foundation for periodic discounts and updates.

	Year 1	Year 2	Year 3	Year 4	Year 5
Total IMC Budget:	\$297,493	\$336,049	\$372,781	\$413,170	\$468,469
Advertising Exp:	\$199,320	\$225,153	\$249,763	\$276,824	\$313,874
Sales Promo Exp:	\$83,298	\$94,094	\$104,379	\$115,688	\$131,171
PR Exp:	\$14,875	\$16,802	\$18,639	\$20,659	\$23,423

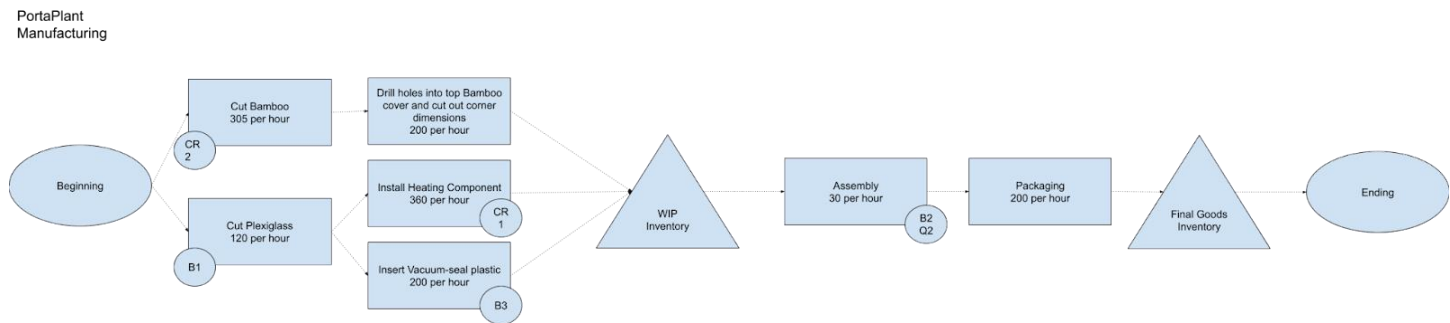
In the financial section of our promotional strategy, an 8% allocation of total revenue for the Integrated Marketing and Communications (IMC) budget is planned for the first year (*Making Every Dollar Count*, n.d.). Social media advertising budgets for our first year are set at \$80/day for Instagram and Pinterest and \$100/day for Facebook and YouTube. Public Relations (PR) expenses, following small business practices, constitute 5% of the IMC budget, totaling \$14,875 for the first year (Group, 2015). The remaining budget is directed towards sales promotions, including the bi-monthly giveaways and other initiatives. This structured approach aligns with industry norms and aims for effective brand promotion and revenue growth.

Our marketing associate will focus on promoting PortaPlant on social media, managing our email list, and overseeing our campaigns. Our sales representative will use various contact methods to

# of Salespeople:	1	1	2	2	2
Compensation Method:	Annual Salary: \$40,000 --Bonus: \$2,000 ----Commission: 30,000 max (based on sales)				

engage with potential customers and increase our sales. They will also be responsible for our sales promotions and updating discounts.
They will be earning a 6% commission on sales.

Exhibit 7: Process Map



For each Bottleneck:

Bottleneck	Which step is bottlenecked?	How will we circumvent the bottleneck?
B1	Cutting bamboo	A quality check in cutting bamboo to ensure the bamboo is the proper length and durable which would adjust its rate per hour to be closer to cutting plexiglass
B2	Assembly	A quality check during packaging to make sure each product is up to standard and would decrease its rate closer to the speed of assembly
B3	Install heating component	When that employee is finished with his batch of cut plexiglass he moves over to help insert vacuum-seal plastic on the remaining plexiglass sheets

For each major quality step:

Quality Step	What is measured?	How often?	How will you ensure quality?
Q1	Bamboo	every 10 units	Check for cracks, hit it with hammer and measure length to ensure a proper cut
Q2	The Assembled PortaPlant	every 10 units	Checking the plexiglass for cracks and ensuring the heating component work properly

For each critical resource:

Critical Resource	Resource Name	Brief Description	Unit Cost (in appropriate unit)	How many?	Total Cost
CR1	Industrial Grade Thermometer	Used for installing vacuum seal	\$200	2	\$400
CR2	Band saw	A physical resource that is a stationary band saw to cut Bamboo; an integral part of our process.	\$550	1	\$550
Total Cost			\$750	3	\$950

Our Facility:

3825 W 11TH AVE, 5,000 SF, has office space and an open floor for manufacturing. The parking lot has ample space for inventory deliveries and the property is zoned to reflect our business needs.

Exhibit 8: Quality

Indicate the Dimensions of Quality on which you will focus.	Why is this dimension important, given your industry & target market?	Identify the Quality Step(s) on the Process Flowchart / Service Blueprint to which this corresponds.
Durability	One of the biggest differences between our product and other greenhouses is the quality materials that go into our product. Our consumers recognize this and pay for that high quality and to ensure our product will last throughout the seasons we need to inspect the foundation holding our product together. Specifically the bamboo wood that needs to be an exact measurement and not contain any defects to hurt the quality of our product.	Q1
Special Features (Heater)	Our segmentations of the target market are Millennials" living in major northern cities of North America, Autonomous Employees (27-30), and University students in northern cities in North America (20-26). These segments have relatively high income thus care more about the special features our product offers. Specifically, the heating component is a big part of our product and ensuring that feature works properly is integral to the quality of our product.	Q2

Use the space below to describe any additional Proactive Quality Assurance Plans that are not connected to a specific activity on your Process Flowchart / Service Blueprint.

The most important proactive assurance plan we can implement is to train our employees. As it is a preventive procedure prior to its defects, it is critical to establish a training program for quality check and update as time goes on. We will provide our employees with the quality assurance training operated by the American Society for Quality (ASQ) (*Quality Assurance Training & QA Courses* | ASQ, n.d.). Skill-based pay will be applied based upon what programs and certificates that are earned from ASQ.

Encourage customers that purchase our product to fill out a quality and competency survey on our website so our customer service team can report back to operations with suggestions and reviews. We will send them a 10% discount coupon to receive a good and increased percentage of response.

Describe any reactive quality assurance plans. Include a recovery plan should a customer receive poor quality goods and/or services.

If any customer receives a low quality, or ineffective product. Upon complaint our customer service team will offer a refund or a brand-new product free of charge. The customer service manager will be in charge of this and will report the frequency and volume to the general manager every week to ensure that the claims are fully resolved.

We will also utilize the ASQ's certificate program based on how many complaints we receive.

If you will utilize a quality/process improvement methodology, indicate which:

☐ NA ☐ TQM ☐ Six Sigma ☐ ISO ☒ **Benchmarking**

☐ Other (specify what): _____

Note: You will not use all of them; only those with highest relevance.

Provide a specific explanation of how your chosen quality methodology relates to your business and how it will be applied:

We place quality checks before bottlenecks to ensure we are utilizing all free time in the process. We use benchmarking so we can identify areas of improvement, measure quality of materials, and ensure a proper high-quality product is manufactured for our customers.

Exhibit 9: Inventory, Suppliers & Distribution

RAW MATERIAL INVENTORY & SUPPLIER SELECTION *If your organization does not have raw material inventory, please check this box: ☐ NA*

Item(s)	Supplier Name & Location (City, State, Country)	Reason for selecting this supplier	Supplier lead time (in days)	Frequency of replenishment (in days)	System of Management	Mode(s) of Transportation
Bamboo Plywood Linyi Blue Horse International Trade Co., Ltd. - Plywood; LVL; MDF, Wood Veneer; Impregnated Paper (alibaba.com)	Linyi Bluehorse international Trade CO. Shandong, China Shandong, China	Found in the JMU Research Libraries. Provides the type of wood we want for sustainability and at a reasonable price.	55 days	182 days	Fixed Order Interval	<input type="checkbox"/> Highway <input type="checkbox"/> Rail <input checked="" type="checkbox"/> Waterway <input type="checkbox"/> Air
Plexi-Glass ("Acrylic - PMMA," n.d.)	Industrial Plastic Supply Inc. Anaheim, California	Found in JMU libraries and offers customized dimensions of acrylic for a good price.	4.5 weeks	30 days	Fixed Order Interval	<input checked="" type="checkbox"/> Highway <input type="checkbox"/> Rail <input type="checkbox"/> Waterway <input type="checkbox"/> Air
Curved Face Electric Process Heater (<i>Electric Process Heater Replacement Grainger Industrial Supply, n.d.</i>)	Granger Birmingham, Alabama USA	This supplier was found on the JMU website, it is reliable, it controls the amount of heat, and is price appropriate.	6 days	30 days	Fixed Order Interval	<input checked="" type="checkbox"/> Highway <input type="checkbox"/> Rail <input type="checkbox"/> Waterway <input type="checkbox"/> Air

FINISHED GOODS INVENTORY *If your organization does not have finished goods inventory, please check this box: ☐ NA*

	Finished goods produced (per hour)	Frequency of shipping finished goods	Average level of Finished goods inventory on site	Amount of safety stock on site
At the end of Year 1	16	6.5 days	16,150	841
At the end of Year 2	17	4 days	17,388	905
At the end of Year 3	18	3 days	18,721	975
At the end of Year 4	19	2.5 days	20,157	1,049
At the end of Year 5	21	2 days	21,702	1,130

What is the lifespan of your finished goods inventory?	<input checked="" type="checkbox"/> NA
How will you manage perishability of Finished Goods Inventory?	<input checked="" type="checkbox"/> NA

DISTRIBUTION *If your organization does not require distribution, please check this box: ☐ NA*

Name of transportation provider/carrier	Reason(s) for selecting this provider/carrier	Frequency of Pick Up / Drop off
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UPS	All our finished goods will be transported through UPS due to our low amount of volume and the uncertainties of orders. UPS also offers a small business plan. This allows us to be more efficient with getting the product to our customers while minimizing our shipping costs. UPS has partnerships with Amazon warehouses and our wholesalers where we can get discounted prices.	Weekly drop-off
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Exhibit 10: Capacity & Resource

	Demand (per hr)	Capacity (per hr)	Utilization	Hrs of Operation	Bottleneck name and description	How will you manage the bottleneck to ensure you can appropriately serve or supply your customers?
At the end of Year 1	15.53	30	51.77%	2080	Plexiglass cutting is slower than bamboo cutting, vacuum seal plastic installation is slower than heating component installation, and assembly is slower than packaging.	Quality checks in bamboo cutting and packaging aim to ensure standards, potentially adjusting rates. Employees transition to other tasks once finished with current assignments, such as helping with vacuum-seal plastic insertion on remaining plexiglass sheets.
At the end of Year 2	16.72	30	55.73%	2080	Plexiglass cutting is slower than bamboo cutting, vacuum seal plastic installation is slower than heating component installation, and assembly is slower than packaging.	Quality checks in bamboo cutting and packaging aim to ensure standards, potentially adjusting rates. Employees transition to other tasks once finished with current assignments, such as helping with vacuum-seal plastic insertion on remaining plexiglass sheets.
At the end of Year 3	18.00	30	60.00%	2080	Plexiglass cutting is slower than bamboo cutting, vacuum seal plastic installation is slower than heating component installation, and assembly is slower than packaging.	Quality checks in bamboo cutting and packaging aim to ensure standards, potentially adjusting rates. Employees transition to other tasks once finished with current assignments, such as helping with vacuum-seal plastic insertion on remaining plexiglass sheets.
At the end of Year 4	19.38	30	64.6%	2080	Plexiglass cutting is slower than bamboo cutting, vacuum seal plastic installation is slower than heating component installation, and assembly is slower than packaging.	Quality checks in bamboo cutting and packaging aim to ensure standards, potentially adjusting rates. Employees transition to other tasks once finished with current assignments, such as helping with vacuum-seal plastic insertion on remaining plexiglass sheets.
At the end of Year 5	20.87	30	69.57%	2080	Plexiglass cutting is slower than bamboo cutting, vacuum seal plastic installation is slower than heating component installation, and assembly is slower than packaging.	Quality checks in bamboo cutting and packaging aim to ensure standards, potentially adjusting rates. Employees transition to other tasks once finished with current assignments, such as helping with vacuum-seal plastic insertion on remaining plexiglass sheets.

Hours of operation/month	Demand/month	Demand/hour	Capacity/month	Capacity/hour	Utilization
40x4=160	32,300/12=2,691.67	32,300/2,080=15.53	30x40x4=4,800	30 per unit	30/15.53=51.77%

Describe adjustments you will make as resource requirements vary with time.

As each year passes, we will need more of each resource to meet increasing demand. Thankfully our utilization is low enough within the 5 years to where we don't need to adjust our process flowchart till longer down the line. However, in the high demand season, which we expect to be in the colder months, we can redirect an assembly worker to the assembly portion of production to increase our capacity. If the bamboo cutting portion of production ever lags, we would need to purchase an additional bandsaw to increase that capacity.

Resources that have a significant impact on capacity at start up

We need proper human resources to operate the manufacturing side of our company. While each employee has a task on the assembly line, we have one employee on a break that is rotated in as an employee is rotated out to take a break throughout the manufacturing process. At start-up we require a bandsaw to cut our bamboo without this critical resource our manufacturing would be severely affected.

How will you manage seasonality? As our product (portable greenhouse with heater) includes the heating feature, there would be seasonality. In winter seasons, there would be more demands compared to summer seasons. So, during the winter season, we will use marketing measures in SNS such as Instagram to advertise our product and maximize our sales as a gift for Christmas. During the summer season, we will focus on and give some % discount and target customers living in regions higher longitude such as New York. We will also consider shipping to Canada's customers too. For the 1st year, we will focus on sales-oriented marketing rather than profit-oriented marketing, as our main goal of the 1st year is to advertise our product to customers as well as expanding our market share.

Exhibit 11: Income Statement

PortaPlant Income Statement Years ended December 31

	Fiscal year				
	2024	2025	2026	2027	2028
Sales Revenue	\$ 3,718,659	\$ 4,200,609	\$ 4,659,761	\$ 5,164,623	\$ 5,856,150
COGS	\$ (2,034,900)	\$ (2,199,088)	\$ (2,358,846)	\$ (2,539,719)	\$ (2,743,389)
Gross Profit	\$ 1,683,759	\$ 2,001,521	\$ 2,300,915	\$ 2,624,904	\$ 3,112,761
Operating Expenses					
Salaries and Wages Expense	\$ 955,000	\$ 1,061,000	\$ 1,181,000	\$ 1,258,000	\$ 1,486,101
Payroll Tax Expense	\$ 96,755	\$ 98,525	\$ 106,864	\$ 112,932	\$ 138,081
Employee Benefits and Retirement Expense	\$ 212,919	\$ 212,919	\$ 231,753	\$ 231,753	\$ 274,065
Advertising and Promotion Expense	\$ 195,800	\$ 225,000	\$ 257,900	\$ 294,800	\$ 328,700
Research and Development Expense	\$ 4,000	\$ 4,080	\$ 4,162	\$ 4,245	\$ 4,330
General Insurance Expense	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Travel, Meals, and Entertainment Expense	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Website Expense	\$ 2,000	\$ 1,700	\$ 500	\$ 500	\$ 500
Licenses Expense	\$ 200	\$ 100	\$ 100	\$ 100	\$ 100
Office Expense	\$ 5,000	\$ 4,500	\$ 400	\$ 400	\$ 400
Depreciation Expense	\$ 33,023	\$ 33,126	\$ 33,126	\$ 33,126	\$ 33,154
Accounting Outsourcing Expense	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Repair Expense	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Employee Uniform expense	\$ 2,000	\$ 100	\$ 300	\$ 300	\$ 400
Shipping /Other Expense	\$ 89,225	\$ 96,082	\$ 103,082	\$ 110,860	\$ 119,358
Total Operating Expenses	\$ 1,686,922	\$ 1,828,132	\$ 2,010,187	\$ 2,138,016	\$ 2,476,189
Earnings Before Interest and Taxes	\$ (3,163)	\$ 173,389	\$ 290,728	\$ 486,888	\$ 636,572
Interest Expense	\$ 11,081	\$ 8,972	\$ 6,687	\$ 4,213	\$ 1,534
Earnings Before Taxes	\$ (14,244)	\$ 164,417	\$ 284,041	\$ 482,675	\$ 635,038
Income Tax Expense	\$ -	\$ -	\$ 18,747	\$ 31,857	\$ 41,913
Net Income (Loss)	\$ (14,244)	\$ 164,417	\$ 265,295	\$ 450,819	\$ 593,126
Operating Cash Flow	\$ 29,860	\$ 206,515	\$ 305,108	\$ 488,158	\$ 627,814
Free Cash Flow	-	\$ (1,652,281)	\$ (1,978,465)	\$ (2,942,319)	\$ (3,984,699)

Statement of Retained Earnings

Beginning Balance of Retained Earnings	\$ -	\$ (14,244)	\$ 150,173	\$ 415,468	\$ 866,286
Net Income (Loss)	\$ (14,244)	\$ 164,417	\$ 265,295	\$ 450,819	\$ 593,126
Dividends to Stockholders	-	-	-	-	\$ 400,000
Ending Retained Earnings	\$ (14,244)	\$ 150,173	\$ 415,468	\$ 866,286	\$ 1,059,412

Exhibit 12: Balance Sheet

**PortaPlant Balance Sheet as of
December 31**

	As of Inception		Fiscal Year			
	2023	2024	2025	2026	2027	2028
ASSETS						
Current Assets						
Cash and Cash Equivalents	\$1,500,000	\$302,114	\$472,281	\$757,007	\$949,574	\$1,087,943
Accounts Receivable	\$ -	\$185,933	\$219,327	\$243,954	\$540,858	\$639,701
Inventory	\$ -	\$78,265	\$87,591	\$94,094	\$101,301	\$109,411
Total Current Assets	\$1,500,000	\$566,312	\$779,199	\$1,095,055	\$1,591,733	\$1,837,055
Fixed (Long-Term) Assets						
Machinery and Equipment	\$ -	\$2,057	\$2,057	\$2,057	\$2,057	\$2,607
Buildings	\$ -	\$1,316,800	\$1,316,800	\$1,316,800	\$1,316,800	\$1,316,800
Total Gross Fixed Assets	\$ -	\$1,318,857	\$1,318,857	\$1,318,857	\$1,318,857	\$1,319,407
Less: Accumulated Depreciation	\$ -	\$33,023	\$66,149	\$99,275	\$132,401	\$165,555
Net Fixed Assets	\$ -	\$1,285,834	\$1,252,708	\$1,219,582	\$1,186,456	\$1,153,852
Total Assets	\$1,500,000	\$1,852,146	\$2,031,907	\$2,314,637	\$2,778,189	\$2,990,907
LIABILITIES AND STOCKHOLDERS' EQUITY						
Liabilities						
Current Liabilities						
Accounts Payable	-	\$340,562	\$379,088	\$418,491	\$462,598	\$504,609
Accrued Salaries and Wages	-	\$36,731	\$40,808	\$48,385	\$48,385	\$57,158
Accrued Payroll Taxes and Benefits	-	\$14,513	\$14,779	\$16,030	\$16,940	\$20,712
Current Maturity of LT Debt	-	\$27,525	\$29,810	\$32,284	\$34,964	-
Total Current Liabilities	\$ -	\$419,331	\$464,485	\$515,190	\$562,887	\$582,479
Long-Term Liabilities						
LT Debt Less Current Maturities	\$150,000	\$97,059	\$67,248	\$34,964	\$ -	\$ -
Total Liabilities	\$150,000	\$516,390	\$531,733	\$550,154	\$562,887	\$582,479
STOCKHOLDER'S EQUITY						
Common Stock	\$1,350,000	\$1,350,000	\$1,350,000	\$1,350,000	\$1,350,000	\$1,350,000
Retained Earnings	\$0	-\$14,244	\$150,174	\$414,483	\$865,302	\$1,058,428
Total Stockholders' Equity	\$1,350,000	\$1,335,756	\$1,500,174	\$1,764,483	\$2,215,302	\$2,408,428
Total Liabilities and Stockholders' Equity	\$1,500,000	\$1,852,146	\$2,031,907	\$2,314,637	\$2,778,189	\$2,990,907

Exhibit 13: Cash Flow Statements

	As of Inception Date	2024	2025	Fiscal Year 2026	2027	2028
Cash Flows From (For) Operations						
Net Income (Loss)	\$ -	\$ (14,244)	\$ 164,417	\$ 265,295	\$ 450,819	\$ 593,126
Depreciation	-	\$ 33,023	\$ 33,126	\$ 33,126	\$ 33,126	\$ 33,154
Changes in Current Assets						
Increase in Accounts Receivable	-	\$ (185,933)	\$ (33,394)	\$ (24,627)	\$ (296,904)	\$ (98,844)
Increase in Inventories	-	\$ (78,265)	\$ (9,326)	\$ (6,503)	\$ (7,207)	\$ (8,110)
Changes in Current Liabilities						
Increase in Accounts Payable	-	\$ 340,562	\$ 38,526	\$ 39,403	\$ 44,107	\$ 42,011
Increase in Accrued Salaries and Wages	-	\$ 36,731	\$ 4,077	\$ 7,577	-	\$ 8,773
Increase in Accrued Payroll Taxes and Benefits	-	\$ 14,513	\$ 266	\$ 266	\$ 910	\$ 3,772
Net Cash Flow From (For) Operating	\$ -	\$ 146,387	\$ 197,692	\$ 314,537	\$ 224,851	\$ 573,882
Cash Flow (For) From Investing Activities						
Fixed Asset Purchases	-	\$ (1,318,857)	-	-	-	\$ (550)
Net Cash Flow (For) From Investing	\$ -	\$ (1,318,857)	\$ -	\$ -	\$ -	\$ (550)
Cash Flow From (For) Financing Activities						
Issuance of Common Stock	\$ 1,350,000	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Debt Borrowings	\$ 150,000	-	-	-	-	-
Long Term Debt Payments	-	\$ (25,416)	\$ (27,525)	\$ (29,810)	\$ (32,284)	\$ (34,964)
Dividends Paid to Stockholders	-	-	-	-	-	\$ (400,000)
Net Cash Flows From (For) Financing	\$ 1,500,000	\$ (25,416)	\$ (27,525)	\$ (29,810)	\$ (32,284)	\$ (434,964)
Net Change in Cash	\$ 1,500,000	\$ (1,197,886)	\$ 170,167	\$ 284,727	\$ 192,567	\$ 138,368
Beginning Cash Balance	\$ -	\$ 1,500,000	\$ 302,114	\$ 472,281	\$ 757,007	\$ 949,574
Net Change in Cash	\$ 1,500,000	\$ (1,197,886)	\$ 170,167	\$ 284,727	\$ 192,567	\$ 138,369
Ending Cash Balance	\$ 1,500,000	\$ 302,114	\$ 472,281	\$ 757,007	\$ 949,574	\$ 1,087,943

Exhibit 14: Financial Statement Notes

Notes 1: Accounting Methods

PortaPlant uses the straight-line amortization method for fixed assets.

Notes 2: Assumptions

The following assumptions are made in developing PortaPlant statements:

1. Accrued wages are assumed to be two-week of annual salaries and wages.
2. Accrued payroll taxes and benefits are assumed to be 15% of annual payroll taxes and benefits.
3. Cash dividends of \$400,000 are assumed to be paid on year 5 to shareholders including angel investors.
4. Inventory is assumed to be two-week of the COGS.
5. The building is assumed to be purchased at the price of \$1,361,800 on year 1 and depreciated 2.5% every year, according to the IRS PUB-946.
6. The machineries and equipment are assumed to be purchased at the price of \$2,057 on year 1 and depreciated 5% for the first year and 10% from the following years, according to the IRS PUB-946. Additionally, on year 5, the amount of \$550 of machineries and equipment are to be purchased with the deprecation rate of 5% that year.
7. Accounts payable is assumed to include advertising expense, inventory cost, interest expense, the principal payment, and accounting outsourcing expense.

Note 3: Investment Capital

The initial start-up costs are funded from founders, each will front \$150,000 which would be \$1,200,000 in total. In addition, the angel investors are assumed to invest \$300,000 in total, 50% (\$150,000) as a long-term debt (convertible debt) and the other 50% (\$150,000) as an equity represented by the common stocks. The loan amount of \$150,000 is assumed to be paid off over 5 years with the annual interest rate of 8%. Convertible debt can be converted into equity in the discount rate of 10% per share.

Note 4: Capital Investment

The initial investment consists of the building \$1,316,800 and machinery \$2,057. We decided to purchase the building rather than renting. Because we have enough capital to buy, and the rent expenses of 5 years (\$202,000) is much more expensive than the interest expenses of 5 years (\$32,487). In addition, the new machinery amount of \$550 is to be purchased on year 5.

Note 5: Risks

Internal Risks

1. Limitation of the market size and the price risk. As we target customers whose incomes are high, we relatively have a small market. By utilizing advertising expenses, we will get recognition among our potential customers other than our target market. We will develop a new and cheaper product for those customers.
2. Quality assurance risk. Though we will apply the criteria provided by American Society for Quality, these criteria might not work well with our system. Trials and errors would help us to manage this risk.
3. Shipping cost risk. As shipping costs take 15-34% of the product price based on the distance, we might run out of shipping expense account. So, we will continuously search for shipping partners with reasonable costs.

External Risks

1. Overseas supply chain issues. As we procure our bamboos from overseas, especially from China, the trade dispute and the shipping days will be our biggest issue. To minimize this risk, we will diversify our suppliers from other countries including the U.S. and store enough amount, which would be more than our current inventory of two-week. Additionally, securing the inventory would be crucial, as it is also stated on the financial ratio analysis, to meet our continuously growing demands.
2. Domestic supply chain issues. In a case when our contractors like Amazon and Lowe's increase the commission rate or enforces unacceptable conditions, we need to diversify our contractors.
3. Competition risk. We need to protect our market when the competition gets tougher. By utilizing the R&D expense, we will emphasize our strength such as a heater, minimize our threats and seek for opportunities by using market penetration and market development strategy.
4. Economic risk. In a case like recessiocon and high inflation rate, the disposable income of our customers might decrease. As our product is not necessary for life, we will cope this risk by using the diversification and differentiation strategies.

Exhibit 15: Financial Ratios

	Fiscal Year					Industry Average
	2024	2025	2026	2027	2028	Ratios
Liquidity Ratios						
Current Ratio	1.35 x	1.68 x	2.13 x	2.83 x	3.15 x	2.57 x
Quick Ratio	1.16 x	1.49 x	1.94 x	2.65 x	2.97 x	2.17 x
Days Sales in Inventory	14.04	14.54	14.56	14.56	14.56	26.68 days
Days Sales Outstanding	18	19	19	38	39	46.00 days
Operating Cycle	32.04	33.33	33.41	52.26	53.88	72.68 days
Leverage Ratios						
Debt/Equity	0.09	0.06	0.04	0.02	0.0	1.11
Times Interest Earned	-0.29 x	19.33 x	43.48 x	115.57 x	414.98 x	7.33 x
Asset Management Ratios						
Inventory Turnover	26.00 x	25.11 x	25.07 x	25.07 x	25.07 x	20.55 x
Receivables Turnover	20.00 x	19.15 x	19.10 x	9.55 x	9.15 x	22.23 x
Fixed Asset Turnover	2.01 x	2.07 x	2.01 x	1.86 x	1.96 x	9.49 x
Profitability Ratios						
Gross Profit Margin	45.28%	47.65%	49.38%	50.82%	53.15%	66.38%
Operating Profit Margin	-0.09%	4.13%	6.24%	9.43%	10.87%	15.00%
Return on Assets	-0.77%	8.09%	11.46%	16.23%	19.83%	12.17%
DuPont Analysis						
Net Profit Margin	-0.38%	3.91%	5.69%	8.73%	10.13%	17%
Total Asset Turnover	2.01 x	2.07 x	2.01 x	1.86 x	1.96 x	2.67 x
Equity Multiplier	1.00 x	1.35 x	1.31 x	1.25 x	1.24 x	1.05 x
Return on Equity	-0.77%	10.96%	15.04%	20.35%	24.63%	25.90%
Business Valuation						
	2028					
Multiple	0.51					
Project Revenue	\$5,856,150					
Estimated Valuation	\$2,986,637					

Exhibit 16: Financial Analysis

*refer to exhibit 15

Liquidity

PortaPlant's current ratio is just in line with the industry average. It goes from smaller to larger and closer to the average showing that we are using our assets effectively. Our quick ratio is coincided with the average of industry ratio. This may mean that we are investing lots of our resources on our working capital, whereas we could resource them better. That is something our company will be working on in the future.

Operating Cycle is higher than the industry average--meaning we need more cash to operate our business. This is something we have already considered and as we can see, our days sales inventory is lower than the average; as the business progresses more we will keep trying to bring this number lower.

Financial Leverage

The industry average for debt/equity ratio is a high number, which typically means that there is a huge financial risk. Our ratio is relatively lower than the industry average, indicating that our business has a good financial base. Our company has a higher times interest earned in the last few years compared to our industry average—this means that we have funds to pay our interest on time. As the years go by, this only increases.

Asset Management

PortaPlant's inventory turnover is higher than the industry average; this suggests that our sales are high and good—however, in the future it could also mean that we have insufficient inventory. Therefore, we will need to make sure we are keeping a close eye on our inventory as our sales increase. On the other hand, our receivable turnover is lower than the average by year 5. This could mean that our company is not collecting receivables on time or have poor credit policies. We will need to reassess our process to ensure that they are received in a timely manner. Our fixed asset turnover is way lower than the industry average for greenhouses—showing that our management may not be using the fixed assets effectively. However, the numbers that we have are still relatively functioning.

Profitability

Our gross profit margin and operating profit margin is lower than the industry average for all five years. This is reasonable because we set our prices fairly with a good balance between profit and customer satisfaction. If we keep our overhead costs reasonable, we can safely say that we will be making profit. ROA or return on assets starts off as low, compared to the industry average but as the company continues to grow, we reach and then exceed the industry average; pointing out that our company is efficient at making profits.

DuPont Analysis

Initially our net profit margin is lower than the industry average, but we are assuming it is because we have a high interest expense; however, as the years pass, we are getting closer and closer to the industry average showing that our company is moving to the right direction. Our total asset turnover (ROA) is lower than the industry average, but is moving towards the industry average, this shows that our company is becoming more efficient at generating revenue from its assets. Our equity multiplier is similar to that of our industry average; our debt-to equity usage is in line with the average industry usage. Similarly, our return on equity (ROE) fluctuates a bit, showing some signs of financial trouble; as the company grows, we match and then surpass the industry average, showing that our company is going to be financially healthy by year 5.

Valuation Method

The valuation is based on the method of multiples using the price to sales ratio of the greenhouse industry applied to the projected revenues. Our industry median ratio is 0.51.

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Meet the Team-Section 1, Team 9

	<p>My name is Ananya Arora. I am from Ashburn, Virginia. I am a junior and an accounting major. In the future, I hope to work as a forensic accountant. I am involved in JMU GIVE where I volunteer and enjoy giving back to the community. If I am not studying or spending time with my friends/family, you could find me at the barn with horses.</p>
	<p>My name is Davis Marden, I am from Oakton, Virginia. I am a junior and a computer information systems major. I love to ski and throw around the football in my spare time. In the future, I hope to work in the cyber security industry, specifically dealing with data hosting companies.</p>
	<p>My name is Breanne Fields from Leesburg, Virginia. I am currently a junior Marketing major with a concentration in digital marketing at James Madison University. I am involved in being in a sorority as well as being a part of 2 clubs, Women in Business and American Marketing Association. In my free time, I like to volunteer at the local RHSPCA, hang out with my friends and watch movies.</p>



My name is Kishan Patel, a junior majoring in the world of Management at James Madison University. I'm from the Harrisonburg, VA area. Juggling classes and campus life, I make it a point to unwind with my family and friends. It's all about striking that balance and finding those mentally recharging moments! I'm all about crushing it at the gym every day, getting that daily workout done and leveling up.



My name is Conner Simmons. I am from Lynchburg, Virginia. I am a junior majoring in Marketing with a concentration in Digital Marketing. I love playing golf with my buddies on a nice, warm day! If I am going on a vacation, it's somewhere warm with a beach! Any extra time I have, I enjoy spending it with my family and friends.



My name is Nicholas Stockel, I am from Aldie, Virginia. I am a junior at James Madison University majoring in computer information systems and a member of the VIC club here at JMU. I enjoy fishing during the spring and summer and hunting in the fall. My main hobby is unwinding with my friends and family by cooking dinner. I am half Puerto Rican and enjoy visiting the island during the summer to see family.



My name is David Lee. I am from Sejong, Republic of Korea. I am majoring in accounting at James Madison University. I usually watch videos on YouTube or read books in my free time.



My name is Marlene Robles, and I am from the Eastern Shore of Virginia. I am currently a junior majoring in Marketing. My main goal is to learn how marketing works around the world, which is why I love doing study abroad programs. I am part of the First Generation and Centennial Scholars programs here at JMU. In my free time, I enjoy running a small decorating business event with my cousin and I love traveling and learning more about different cultures!