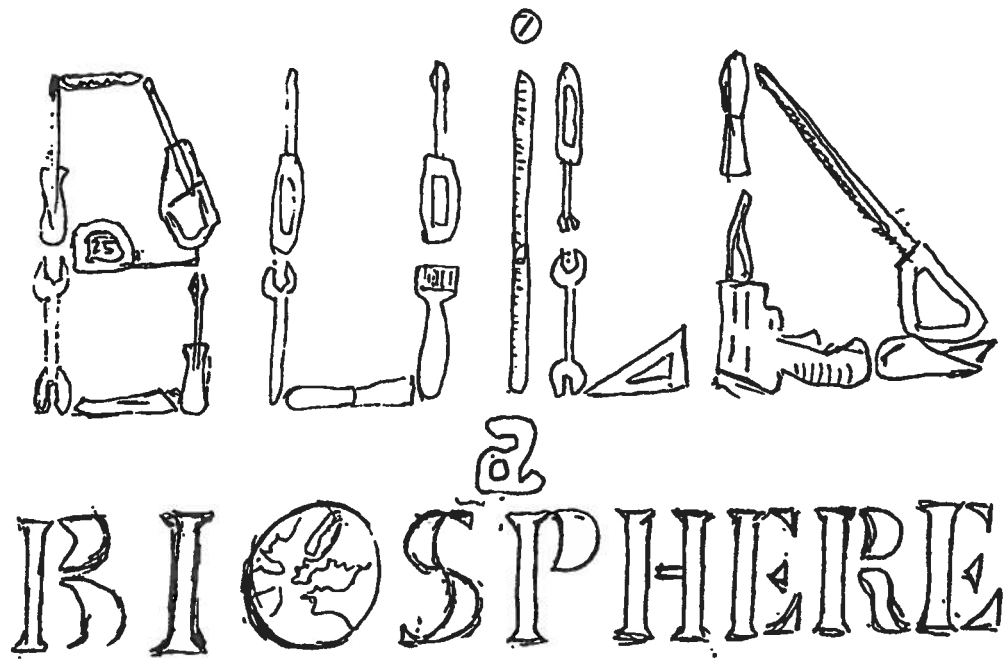


Build a Biosphere

Tuesday December 9, 2014



Patrick Shami

Executive Summary

16.8% of California residents are currently living in apartments across the state. That is over 6.3 million people currently living in situations where there is little to no garden space (www.nmhc.org). 38,573 of which are living here in Marin County (www.city-data.com). My business, Build a Biosphere, aims to give these people an alternative to having a garden, while also giving them an opportunity to learn about plants and the environment. My business takes old containers such as mason jars and different types of bottles, creates a completely self-sustaining ecosystem inside, and sells them for peanuts compared to our competitors. We strive to get a biosphere in every apartment building in the state.

Years ago my father told me a story of a lamp he had while living in his mother's apartment in Egypt. This was no ordinary lamp; the lamp base was a glass globe with plants growing in it. He told me about how it would sustain itself, never needing any human interaction until one day it got knocked off the shelf from which it stood. Ever since then I have wanted to recreate this phenomenon, and share it with the people around me. MarinSEL has given me the perfect opportunity to do so. I surveyed mostly juniors and seniors in high school, as well as some young adults to find out their preference toward bottle size, and if they would consider putting a terrarium in their home. I targeted these people because they will be in their first year of college or about to leave to college by the time I get my business up and running. Through my survey I found 78% of participants do not own a terrarium. I plan to take advantage of this open market and advertise through Facebook and Instagram campaigning. This includes a page for my business with an open comments/suggestions sections, and frequent posts about my business. I chose these two social media sites because these are where the majority of my survey responses came from.

To successfully run my business I will need four employees including myself. I will need one botanist or someone with some kind of experience in a nursery; someone whose skillset extends beyond the backyard. This person will be in charge of deciding what plants to use in the containers with what soils etc. This is a temporary position, possibly even seasonal. The next employee I will need is an assembly worker. Although my product is small, it is tedious work to create a self-sustaining ecosystem. This person will need to have to be a very patient person, someone who enjoys meticulous work. The third employee I will need is a marketing specialist. This person will be in charge of managing the social media sites and eventually launching our own website. Finally the last employee needed is a general manager. Someone to oversee all the process and who can step into any position at any given moment in time. This person will need to have all the skills mentioned above, or will need to be trained.

My business does not face much competition. My largest competitor is Ecosphere Associates. They sell a similar product to mine, only it has shrimp living in it and is filled with water rather than my plants. They sell their product for over 5 times what I plan to sell my product at.

I have assembled a variety of prototypes for you to visualize what the customer will be able to purchase. I hope to one day give everyone the delight my father and grandmother experienced with their lamp all those years ago.

Business Description

Positioning statement

Build a Biosphere uses bottles and mason jars as containers for miniature biospheres: small, completely self-contained, self-sustaining ecosystems, used for decorative purposes around the home and workplace.

Business Description

Hello, my name is Patrick Shami. When I was younger my grandmother told me this story of a lamp base she had in Egypt. It was full of plants and 100% sealed and self-sustaining. Ever since then I have wanted to recreate this phenomenon for many others to see. At Build a Biosphere, we create multiple sizes of self-contained ecosystems inside either some kind of reused glass bottle, or an old mason jar. Build a Biosphere is the perfect addition to your home or workplace!

Market Opportunity

The Need

My product acts as a stress reliever in the workplace and at home. It has been proven that greenery in the workplace relieves stress and fatigue. It also gives children and parents alike the opportunity to see how an ecosystem works with no human interaction.

Target market

Persona Profile

Taylor is a 34 year old female who has just moved into her first apartment. She has a 3 year old son and really misses being able to plant in her garden and teach her son about nature.

Market Demand

- I) Size of target population: 38,573 people living in apartments in Marin County
- II) Percentage of market to capture: 0.7% is 270 customers
- III) Average revenue from each potential customer: \$20 per person per year
- IV) Total potential revenue per year: \$5,400
- V) Estimated annual revenue: \$4000 I will sell to 200 people

Market research

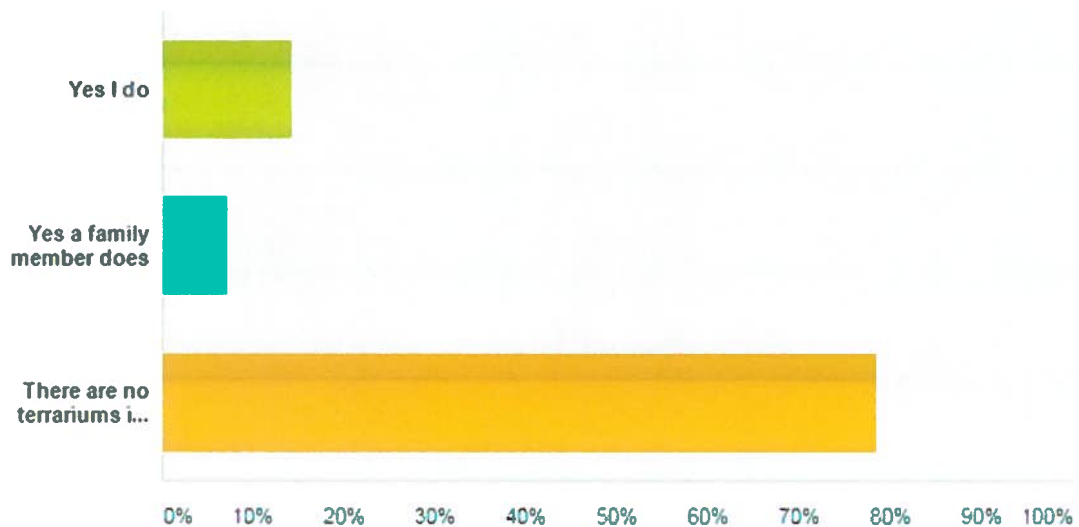
These are the assumptions I made before conducting any research for my business.

Assumptions	Importance	Evidence
People in apartments have no or a limited garden.	10	8
People will want my product.	9	9
The plants will live	10	4
I will be able to get bottles for free.	6	2

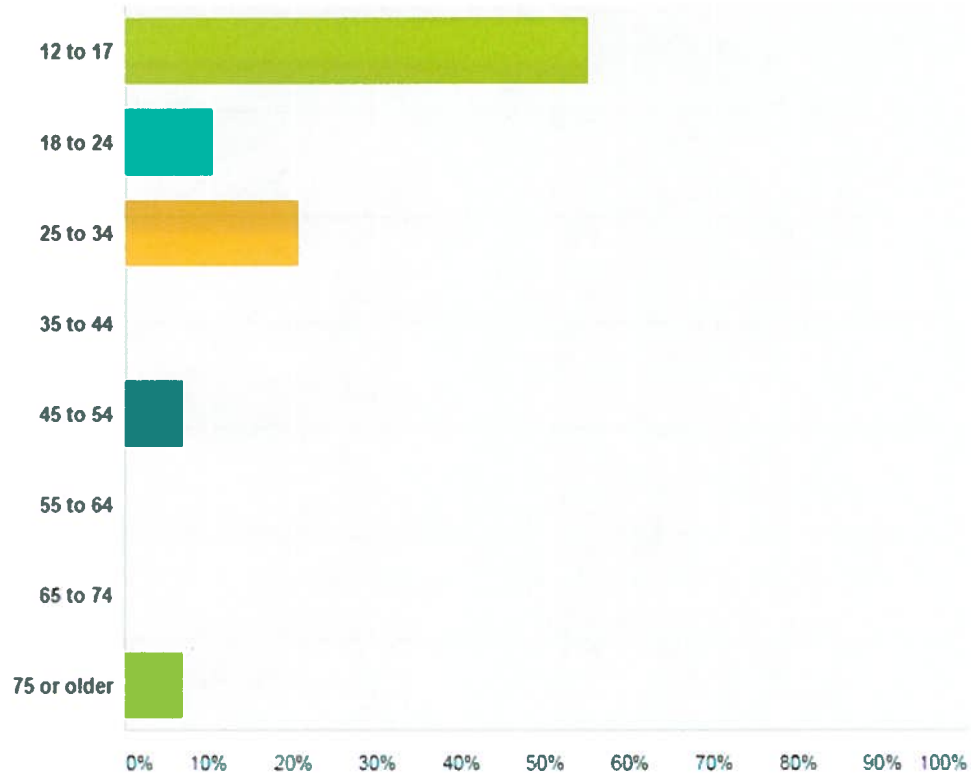
Primary research I conducted:

Do you or a family member family have any terrariums in your home?

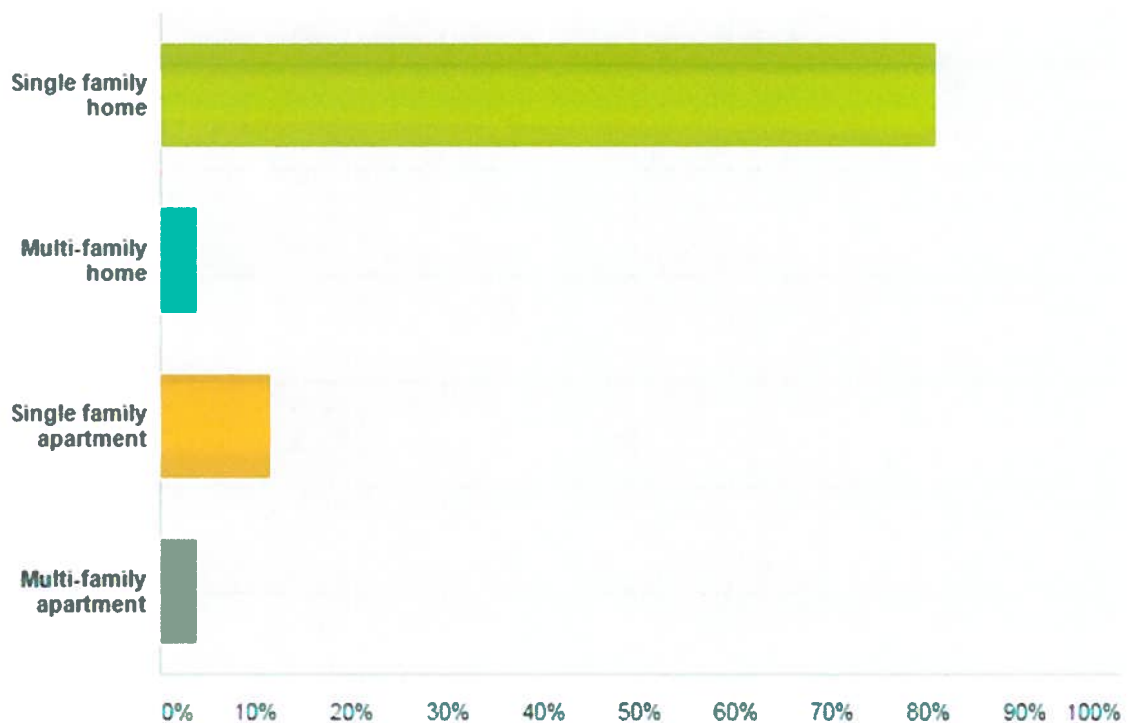
78.57% of participants claimed that there were no terrariums in their home. 14.29% said they personally had a terrarium, and 7.14% said a family member had a terrarium. I asked this to find a rough estimate of the market I would be taking advantage of.



The next question I asked was the age of my participants. This was to make sure I was surveying people within my target audience.

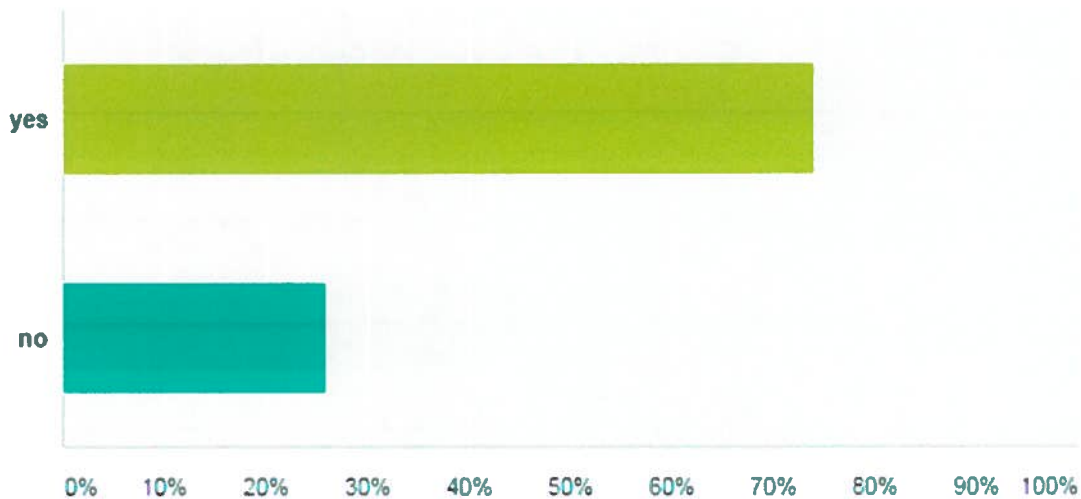


I also asked what the living situation of my participants was. This was to further ensure I was capturing responses from my target audience.



Would you buy a 100% self-sustaining sealed terrarium?

74.07% of participants said they would buy my product.



The final question I asked was how much someone would expect to pay for my product. I received a range of results. The average price willing to be paid for my product came out to be about \$31. This is double what I planned to sell my product for. This means if I ever need to hire more employees or expand, I have the opportunity to slightly raise the price of my product.

Secondary research I found:

Question/Topic of Research	Source (include link)	What you learned from the source
What kinds of plants do people put in terrariums?	http://www.apartmenttherapy.com/diy-or-buy-terrarium-167979	Pilea involucrata 'Moon Valley' Variegated Spider Fern Starfish
Do I need activated charcoal?	http://www.instructables.com/id/Bottle-Garden/step10/Finishing-Touches/	I don't need it, but it is better to have.

Competitive Analysis

Products/Service	Price	Quality	Competitive Advantage	Weaknesses	How are you different?
Enclosed ecosystem	\$80-\$500	2 shrimp die. One lives for 15+ years	Largest company. Looks nice.	Made of thin glass. Very expensive	Use reclaimed glass. No fish. Plant life not sea life.

SWOT analysis

Strengths: -Green thumb -Unique product -Each biosphere grows differently depending on environment	Weaknesses: -Not professionally made -Inconsistent -Time restraints
Opportunities: -Free bottles -Cost of land goes up -Increase in real estate value	Threats: -Run out of free bottles -Plants die -Cost of materials rise -Competitors price drops -More competitors come to market

Potential Positive: Competitors go out of business
 More people hear about my business
 News of my company spreads among people, thus increasing demand for my product.

Potential Negative: I go out of business
 My competitors drop their prices.
 This would be a negative for me because large companies are able to make less money but sell more products. I am only able to make a certain number of my product in a given amount of time. This means I have less wiggle room to drop my prices to stay competitive.

Marketing Strategy

Mission, Vision, Values

My mission is to provide an educational product for children and parents alike that is also an aesthetically pleasing addition to any home or workplace. We strive to reduce stress and increase productivity in the workplace, as well as at home.

Branding

Build a Biosphere strives to be:

- Energetic: We aim to raise children and adult interest in the environment.
- Reusable: We use repurposed bottles and jars.
- Custom: If the customer brings us a bottle they would like to use, we will gladly build a biosphere for them.

Slogan: Biospheres to save our sphere!

This is my Logo:



A handwritten signature in black ink, located in the bottom right corner of the page.

I plan to use non-celebrity endorsement to show people happy with the product, and show children showing interest and asking questions about the environment.

Marketing Objectives, Strategies & Tactics

MOST Grid: Marketing Objectives, Strategies & Tactics		
Objectives are what you want to achieve and should be SMART (Specific, Measurable, Achievable, Relevant, Time bound). Strategies are broad methods of achieving your Objectives. Tactics are specific plans for implementing each strategy.		
Objectives	Strategies	Tactics
Sell 8 biospheres the month of february a month.	Spread info about company by word of mouth	Give away a few biospheres with info cards or bussiness cards and a request to spread the word about my bussiness.
	Make themed items for different seasons	plant roses for february and valentines day.
Educate public on environmental issues.	Find at least 50 new contacts and expand market	Mailchimp and other mass media sources
		Sell product in stores in different areas to expand to diferent demographics
	Create a website	on line store
		options for customization
		Facebook
		Hire my sister for graphic design
	Post Ads on other websites	Use family and friend' websites to put banner ads for my product
		If company grows enough use google advertising

Operations

- **Suppliers**
 - Linda Habashi
 - Bottles
 - Pierre Shami
 - About 50 jars
 - Home Depot or similar store
 - Pea Gravel
 - Soil
 - plants/plant seeds
 - Petco
 - Activated charcoal
 - Uline
 - Jars
- **Production Facility**
 - Shami residence

Management Plan

Key positions

1. Botanist
2. Marketing specialist
3. Assembly worker
4. General Manager

Skills needed

1. Should have some type of plant life experience in a nursery or other.
2. Someone who has prior advertising experience or has been exposed to marketing development classes.
3. Someone with tuned fine motor skills, and patience.
4. Someone with all the skills stated above that also leads well.

Financials

I have two products available for sale. The difference in unit cost is that I can get wine bottles for free. The unit cost of my second product is \$5.92

Unit Cost Analysis

Unit Cost Analysis					
Product: 1 Biosphere in a jar					
Examples: 1 pie, 1 ceramic bowl, 1 burrito, 1 pair of pants, etc.					
Materials	Total \$ (a)		Quantity (Ex. Pound, ounce, package of 10)	Total # of Units (from this quantity) (b)	Cost per Unit = (a) / (b)
1 Pea Gravel	\$13.47		5 lb.	40	\$0.33
2 Charcoal	\$13.59		2.8 lb.	50	\$0.27
3 Soil	\$9.99		2 cubic feet	125	\$0.08
4 Plants	\$2.00	lb	20 seeds	5	\$0.40
5 Jars	\$12.95		12	12	\$1.08
6					
7					
8					
Total Material Cost Per Unit:					\$2
Variable Labor:	Wage Per Hour (a)		# of Hours Per Unit (b)		Cost Per Unit = (a) x (b)
Student	9		0.5		4.5
Total Variable Labor:					4.5
Total Unit Cost (Total Material Cost + Total Variable Labor):					\$7

Forecasted Income Statement

Business Name			
Annual Income Statement			
Year(s)		Total	%
Revenue/Sales			
	Jar	\$ 1,387.00	60%
	Bottle	\$ 935.00	40%
	Revenue Stream 3	\$ -	0%
Total Revenue/Sales:		\$ 2,322.00	100%
Cost of Goods Sold			
	Jar	\$ 757.40	73%
	Bottle	\$ 279.91	27%
	Revenue Stream 3	\$ -	0%
Total Cost of Goods Sold:		\$ 1,037.31	100%
Gross Profit		\$ 1,284.69	55%
Operating Expenses			
	Rent	\$ -	0%
	Salaries	\$ -	0%
	Professional Fees: Legal, Accounting	\$ -	0%
	Utilities: Water, energy, waste collection	\$ -	0%
	Marketing	\$ -	0%
	Other	\$ -	0%
	Other	\$ -	0%
	Other	\$ -	0%
Total Operating Expenses		\$ -	0%
Net Profit		\$ 1,284.69	55%

According to projections, after the first month of sales I will be in the red.

Required Start-Up Capital

- \$50 to purchase a bag of soil, some jars, and the rest of the materials needed.
- This should be enough to make 10-15 products, depending on the size.

Conclusion

By following this plan, Build a Biosphere will meet its goals as well as successfully achieving a triple bottom line. A biosphere is a fantastic gift item to show someone that you care about their mental health as well as the environment. Build a Biosphere offers this service to people. Biospheres are also great conversation starters; most people cannot believe that it requires no human interaction.

Further than obtaining a social aspect, Build a Biosphere attains a sustainable aspect as well. We use recycled containers, use locally grown plants and seedlings as often as possible, and educate the public about the environment and how it works.