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Pascal

Your Beach Day Just Got Better.

Company Synopsis

Pascal is a B2C organization that serves beachgoers who wants to enjoy their beach day stress-free. We'll generate revenue using rental revenue model.

Our primary objective is to provide a convenient way for individuals on the beach to take shade from the sun and relax stress-free. When an individual steps out of their car, we want that individual to forget that he or she didn't remember to bring their beach umbrella or forget that he or she didn't have enough space in their car to take their beach umbrella. Any individual should be able to step out of their car and rent our beach umbrella via the lockers that are conveniently located adjacent to the parking lot. Having said that, individuals who are already at the beach without a beach umbrella will also be able to rent Pascal whenever they desire.

Some of the factors that really sets us apart from any of our competitors are not only providing the convenience of being able to take shade from the sun at any given time but also providing the convenience of not having to pay for more than what they used. We offer hourly rates for any rentals, so that for every rental customers only pay for the portion of the time they used Pascal.

At the end of the day, Pascal does well on the RIBS test. Pascal is a relevant product. Having too much sun exposure leads to melanoma skin cancer. Our product helps mitigate some of that risk by providing a way for individuals at the beach to take shade from the sun. Our product is inevitable. To our knowledge, there is no product in the market that provides a

convenient way for individuals at the beach to rent beach umbrellas (more on the competitive analysis). Pascal is believable. Since our product is demoable, it's believable. Pascal is simple to use, just download our app and start renting.

Market Overview

The number of customers depends on the number of people who are traveling to beaches, whether they are locals having a beach day or people who are on vacation. On average 129 million people visit southern California beaches each year which include not only tourists but locals as well. Of those people, you can't help but think that more than 50% of those people have some sort of shade that they bring with them. In most cases, it's beach umbrellas.

In San Diego, there is a major trend of beach rentals that offer umbrellas. This trend is that the only location that offers umbrella rentals are all in the PB/Mission Beach area. The reason being is that in this particular location, there is a boardwalk that separates land from the beach; so of course, it would be ideal to have rental services that close to the beach. This gives us a chance for a massive white space opportunity. The reason being is that because the renters are only in that location, there are so many other beaches in at least the San Diego area that don't have rentals even remotely near them, which is where we come in. Putting our umbrellas in lockers next to parking lots allows the easy and accessibility that other people may not have if they go to different beach locations. So on the chance they don't have an umbrella and decide they want one, it's right next to their cars, close to the beach.

As far as resorts in San Diego it seems that if they offer any type of beach equipment, they're complementary since the majority of these resorts have private beach fronts. Take for example the Bahia resort offers complimentary bungalows while enjoying your stay there. It

seems that resorts in San Diego, they tend to give you the experience to remember rather than try to give you the headache of finding locations that offer beach umbrella rentals. For the location rentals in PB and mission, Ray's Rentals, have several different options one being that they only offer all-day rental umbrellas starting at 10 dollars for 8 Hours. If you happen to go over the 8 hours, they will charge you overnight cost at 15. The only locations that seem to offer by our are Cheap Rentals. They have a rate of 5 bucks an hour for their umbrellas, but they offer all day use at 10 an hour. Basically, for the average consumer, it is almost a better bargain to just rent the umbrella for the entire day. The main reason we would be set apart from them would be that we would not be limited to just PB/ Mission Beach area. We would allow for a much wider range of locations that are closer to the beach.

How the Product Works

The ways that this product works is as follows:

1. The person would have to first download the app on their phone (currently we have only on iOS, but as the company grows we would also add to android).

    a. They will then add their personal information to become a member of Pascal.

2. When they have opened the app, they will not only have their location but of the location of umbrellas, in use and not in use and will be distinguished by the different colors on the map. Obviously, the ones that are not in use are also then the locations of lockers.

    a. The way that the locations works, is that we have added the Ultimate GPS from Adafruit and attached an external antenna to the umbrella. We then uploaded the longitude and latitude of the umbrella onto firebase which in return is then uploaded to the app in real time.

3. When the person arrives at the beach, they will then again open the app to purchase an umbrella with a particular serial number on the umbrella and also on a locker. They will then be given a specific code to open the locker and use the umbrella.

4. Once the user has put the umbrella in the sand, they can opt to use the Bluetooth as a speaker to listen to their favorite music/podcast/or even audiobook.

5. Once the user is done, all they have to do is place the umbrella back into its correct locker and press end, to have the exact amount displayed on their screen. In the future, these lockers and umbrellas will be equipped with RFID chips so that we know that the umbrella was placed in the correct locker.

These umbrellas give the user the ease of not having to buy, remember to bring, or having the space to bring their umbrellas and speaker to the beach.

Revenue Model

Our primary mode of revenue is rental. Each user will be able to rent Pascal using our Pascal App. There is a flat charge of $1.50 for opening Pascal. Then for each hour, the user gets an additional $1.50 credited to their account. For example, if the user used Pascal for 2.5 hours, then he or she pays $1.50 for opening Pascal, then $1.50 for the first hour of usage and additional $1.50 for the next hour of usage. There is no charge for the last half an hour of usage. This brings the total to $4.50 of revenue for the 2.5 hours of usage of Pascal. Most of our revenue comes from the actual user using our product and not from any other additional channels.

In terms of unit cost, our current model has a Raspberry Pi, a GPS module, and a power bank enclosed in a case and attached to a beach umbrella. All of this brings our unit cost to approximately $108 per Pascal.

In the future, we would like to adopt a more aggressive rental revenue model. In this new model, each uses still gets charged $1.50 per hour of usage of Pascal. In addition, we'll provide an additional feature for an additional $0.50 per hour.

Product Design

When designing the Pascal product, we wanted to not only focus on functionality but also UI and UX. The easier our product is to interact with, the more people will decide to use it. We focused on making our UI as simple and straightforward as possible by modeling it after other common UI patterns that people might have interacted with before. Throughout the entire app, we keep the design cohesive by placing similar type buttons such as "done" buttons in the same placement on the screen so the user doesn't have to search for them. We also decided to add some minor graphics so the process would be responsive to the user. This included adding certain loading gifs where we know the app might run slow since it will have to access the database. We also included a "How to Rent" button in 2 places so if the user is confused about the flow of the renting process they can get a simplistic overview in order to learn how to continue.

The main flow of our information architecture tends to fall under the sequence hierarchy but we tried to overall keep the number of choices as few as possible in order to make the app as intuitive as possible while staying simple. Therefore, our information architecture aims to follow the design principles developed by Dan Brown. The main "map" screen has a total of three buttons that the user can interact with, reducing the amount choices to be made, and they are designed to draw the attention of the user in order of importance. The "Rent" button is large and prominent so if the user is familiar with the renting system they can immediately begin the

process with no hassle. The second most prominent button is the "How to Rent" button which is difficult to miss so if the user is new to Pascal they don't have to look around to get the help they might need. The last button is the three dash icon which is used in many other applications and typically easily recognizable. If clicked it gives a side menu to give the user more options such as putting in their payment options and account settings.

Certain accessibility concerns we considered was if the user wasn't as familiar with the format of either the rental process or applications in general. This might include the elderly who might not recognize the three dash icon to show a menu. In order to combat these problems, we added the "How to Rent" to help with the process of learning how to rent a Pascal umbrella. We also aimed to make the app as simple as possible so there aren't too many buttons, choices, or screens for a user to get lost in.

Competitive Analysis

Doing research on direct and indirect competitors, we have found that we do not have any direct competitors since we are the only product that pairs a speaker, beach umbrella, and rental service together. We have, however, found two main indirect competitors: beach rental stores, and an attachment for patio umbrellas that has lights and a Bluetooth speaker.

The patio umbrella speaker also has lights and is priced at $25 and attaches to a patio umbrella that the user already owns. The attachment looks large and likes it would keep the umbrella from closing unless removed first. This product doesn't have very good reviews on Amazon for various reasons. These consist of:

- Its battery powered and it only lasts for 6-8 hours per battery replacement
- It is not waterproof

- The sound quality isn't very good

- For many users, the speakers suddenly stopped working

Our team looked into whitespace surrounding renting out beach umbrellas since beach shops have been doing this for quite an amount of time now. We found that many rental shops only rent on a day to day basis, not hourly, for around $15 for an umbrella. They also are usually more inland than most people would want to travel to from the beach just for an umbrella. If a customer is looking to rent a lot of items it would make sense for them to go to a rental shop but it is more of a hassle than gain if they are only wanting to rent a beach umbrella. Our product would aim to be right on the border of the beach so users wouldn't have to travel far. We also have the feature of an attached Bluetooth speaker and we couldn't find a single rental shop that had this implemented.

SWOT Analysis:

- Strengths: We don't have any direct competition with the uniqueness of our product and we are bringing our product closer to the customers than our competitors. Just by putting it closer in proximity to customers we hope to acquire some of the customers from rental beach shops.

- Weaknesses: We require customers to have our app downloaded in order to use our product which will probably have us lose out on some since most people would rather do nothing than something.

- Opportunities: We see some opportunities in expanding our features to elevate the experience such as possibly adding charging ports and hotspot for phones. We also would like to try to work with beachside resorts in order to gain customers from them.

- Threats: We might face problems in getting cities or beaches to allow us to place our lockers and if beach stores start attaching speakers to their umbrellas we don't have much of an obvious advantage over them.

Customer Personas

For the personas, there are multiple different types that we narrowed down, but for all three that is one similarity between them all, the need for convenience and simplicity. We have a traveler. This person and actually many people don't really think about bringing their umbrella along with them to whatever beach destination they decide to go to. This person will either pay overly priced rentals at their resort or will end up just buying one at whatever location they're at and don't bother taking it back with them due to check-in fees at the airport. With Pascal, it becomes much more convenient and less tiresome to figure out what they're going to do for sun protection at the beach.

Another person we have in mind would be just the local beach town people. You have the regular college/ high school beachgoers who tend to only go during dusk for the bonfires or only go for a few hours since it becomes too hot to stay for much longer. Many of these young adults don't have the money or the room to be bothered to get an umbrella, but with Pascal, beach day just got easier without having to break the bank. They don't even have to worry about ruining their speakers either since Pascal will take care of that too!

Lastly, we have the moms who have to plan a beach day accordingly for their kids/ party goers. For the everyday mom, it becomes Tetris in their minivans, or really whatever can they have, to get the umbrella to fit with everything else. With Pascal, they no longer have to worry

about whether it'll fit in their car, all they have to do is stop next to the pay booth and pick up an umbrella! Everyone can get shade now!

Customer Acquisition Plan

The main types of personas that we are trying to target to are tourists, college students, and forgetful beachgoers, mainly anyone who doesn't want to be bothered to bring/own a beach umbrella or someone looking for a simple quick way to elevate their beach experience. Certain channels that we would try to use to our advantage to attract new customers would be Facebook or app store ads. Since our product is modeled similarly to the Bird product (app-based) we would want to try to partner advertising with them or market similarly to their model but only in the beach areas. Some of their types of customers would overlap with ours so this might prove successful. However, we would mostly rely on word of mouth as a primary way to bring in new customers. Relying on word of mouth would be the best way in the beginning for Pascal because it is free and happy customers attract more customers.

Since we plan to target only hot year-round beach cities, we can argue that the Life Time Cycle model would follow:

- Monthly customer revenue: average daily cost value ($1.50*5hours = $7.50) multiplied by the number of visits per month (4) = $30

- Customer profit margin: There is no cost to serve a customer since it is an app and a unit cost of an umbrella that would last a few months is around $130. Given that a single umbrella would be used by multiple customers a month, we can estimate the profit margin to be around 40%

- The average lifespan of a customer: around 20 years accounting that prime beach months would last 5 months of the year.

- LTV = 0.4*$30*5*20 = $1200

Traction to date

During our first stages of development, we had a lot of different feedback from potential customers. If you recall our original product, was the same concept, but for the rain. When asking consumers if they would use this product, many said no. The reason being is that people aren't trying to go out of their way to rent an umbrella and would rather just run to wherever they need to go; loved the concept, just not very practical. Also because we live in San Diego, it almost never rains for more than a couple of months out of the year, so as far as profit in San Diego it would be very limited. Thus we decided to pivot our idea to something that not only would work in San Diego but almost anywhere that had a large body of water.

Again when asking the same customers if they would use this product, many not only said yes, but they would account times that they could recall having something like Pascal useful. Take, for example, our teammate Elizabeth! When on vacation to Hawaii, it became apparent not only to her parents but to her and her sister as well, that they would be needing a beach umbrella. They checked at the hotel they were staying at, but the hotel was renting them for an absurd amount of money and would not let them take it out to other beaches around the island, so it was more convenient for them to just buy one! This is was a good alternative, but when trying to go home, it would have cost them another 50 bucks! Just to check-in the umbrella onto the plane; so at the end, they couldn't even keep the umbrella they had purchased. With the

creation of Pascal, they and many others in their position can rent an umbrella without the ridiculous price, and have peace of mind on their trip.

About the Team

Our team consists of highly accomplished individuals. Every member of our team received their degree in one of the top institutions in all of North America.

Our CEO, Danyelle Theokari, has a Bachelor of Engineering in Computer Engineering from UC San Diego. Danyelle has industry experience with the company Workday and through her internships has worked with a variety of people in diverse positions which has given her knowledge on what is needed to make a successful end-to-end product. Her technical engineering skills have proved useful in developing Pascal but also used this opportunity to develop new skills in designing the user interface and overall user experience.

Our CIO, Elizabeth Murillo, has a Bachelor of Engineering in Electrical Engineering from UC San Diego. Elizabeth has a background of hardware and systems engineering that was gained during her time at Lytx as an intern. She had what it took to get a system working properly with firmware. She was able to come up with how the pieces of the product would work together. Allowing for a portable, but a sturdy device. She was also able to upload all data collected on Pascal to their database and was also able to get a connection between the speakers and phone via Bluetooth. By the end of the final stages of Pascal, she gained even more insight into what it really takes to build a successful startup.

Our CTO, Ravi Patel, has a Bachelor of Engineering in Computer Engineering and a Bachelor of Science in Mathematics -- Applied Science from UC San Diego. With a background in Mathematics, Ravi brings a valuable aspect of theoretical analysis required for data analytics

and feature selection based on revenue analysis. In addition, his engineering background provides optimal support for integrating any additional features required for refurbishment. The combination of engineering and mathematics provides an excellent resource for any pivoting techniques required for Pascal to be successful.

Financials

Our primary reason for needing additional finance is for scaling. We want to be able to provide our service to every major beach located throughout San Diego County, then throughout major cities in California, and eventually throughout the United State. In addition, we also want to make Pascal into a more technologically efficient product. We want to replace the Raspberry Pi with a custom Printed Circuit Board (PCB) that's smaller, more powerful, and more space efficient. This will clear up some space for us to include a larger battery that can support charging ports. This PCB should ideally be integrated with SIM card to enable each Pascal product to connect to a network. With the SIM, we want to be able to provide a hotspot for users to be able to connect. On the software, we require capital to maintain our database and providing security on all the data we have on our uses. On the operational side, we have to pay for credit card processing fees.

Alone in San Diego Country, there are more than 40 beaches. Assuming that each beach can support 30 Pascal, that's an estimated 1200 Pascal throughout San Diego County alone. With a current unit cost of $108 per Pascal, we require an estimated $129,600 to scale all of San Diego County. Having said that, Los Angeles County and Orange County combine to have over 60

beaches along its coastline. Being able to scale all through these two cities require an estimated $194,400 in capital.

In return, investors get a share of Pascal and a potential for astronomical growth and outsized returns (relative to a more matured company). So, each time Pascal makes a profit, so do the investors. In addition, investors get access to a huge market of users.

Ethical Issues

Certain ethical concerns that we had when initial designing our product was similar to the ethical problems that we see the Bird Scooter company falling into. Many complaints have been made against Bird's scooters littering the streets and being in the way of pedestrians. In order to avoid falling into these same pitfalls, our MVP plans to have lockers that the customers must return the beach umbrellas to in order to stop paying for them. These will keep the umbrellas from being left all over the place but also will keep them from ending up in the ocean.

Another ethical concern that we had when designing our product was that the speakers would be annoying to other beachgoers and houses. In order to account for this, we chose speakers that will be loud enough for our customers to hear their music but not so loud that the noise will travel very far from the umbrellas. We also added a note under the "How to Rent" button in our app to remind customers of the volume of their music.