Coffee Express Business Model

The Pennsylvania State University, College of Engineering

EDSGN 100: Spring 2014, Bevin Etienne

4/30/2014

Members:

Bridget Winch

- Blw5344@psu.edu

Team:

Thomas Nylec

- ten5053@psu.edu

Nick Minutillo

- nim5247@psu.edu

Lucas French

- lxf209@psu.edu
**Table of Contents:**

Introduction.......................................................................................................................................................... 3
Mission Statement...................................................................................................................................................... 4
External Research.................................................................................................................................................. 4
  - Transportation.................................................................................................................................................. 4
  - Surveys............................................................................................................................................................. 5
  - Benchmarking.................................................................................................................................................. 6
  - Coffee............................................................................................................................................................. 9
  - Location........................................................................................................................................................ 10
  - Containers.....................................................................................................................................................

Concept Generation and Selection..................................................................................................................... 17
  - Cost Analysis............................................................................................................................................... 17
  - Delivery System...........................................................................................................................................

Final Design.......................................................................................................................................................... 19
Conclusion............................................................................................................................................................ 21
Works Cited.......................................................................................................................................................... 22
**Introduction:**

When presented with the assignment our group immediately jumped on the idea of a restaurant delivery service. As we talked it out and went over various problems and specifications, we found ourselves talking about a different, better idea. It would be a Starbucks delivery service for here at Penn State University. Naturally when already talking about delivery services we came up with the idea of a campus coffee delivery service and we chose Starbucks as our primary coffee brand.

**Mission Statement:**

Our mission, as students in Engineering Design 100 at The Pennsylvania State University is to put as much effort and thought as possible into creating and designing a project that uses communication and sustainability to achieve a goal. After following the design process we plan to exceed our goal by meeting all necessary requirements of the assignment and more.

**External Research:**

- **Transportation**

  The type of transportation we choose for delivering to the locations that are later mentioned was the Mitsubishi Mirage. To come to this choice we compared the car to a Smart Car and a Fiat. After examining the results of various categories we decided that the Mirage was the most cost efficient and the most energy efficient for what we are looking for.
<table>
<thead>
<tr>
<th>Car</th>
<th>Fiat 500</th>
<th>Smart Car Coupe</th>
<th>Mirage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price ($)</td>
<td>16,195</td>
<td>13,270</td>
<td>12,995</td>
</tr>
<tr>
<td>Gas Mileage</td>
<td>31/40/34</td>
<td>34/38/36</td>
<td>37/44/40</td>
</tr>
<tr>
<td>(Cty/Hwy/Cmb)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engine</td>
<td>4 cylinder, 1.4 liter</td>
<td>3 cylinder, 1.0 liter</td>
<td>3 cylinder, 1.2 liter</td>
</tr>
<tr>
<td>Gas/ Diesel</td>
<td>Gas</td>
<td>Gas</td>
<td>Gas</td>
</tr>
</tbody>
</table>

- **Containers**

For this project we had to work on designing our own containers. What we decided upon was two containers, one for hot drinks and a cooler for cold drinks. Each container will have slots for the coffee cups to go to prevent the drinks from spilling. The hot container is a prototype that we created. It is a Styrofoam container with coils wrapped around each drink slot. These coils are all connected to a car’s cigarette lighter using the same attachment that a phone charger uses. These containers will hold 24 cups (4 cups by 6 cups) and be heavily insulated. Each will also be able to stack on top of each other to maximize the amount of containers to be able to be carried.

- **Sales to Starbucks**

Working with Starbucks is a great investment for both Starbucks and our delivery service. Starbucks is one of the most popular restaurants on campus, and its main deterrent for customers is the massive wait and crowds of people. With Starbucks Express, Starbucks is still making just as much money, if not more, than they are now. According to our poll amongst Penn State Students, over 60% of students would be more inclined to buy Starbucks if they didn't have to wait in line. By eliminating the hassle of coming to the store
and waiting in line, more students will order Starbucks and will therefore contribute more revenue to the company. Also, since we are working solely with Starbucks, any competition is eliminated for them when it comes to coffee delivery. Starbucks Express will not only make orders more convenient for Starbucks (as they have plenty of time to prepare them before we pick them up), but it also will increase Starbucks’ total profit and sales.

- Marketing

We will have plenty of methods to advertise our service. We can start by simply handing out flyers and posting some on bulletin boards. Flyers are a cheap and easy way to advertise our service. We looked online and found out that we can print 50 professionally printed 3.47” x 8.27” flyers for only $8.99. We will also hand out business cards because they are another cheap and easy way to advertise. We can get 500 professionally printed standard size business cards for only $9.99. We can advertise online on popular websites like Facebook, as well as on the Com Radio station. Our delivery car(s) can have our logo on the sides, and we can put up signs at the Starbucks coffee shops themselves. One way to bring a lot of customers is to do a giveaway: we can offer people a chance to win a gift card to Starbucks if they order from us. We will not only be advertising our service, but also our app. The app will be the main way to order from us.

- Coffee

In a hectic college town, coffee is a vital part of most people’s daily lives. Students, teachers, and other staff all rely on coffee to energize them and get them through the day.
However, getting coffee isn’t always easy, especially when you are a student living in a dorm room. Coffee makers are slow, require lots of effort, and produce more coffee than one student needs. As a result, most college students rely on local coffee shops to get their coffee faster and more efficiently. Most coffee shops downtown are locally owned and have a very relaxed atmosphere, free of crowds and excessive noise. The coffee shop on campus, Starbucks, however is constantly crowded and can take up to 20 minutes of waiting in line before you can even order a drink. Starbucks is so crowded because it accepts students’ meal points as payment, and is centrally located on campus. Although Starbucks’ location is convenient for students, its long lines and overcrowding makes getting coffee extremely difficult. After hearing about food delivery systems on other campuses and how successful they were, we decided that offering a coffee delivery system would be extremely convenient for students.

Another big factor in our choice in coffee was the size of the company and the room for growth. Starbucks is the largest coffee shop company in the world, with nearly 18,000 stores in 60 countries and it’s still growing. Starbucks’ sales grew by 11.98% from 2012 to 2013. Not only is Starbucks the largest, it is also one of the most demanded. In 2012, Starbucks sold 545 million pounds of coffee, which is about $13.3 Billion in revenue.

- **Benchmarking**

As a guideline for our delivery service, we compared multiple other successful delivery services worldwide. EAT Club is one of the world’s most popular food delivery services, founded by Kevin Yang and Rodrigo Santibanez. They were inspired by the notion of
restaurant quality food delivered to office workers. After working with a few local restaurants, they began taking orders and delivering them to office and residential buildings. Customers were thrilled to have such a convenient and fast way to get food, and the business took off. After August Capital’s $5 million investment in the company, Yang and Santibanez consider geographical expansion and developing an online component to their service.

An Indian delivery service made us realize how popular food delivery is across the world, specifically in Mumbai. Each day, over a quarter million office workers order food from one man known as Dabbawalla. Food delivery has been popular for decades, as Dabbawalla’s service has been functioning for 125 years with 5,000+ workers, delivering 200,000 fresh meals, and having a punctuality rate of 99.999999%, which means one delay in six million deliveries. Obviously it has taken vast amounts of time for their business to become so popular, but with perseverance it has become a huge success.

Upon analyzing both EAT Club and Dabbawalla’s delivery services, we took their most successful strategies and integrated them into our plan. Customers value efficiency and quality more than anything when it comes to food delivery, and we decided to develop the highest-grade thermal insulating transportation devices for our coffee. In order to make our service as efficient as possible, we mapped out a delivery map that uses the least amount of gas and travels in the fastest way possible. Also, we are making an interactive app that makes it extremely easy and convenient for customers to order their coffee, as well as what time and place they want it delivered.
• Surveys

How many cups of coffee do you drink a day?

Answered: 59  Skipped: 1

Would you pay to have Starbucks delivered to you?

Answered: 59  Skipped: 1
If you answered yes to the previous question, what is the maximum amount you would pay to have Starbucks delivered?

- $0.00: 10%
- $1.00: 40%
- $1.50: 5%
- $2.00: 45%

What time would you most like to have Starbucks delivered to you?

- Morning (7-11 am): 55%
- Afternoon/evening (12-7 pm): 20%
- Late night (9 pm-2 am): 20%

Where do you live in State College?

- Pollock/South halls: 40%
- West halls: 10%
- East halls: 30%
- North halls: 5%
- Off campus: 20%
Concept Generation and Selection:

To come up with the final design for the project there were many factors to weigh out as well as different opinions that had to be recognized before finalizing the plan. We started with a small list of ideas for the project and finally came up with a rough sketch for our design. We then had to consider any and all complications and problems that may be factors when actually starting the business. To start, transportation was a major concern. Car or bike? Gas or diesel? Hybrid or electric? These were all options we had to consider before continuing with the project. The way we decided upon our final decision was through use of the design process. We carefully thought out each pro and con for each choice and came up with what we thought was best using outside research as described in the previous sections. There were many other complications that we had to discuss such as location of drop-off, containers for travel, type of coffee to deliver, and how we would pitch the idea to the coffee company. After going through this process for each problem that came up we finished the project and came up with our final design.

Price/Expenses

Our main expense will be transportation, including a vehicle and gas. We want to use as little gas as possible, so we mapped out an efficient driving system and picked a car with good fuel efficiency. The car we chose is a Mitsubishi Mirage, which costs around $12,995. It gets on average 40 miles per gallon, and is the most fuel and space efficient car for our specific business. We need a vehicle that will be durable, secure, and use as little gas as possible. The Mirage will provide sturdy transportation of coffee as well as sustainable fuel consumption.
We plan to charge a standard rate of $1 in addition to the cost of the Starbucks beverage for on-campus delivery, and $1.50 for late-night deliveries. According to our surveys of Penn State Students, about half of students asked would use our delivery service regularly. As there are around 13,000 students on campus, we can estimate about 6,000 of them will use our delivery service. At $1 per delivery, we can make large profits very quickly, depending on how many students order coffee each morning. When we first begin, we probably will not make very much money because not many students will know about our service or know how reliable we are. However with time, advertisements, and word of mouth about our convenient service, our business will grow rapidly.

Eventually, we will hire workers and purchase more vehicles to add to our growing company, but we will start with only one car and the four of us working together. Salary is something we have yet to determine, as we have not hired any workers and will just split our earnings evenly amongst ourselves until then.

**Delivery System**

There were two parts to the delivery system that needed to be thought through to run an efficient business model. The first of these was the actual location of dropping off the coffee. There were several ideas that came to mind including a drop off at the nearest bus station, commons area, and individual dorm halls. Delivering the coffee at the bus station made sense for the students who were on their way to class, but not for the students who wanted to remain in their dorms. Delivering to individual dorm halls would be the most preferable for the customer, but would prove difficult for the employee to deliver coffee efficiently. All dorms are
locked and only accessible to university staff and students living inside. This would mean that the employee would have to wait outside for students to pick up their order. There is also the problem of relying on the students to pick up their deliveries promptly on the clock. If a student picks up their coffee late, then the employee would be late to deliver coffee to the next dorm. This chain reaction of delays would be detrimental to business.

We chose to deliver to the commons area. Although it would not be the first choice for consumers, who would prefer to have coffee delivered to their individual dorm hall or front door, it proved to be the most effective means of delivering coffee. This would be the most competent way to eliminate chances of delays, while providing coffee in an efficient and timely manner. A short walk from a student’s dorm to their commons area for a cup of Starbucks coffee would be appealing to students who live far away from the nearest Starbucks franchise.

The second problem to solve in delivery was the transportation from the coffee shop to the commons areas. A drawn out flowchart (shown below) helped map our ideas and create the most practical method of delivery.
If there are four commons areas on a university campus, then two employees would be ideal. Employee 1 would travel the given blue path, while employee 2 would travel the given green path. Each employee makes a loop from the coffee shop to deliver to two commons areas and back to pick up more. Time differences will vary between college campuses. After considering each step of the delivery process though, a good measure estimates that each employee can complete one loop in at most 45 minutes. This means that coffee can be delivered to customers on an hourly basis. Employees will then have an average of 15 extra minutes in each loop in case they run into unexpected traffic, or delivery issues.
**Final Design**

Our final design is the business plan and model that includes each aspect of our project. The business is a company that delivers coffee on campus to students and faculty alike in a mass transport of coffee by charging a small delivery fee per cup delivered. The coffees will be transported from any Starbucks location, on or off campus by a Mitsubishi Mirage and carried in a specially designed container. The idea will have to be pitched to Starbucks in order to get their coffee used and we would get Starbucks’ attention by giving them projected sales increases. Also, we would market our idea through various flyers and other advertisements across campus. Customers can place orders online or through our specially designed app.

**Conclusion**

Throughout the duration of the project, our group steadily worked towards our goal of creating an idea for a successful company. To start we had to learn each other’s strengths and weaknesses and learn to allocate our time and resources properly. We began by following the basis of the design process as taught to us but finished by actually understanding and using the process efficiently. As a group we worked together to each do separate portions of the assignment including everything from research to layout of the paper and designing the PowerPoint. When we brought everything together we looked over each other’s work and corrected and changed things that needed to be fixed. By planning the process out and using the design process we came up with an idea for a company that has strong capabilities of
becoming successful and can strive in today's economy. As doing such, we completed the goal and mission ahead of time. Now of course, everything discussed here and designed by our group cannot be true unless the other companies involved agreed to partner with us. This will depend on how we approach the companies and how they view our overall idea for our business. However, our project overall is a well-designed and functional business that successfully emulates a real business.
Works Cited

- <http://www.mitsubishicars.com/mirage>
- <http://www.vistaprint.com>
- <http://www.hfs.psu.edu/housing/about-us.cfm>