University of California, Santa Cruz

Project Phase 1 Report

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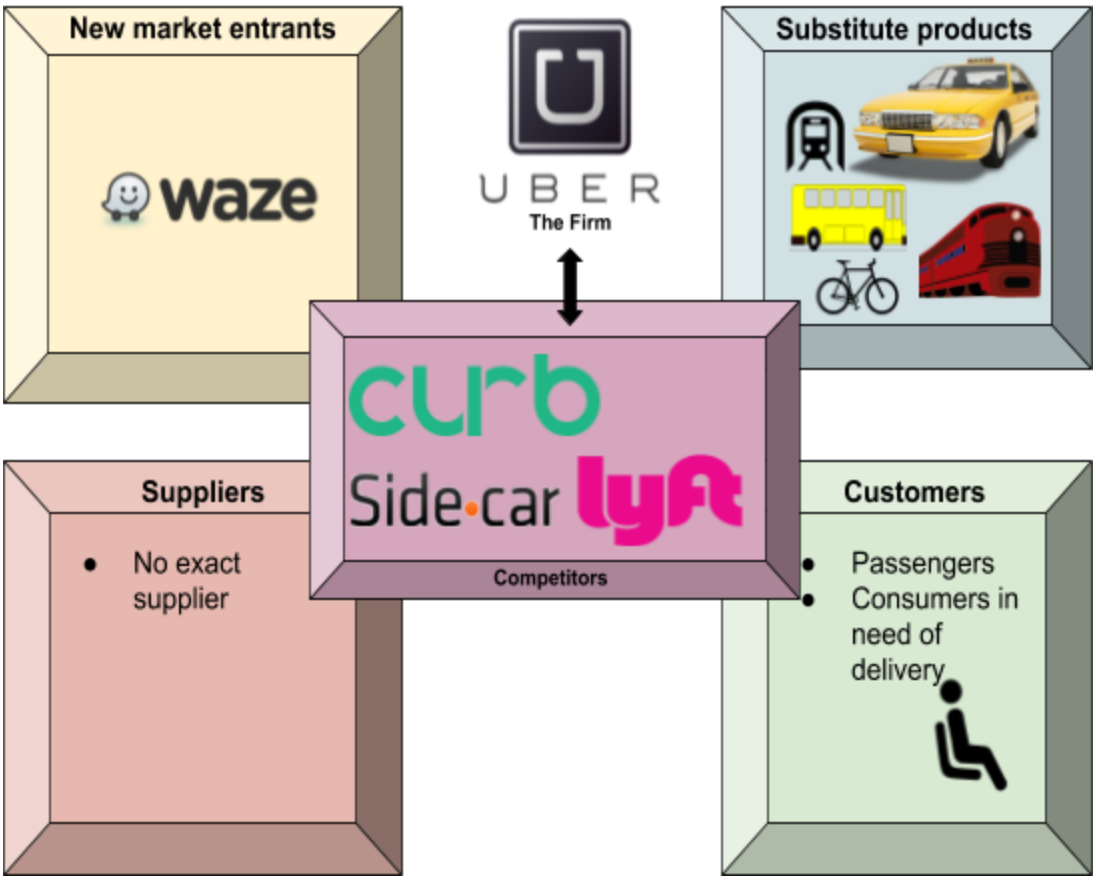
1. **Porter Analysis of the Industry**

- Define the problem: Uber's competitive strategy for the morden taxi industry
- Step 1: Market Landscape



- Step 2: Five Force Analysis

1) Force 1: Rivalry between competitors (relative brand value)
    a) High intensity of rivalry between established competitors
    b) Multitude of car service companies on a metropolitan, regional, national, and international scale
    c) Lyft is matching Uber pricing, threatening existing market position
2) Force 2: Threat of new entrants (not strategically applicable)
    a) Face "barriers to entry", such as capital expenditure, and brand-name.
    b) Waze is going to develop a new carpooling service which may be a new competitor in the future.
3) Force 3: Threat of substitutes barriers (medium-term and long term expansionary goals)
    a) The public transportations will be the major substitutes barriers
    b) Bikes
4) Force 4: Supplier Power (driver bargaining power)
    a) Drivers keep 80% of each ride but not surcharge
    b) They use their own car, have their own insurance and license themselves
    c) Signing up is simple
    d) Uber provides them with phone and heatmap
5) Force 5: Buyer Power (user driven service)
    a) Increasing price sensitivity among consumers
    b) Similar services increase power of buyer
    c) Large organizations have power to drive down price

- Step 3: Determine the attractiveness of the industry based on the cumulative strength of the five forces
    - Companies don't need to have much work on suppliers because suppliers are part of customers and they will manage their own business. All the companies need to do is providing them with technology support on the app.
    - Companies have the power to adjust the price based on buyer's amount.
- Step 4: Competitive position or strategy
    - Segment the industry into 2 axes
        - Product Axis: Two Extremes
            - Unique Product as Perceived by the Customer
                - First P2P(people to people) search engine in the world
                - Drivers use their own cars
                - Automatic payment via app (and no tip necessary)
            - Low Cost

        - Having a ride on Uber is weigh cheaper than taxi
    - Target Market: Two Extremes
        - Target could be the whole market
            - Everyone has a smartphone with Uber app can use Uber to order a ride
            - Uber is now operating in 570 cities worldwide
        - Particular Segment of the Whole Market

	Product	
Whole market	Unique product	Low cost
Target Market	**Product Differentiation** Uber Lyft(good at safety)	**Low -cost Leadership** Side.car Curb
Particular market	**Focus on market niche** Ingogo(only serve in Australia) Ola Cabs(only serve in India)	

- Step 5: Conclusion
    - Through the analysis of the competitors in the modern taxi industry, we can find more information about what we have to improve in order to exceed other competitor. For example, the buyer power in this case is very high. It is important to attract customers to use our application. As we compete with other firms, the research shows that Lyft has a high security which makes it more unique. Then we have an idea of building up Uber's safety.

2. **Business Value Chain**

Primary Activities	Inbound Logistics	Operations	Sales & Marketing	Service	Outbound Logistics
Support Activities	Administration & Management				
	Human Resources				
	Technology				
	Procurement				

- Key Primary Activities
    - **Inbound Logistics**
        - Uber has relationships with various suppliers in order to utilize computers, laptops, updated software, and other items with which employees can work with.
    - **Operations**
        - Uber uses computers to program in Node.js, Python, Java and Go in order to create the Uber application.
    - **Sales & Marketing**
        - Our sales and marketing team is tasked with activities to inform buyers about Uber products and services, to induce consumers to download them, and to facilitate their purchase.

        - **Service**
            - Uber's programmers works tirelessly and effectively to give users the newest and updated version of Uber.
        - **Outbound Logistics**
            - Our programmers and data systems analysts team collects data based on consumer downloads and works to distribute the application onto various application stores within the digital market.
- Support Activities
        - **Administration & Management**
            - Our company is composed of a variety of teams that comprise to create the infrastructure of Uber. Teams within accounting, legal, finance, control, public relations, quality assurance and general (strategic) management all work together to keep our application running smoothly.
        - **Human Resources**
            - Our HR staff implements recruiting, hiring, training, developing, compensating and (if necessary) dismissing or laying off personnel in order to guarantee Uber's productivity.
        - **Technology**
            - Uber utilizes the latest in hardware and software to implement code written in Node.js, Python, Java and Go in order to produce the Uber application.
        - **Procurement**
            - Uber works to acquire hardware and software to maintain Uber Headquarters as well as prioritizes in procuring drivers to work for the firm.

3. Business Challenges / Issues

- Business Needs
    - We are the global leader in the corporate ground transportation industry. Our company is changing the way the world thinks about transportation. We are building the technology people use everyday. Our business helps make cities safer, smarter and more connected, while our services have brought opportunities to local economies. Uber wants to give positive impact with the communities we operate in. Uber's business is based on a huge data principle of crowdsourcing. Our system gives automatic calculations using GPS, street data the company's own algorithms to make decisions and adjustments based on traveler's location. Besides the basic services, we also offer UberPool, a feature which allows users to take the same ride as someone on a similar journey.
    - Uber wants to make sure the safety of each customer and driver a priority, making the whole experience comfortable and joyful for both parties. Ensuring that the customers and drivers feel secure is one of our biggest concern. Now Uber has provided a rating system for both divers and customers. This system has been implemented to make sure that both customer and driver have good experiences with their journey. Many aspects are considered during the rating, including how polite the driver/customer is, how respectful they are, or how they react with different situations (accident etc.). The rating goes from 1-5 stars. Uber is using this way to make sure that both sides of the ride are satisfied and being reliable.

- Customer Needs
    - Customers who are willing to take Uber want to make sure that their trip is both joyful and safe. However, the potential threat that worries almost all the travelers after an investigative reporting that Uber gave thousands of employees access to where and when each customer travels, which is an extremely alarming to the surety of the users. Not only that, traveler would not have a choice of what kind of driver they would encounter. In other words, customers do not have the choice to choose a driver, or particular reference. Sometimes this issue cause customers feeling uncomfortable of taking rides with particular drivers or even feeling insecure. Although the rating system in Uber can provide both customers and drivers a general view of each other's credibility. Although driver/customers have the right to reject a driver/customers while their rating is below 4.6, passengers still don't have the right to choose particular driver that would make them feeling more comfortable with their trip. For example, if a single female is willing to take Uber at midnight would she feeling more comfortable with a female driver or a male driver? The answer is obvious.

- **Solution and Improvements**:
    - We care about our customers and want to provide the best travel experience for them. One solution for the current issue might be an improvement of our privacy condition, - trying to come up with a policy that guarantees more rights to our customers. Instead of letting the application to complete the ordering process and randomly select driver we are offering the right to let our customers to pick the driver they want or select a particular type/gender of driver that they prefer or feeling comfortable with. The purpose of giving them them the right to choose their driver is beneficial for both side of driver and customers.
    - Moreover, customers will have the opportunity checking on driver's background and informations. This gives the protection of customers and a safer selections for drivers combine with the rating system. We believe that our new solution will provide a comfortable sphere for both side of the line. Reaching out our mission:"make transportation as reliable as running water, everywhere, for everyone."

https://www.revealnews.org/blog/why-privacy-advocates-are-worried-about-ubers-security-problems/

4. Important Business Processes

Uber: We are problem solver:
We are solving the ongoing problem in regard to booking taxi services and giving technological solution through a smartphone application. The IT based business solution which allows customer to book cabs by tapping smartphones brought a revolution in the taxi industry.

The necessary business processes that need to be automated by the software application:

1. To interact with the customer(GUI).
2. To provide application logic(software) to automate business processes, which include customer logic and fulfillment logic.
3. Share and Manipulate data.

Translate the business processes into the requirement for the software:

- Log into uber server via app.
- Establish GPS position.
- Execute map on screen where you set pin pick up point and the destination.
- Verify the payment method .
- Uber calculates the cost of the trip based on distance, time, service fee.
- Uber system then uses GPS to find the nearest driver.
- Nearest Uber drivers receive the request, giving option to accept or decline.
- If the request accepted, driver receive the pick up address and customer's contact info except the destination.
- The tracking system allow customer to know where the driver is and when the driver will arrive.

Software architecture diagram

5. Software Requirements(functions, features,etc.)

- **Software Requirements**
  - Customer's Side
    - To locate the customer and display drivers nearby for the customer to select
    - To find the fastest route from the customer's current location to his/her destination
    - To notify the customer when the driver is nearby/arrived
    - To provide a quick and easy payment method for the customers
  - Driver's Side
    - To notify the driver when a nearby customer requests a ride
    - To display to the driver how much the ride will cost (distance + time)
    - To provide directions to the customer's location and to his/her destination
- **Application Software**
  - Geolocation are used to (1) identify a device's location and (2) provide driving directions to both the customer's current location AND destination
  - Push Notifications / SMS are used to (1) notify the **customer** when his/her ride has arrived and (2) notify the **driver** when a nearby customer has requested a ride
  - Payment Integration is used to ensure that the ride was paid for
- **Software Vendor Options**
  - Geolocation
    - CoreLocation framework (iOS), Integrated Location APIs (Google)
    - MapKit (iOS), Google Maps Android API
    - Google Maps
  - Push Notifications / SMS
    - Twilio (SMS)
    - Apple Push Notifications Service (iOS), Google Cloud Messaging (Google)
  - Payment Integration
    - Braintree (software that verifies card payments)
    - Card.io (iOS)(software for credit card scanning)

https://yalantis.com/blog/uber-underlying-technologies-and-how-it-actually-works/

- **Criteria**
  - Because the Uber application is used on mobile devices, it is best to first select software that is already being used by the industry's largest competitors: Apple

and Android. This includes functions like **push notifications** and **geolocation**, where the companies have already integrated this software into their mobile devices.
    - Any additional software our application uses should be software that is not already integrated into the company's mobile devices; this includes software like Twilio (SMS) and Braintree (credit card payment)

- **Preliminary Specification of the IT Technology (to support the application)**