Don't Text: Market Opportunity Analysis of a Mobile Application System to Prevent Distracted Driving

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Abstract

A mobile application development company based out of Framingham, MA sought the assistance of three Worcester Polytechnic Institute seniors studying Management Engineering to provide a market research analysis on a product called Don't Text. Don't Text is an on-board diagnostic device that corresponds with a mobile app on smartphones to minimize distracting cell phone use while driving. The company's main goal for the team was to research the potential markets for this business venture and determine the most valuable approach for launching this product. Axiomatic design strategies were used to break down the business initiatives. Using detailed research and reasoning, financial data, and a survey collecting over 1000 responses, the market potential for Don't Text was thoroughly analyzed. With this information insightful recommendations and a sample business plan were provided to the company.

Acknowledgements

Our team would like to acknowledge those individuals who helped our project to be a success. First we would like to thank our sponsor, Sean Mahoney, for giving us the opportunity to work with his company and gain invaluable real-world experience, and for his willingness to share his personal knowledge. We would also like to thank our faculty advisor, Walter Towner, for constantly supporting us and providing us with valuable advice. He taught us many skills, including axiomatic design that will be beneficial to the members of our team way beyond the scope of this project. Finally, we would like to thank the WPI community for their help in the distribution and collection of our survey results.

Authorship

This project was completed by three senior undergraduate Management Engineering Students: Kailyn Connor, Andrew Sinkewicz, and Paige Westlake. Through constant collaboration and the equal division of work, we were able to successfully complete our project and reach all of our objectives.

Executive Summary

This Major Qualifying Project was completed in order to determine the market potential for a mobile application called Don't Text through the use of axiomatic design and in-depth market opportunity analysis. The results are several comprehensive recommendations for the sponsoring company and an applicable business plan.

Don't Text, a company which is led by President, CEO, and Worcester Polytechnic Institute alumnus Sean Mahoney, has developed a device that disables text messaging, phone calls, and unsafe application use on Android and BlackBerry compatible smartphones while operating a motor vehicle. The Don't Text software is unique from other similar products on the market because an external administrator monitors the phone's functionality when the designated vehicle is in motion. This system creates a level of accountability unlike many other similar applications. The application will allow the user to choose some appropriate applications to remain in use while the vehicle is in motion, such as GPS software and music; however, most application use will be prohibited. Additionally a select few telephone numbers will allowed to be accessed by the user, which will always include emergency services. Don't Text is meant to be a precautionary device, not necessarily a punishment or inconvenience for the user. Because of Don't Texts' unique value proposition, there are multiple market segments the company could target. Our team worked to determine which of these segments possesses the largest opportunity for the product and company.

In order to determine the market potential for Don't Text, as well as what is needed to reach the company's overall goals, our team employed several different methods, the first of which was axiomatic design. We used axiomatic design to aid Don't Text in their pursuit of a viable and successful product. Our main goal, or primary functional requirement, for Don't Text is to reach the first 100,000 to 300,000 users. We feel that reaching this target will allow the product to flourish in one targeted market, yielding many opportunities for growth in other markets. Axiomatic design allowed us to succinctly evaluate what business elements are needed in order to achieve this primary functional requirement. By completing this analysis, we were able to determine the necessary components for the final business plan for Don't Text. The second method our team used was market opportunity analysis. This process involved determining all of the possible market segments Don't Text could target then narrowing down these opportunities based on their overall feasibility. From our initial analysis, we determined that four market segments showed potential to reach the overall goal of obtaining the first

100,000-300,000 users of Don't Text. These segments are auto insurance companies, general consumers, cell phone providers, and rental car companies. We then created numerical models to quantify the market opportunity for each of the four segments. This resulted in the ability to make final recommendations on which markets Don't Text should pursue.

After our extensive market research and basic analysis we were able to conduct an evaluation to determine the best market opportunity for Don't Text. We found that the most financially feasible opportunity is to target the auto insurance industry. Not only could this market generate a large revenue stream for Don't Text, the insurance companies themselves could save millions of dollars through the use of this product. Selling to general consumers is also a multimillion-dollar opportunity. However, cell phone providers and rental car companies may not be able to obtain the same revenue and the value of entering this market is not as large. One issue with entering any market with Don't Text is there are currently many similar applications with the same purpose, minimizing cell phone use while driving to protect end users and others on the road from distracted driving accidents. In addition, one competitor product, Cellcontrol, is nearly identical to Don't Text but is currently compatible with Apple's operating system. Having Apple compatibility is a major advantage and will serve as a barrier to entry for Don't Text, especially into the general consumer market. Additional findings were provided by our survey results. Using basic demographic information, driving habits and personal opinion and interest in the subject, the responses were tabulated to form conclusions. Some cross tabulations included age and interest in a discounted insurance rate for using Don't Text and age compared to interest in a preventative device for safe driving habits.

Our primary and secondary research allowed us to draw several conclusions and make recommendations for Don't Text. Our primary recommendation is for Don't Text to pursue the auto insurance industry as their target segment, contingent on the future compatibility of the app with Apple's iOS. In order for Don't Text to succeed and reach the overall goal of obtaining the first 100,000-300,000 users and beyond, we believe that the company should first focus on the compatibility issue with Apple's operating system. It is imperative that Don't Text have full compatibility with all of the major smartphone operating systems before attempting to target the auto insurance industry. After this has been achieved, Don't Text should immediately focus their attention on securing contracts with major auto insurance providers. The results of this project are intended to aid Sean Mahoney and his company in making decisions for the future of Don't Text.

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1. Introduction

1.1. Problem Statement

Distracted driving caused by cell phone use has become a pandemic in America causing thousands of automobile accidents throughout the country. In 2011, at least 23% of car accidents were related to cellular device use, which is equivalent to 1.3 million crashes (Virginia Tech Transportation Institute, 2009).

Don't Text has developed a device that disables text messaging, phone calls, and unsafe application use on mobile telephones while operating a motor vehicle. The company is seeking a market and product analysis for a new business opportunity involving this device and application. There is a competitor with an identical product and therefore it is critical to be first to enter the appropriate market with this device. A business plan with a strong marketing and sales plan to launch this new technology is needed.

1.2. Don't Text

Don’t Text has a mobile application development team based in Framingham, MA led by President, CEO, and Worcester Polytechnic Institute alumnus Sean Mahoney. Our Major Qualifying Project (MPQ) team is working alongside his team to research and determine the appropriate market for his latest innovative venture. Don't Text is a combination of mobile application and vehicle integrated software that eliminates a smartphone’s capability to use texting and calling functionality while the cell user is driving a specified vehicle. A smartphone must be registered to the onboard diagnostic device (OBD) located under the steering wheel and relative data is then collected via analysis software. Don’t Text software is unique because another party monitors the phone’s functionality when the designated vehicle is in motion, which creates a level of accountability unlike other similar applications. Don't Text is still developing the appropriate technology for data collection, but the intentions are for the responsible party to be able to track driving data and cell phone use data.

The application will allow the user to choose some appropriate applications to remain in use while the vehicle is in motion, such as GPS software and music; however, most application use will be prohibited including social media sites, email, games, and other cell activities that could distract the driver. The user can choose to allow phone calls from select contacts, again monitored by the third party administrator. Emergency phone calls will always be allowed. Don’t

Text is meant to be a precautionary device, not necessarily a punishment or an inconvenience for the user. There are multiple avenues Don't Text could take to bring this technology to the market.

1.3. Market Need

Distracted driving caused by cellphone use has become a pandemic in America, causing thousands of automobile accidents throughout the country. In 2011, at least 23% of car accidents were related to cellular device use, which is equivalent to 1.3 million crashes (Virginia Tech Transportation Institute, 2009). The United States has created hundreds of state and federal laws to protect its citizens from careless driving accidents, which can cost them their lives. The United States made texting while driving illegal in 2007, and although government studies have shown an 8% decrease in accidents due to texting, the problem is not solved (Distracted Driving Laws, 2007).

1.4. Market Value

Don't Text has created a device which tracks and inhibits the use of one's cellphone while they are driving. The device will likely have many interested buyers because distracted driving is a major safety issue in today's society. The value of saving lives is huge and immeasurable, but additionally this product could protect against the costliness of avoidable car accidents. One industry that is especially affected by these dangerous activities is auto insurance companies. With over 23% of car accidents being caused by cell phone use, this represents an extremely large claims expense (Distracted Driving Laws, 2007). Other interested parties include the government, parents, families and friends of victims, and society as a whole. When people text and drive they are putting everyone around them at risk and by holding them accountable for their actions through the use of Don't Text, the road could be a safer place.

2. Methodology

2.1. Methodology Intro

Our team researched necessary information to understand the appropriate way to launch Don't Text. From there, we took multiple approaches to collect and analyze additonal data to make informed recommendations. First we used axiomatic design to break down the company's goals and understand the functional requirements needed to make this business venture a success. We then completed an in-depth marketing analysis to determine markets that make more sense to enter. Finally we collected our own data via a short survey completed by over 1,000 individuals and analyzed this data for conclusions about the market potential for Don't Text.

2.2. Axiomatic Design

Axiomatic design is a way of organizing and analyzing the design of a complex system. This methodology was originally created by Dr. Suh Nam Pyo at MIT and is traditionally used to design mechanical systems by transforming customer needs into functional requirements, design parameters, and process variables. The name "axiomatic" design comes from the two design axioms that are the basis and reasoning behind this design technique. The first axiom is called the "independence axiom" that has the goal of maintaining the independence of the functional requirements. The second axiom is the "information axiom" which has the goal of minimizing the information content of the design. The overall purpose of these axioms is essentially to reduce coupling of different components in the system, meaning there is minimal interaction and they are able to function independently, as well as to make the system as simple as possible (Suh, 1990). Although axiomatic design is typically used for making physical systems such as the design of a drive shaft, it can also be adapted to design intangible systems, such as a company. Our team used the principles of axiomatic design to identify and analyze what components are necessary to achieve the overall goal of Don't Text.

2.2.1. Implementation of Axiomatic Design for Don't Text

Our team used the axiomatic design software, Acclaro, to aid Don't Text in their pursuit of a viable and successful product. Our main goal, or primary functional requirement ("FR0"), for Don't Text is to reach the first 100,000 to 300,000 users. We feel that reaching this target will allow the product to flourish in one targeted market, yielding many opportunities for growth in other markets. Additionally, obtaining the first 300,000 users or less is a capacity that is currently able to be managed by the company. After identifying the primary goal of our axiomatic design,

we then identified the functional requirements that are necessary to reach this goal (FR0). These functional requirements are essentially what we found to be the primary areas of a business that are necessary for Don't Text to acquire and support their first 100,000 to 300,000 users. These requirements include developing the product and creating organizational, marketing, sales, financial, and logistical plans for Don't Text. The success of the functional requirement "developing the product" can be measured by ensuring that the product satisfies the customers' and overall market needs within reason and legal restrictions. The organizational plan is measured by if it allows all required business tasks to be completed. To measure the success of the marketing plan, all profit opportunities from market segmentation are to be identified for more than 10% market penetration. The sales plan is measured by 0.09% of adult American licensed drivers with a smartphone purchasing Don't Text. The financial plan's success is measured by the accuracy of current and projected financial performance. Finally, the logistics plan is measured by if all customer orders can be fulfilled in the allotted timeframe.

Along with the functional requirements for acquiring the first 100,000 users, each requirement has its own set of sub requirements. The sub requirements for developing the product include designing the product based on customer needs, testing the product to ensure required functionality and conforming to legal structures. For creating the organizational plan, the sub requirements include identifying necessary positions and developing a hierarchical structure for the necessary positions. The marketing plan's sub requirements are conducting market analysis and employing the marketing mix. Creating the sales plan has sub requirements consisting of determining the sales channels and determining sales activities. The sub requirements for creating the financial plan are forecasting financial indicators and implementing accounting systems. Finally, the logistics plan's sub requirements are distributing the product and managing its inventory. Although a functioning business is very complex and includes many more requirements, we feel that for the purpose of designing a business system for Don't Text, the included function requirements provide an adequate base and can be expanded upon once a higher level of detail is available. A complete version of this decomposition can be seen in Appendix A.

2.2.2. Project Scope

All of the functional requirements are necessary to have a successful product launch; however, some of the steps have already been completed by the Don't Text team and will not be

addressed by our team. Don't Text has already designed and developed the product so we will not focus our research on that functional requirement. Additionally, the company already has a defined organizational and logistics plan that can support obtaining the first 100,000 to 300,000 users. Therefore, our research and recommendations will focus on the marketing plan, sales plan and financial plan. We will identify which markets make the most sense to target to successfully reach the company's overall goal, we will advise Don't Text on the best sales strategies and channels to most effectively sell the service and device, and we will create financial projections based on the estimated sales of Don't Text.

2.3. Market Analysis

Our team developed an organized analysis of the market for Don't Text using a process of elimination to determine the most feasible target markets to reach our FR0. First, we listed all the markets we believe might have any interest in the product, even if some did not seem feasible in reaching the hands of 100,000 to 300,000 users. We then made a table and answered a series of defining questions to compare all of the listed potential markets. We eliminated some of the markets due to a lack of business opportunity using a cost-benefit analysis model. The team then created a table with the remaining list of potential markets after elimination. This analysis provides Don't Text with our understanding of the markets, and why some may be better to enter than others.

2.4. Survey

In order to gather primary data from the identified target markets, we constructed a fourteen-question survey with varied questions dependent on the responses given. In order to create and distribute the survey, we used an online survey software and insight platform called Qualtrics The purpose of this survey was both to gather information about cell phone use while driving habits, as well as to gauge interest in a product that would prevent these types of activities. Questions such as “What do you use your cell phone for while you are driving?” allowed us to see if people are using their phones in such a way that Don’t Text would prevent. Questions such as “Would you be willing to use a device and mobile application that prevented you from doing certain activities while driving such as texting or making phone calls if you were offered a discount on your car insurance?” were used to receive feedback about consumer willingness to use a product like Don’t Text. Our team strategically formulated the questions so they would be as objective as possible and would allow us to gather general information on the

topic opposed to product specific information. This survey was conducted anonymously but biographical information such as age, gender, and parental status was requested in order to conduct analysis based on the provided demographics. The survey was sent to undergraduate and graduate WPI students, as well as WPI faculty and staff in addition to our family and close friends.

3. Findings and Analysis

3.1. Don't Text Limitation

Don’t Text is facing an issue in terms of operating system compatibility. Currently, the application is only compatible with Android and BlackBerry smartphones. Although the program has been developed for Apple iPhones, it is unable to be used because of restrictions put in place by Apple. The company has very strict guidelines regarding the functionality of apps sold on the Apple App Store. Don’t Text has been unable to get approval for their app to prohibit certain functionalities when a user is driving (Grant Street Creative, 2014). However, Don’t Text has been able to develop a feature that essentially will force an iPhone into airplane mode, which is a potential alternative. We feel that this compatibility issue ranges in severity based on the different target markets and will be discussed in further detail in the following sections. An in-depth analysis was performed on the remaining markets, using research and financial data.

3.2. Target Market Analysis

To create a complete list of consumers who find value in this venture, we asked ourselves, who would benefit from this product or service? We categorized these markets in business-to-business (B2B), business-to-government (B2G), and business-to-consumer (B2C) because Don't Text as a business can choose to sell this product through any of these channels. The B2B markets we considered are auto insurance companies, rental car companies, corporations with company cars, trucking companies, cellular phone providers, and taxi services. The B2G markets include transportation run by the government such as school buses, and public safety officials. The B2C markets are parents, grandparents, or other caretakers of young adults, and general public individuals interested in the product for their own use.

Our first step in determining the feasibility of each potential market was to complete a cost-benefit analysis, with some subjectivity (see Table 1 below). We considered why these specific groups might be interested in paying for this product and service, along with why Don’t Text may not be a worthwhile purchase. Some common themes throughout the analysis were that the product could save lives and reduce claims expenses from unnecessary accidents. However, it could also be considered an unnecessary, expensive investment, especially if the particular market segment is not frequently affected by car accidents. Additionally, there are several potential markets that have strong incentives to not be distracted while driving, such as fear of

losing their job or other restrictions put in place. After initial analysis we were able to determine which market segments could be eliminated based on their costs out weighing their benefits. With the four remaining target market segments, we asked multiple questions to further determine which markets have the best opportunities to reach FR0. These questions involve determining the sales channel, size of the market, and flexibility related to the lack of compatibility with the iPhone (see Table 2 below).

Who would pay for the product/service (who could benefit)?	Why would they pay for the product/service?	Barriers to entry or what would prevent entity from purchasing product/service?	Reason for Elimination
B2B			
Insurance Companies	To reduce their claims expense by a decreased number of accidents from cell phone use (large $ amount of claims expense)	--Large size of company makes purchasing decisions complex --Large purchase expense	N/A
Rental Car Companies	To reduce accidents from cell phone use in their vehicles/ reduced expenses from accidents/ protecting assets	--Large size of company makes purchasing decisions complex --Large purchase expense --Credit cards used to book provide insurance protection	N/A
Corporations w/ cars	To reduce accidents from cell phone use in their vehicles/ reduced expenses from accidents/ protecting assets	--Large purchase expense --Small number of accidents***	Not enough accidents to justify the purchase of the product
Trucking Companies	To reduce accidents and associated costs and increase safer driving	--Expensive --Laws already in place for no texting and driving --Risking job if texting while driving (contract)	Drivers already have a lot to lose so product should be unnecessary
Cell Providers	Potential to be sued for accidents caused by cell phone use and being aware of preventative products (sold from Don't Text to provider)	--Large cost --Limiting use of their own product --Reason to buy is not a current concern	N/A
Taxi Services	Increase safety of driver and passengers, and reduce costs from accidents, Good advertising point - competitive advantage**	--High cost compared to competitors functioning without this feature --Risking job if texting while driving (contract)	(See Trucking Companies)
B2G			
Transportation	Safety precautions for local citizens/children and saving money spent on accidents	--Not enough infrastructure in some towns = no need --Expensive and low percentage of crashes*** --Already contract or pledge in place accomplishes same thing --Have radio communication --Regulated	High regulation and potential to lose job should be enough protection. Radio communication already in place.

Public Safety Officials	Safety precaution for state employees and saving money from accidents	--Using own technology and need some of these functions --Using computers in their cars so cell phones shouldn't be an issue --Already held accountable based on their role	Responsibilities require communication.
B2C			
Parents/Guardians	Preventative safety measure for teens/ new drivers	--Cost --Teenager objection to product use --Additional benefit to getting product through insurance companies than on own with same purpose	N/A
	Concerned for own safety/ self-accountability	--Cost --Prevents from doing what is desired --Do not want to be controlled by others and can monitor self for free with self-control --Can put phone in airplane mode to accomplish same benefit --Cheaper alternatives (i.e., free app downloads with similar purpose)	Product is designed for third party holding user accountable. Individual users will not be interested in purchasing for themselves and limiting their own activities in any other way then self-control.

Table 1 - Round 1 Target Market Analysis

	How will product/service be sold? (sales channel)	Potential Revenue Model	Room for Expansion?	Overestimating Reach?	Apple Issue (1-5) (Non issue- Impossible)
Insurance Companies	--Direct to company (service) --Company promotes and distributes (product)	--AndPlus receives a percentage of company savings --Contract	Yes. Target large companies first, then trickle to smaller companies	--Difficult to establish contracts with large insurance companies	4.5 --Wouldn't want to distribute product to only a portion of their customers
Rental Car Companies	--Direct to company (service) --Company promotes and distributes (product)	--Wholesale pricing (small profit per unit) --Contract	(See Insurance Companies)	--Difficult to establish contracts with large rental car companies	3 --Are able to offer product/service to a portion of their customer base
Cell Providers	--Direct to company (service) --Company promotes and distributes (product)	--Wholesale pricing (small profit per unit) --Contract	(See Insurance Companies)	--Difficult to establish contracts with large cell providers	2 --Large consumer base of non iPhone users
Consumers (Parents/Guardians) -->B2C	--Direct via website to consumer (product and service)	--Retail sale of product (per unit profit)	Yes, continuously new young drivers, and therefore more caretakers concerned with driving safety precautions.	--Difficult to market to large consumer market	2 --Large market of non iPhone users
Consumers -->B2B-->B2C	--Sold to company to then be retailed (product and service) --i.e. Cell Companies, Walmart, Amazon	--Wholesale of product (small profit per unit)	Yes, very broad market, continuously growing	--Difficult to establish contracts with large retailers	2 --Would be able to offer product to any non iPhone user

Table 2 - Round 2 Target Market Analysis

3.2.1. Insurance Companies

One industry that is especially affected by improper cell phone use while driving is the auto insurance industry. With over 23% of car accidents being caused by cell phone use, this represents an extremely large claims expense (Virginia Tech Transportation Institute, 2009). If insurance agencies were able to purchase and distribute a device to their customers that would ensure that they are not distracted by their cell phones while driving, they would be able to reduce the number of accidents of their policy holders. With this strategy, not only can insurance companies save money, but so can drivers if they agree to use Don't Text because they are giving their insurance company a way to ensure they are not participating in dangerous cell phone use while driving. This benefit would could function as a pay-as-you-drive discount. Due to the high volume that insurance companies could save on their claims expense and the resulting revenue potential for Don't Text, this market segment will analyzed and quantified in section 3.3.1.

Although the auto industry represents a very large target market for Don't Text, there are barriers to entry that could make market establishment difficult. One challenge would be establishing contact with the insurance companies initially. This would involve the company

contacting the insurance providers directly and pitching the product. Not only is this contact difficult to obtain, but the decision for a company to enter into a contract for thousands of Don't Text devices would be a large purchase decision involving different branches within the company. An additional issue with selling Don't Text to insurance companies is the current incompatibility with Apple's iPhone. Insurance companies could be concerned with the fact that if they establish a contract to distribute Don't Text to their consumers that they will not be able to offer it to all of their customers.

3.2.2. Rental Car Companies

Rental car companies may be interested in Don't Text because through this product and service, they could reduce the number of accidents in their vehicles from cell phone use, and reduce claims expenses on related accidents. The four major rental car companies are Enterprise Holdings, Hertz Global Holdings, Avis Budget Group, and Dollar Thrifty Automotive Group. These four large businesses operate nine different brands, and each generate annual revenues over one billion dollars, as seen in Table 3 below (Maxfield, 2012). Rental car companies provide a promising opportunity, as these larger players would have the funding to invest in Don't Text. By reducing accidents in their vehicles, claims expenses will be reduced, which allows them to keep their rental fees at reasonable rates, giving them a competitive stance in the market. Rental car companies are also the number one purchaser of cars and trucks in the United States, which means it is one of the largest avenues for Don't Text to reach and surpass our FR0.

Company	**Brands**	**Annual Revenues**	**Fleet Size**
Enterprise Holdings	Alamo, National, and Enterprise	$14 billion	> 1 million
Hertz Global Holdings (NYS:HTZ)	Hertz and Advantage	$8.3 billion	615,600
Avis Budget Group (NAS:CAR)	Avis and Budget	$5.9 billion	393,000
Dollar Thrifty Automotive Group (NYS: DTG)	Dollar and Thrifty	$1.6 billion	107,000

Table 3 - Rental Car Company Annual Revenue and Fleet Size

Specifically, we considered the 2012 U.S. car rental market to assess the opportunity in this target market for Don't Text. In the United States, Enterprise Holdings has over 900,000 cars

in service on average annually (“Market Data”, 2012). If Don’t Text was installed in one-third of Enterprise Holdings’ vehicles, the company would reach the higher end of the FR0 goal. Only one-ninth of the vehicles would need Don’t Text to reach the lower end of FR0. If all of the Hertz and Avis Budget Group vehicles in the U.S. had Don’t Text installed, FR0 would be reached, exclusively, because they each have over 300,000 vehicles. Even if one-third of the fleet tried the product, the goal would be reached. Dollar Thrifty Automotive Group also presents an opportunity because they have approximately 122,000 vehicles in their fleet, and if all had Don’t Text installed, the company could reach FR0 (“Market Data”, 2012).

Additionally, this data is representative of the U.S. only. Globally, Enterprise Holdings has 1.4 million cars and trucks in its fleet, so there are opportunities for Don’t Text beyond the country limits (“The Business of Sustainability”, 2013). Due to this large fleet, implementing the Don’t Text product and service into even a portion of the number of vehicles Enterprise Holdings manages would be an expensive investment, so there is potential for some hesitancy on the worth of this business decision.

We considered that rental car companies might be overestimating our reach if it is difficult to establish contracts with the larger players. In general, it is difficult for smaller businesses such as Don't Text to create contracts, where larger businesses have the resources to create better contracts, and smaller companies are advised to reach out for legal advice (Vitez, 2009). Another reason why rental car companies may not want to adopt Don’t Text is because many customers opt out of buying the extra insurance on the rental car since their credit card may cover it. American Express, MasterCard, Discover and Visa all offer at least some type of coverage for their cardholders (Crouch, 2013). The car insurance companies may choose to require their drivers to use Don’t Text as a way to keep the cars protected, but offering an incentive on rental car insurance may not be the most effective measure due to the costs of outfitting the whole fleet with it.

Apple’s refusal to launch a Don’t Text app is a considerable, but not detrimental, issue in the rental car company market. These car companies will still be able to offer the Don’t Text option to their customers who are Android or BlackBerry users. With a reduced cost option for Don’t Text users, this opportunity could still be of great value to the rental car companies. These businesses may be dissatisfied with the ability to only offer a portion of the customers this option if they are making the investment to install the on-board diagnostic in their vehicles. However,

due to the identified potential in this market, an in-depth market opportunity analysis model will be further discussed in section 3.3.4.

3.2.3. Trucking Companies

We ultimately eliminated all trucking and delivery companies despite there being a fairly large market, due to the volume of trucks on the road. The trucking companies could certainly use the device and it should help reduce the distracted driving accidents involving their trucks and help protect their assets. The Federal Motor Carrier Safety Administration has done testing on the case of truck drivers texting and found very strong facts that back up the fact that trucking and texting should be illegal. They found that when a truck driver texts, they are twenty times more likely to get into an accident. They are nearly six times more likely to get in a crash when dialing a phone and nearly seven times more likely to crash when reaching for a cell phone (The Chestnut Firm, 2014).

However, recent federal legislature has made the Don't Text essentially unnecessary. In January 2010, the United States Department of Transportation enacted a federal law that prohibits truck drivers from exchanging text messages while they are driving, or risk a fine of more than $2,500 for each offense (Text'nDrive, 2010). Also, if truck drivers are caught text messaging and driving more than twice, they are at risk of losing their commercial driving license. Additionally, any trucking company that allows its drivers to avoid the new law, or tries to hide it is subject to fines of more than $10,000 (The Chestnut Firm, 2014). We feel that the new law should police the drivers enough and keep most of the drivers from using their phones while they are driving because the fear of losing their driver's license and being fined are very real threats. This would reduce the target market for the device because most trucking companies would emphasize the rules to their drivers to avoid breaking any laws and being fined. Not only are the laws in place likely a sufficient deterrent for distracted driving, but the cost of outfitting an entire fleet with Don't Text would also be very expensive. For these reasons, we do not believe that trucking companies represent a feasible target market for Don't Text.

3.2.4. Companies with Corporate Cars

Many companies throughout the world provide their employees with company owned vehicles. These cars are typically used by the employees to conduct business related activities but many companies allow their cars to be used for personal use as well. Because the vehicles are owned by the company, they have a particular interest in the use of the car and the safety of both

the vehicle and the employee. For this reason, it is safe to assume that companies would not want their employees to get in accidents and that they would be interested in ways to prevent unnecessary crashes. One way in which these companies could help to prevent employee accidents in the company cars would be to enforce the use of Don't Text. This would give the company the ability to hold their employees accountable for not using their phone in an inappropriate matter while driving in a company owned vehicle. As of the end of 2012 in the United States, there were 728,000 business-registered vehicles in fleets of 25 or more and 975,000 in fleets of 5-14 (this number also includes vehicles owned by the government, rental cars, and taxis), see Table 4 below (Bobit Publishing Co, 2012). This could be of particular interest in European markets where company cars are much more prevalent than in the United States. In 2008, 5.7 million out of 11.6 million total passenger cars sold were registered to companies (European Commission's Directorate, 2010).

CARS IN SERVICE (AS OF JAN. 1, 2013)

BASED ON 5+ UNITS PURCHASED ANNUALLY OR 15+ UNITS IN OPERATION			
TYPE OF FLEET	LEASED OR MANAGED	COMPANY OWNED	TOTAL
Commercial (including utility)	429,360	298,370	727,730
Government	5,000	1,285,000	1,290,000
Police	11,000	405,000	416,000
Taxi	6,600	148,000	154,600
Rental	—	1,850,000	1,850,000
Fleet Total (15 or more)	**451,960**	**3,986,370**	**4,438,330**
All Fleets with 5-14 cars	**408,750**	**565,890**	**974,640**
CAR INDUSTRY TOTAL	**860,710**	**4,552,260**	**5,412,970**

Table 4 - Corporate Cars in the United States

Although companies would likely want to prevent their employees from using their cell phones while driving in corporate vehicles, there are several reasons why companies may not choose to use Don't Text. One major reason would be the associated cost of purchasing Don't Text for a large amount of company vehicles. Companies may see less expensive alternatives such as a contract banning improper use of a cell phone while driving as a viable solution.

Additionally, there is currently no data to suggest that companies are facing a major problem of their employees getting into accidents in company cars. For these reasons we believe that most companies would find that there are simply not enough accidents to justify the purchase of Don't Text. It may also be difficult to establish contact with large corporations to explain the product and service.

3.2.5. Cell Phone Providers

There is an opportunity for cell phone providers to purchase and promote Don't Text because it has the ability to reduce the risk of being sued for misuse of cell phones while operating a vehicle. Don't Text believes that in the future, cell phone providers will be responsible for their awareness about preventative products such as Don't Text if they are not sold and enforced with the sale of cellular devices. There are multiple cases indicating this issue could arise. For example, in 2009, 35-year-old Jennifer Smith sued the cell phone provider of the phone that distracted a 20-year-old driver, killing her mother (Richtel, 2009). Similarly in 2003, a woman in Indiana sued Cingular because they were the cell phone provider of the distracted driver who caused a car accident (Richtel, 2009).

Although this concern may be on the rise, it is not currently a pressing issue that would force cell phone providers to act immediately. In many car accidents resulting from cell phone use, the plaintiffs argued the distracted driver is at fault and completely liable for the accident (Matthews, n.d.). Additionally, states and municipalities continue to create laws banning texting and other inappropriate cell phone use while driving (Matthews, n.d.). Another important issue to consider is the current incompatibility of Don't Text with Apple's iOS. Apple's lack of participation in this business venture is less of a problem in the cell provider industry because Androids are large in the smartphone market and cell providers could sell Don't Text strategically within this particular department of their store and website. Similar to the concerns of Apple, Don't Text would limit the functionality of the products cell phone providers are trying to sell, so it may be seen as contradictory to their current sales items. However, despite these potential pitfalls of this market, we decided to continue to consider it as a potential market to enter and a full financial analysis of the market opportunity will be discussed in section 3.3.3.

3.2.6. Taxi Services

One of the main reasons that taxi drivers may not need or want to purchase Don't Text is because they are going to be held responsible for their driving. If they get into a crash with a

customer, they are going to be held responsible for the passenger, as well as the cars involved in the crash. Since text messaging and driving is restricted or illegal in many states, the driver is subject to fines and may lose his or her license if caught. In New York City, taxi drivers are not allowed to use their cell phones, even if it has Bluetooth or are otherwise hands-free and are subject to $200 fines for violations (FAQs, 2014). After two violations, drivers may be suspended and after three times within a fifteen month period, their license may be revoked (NYC Taxi, 2014). Following any violations, the drivers are also required to take a distracted driving course before they can drive their taxi again.

None of the large car insurance companies insure taxis, so the drivers who own their own cars are left to use much smaller, more local companies (NYC Taxi, 2014). This policy would restrict them from purchasing Don't Text through a car insurance company, at least in the first couple of years until the device has saturated the market. Taxi insurance is much more expensive than regular car insurance, due to the fact that they are driving much more than an average driver and are responsible for passengers. It is expected that drivers would not want to spend the money on the Don't Text device when their insurance rates are so high already. With the added fact that it is illegal to text and drive and that there are steep costs to violators, independent taxi drivers do not seem like an appealing target audience.

For a taxi company with hundreds of cars on the road it may be appealing to make sure the drivers are not distracted. However, as previously mentioned, taxi drivers are restricted from using their phones at all while driving and can face heavy repercussions if they violate the law. This policy alone serves as a deterrent for the taxi drivers. It would also be very costly for these companies to install the Don't Text device inside all of their cabs. There are estimated to be more than 230,000 taxi drivers in the United States, which would require many devices to be purchased (Bureau of Labor Statistics, 2014).

3.2.7. Public Transportation

The Don't Text device may find a very appealing market in bus drivers and other drivers of public transportation due to the fact that many lives are in the hands of just one driver. Most states have bans against texting while driving in the car, which covers bus and transportation drivers. While many states have certain restrictions on the use of a cell phone, it is not completely outlawed for regular drivers. However, it is illegal for bus drivers to use their phone completely (GHSA, 2014). The law states that any bus driver or commercial driver with a

vehicle weighing more than 10,000 pounds who is caught texting and driving may face a $2,750 fine (Lowy, 2010). Pete Pantuso, the President of the American Bus Association agrees with the ban on drivers using their phones, saying, "A lot of our members have policies in place. It's just safe and smart (Lowy, 2010)." While the prohibition does not apply to devices that allow dispatchers to send text messages to bus drivers, most of those devices have mechanisms that prevent their use while a bus is in motion (Lowy, 2010). By having many checks in place to keep the bus drivers from using their phones, the Don't Text device may be too costly to put in every bus and may be considered unnecessary.

Another market that could be targeted for the Don't Text device is railroad operating companies. In 2008 in California texting and driving is thought to have caused the worst train crash in fifteen years. The conductor of the train, Robert Martin Sanchez, had allegedly sent text messages less than a minute before the train he was controlling skipped a red light and collided head-on with a freight train, killing twenty-five passengers and injuring more than 130 riders (Reuters, 2008). Following the crash, California unanimously approved a bill that would ban texting on the job for all train operators. Before California had established the law, it was up to train companies to prohibit or restrict the use of phones while on the clock (CNN, 2008). While this tragedy could have been avoided if Don't Text was being used, we do not think that the market would be large enough to pursue. For example, there were only 554 freight trains in use in the entire country in 2002 (Federal Railroad Administration, 2004). Also, many areas do not have trains at all, with only large metropolitan areas having their own subway systems. With the low percentage of crashes, along with a relatively small market, we feel that public transportation does not represent one of the top market opportunities for Don't Text.

3.2.8. Public Safety Officials

In considering a B2G market, public safety officials are a potential target market interested in a product such as Don't Text, but this market did not pass our cost-benefit analysis. The use of Don't Text would further protect state employees and help the government reduce costs from cell phone-related accidents. However, under further investigation of this market it becomes clear that this type of limiting technology is not relevant among officials who rely on communication to effectively perform their job. APCO International sells multiple products and services for public safety communications including radio systems and equipment, alerting, notification, signaling, and video and surveillance systems (APCO, n.d.). The functions limited

by Don't Text might be needed in police vehicles, fire safety vehicles, and ambulances. The use of computers and other technology in their vehicles should force them to be responsible enough while driving. Based on their job, they are already held accountable for responsible driving behavior. Their jobs are on the line, creating a level of self-accountability that decreases the value of Don't Text in this market.

3.2.9. General Consumers- Personal Use

Another major potential market for Don't Text is providing the product to individuals or guardians of teenagers and young adults. This would constitute a business-to-consumer transaction. Specifically individuals may be interested in purchasing Don't Text for themselves in order to hold themselves accountable. However, we feel that this particular market segment of targeting individuals would not be large enough to reach FR0 because there are several other alternatives to insuring that individuals hold themselves accountable. For example, there are multiple free or inexpensive apps that do not include an on-board diagnostic device that help cell phone users eliminate distracted driving from their lives (read more in the Competitive Analysis, Section 3.4.). Another alternative is simply turning the smartphone on airplane mode so the individual is not tempted to use applications that require cell phone service. This could essentially provide the same benefit but at no cost. However, an individual would still be able to use his or her phone while operating a vehicle at his or her own will, unlike using Don't Text which would not allow certain functions while the car was in motion. The product is designed for a third party to hold the user accountable, and it is unlikely individual users will be interested in limiting their own activities in a way other than self-control.

3.2.10. General Consumers- Dependents

A business to consumer segment with a much larger potential market is selling Don't Text to parents, grandparents or other guardians of teenagers and young adults. This demographic would likely be interested in the product in order to insure that their dependents are being held accountable for not using their cell phones inappropriately while driving. In 2009, there were over 10 million drivers in the US under the age of 19 and over 17 million drivers in the US between the ages of 20 and 24 (U.S. Census Bureau, 2012). This represents a large potential market for a product such as Don't Text. Additionally, motor vehicle crashes are the number one cause of death for teens in the United States, making vehicle safety a major concern for many parents (CDC, 2012).

Although the safety of their children while operating a motor vehicle is important to parents or guardians, this does not necessarily mean that they would purchase a product such as Don't Text. Many teenagers or young adults may object to using a product that would restrict the use of their cell phones and parents may not be able to exert enough authority to force use. Only 66% of teens say they care about their parents' opinion on cell phone use while driving (Ten to Twenty Parenting, 2013). Additionally, parents or guardians may choose an alternative solution if they want their children to not text and drive such as another mobile application or asking their child to sign a pledge or agreement. However, due to the sheer size of this potential market combined with that of individuals purchasing the product for themselves, we will be analyzing these market segments together further in section 3.3.2.

3.3. Market Opportunity Analysis Financial Models

Our team continued the analysis with the markets we believe have a significant opportunity for Don't Text. The next logical step in this analysis is using financial data to understand the monetary business opportunities.

3.3.1. Insurance Companies

The auto insurance industry represents a large potential market for Don't Text. In order to quantify the size of this market, we used several reported statistics to make estimates on the potential market opportunity. This complete market opportunity and financial analysis can be seen in detail in Appendix B. It is very important to note that this analysis does not take into consideration the current incompatibility with Apple's iOS. The first number we used was the total incurred loss for the auto insurance industry as a whole which is over $120 billion annually (Insurance Information Institute, 2012). We then multiplied this number by the percent of car accidents that are caused by cell phone use, which is 23% (Virginia Tech Transportation Institute, 2009). This calculation resulted in over $27 billion of estimated auto insurance claims expense that was a result of cell phone use while driving (assuming that these particular accidents cost insurance companies 23% percent of their total claims expense). Next, we analyzed four insurance companies and calculated each one of their estimated losses from paying out claims due to cell phone use while driving. To do this we used data on the percent of total market share each of the four companies has, what their total claims expense is (in all segments, i.e. home, life, and auto), as well as what percent of their total business is auto insurance. From here we then developed a potential revenue model for Don't Text.

The potential revenue model involves charging the insurance companies as a percentage of what they are saving by having their customers use Don't Text. These calculations were based on statistics from the auto insurance agency as a whole, as well as statistics from three of the top insurance companies; State Farm, Allstate, and Progressive as well as a smaller company, The Hanover Insurance Group. The results of this analysis can be seen in Appendix B. As an example, if Don't Text formed a partnership with State Farm who currently has 18.7% of the market share, holding 43 million auto policies, and Don't Text was adopted by and prevented accidents of 4% of the customers, State Farm could potentially save an upwards of $169,195,727 (State Farm Annual Report, 2012). If Don't Text only charged 2.5% of the company's savings, that would generate $4,229,893 of revenue for Don't Text annually. It is important to note that this analysis was conducted by using two different formulas to calculate savings for the insurance companies and also uses three different scenarios (optimistic, average, and pessimistic). Additionally, the 4% adoption rate was based on a case study we conducted by analyzing the adoption rate of a similar program, Progressive's Snapshot Discount (Progressive, 2014). The calculated adoption rate was around 8% so using a 4% rate is on the pessimistic side. For these reasons, we feel that the calculated results are a reasonable assumption and take into account many different variables and scenarios.

3.3.2. Consumers

In order to estimate the required consumer adoption rate and the revenue potential for Don't Text we developed a model based on given statistics and fact-based assumptions. For general statistics, we found that in 2012, there were 210 million licenses held in the United States (U.S. Census, 2012). Additionally, 56% of U.S. adults currently own a smartphone (Pew Research Centers, 2013). These statistics served as the basis of our calculations, representing a very broad target market. To narrow the market down further, we considered the percentage of U.S. adult license holders and smartphone owners with either an Android or BlackBerry phone which was 55.6% (Protalinski, 2013). These statistics then allowed us to estimate the number of adult drivers with an Android or BlackBerry smartphone, which we calculated to be just over 65 million people. In order to determine what percentage of this potential market would have to adopt Don't Text to obtain the first 100,000 to 300,000 users, we divided the total number of desired users by the number of adult drivers with an Android or BlackBerry smartphone. The result was 0.15% to 0.46% of the potential market (adult drivers with an Android or BlackBerry

smartphone) would have to adopt Don't Text in order to reach the desired number of users. Additionally, we performed very simple calculations to estimate the revenue that could be obtained by selling between 100,000 to 300,000 units based on a range of retail selling prices. For 100,000 units sold, Don't Text would generate gross sales of $3.5 million if the selling price was $35, and up to $7.9 million if the selling price was set at $79. The complete details can be seen in Appendix C. These calculations show this market is very feasible and can generate substantial sales; however, the sales plan to make this possibility a reality must be very effective because, as mentioned previously, many consumers may not be interested in purchasing Don't Text for themselves or for their dependents. Although there is a substantial concern for safe driving, end users may object from a restriction on themselves and the product could be obtained elsewhere for a more enticing benefit, such as discounted insurance rate.

3.3.3. Cellphone Providers

Despite our initial doubts in this market, we ran a financial analysis to evaluate the potential opportunities to follow through with Don't Text in this market. If packaged appropriately, there are opportunities for carriers and Don't Text to make profit from this product. To model the market potential for cellphone providers we used three primary statistics: the estimated number of injuries and deaths caused by distracted driving annually in the U.S., the percentage of U.S. smartphone owners with an Android or BlackBerry, and the market share of the top four cellphone providers. Similar to insurance and rental car companies, the big players in the market would be targeted first, followed by the smaller providers. As of 2012, Verizon and AT&T controlled over 70% of the wireless market, with 111.3 million and 105.2 million subscribers respectively, followed by Sprint and T-Mobile with 56 million and 33 million subscribers correspondingly (Reardon, 2012). Smaller providers include Clearwire, MetroPCS, Leap Wireless, and U.S. Cellular with much fewer customers (Reardon, 2012). For our calculations we assumed that the average damages sought by a suing party was $10,000. This assumption was made from the previous example when the daughter of a woman killed by a distracted driver sought $10,000 in damages (El-Rahman, 2009). The first set of calculations was done to estimate the total cost of lawsuits for cellphone providers based on a range of percentages of injured parties that would actually seek damages from the cell phone provider. Based on these calculations, we were then able to estimate the cost to each company on an annual basis, assuming they were forced to pay out damages for 50% of the cases.

The next set of calculations was performed to identify the potential revenue that could be protected by the companies adopting Don't Text. For these calculations we took into account both an adoption rate as well as a percent of the accidents that would actually be prevented by Don't Text. Three different scenarios were calculated using 25%, 50%, and 100% prevention rates with a 5% adoption rate. We then used a percentage of savings model, like what was used for insurance companies, to estimate if this revenue stream could generate a desirable level of revenue for Don't Text. Based on a 0.5% suing rate, 50% of accidents being prevented, and a 5% adoption rate, potential revenue for Don't Text would be under $5,000, which indicates that entering this market is not financially feasible. Alternately, we calculated a revenue stream based on selling the product at a wholesale price, which drastically increased the potential revenue steam to a range of $2.5 to $13.5 million.

The last calculations were performed to determine what adoption rates of Don't Text would allow the company to reach the overall goal of obtaining the first 100,000 to 300,000 users. To do this we calculated the estimated number of customers with an Android or BlackBerry smartphone for each of the four companies. Based on these numbers, we could calculate the desired adoption rates for each cell provider to reach the 100,000 to 300,000 users. For example, for Don't Text to reach their desired number of users, 0.17% to 0.51% of AT&T customers would have to adopt the product. For the detailed analysis, see Appendix D.

Overall, our team does not believe the cell providers should be held responsible for distracted driving accidents; their recommendations and campaigns for safe driving cannot control each human's actions. The market is large enough to reach our FR0 because the larger providers have such a huge consumer base of Android and BlackBerry users, but there is not enough data to convince us the companies will find value in protecting their revenue stream through the sale and promotion of this product.

3.3.4. Rental Car Companies

To begin analyzing the market potential for Don't Text in the rental car industry we identified the fleet size of the top four rental car companies. In total, there are over 1.8 million rental cars in operation in the United States. These companies combined brought in over $23.5 billion in 2012. This averages to each car bringing in over $13,000 per unit (Auto Rental News, 2013). If a Don't Text device can prevent one accident for a rental car company it would save them an estimated $31,252 based on the national average for the price of a new car (Auto Rental

News, 2013). However, due to limited information about rental car accidents and the money paid out by companies for these accidents, we had to make several assumptions and estimates in order to assess the financial opportunity for Don't Text in this market segment.

As a basis for our calculations we performed a case study analysis of Hertz to estimate how much each of the top rental car companies were paying out annually in terms of public liability and property damage from accidents involving their rental cars. We found that Hertz pays out $613.7 million annually in public liability and property damage expenses (Hertz, 2012). With this number we calculated a ratio that could be used to estimate how much the other top three companies were paying for these types of costs.

The next calculation was to estimate the potential amount of revenue that a rental car company could protect from using Don't Text. To do this we took into account the estimated property and liability expense, an adoption rate of 5%, the percentage of Android and BlackBerry users being 56% and finally 23% of all accidents being caused by cellphone use. With all of these factors, we estimated there is approximately $7.7 million that can be protected in the rental car industry as a whole. We then used a percentage of savings revenue model to calculate how much Don't Text could make based on what the rental car companies were saving. For example, if Enterprise enforced the use of Don't Text and the company received 5% of savings, they would earn a revenue of $192,200 annually. In order to increase this revenue stream, Don't Text could also charge a per unit wholesale amount to the rental car companies. For the detailed analysis, see Appendix E.

3.4. Competitor Analysis

There are current mobile applications in the market that provide some of the same functions as Don't Text. However, none of these companies are working with automobile insurance companies and instead primarily target parents of teen drivers. The most direct competitor with Don't Text is an application and OBD device called "Cellcontrol" (Cellcontrol, 2014). There are also three other main competitors of Don't Text that use technology such as GPS to monitor cell phone use while driving. These apps are called "Textecution","txtBlocker", and "Safely Go" (Nationwide, 2011) (Safely Go, 2014). A full competitor analysis can be seen in Appendix F.

Cellcontrol is in fact very similar to Don't Text. It also uses an OBD device to connect between the car and the driver's cell phone and limits very similar functionalities as determined

by the administrator. A parent or employer has the ability to choose what the user has access to while they are driving and can change these settings at any time. The device has the ability to only connect to the driver's phone so passengers are not limited on their own personal cell phone use. Cellcontrol has established two primary target markets, the first being parents of teenagers and the second being companies with auto fleets. The product is the same for both segments but the pricing varies. For a parent to purchase Cellcontrol, the price is $119 or $129 depending on the model of the OBD device. For companies purchasing Cellcontrol, contracts are established in order to determine the pricing and services offered. It is also extremely important to note that Cellcontrol is currently compatible with Apple's iOS as well as Android, BlackBerry, Brew, and Windows, which is a major advantage over Don't Text (Cellcontrol, 2014).

Textecution is a mobile application available for the Android and BlackBerry platforms that prevents the user from text messaging if they are moving at a rate above 10 MPH. If the user needs to access their device they must request an override and the app will contact the administrator to seek permission. This company intends that the administrator be either parents or an employer. This particular application does not make any distinction between if you are a passenger in the moving automobile or if you are on another form of transportation such as a train or bus. Textecution is a one-time $29.99 charge for a single user (Nationwide, 2011).

txtBlocker is another mobile application currently on the market that is fairly similar to Textecution, however it also has the capability to send a response text message on behalf of the driver. Therefore, if the phone is moving over a certain speed the app will automatically let anyone who text messages the user know that they are driving and cannot respond. Additionally, txtBlocker has corresponding software that allows the administrator (typically a parent) to set locations and times where texting and other phone functions will be prohibited. This feature is intended to allow parents to prevent their children from text messaging at inappropriate times such as when they are at school. txtBlocker is $6.99 per month or $69.99 annually for a single user (Nationwide, 2011).

A fourth competitor, Safely Go, works in a similar matter but requires the user to turn on the app, and does not use GPS to sense when the car is in motion. When the application is running it blocks all texts and calls except for three designated numbers that can be contacted hands free. Additionally, this application allows the use of three pre-designated apps while it is running (Safely Go, 2014).

Not only does a different target market set Don't Text apart from the competitors, but so does the high level of accountability that the product provides. Three of the competitors mentioned rely on the administrator or oneself to make all of the decisions and hold the user accountable for not texting and driving. However, with Don't Text, the on-board diagnostic device provides a second level of accountability because insurance companies can compare the miles driven versus the miles recorded by the Don't Text application. This makes the administrator an optional function so that an adult that may choose to have Don't Text to save them money on their car insurance, but would not have to have someone else in control of their cell phone use. Overall, Don't Text is able to target a much larger and more relevant segment of the market by going to consumers through insurance companies and not focusing solely on parents with teenagers or companies who want to ensure their employees are driving safely. However, with the direct competitor, Cellcontrol, that has an extremely similar product the key will be penetrating the insurance industry first since there are no major differentiators between the products.

An indirect competitor of Don't Text is Progressive's Snapshot Discount. Progressive offers a similar OBD device that allows Progressive to charge for auto insurance based on an individual's driving habits, such as speed and amount of hard braking (How Snapshot Works, n.d.). The Don't Text OBD device will record similar data but will have the distinguishing feature of preventing cell phone use. In many ways the Snapshot Discount has paved the way for a device such as Don't Text because consumers are familiar with pay-as-you-drive insurance discounts and the technology is already established and in use (Progressive, 2014). It seems that the next logical step would be a device such as Don't Text that has similar functions to the Snapshot Discount but also prevents cell phone use.

The main competitive advantage for Don't Text is that the user is restricted from disabling the product because they are held accountable by a third party adminsitrator. Competitor products that rely on GPS can easily be disabled by turning off location services or exiting out of the application. Don't Text works automatically and can only be disabled by turning off the car or removing the device from the diagnostic port. This is a strength for Don't Text because it holds drivers more accountable for their driving than the other call blocking applications; however, Cellcontrol provides this same benefit.

The main weakness for Don't Text is that drivers may not feel comfortable having their phones disabled while they are driving. Drivers may use a GPS based application knowing that they can turn it off when they need to use their phone. Knowing that it is not easy to remove Don't Text may make drivers weary of using it. Additionally, Cellcontrol, the most direct competitor of Don't Text, has already won numerous awards and has been recognized on national programs. This is a major disadvantage to Don't Text because there is already an established product in the market that is receiving recognition that might make consumers, or even insurance providers, choose this product over Don't Text.

3.5. Survey Results

Our survey was started 1,121 times and was completed 1,050 times. Question one was a demographic question asking the person's age. We found almost half, 46.43% of respondents are 19 to 21 years old. There are 10% of respondents that are 16 to 18 years old, 20% are 22 to 30 years old, 5.89% are 31 to 40, 5.45% are 41 to 50, 8.04% are 51 to 60 years old, 4.2% are over 60. We later used this information to cross tabulate information about driving habits or the potential use of a product like Don't Text with age.

Question two asked for the respondents' gender and fortunately for our analysis, the split was nearly exactly 50% female and 50% male. We generated responses from 557 males and 563 females. This is important to note in the rest of our data because we are representing both women and men equally.

Question three asked the kind of cell phone the respondent uses. Out of 1,120 responses, 526 people (46.96%) have an iPhone, which is important to note because almost half of the respondents' phones will not work with the Don't Text product at this time due to Apple's restrictions on the application. Android users represented 34.2% of our survey respondents with 383 responses. One limitation in our survey is we did not provide an option for BlackBerry phones, but instead had an "other" section, which had 207 responses. These people may have BlackBerry phones, other smart phones, or simple phones. There was also a choice for people who do not have cell phones, and only four people reported this answer. This question was important to understand the market since this app will not work for everyone, and also to know how vital it is that Apple is currently not compatible. We hoped to find out what the people who can actually use this app feel about distracted driving and options to prevent it.

The next question asked if the respondents have a U.S. driving license, and if yes, which state. We found that 94.04% do have a U.S. driver's license, and only 66 of 1,108 respondents did not. Of those who do have a driver's license, 41% stated they are issued in Massachusetts. This geographic information was important to us because we can cross tabulate our data to provide inferences to local insurance companies. We can also observe how answers differ depending on location to target the represented area in the United States with the highest demand for Don't Text. The next most represented state licenses were New York with 12%, Rhode Island with 10%, and Connecticut with 8%.

The next question moves away from demographics and asks what the respondents used their cell phones for while driving. Respondents could choose more than one answer to this question, which is why the percentages cannot be summed to 100%. The results show 64.09% of people make phone calls while they are driving and 27.61% text while driving. These statistics are crucial to understand because these two features are the ones eliminated in Don't Text. Other functions that many people use while driving include GPS at 55.89% and music at 39.67%. Less accessed applications while driving included checking email, 12.16% of respondents, and social media, 5.6% of respondents. Common write-in answers included receiving phone calls (as opposed to making them), hands-free calling mostly through Bluetooth, and stock market or camera related applications.

Survey question six asked how often respondents use their phones while driving for any purpose other than GPS or music, since these applications will likely be allowed by users of Don't Text. Answers ranged from frequently to never, and averaged right between sometimes and rarely. A total of 9.25% of respondents admitted to frequently using their phones, meaning almost every time they drive. A drastic change was noticed in the next option, as 41.68% of respondents said they sometimes use their phones, meaning once in a while or at red lights, and 41.31% rarely do, such as for special circumstances like an emergency or running late. A small percentage, 6.41% of respondents, only use their phones for music or GPS, and only 1.36% never use their phone while driving. These low statistics in combination with the statistics supporting the dangers of distracted driving suggest a large need for a product like Don't Text.

Next, in question seven, we asked how distracted from the road respondents feel when using their cell phones while driving. Some people, 8.3% of respondents, feel not at all distracted. However, 46.34% of respondents feel slightly distracted, 27.14% of respondents feel

moderately distracted, and 18.22% feel very distracted. These responses indicate a need to eliminate using cell phones when driving because people are distracted, as other research has shown. This survey question goes a step further to say people are also aware of the repercussions of their actions. A recorded 168, or 27.23% of respondents would be willing to use a product like Don't Text if there was an incentive of a significant car insurance discount. The limitation with this response is the survey provided a very situational option, rather than options limiting respondents to definite interest or no interest. However, this finding gives us more of an idea of how people are slightly interested, but require a large incentive to consider using the product. Additionally, 85 respondents representing 13.78% of the Massachusetts license holders claimed to be interested in the insurance discount regardless because they do not text and drive anyways. Finally, 92 people said they would not be interested, representing only 14.91% of the Massachusetts license holders. This statistic means 85.09% of Massachusetts license holders would be interested in using Don't Text for a significant insurance discount, and 57.86% would use the product for any discount.

Question eight of the survey asked, "Have you ever had an experience where you have felt that you had put yourself or others in danger while using your phone and driving?" More than 80% of the respondents said they never had this experience. Many of the reasons for the yes answers were that the drivers were using the phone's GPS and sending text messages. This information is value to Don't Text because the device prevents text messages while driving and could prevent many of these accidents. However, Don't Text does allow for the use of GPS, so some of the drivers might still be distracted despite having the device installed.

Question nine of the survey asked, "If you were a passenger in a car, would you approve of the driver texting while driving?" Only four respondents said they were perfectly fine with the driver texting and driving. Over 85% of respondents said they would not approve of the driver texting and driving while in the car with them. This result is beneficial for Don't Text because there is a large portion of consumers who do not approve of drivers texting and driving.

Question ten asked, "Would you be willing to use a device and mobile application that prevented you from doing certain activities while driving such as texting or making phone calls if you were offered a discount on your car insurance?" Only 138 of the 979 respondents replied that they would not use the device, which is only 14.1% of all answers. However, we also added a subtext to the question stating, "Note: Device would not prevent you from such activities such

as playing music, using GPS, or receiving/placing emergency phone calls." Many respondents wrote that they would not use the device in case there is an emergency and they need to make a call or they want to be able to use the phone's GPS services. This shows that the number of respondents who said they would not want to use the device might be too high because they did not read the question correctly and realize Don't Text would allow them to use these features.

Question eleven asked, "Do you feel that having a device and mobile application that prevented you from doing certain activities while driving (such as texting or making phone calls) would make you a safer driver?" More than 65% of the drivers said yes versus 34% who said no. The main reason for the people answering no was that they feel they do not use their phone enough or feel that they text safely, which as our research has shown, is not factual. They key for Don't Text to reach these consumers is to show drivers that they are not as safe as they realize and display the benefits of the device.

Question twelve asked, "Are you a parent?" and if the respondent answered with a no, then the survey was complete but if they replied yes, they were then presented question thirteen asking, "Would you be interested in purchasing a device for controlling and monitoring your child's use of their cell phone while they are driving?" We received answers of yes from 191 parents, which was 18% of the total participants. Nearly half of the adults, 48%, responded they would be willing to buy Don't Text for their children however these numbers may be artificially low because 32% of the adults said no but 19% of them said other and provided a response as to why. Many of them said they would not because their children were adults. This means that our respondents are not in our target demographic for children and the comments collected suggest that if the ages of their children were lower, the number of yes replies would have been higher.

Finally, on question fourteen, we asked, "How much would you be willing to spend on a product like this?" referring to the Don't Text device. Nearly 25% of the answers were from $25 and under. More than 75% of the respondents would buy a device priced no higher than $75. Don't Text would have to be priced in this range to appease the target market while covering any internal costs, allowing the company to make money on their sales. The questions list and full results of this survey can be seen in Appendix G.

3.5.1. Cross Tabulations

Using the information from the survey questions, we ran cross tabulations in Qualtrics to better understand the data and what it can actually mean for Don't Text opportunities. The

following five cross tabulations provide insight to the company on market size, need for the product in the market, and demographic and personal information in relation to interest in the device.

3.5.1.1. Massachusetts Drivers and Insurance Discount

Due to the geographic location of Don't Text in Framingham, MA, our group has a particular interest in opportunities for insurance companies in Massachusetts. We cross tabulated questions to find that out of those respondents holding a Massachusetts driver's license, how many would be happy to use this product for any discount, a significant discount such as 25% or more off, any discount because they do not text and drive already, or no willingness to use the product. Results of this cross tabulation can be seen in Appendix H, Figure 29. We found that out of 617 respondents with Massachusetts licenses, 272 respondents or 44.08% would be interested in the product for any discount, indicating there is a significant interest in car insurance discounts from the use of this product or one similar. Also, 168 or 27.23% of Massachusetts license holders responded they would be interested in the mobile app and device pair only with a significant discount on their auto insurance. In addition, 85 people with Massachusetts licenses would be interested in this safety feature for their car for an insurance discount because they already claim to not use their phone while driving.

Combining these three statistics we find that 85.09% of Massachusetts license holders are interested in a safe driving feature to prohibit texting and calling while driving with a significant discount on their car insurance. This finding implies a large opportunity for Don't Text to partner with Massachusetts insurance companies such as The Hanover Insurance Group. Only 92 respondents out of 617 were not interested in using the app and device for a discount.

3.5.1.2. Level of Distraction and Phone Use While Driving

We sought dramatic statistical data through the cross tabulation of the question regarding how distracted the respondents feel from the road when using their cell phones with the question asking what respondents use their cell phone for while driving. Results of this cross tabulation can be seen in Appendix H, Figure 30). We found that only 53 out of 807 people do not feel distracted at all when making phone calls and driving. Additionally, we expected no responses in this category, but a minor 16 out of 807 people do not feel distracted at all when texting and driving. This datum is concerning because this suggests that these respondents are not aware of the dangers of distracted driving.

We observed a pattern in the responses to these two questions. For every use of the cell phone (texting, checking email, making phone calls, social media, music, GPS, other), the majority of people feel slightly distracted, a lesser group feels moderately distracted, a smaller group feels very distracted, and an even smaller percentage feels not distracted at all. This observation indicates that most people are realizing at least a slight level of distraction, meaning they are at least slightly aware of the risk they are putting themselves, their passengers, and the others on the road. The small percentage of people who said they are not distracted at all from these activities means there are not many, but still a group of people, who need to become aware of these dangerous activities. These respondents are likely the ones who are continuing to text and make phone calls while driving, and the group that really needs to be held accountable by a product like Don't Text.

3.5.1.3. Age and Preventative Device

We cross tabulated the results from the question asking, "What is your age?" and "Do you feel that having a device and mobile application that prevented you from doing certain activities while driving (such as texting or making phone calls) would make you a safer driver?" The results of this cross tabulation can be seen in Appendix H, Figure 31.) The sixteen to eighteen year olds were three times as likely to say yes and the nineteen to twenty one year old group was more than twice as likely to reply yes. This is good for Don't Text because it is marketed towards younger drivers and they overwhelmingly agreed that the device would make them safer.

3.5.1.4. Age and Insurance Discount

The next cross tabulation asked for the user's age and if they would be willing to use a device like Don't Text in exchange for some type of discount on their car insurance bills. Results of this cross tabulation can be seen in Appendix H, Figure 32). Only 14% of all respondents said they would not be willing to use the device in exchange for a discount. More than 43% of the respondents said they would be happy with any type of discount and only 27% of them would want a sizable discount off their bills. This would be good information to bring to the car insurance companies because it shows that many drivers are willing to have the device installed in their cars and many of them are only looking for a small discount.

3.5.1.5. Type of Phone and Insurance Discount

The final cross tabulation compared the results of which type of phone the drivers owned and if they would be willing to use a device such as Don't Text in exchange for receiving a

discount on their car insurance. Results of this cross tabulation can be seen in Appendix H, Figure 33. More than 46% of the respondents had iPhones and slightly more than 34% of them had Android phones. More than 87% of the iPhone users were willing to use a call blocking device in exchange for a car insurance discount compared to 84% of the Android users. This shows that Don't Text will have to gain compatibility with Apple products in order to stand apart from the competition. Most of the Apple users are willing to receive the discount so if Don't Text can get Apple on board, it could be very advantageous.

4. Recommendations

4.1. Conclusions and Recommendations Overview

After completing basic market research, conducting in depth analysis of several potential markets, and synthesizing our survey results, we have been able to draw conclusions and make several recommendations. These recommendations will address which of the four primary markets: insurance companies, general consumers, cell providers, and rental car companies, Don't Text should target and why. These conclusions are outlined below and will be discussed in further detail, including the related recommendations, in this chapter.

- The automobile insurance industry represents the most feasible potential market. (Section 4.2.)
- We have quantified a large potential market selling Don't Text to consumers but have concluded that this market is very hard to reach in mass quantities. (Section 4.3.)
- The target segment of cell phone providers is not feasible using a percentage of savings model but has potential if used as a wholesale sales channel to consumers. (Section 4.3.)
- Rental car companies should not be a target segment at this time due to the comparative small size of the market.
- Don't Text should work with Apple to solve current compatibility issue. (Section 4.4.)
- At this point in time, the current incompatibility issue with Apple limits all of our recommendations. (Section 4.4.)

4.2. Insurance Companies

Due to the large opportunity identified in the previous chapter and the comparative ease of reaching insurance companies, we recommend that the automobile insurance industry be the initial primary target of Don't Text. Compared to the other identified opportunities we believe that this market segment has the most potential due to the large cost reduction Don't Text can provide to this industry which would likely generate a very large interest. Additionally, because of this cost reduction, Don't Text would have the ability to generate revenue using a percentage of savings revenue model which is a win-win scenario for both the insurance companies and Don't Text. Because of the potential we have identified in this particular market segment, we have created an in-depth business plan that identifies many different aspects of this opportunity

and goes into detail about how Don't Text should target this segment. This business plan can be found in Chapter 5.

4.3. Consumers

Although we would recommend targeting insurance companies as the primary market for Don't Text, we believe the consumer market represents a large opportunity due to its sheer size. However, it is much more difficult to advertise and sell to the mass consumer market. The following two sections highlight two possible sales channels for reaching the mass market consumers.

4.3.1. Selling Directly to Consumers (B2C)

Selling directly to consumers could provide a large opportunity for Don't Text to move large quantities of their product. There are over 210 million licensed drivers in the United States and more than 250 million registered passenger vehicles on the road (Federal Highway Administration, 2011). This leaves a massive market to target and should allow Don't Text to reach its initial goal of obtaining its first 100,000 users.

One way to sell the product to potential customers would be through the Don't Text website. This would allow the company to save money by avoiding expensive advertising campaigns through the radio or television. E-commerce sales rose by $33 billion from 2011 to 2012 (Pimsleur, 2013). This means that more and more, consumers are willing to purchase products on the internet. By using Google AdWords, the website could be advertised on the largest search engine in the world for less than one dolllar per click (Google, 2014). It is expected that businesses will make two dollars for every one dollar they spend advertising through Google (Gabbert, 2012). However, Google predicts that businesses may make up to eight times the amount spent on using AdWords (Google, 2011). This will boost the amount of viewers of the company website, which will lead to more sales of the Don't Text device.

Radio and television are also widely used forms of advertising media in the United States. A radio commercial is estimated to cost nearly $2,500 per week (Astor, 2009). Another option may be to advertise on television through short commercials or infomercials. This option is also very expensive, with the average cost of nearly $110,000 per national advertisement during primetime hours (Crupi, 2011). Don't Text should avoid the high cost of mass advertising in the beginning stages, therefore our recommendation would be for Don't Text to use Google's AdWords to keep costs low initially and gauge general consumer interest.

A main benefit for selling directly from the website is the fact that not supporting Apple products would likely not be a major setback. The sales would not be as large as if Android and Apple were both supported but consumers would at least be able to choose one of the options. There is a possibility that Apple could allow the product after it starts to do well on the Android market, but until it is allowed, selling Android only is a better option than not selling anything.

One main drawback from selling through the website, directly to consumers is that it may be unnecessary if the car insurance companies decide they want to sell the device. It would be unlikely for a customer to buy the device independently when the car insurance company is offering a discount for using the same device. In this scenario, the only target market would be the customers of smaller car insurance companies who are either slow to adapt to the device or are unwilling to do so. Although there are several benefits of selling Don't Text directly to consumers through a company website, we do not feel that this sales channel alone would be capable of selling the first 100,000 to 300,000 units of Don't Text, simply because it is unlikely that a large enough percentage of the target market would be aware of, let alone purchase the device.

4.3.2. Selling Indirectly to Consumers (B2B → B2C)

Another sales channel of interest would be to sell Don't Text by wholesale to major retailers. Companies such as Amazon or Walmart are capable of reaching the large consumer market and could serve as retailers of Don't Text. Additionally, cell phone providers such as AT&T or Verizon have a large customer base of smartphone users and may be another viable retail partner for Don't Text. This process would involve wholesaling the product to these retailers who would then sell it at a markup to the consumer market. This channel is a more effective way of reaching the consumer market as opposed to direct sales because these suggested retailers already have a large point of contact with the desired target market that Don't Text simply does not have.

A challenge associated with this particular sales channel would be to establish agreements with large retailers to sell Don't Text. Especially with cell phone providers, it may be difficult to get them to agree to sell a product that essentially limits the use of the smartphones they are selling. It is also important to address the current issue of incompatibility with Apple's iPhone. We feel that this may not be a major issue for this particular way of targeting the consumer market because retailers would still have a large population to sell to that own Android

or BlackBerry phones. As of mid-2013, 52% of all smartphone users in the U.S. have an Android phone (Protalinski, 2013). Although their potential customer base is reduced because of the incompatibility issue, it is not imperative for them to be able to sell the product to everyone that has a smartphone, unlike an insurance company who would want to be able to offer the product to their entire customer base.

Overall, although we do not think that the mass consumer market should be the initial primary target of Don't Text, it is an opportunity that should not be ignored. The world is changing rapidly on a daily basis and it will be important for Don't Text to identify trends in the market as they are happening and constantly reevaluate the market potential for Don't Text. If market conditions are supportive of Don't Text being targeted to general consumers, we would recommend that Don't Text sell their product through the large retailers mentioned previously in order to sell a large enough volume to generate the desired profit for Don't Text.

4.4. Barriers to Entry Analysis

Figure 1- Barriers to Entry Analysis

Our team has identified barriers to entry that we feel will ultimately prohibit Don't Text from entering the market under current circumstances (see Figure 1 above). There is a high level of competition, with multiple mobile applications operating similar functions. However, the primary competitive advantage for Don't Text is the on-board diagnostic feature and associated service to track vehicle and cell phone use data. Although there is at least one other company with this functionality, we believe that Don't Text could surpass their main competitors by targeting the insurance industry. The accountability provided through this competitive differentiator is most valuable to insurance companies based on our financial calculations and reasoning. However, we believe it will be very difficult to target these insurance companies without Apple iOS compatibility because insurance companies want to provide and monitor special discounts available to all of their customers, not a select few based on type of smartphone they own. We also believe Apple will not approve of the Don't Text application on their devices until it is proven successful in other markets. Many safe driving apps and products are designed only for Android and BlackBerry right now due to Apple's restriction on limiting their own product's functionality, so until Apple discovers drastic reasoning to participate, we do not think they will eliminate texting and calling while driving functions. Also, Apple is known to be a leader in their industry, so if they haven't complied with the terms of such applications yet, we do not see it likely they follow in the footsteps of Android and BlackBerry. Apple is financially successful from many endeavors and likely does not need the projected revenue stream provided by this concept. Again, we cycle back to the competition limiting our abilities to launch the product, especially without Apple on board.

Based on our detailed analysis, we believe Don't Text is a product that provides value to many different market segments. People feel very passionately about safe driving, and there are many parties who could benefit socially and financially from this technology. However bringing this product to market presents many challenges and we have identified several barriers to entry. Our overall recommendation is for Don't Text to target insurance companies, contingent on the approval from Apple. From our primary and secondary market research we have found that drivers are interested in any savings they can obtain on their auto insurance and are willing to change their behavior to become eligible, as exemplified by our survey results and the more than one million users of Progressive's Snapshot discount (Progressive, 2014).

In order for Don't Text to succeed and reach the overall goal of obtaining the first 100,000 to 300,000 users and beyond, we believe that the company should first focus on the compatibility issue with Apple's operating system. It is imperative that Don't Text have full compatibility with all of the major smartphone operating systems before attempting to target the auto insurance industry. After this has been achieved, Don't Text should immediately focus their attention on securing contracts with major auto insurance providers.

5. Sample Business Plan

This sample business plan was created in order illustrate the functional requirements identified through the axiomatic design process and how they can be applied by the company. As mentioned previously, this business plan will not include information about product development, the organizational plan, or the logistics plan because of the identified scope of our project. However, it is important to note that these areas would be presented in a complete business plan.

5.1. Market Analysis

5.1.1. Industry Analysis

The two main industries that Don't Text falls under are mobile applications and big data. The mobile application industry produces apps from weather, to games, to social media and more. This industry has a large amount of players and it is difficult to obtain any sort of substantial market share. However, this is not a concern for Don't Text because Don't Text will not be generating revenue from app sales. While other apps charge a download fee, Don't Text will be free to users and the overall success and growth of this industry is less of a concern.

The service aspect of Don't Text is in the big data industry. According to Oracle, "big data is the derivation of value from traditional relational database-driven business decision making, augmented with new sources of unstructured data" (MIT, 2013). Don't Text falls under this description because it will provide insurance companies with new sources of large amounts of data based on consumer distracted driving habits that can ultimately be used to save them money. There are currently hundreds of companies in this industry that provide big data services to other businesses, but no other companies are providing the same type of data based on consumer cell phone use while operating a motor vehicle.

5.1.1.1. Future Outlook and Trends

Overall, the mobile applications and big data industries have a positive future outlook. Free app downloads are estimated to account for 91% of all app downloads in 2013 (Gartner, 2013). In 2012, free app downloads were over fifty-seven billion and by 2017 are projected to be up to over 253 billion (Gartner, 2013). Simon Khalaf, Chief Executive of mobile analytics firm Flurry Inc., said the apps industry "is like cars at the turn of the last century, you see the growth of roads and know they're going to be big, but it is still in the early days" (Wall Street Journal,

2013). This is a good sign for Don't Text because free app downloads are likely to increase over the next five years and there is no sign this growth trend will end.

The outlook of the big data industry is also very positive. The big data industry was valued at $3.2 billion in 2010 and is expected to grow to $16.9 billion in 2015 (Infosys, n.d.). Big data is trending in several different ways. Two of the main trends are described as follows:

1. "No longer will big data be the bastion of scientists — enterprises will look for technology solutions that can be easily configured based on user preferences, provide rich visualization dashboards for executives, and accessed on smartphones and tablets" (Infosys, n.d.).
2. "Enterprises cannot afford to wait around for big data to be processed at its own time — they will need near-real-time results that match the speed of traditional business intelligence" (Infosys, n.d.).

The industry growth and trends are very favorable for a product like Don't Text because the industry as a whole is growing and in a way that Don't Text can cater to.

5.1.1.2. Industry and Market Forecast

Currently both mobile applications and big data are being used in the insurance market. Many of the major insurance companies put out mobile applications in order for insurance information to be more accessible to their clients. Don't Text would be another mobile application tool for the insurance company's customer and therefore it would likely meet little resistance in terms of user experience and downloading capabilities. Big data is a major part of the insurance industry because insurance companies collect their own data as well as obtain data from outside sources for underwriting purposes. Don't Text would be providing these insurance companies with a new source of data, cell phone use while driving, so they are able to better analyze their customers and tailor policy decisions based on this data.

5.1.2. Target Market and Segment Strategy

The primary market we are going to target is auto insurance companies. We have chosen this particular business-to-business segment because it has the largest revenue opportunity for Don't Text. Auto insurance industry claims are in the $120 billion range and with an estimated 23% of these claims caused by cell phone use while driving; there is a huge amount of money on the line. By protecting this particular line of revenue for insurance companies and charging them

a percentage of their savings, Don't Text will have the opportunity to make a substantial amount of money.

5.1.2.1. Market Needs

Insurance companies will see Don't Text as informational. Primarily it allows them to track its customers and see who is more likely to text while driving rather than simply make assumptions. This device will stop or limit people from texting and driving, which should lead to fewer accidents. For the insurance companies, Don't Text is a way to protect their revenue stream by reducing the number of claims caused by cell phone use while driving.

It is also important for Don't Text to consider the end user. Although the drivers who will be using Don't Text are not the suggested direct customers, their needs still have to be considered. These consumers want a way to reduce their car insurance expense through the accountability of safe driving. By providing these consumers with Don't Text not only will they be able to save money on their car insurance but indirectly parents of teenage drivers will benefit from knowing their loved ones are being held accountable for their driving habits.

5.1.2.2. Market Trends

The auto insurance industry is currently undergoing a trend that directly correlates to the services Don't Text can provide. This trend involves the concept of "pay-as-you-drive" auto insurance also known as usage-based insurance that has been popularized by Progressive's Snapshot Discount (Progressive, 2014). The idea with pay-as-you-drive insurance is that consumers are able to save money on their car insurance based on their individual driving habits and records. These types of programs track information such as the times that the user is driving, their breaking habits, and speed information. Users are then able to reduce their car insurance rates if their driving habits are determined to be less risky. According to insuranceQuotes.com, about two-thirds of drivers who sign up for pay-as-you-drive car insurance are saving money, but only about one percent of all drivers have signed up, and most Americans (58%) don't even know what pay-as-you-drive car insurance is (Insurance Business Weekly, 2013). As awareness of pay-as-you-drive insurance discounts increases, all insurance companies will likely be looking for similar programs they can offer their own customers. Don't Text is the next logical step in this trend because distracted driving caused by cell phone use leads to a large number of claims for insurance companies and both the company and user can save money by being held accountable for not participating in these dangerous activities.

5.1.2.3. Market Growth

The auto insurance industry is one that will be around for the foreseeable future. Automobiles are an essential part of modern society and car insurance is something that is currently required by the government. As mentioned previously, there is also an increasing trend for pay-as-you-drive auto insurance discounts, which Don't Text would fall under. For this reason we feel that the forecast for the industry Don't Text would serve is positive and supportive of a product that bans texting and driving. Additionally, in recent years there has been an increased awareness in the dangers of texting and driving that creates an opportunity for a product like Don't Text.

5.2. Strategy and Implementation

5.2.1. Competitive Edge

The competitive edge of Don't Text is directly related to the specific market segment of insurance companies being targeted and how this industry can benefit from the unique accountability aspects that were mentioned previously. The competitors of Don't Text such as "Textecution", "txtBlocker", and "Safely Go" heavily rely on an administrator, such as a parent, to ensure the intended user is utilizing the application properly (Nationwide, 2011). Additionally, the entire functionality of these products can be disabled by simply turning off location services or the application itself. However, with Don't Text, although there will be an optional administrator function that will allow access for certain emergency contacts, the user accountability is not contingent on the verification of the administrator. Alternatively, the insurance provider will use the data collected by the OBD device to insure the device is being used properly and all of the time. The software will be able to measure the data collected against what is normal and point out red flags where the app is not being used when it is supposed to. This will eliminate the issue of when a user's phone has a dead battery or an emergency phone call has to be received or placed because the software will know what normal "excuses" will look like and will be able to identify when the activity becomes "un-normal". This function will be available through a connection to a centralized data repository that will collect the necessary information from the phone for future reference when monitoring the car or phone directly is not an option. This ability gives Don't Text a competitive edge because other similar products do not currently have this type of monitoring capability and therefore cannot provide insurance companies with this type of benefit. It is important to note that the direct competitor, Cellcontrol

also utilizes an OBD devices to monitor the user but they are not currently targeting the insurance industry.

5.2.2. Marketing Strategy

Don't Text should market Don't Text as a life-saving device that prevents distracted driving and as a result, protects part of an insurance company's revenue stream. The device should be marketed directly to the insurance companies because they represent the biggest revenue opportunity and have the best potential for rapid growth. Doing so will prevent expensive national advertising campaigns that are typically required for selling directly to consumers around the country.

5.2.2.1. Positioning Statement

The image that should be created in the minds of end users is that of safety and in turn, life-saving ability. People should want to use Don't Text because not only can they save money, but because they will reduce their risk for accidents for themselves and their loved ones. To insurance companies, Don't Text should be positioned in such a way that they see the product as a partner helping to significantly reduce their claims cost. This position will be emphasized by the way the product is priced because Don't Text will only make money by taking a percentage of the money the insurance companies save.

5.2.2.2. Pricing Strategy

The suggested pricing strategy for Don't Text involves charging the insurance companies an amount based on their savings from their customers using the device. With this strategy, the insurance company will not be charged on a per unit basis, but instead will only be charged as a percentage of what they save on claims. Even taking just 1% of the costs that are being saved from reduced claims would result in substantial generated revenue for Don't Text. This concept will be further explained in section 5.2.3. Sales Forecast.

5.2.2.3. Promotion Strategy

With the target market of insurance companies, the best way to reach these customers is to travel to their headquarters and present the business opportunity. Although these insurance companies are the direct customers, it is important to consider the end consumer as well (the insurance companies' customers). In order to generate awareness and garner support for Don't Text, the company should work with nonprofits and other groups that campaign against texting

and driving. Not only will this marketing plan draw more attention to the product's targeted issue, but it will be positive public relations for Don't Text and help to make the product more appealing to the customers. Once initial contact is established with car insurance companies the main promotional efforts would likely only include a website with information about Don't Text and the insurance companies carrying the device. The ad campaign would focus on reaching individuals as well as companies. This website would likely contain the following sections:

- Statistics
- Insurance companies using the product
- Information on the product
- Information on the company and employees
- How to buy and use Don't Text
- Contact info

Since we are not suggesting Don't Text target a large consumer market, there will not be any sort of mass media campaigns, but instead focus will be on how to target individual auto insurance companies one at a time. The website will be important because it will be the only interaction that the company has with the end user of Don't Text.

5.2.2.4. Distribution Strategy

The company should create sales pitches to present to appropriate departments within major insurance companies in order to introduce and promote Don't Text, with the goal of reaching top executives. Initially, Don't Text should look for companies that do not currently provide diagnostic port devices to customers to offer discounts. From these presentations and sales pitches, Don't Text would negotiate exclusive contracts with insurance companies for the product, software, and training of the employees who will serve as customer service representatives for the end users.

To distribute the OBD device, Don't Text must have them manufactured and then shipped to the insurance companies. These devices should be purchased at a wholesale price in large quantities to help reduce the cost of manufacturing many small batches over the same period of time. The distribution of the cellphone application, which communicates with the diagnostic device, will be through various app stores such as Apple's App Store and Google Play. The software will be distributed to the insurance company and Don't Text will train the appropriate insurance company employees on how to use the program.

The distribution and communication channels for a service contract are slightly different. Insurance companies may opt for a service contract after the initial sale so they can constantly work with Don't Text on product improvements. Here, communication between Don't Text and the consumer is key to the success of a service contract. Don't Text service employees will be able to attain virtual private network (VPN) access to the servers that run the software and manage data collected by the OBD devices. Don't Text will also have trained employees in basic troubleshooting of the software, OBD device, application and any other features of the product.

5.2.2.5. Marketing Programs

Promotional programs for Don't Text should be fairly limited. The main promotional activity would be contacting auto insurance agencies and being able to thoroughly explain what Don't Text is and how it can help to protect their revenue stream. This may involve a contractual relationship with a third party marketing company that works frequently with automobile insurance companies so that Don't Text will not have to approach the big-name insurance companies as a small startup firm. As a result, promotional programs will mostly involve the development of marketing materials and a strong pitch.

5.2.3. Strategic Alliances

A potential beneficial alliance for Don't Text could be nonprofits and other groups that campaign against texting and driving. As previously mentioned, not only will this draw more attention to the problem that the product targets but it will be positive public relations for Don't Text and help to make the product more appealing to the customers. It is very important for Don't Text to be seen as a positive product to the public because they are the end users and should trust the company and understand the importance of driving without cell phone distractions. For example, to gain a positive public image, Don't Text could offer to sponsor some type of event for a high school. Don't Text could pay for a "Dream Prom" to the high school that is able to tally the most miles driven by their staff and students with Don't Text enabled in their cars.

5.3. Financial Plan

5.3.1. Important Assumptions

The primary assumption being made is what companies we will be able to contract with during the first three years of business. We are predicting that by the end of Year 3, we will have

contracts with Allstate, Progressive, and State Farm, or another combination of insurance companies of relative size. Other assumptions including those made for costs and expenses are based on this primary assumption and are described in detail in each of the financial statements. While the following financial models are based on these assumptions, they have been designed in an Excel spreadsheet so that as assumptions are altered, the corresponding line items will adjust accordingly. This provides benefit to Don't Text because they will be able to input their actual data in to use these models and view the corresponding results.

5.3.2. Key Financial Indicators

Two key financial indicators are revenue and direct cost of sales. These projections can be seen below in Table 5. The large revenue increase from year to year is based on the assumption that Don't Text will be able to secure one new contract per year. The costs are estimated based on the number of OBD devices to fulfill the contract multiplied by the cost per unit of $5 and the assumption that ten times more devices than are expected to prevent accidents will be needed. Using projections for both revenue and cost of goods sold we were able to calculate gross profit as well as gross margin percent.

	Year 1	Year 2	Year 3
Sales Revenue	$2,470,954	$5,271,996	$9,501,889
Direct Cost of Sales	$1,164,249	$2,483,949	$4,476,849
Gross Profit	$1,302,755	$2,781,247	$4,487,049
Gross Margin Percent	53%	53%	53%

Table 5 - Key Financial Indicators

Another important financial indicator is net profit. The following is the projected net income for Years 1 through 3:

- Year 1: $589,722
- Year 2: $1,600,572
- Year 3: $3,175,311

Don’t Text’s financial strength lies in the high amount of revenue that is able to be generated from a single contract. The cost of goods sold is relatively low and fixed, allowing the net profit to grow substantially as new contracts are obtained.

5.3.3. Break-Even Analysis

Table 6 below illustrates the break-even analysis we have conducted for the business, Don’t Text. This analysis was completed based on gathering numbers from the income statement

such as Year 1 revenue and total fixed and variable cost. From these numbers we were then able to calculate the revenue per device as well as the monthly fixed cost. From this we calculated a break-even point of 2,975 units, which is equivalent to $441,523 dollars or 0.18 contracts. In other words, we will break even during the first year when 18% of the contract payment is received which will likely occur by the end of the first quarter.

Number of Devices that Prevented Accidents	Year 1 Revenue	Total Fixed Cost	Total Variable Cost
16649	$2,470,954	$426,648	$1,164,150
	Revenue Per Device	**Monthly Fixed Cost**	**Cost Per Device**
	$148.41	$35,554	$5.00
Break-even=	2975 units*	$441,523 dollars	0.18 contracts

Table 6- Break-Even Analysis

*These units refer to the number of accidents that must be prevented by Don't Text.

5.3.4. Projected Profit and Loss Statement

The profit and loss statement has been projected out for three years (see Appendix I). As mentioned previously in the plan, we are estimating that we will be able to obtain one new insurance company contract per year for the first three years. For Year 1, we are basing sales revenue on obtaining a contract with a company that is similar in size to Allstate. By using the revenue model of charging 2.5% of the company's savings Don't Text is projected to obtain a contract worth $2,470,954 (as explained in section 3.3.1.). Although this seems like a high number, we believe it is reasonable because it is based on the pessimistic scenario of a 4% consumer adoption rate. For Years 2 and 3, we used the same revenue model and anticipated adding an additional company (similar in size to Progressive) during Year 2, and adding a third company (similar in size to State Farm) during Year 3.

The next line item is direct cost of sales. This number has two components, the cost needed to purchase and distribute the OBD devices and the cost associated with hosting the Don't Text application on the Apple Store (Google Play does not charge for hosting). In order to estimate the cost of the OBD devices we used the number of car accidents that would have to be

prevented to save the particular company the specified amount of money. We then multiplied this number by ten to account for the people who would have the device but would not have gotten into an accident without it. Finally we multiplied that number by $5, which is the estimated cost to manufacture and ship one OBD device to the insurance companies. Other costs of sales were estimated by predicting the price of both travel and travel related expenses to send Don't Text's leadership team to the insurance company to sell the contract. Other costs of sales include the price of a driving column and a prototype in order to effectively demonstrate how Don't Text works. As a result of subtracting the costs of goods sold from the revenue, we calculated a gross profit of $1,302,755 with a gross margin percent of 53.

Most of the expenses are based on standards such as rent, utilities, insurance and payroll taxes. The marketing and promotions expense was calculated based on the "other costs of sales" multiplied by five to represent traveling to five different insurance companies. Depreciation was calculated for the two major assets, computers and servers. Finally, the line item of "other expense" was estimated to be $5,000 to budget for additional unforeseen expenses. Additionally, we calculated the estimated income tax. As a result, the projected net profit for Year 1 is $589,722 with a 24% net profit to sales ratio. The same calculations were used in order to estimate net profit for Years 2 and 3.

5.3.5. Projected Statement of Cash Flow

The cash flow statement has been projected for three years (see Appendix J). The first line item, "Cash from Sales" is based on the projection that during the first year we will receive three out of the total four payments owed to Don't Text per the contract. As a result, the rest of the amount owed falls under accounts receivable in the following year. Under the subtitle "Expenditures for Operations" cash spending for each year is equal to the total operating expense plus the income expense for that particular year. Sales tax is paid out in cash and was calculated by multiplying the sales revenue for each year by Massachusetts's sales tax of 6.25%. For the first year, the beginning cash balance comes from the cash required as part of the startup plan and in subsequent years the beginning cash balance comes from the cash balance of the previous year. We feel that the resulting cash balances in every year are adequate to maintain the financial health of Don't Text.

5.3.6. Projected Balance Sheet

The balance sheet has been projected for three years (see Appendix K). The first line item, "Cash", comes directly from the statement of cash flow for any particular year. Accounts receivable is based on what is still owed to Don't Text based on the assumption that we will receive three out of four quarterly payments in any given year. The only other asset Don't Text has is the servers and computers, which have both been depreciated appropriately. Retained earnings was calculated by adding the net income to the retained earnings of the previous year. To calculate net worth we subtracted total liabilities from total assets and by Year 3 we have projected the net worth to be over $5.3 million.

5.3.7. Business Ratios

We have calculated the primary business ratios that allow for a quick analysis of various aspects of the Don't Text Company. The following ratios are especially important to note:

- **Sales Growth:** Year 2 → 213%

  Year 3 →180%

  Indicates strong sales growth from Years 1 to 2 and Years 2 to 3.
- **Gross Margin:** 53% for Years 1 to 3

  Indicates consistency and a high gross margin percent.
- **Current Ratio:** 5.06 and above for Years 1 to 3

  Well over 1 indicating that Don't Text is highly capable of paying off liabilities and is able to turn the product into cash relatively quickly.

The full ratio table can be found in Appendix L.

5.3.8. Time Value of Money Analysis

We have conducted a basic time value of money analysis for Don't Text in order to project the worth of the company today, based on an estimated rate of return for the venture over three years. To do this we used two different methods in order to calculate the net present value of Don't Text based on the projected financials. The idea behind time value of money analysis is that money available at the present time is worth more than the same amount in the future due to its potential earning capacity. In order to determine if investing in a venture is worthwhile, it is beneficial to estimate what the company will be worth over a determined period of time.

The first calculation was used to determine the present value (PV) of Don't Text, by basing it on the projected net worth of the company at the end of Year 3 (as seen on the balance

sheet). The projected net worth that we previously calculated as part of our financial projections was $5,365,605. In order to calculate the present value of this amount, we used a discount rate of 7.82%, calculated over a three-year period. We determined this discount rate by basing it on the 10-year average return rate of the NASDAQ (Nasdaq Composite Index, 2014). We feel this basis rate provides a fair estimate of the rate of return that Don't Text is capable of achieving because the NASDAQ is comprised of many technology-based companies. This calculation resulted in an estimated present value of Don't Text of $4,280,758.

The second calculation was done to estimate the net present value (NPV) of Don't Text based on discounted cash flow. This method involves determining the value of a venture based on the sum of its cash flows over a determined time period. To perform this calculation we used the cash flows for each year from the projected cash flow statement and the previously mentioned 7.82% discount rate. This calculation resulted in an estimated NPV of $3,397,904. By taking the average of these two different time value of money calculations, we determined that the estimated value of Don't Text today, based on the financial projections for the first three years, is $3,839,331. The calculations can be seen in further detail in Appendix M.

5.3.9. Long-term Plan

After Year 3, we projected Don't Text will be working with three of the top insurance companies. This will generate a significant profit for Don't Text that allow us to consider three primary long-term options based on the condition of the market and outside factors. One option would be to continue to sell to insurance companies. However, it is likely that Don't Text will have a competitor who has a very similar product targeting the insurance industry, or large insurance companies will come up with a similar solution internally. If this is the case, the second option could be to target the larger consumer market, focusing on parents with teenage drivers (as mentioned in section 3.2). This alternative market would likely not be capable of drawing the same high level of revenue that the insurance industry can provide to the company but is a viable option. The third option, if Don't Text was unable to expand in existing or new markets, would be to close or sell the company. This choice may seem drastic but with a projected net worth of over $5.3 million dollars after three years, this could provide a significant amount of money to the founders and other shareholders and make their time, effort, and investment very worthwhile.

6. Project Outcomes

Primary Project Outcomes:

1. Implementation of axiomatic design to identify functional requirements needed to obtain the desired amount of initial users for Don't Text.
2. Extensive market research to segment target markets for Don't Text.
3. Quantification of the value of market opportunity for Don't Text through case studies and financial modeling.
4. Strongly supported recommendations for future decisions involving Don't Text market penetration including a sample business plan.

Overall, this project was able to use axiomatic design to zero in on what business elements are needed in order for Don't Text to successfully reach their desired amount of initial users. We identified several components that must be present including product development, organizational, marketing and logistic plans. We then established design parameters that explain the factors that need to be considered for each of the functional requirements as well as how to measure if they have been achieved.

Next, we completed extensive market research to identify all potential market segments for Don't Text and then analyzed which of these opportunities were the most feasible. This involved researching how each segment could benefit from the use of Don't Text, as well as identifying reasons they would not want to purchase the product. From this basic analysis, we were able to determine the four market segments that presented the greatest potential for Don't Text.

After determining these four market segments, we then created models to quantify each of the opportunities. This involved in-depth analysis through case studies and available market data. From these evaluations, we determined that the insurance industry represented the largest opportunity for Don't Text, followed by the general consumer market.

Finally, our team was able to make recommendations for Don't Text based on our completed primary and secondary research. We have recommended that Don't Text pursue the auto insurance industry as their target segment, contingent on the future compatibility of the app with Apple's iOS. These recommendations were expanded upon in a sample business plan that

highlights various aspects of the supporting business structure needed to launch Don’t Text to the insurance industry market.

We have completed each of the four tasks in order to provide our sponsor, Sean Mahoney and his company, with recommendations based on extensive market research and analysis. We feel that our project will be of great benefit and will aid Don’t Text in making decisions for the future of this product.

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Appendices

Appendix A- Full Acclaro Axiomatic Design Decomposition

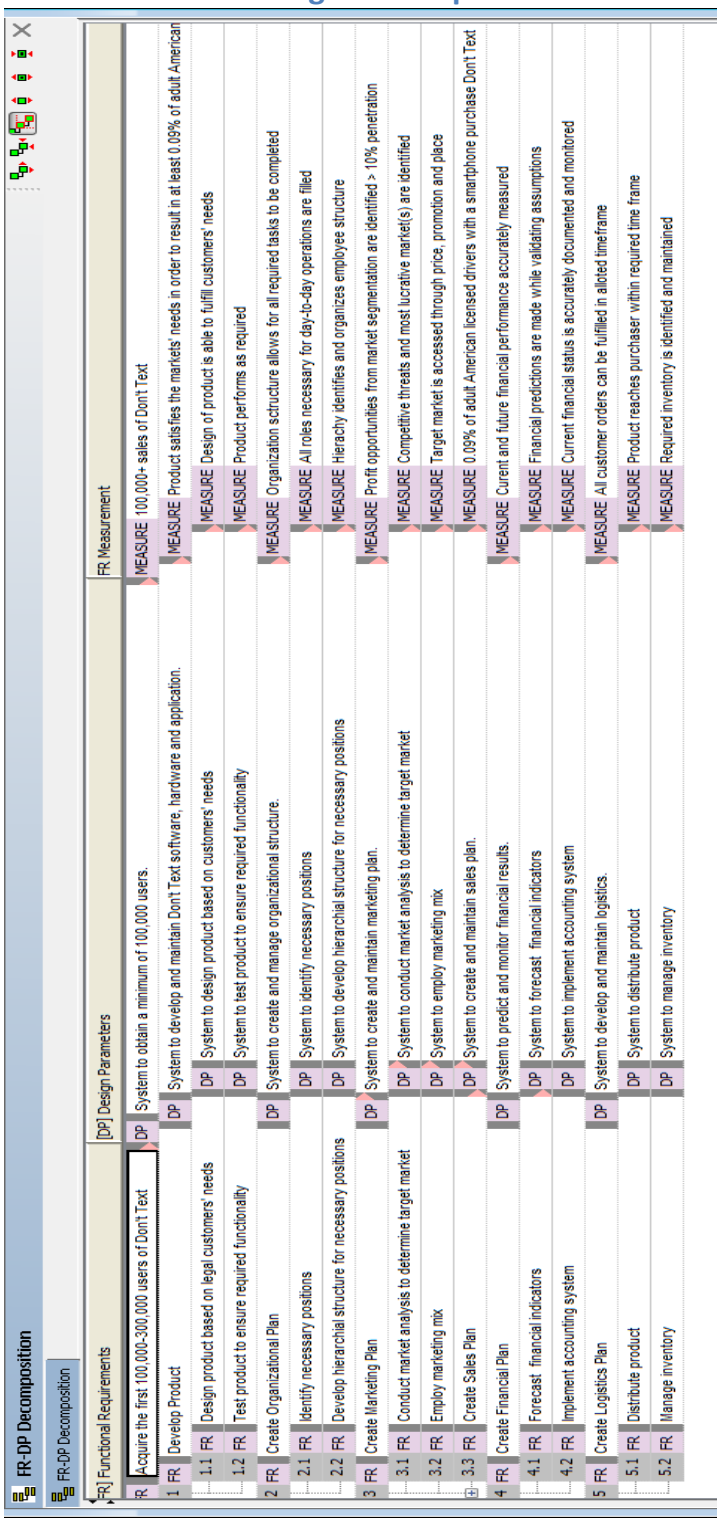


Figure 2 - Axiomatic Design Decomposition

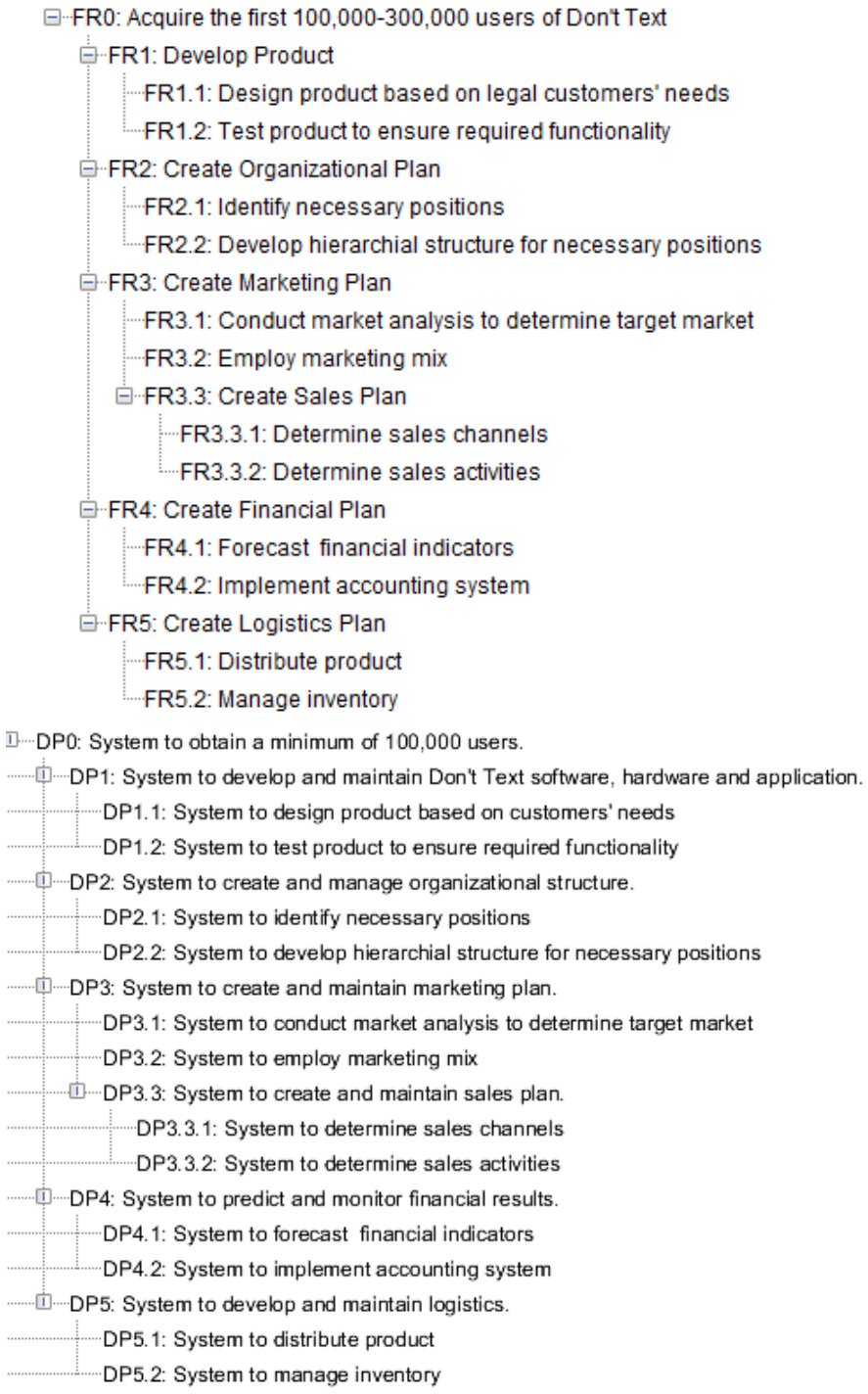


Figure 3 - Detailed Axiomatic Design Decomposition Functional Requirements and Design Parameters

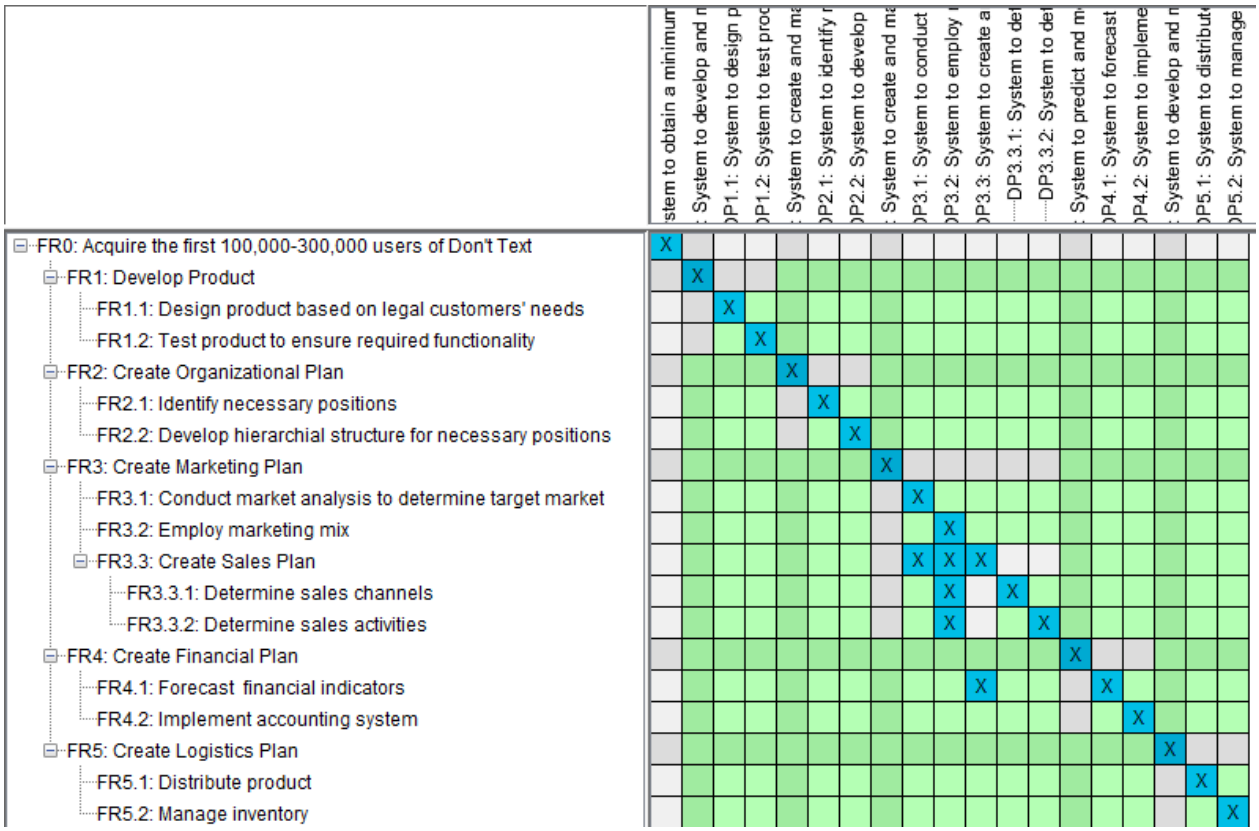


Figure 4 - Axiomatic Design Matrix

Appendix B- Auto Insurance Industry Market Opportunity Analysis

Auto Insurance Industry Constants				Note: this model assumes Apple, Android, and Blackberry compatability				
Total Incurred loss for auto insurance industry ($)[1]	% of car accidents caused by cellphone use[2]	Total Auto Insurance Claims Expense caused by Cellphone Use		Amount per collision[3]	Number of State Farm Accidents That Would Have to Be Prevented by Don't Text (Scenario 3)		Number of Allstate Accidents That Would Have to Be Prevented by Don't Text (Scenario 3)	Progressive Accidents That Would Have to Be Prevented by Don't Text (Scenario 3)
$120,044,705,000	23%	$27,610,282,150		$4,245	39,858		23,283	26,394

By Company

	Market Share[4]	Total Claims Expenses	Percent of Business that is Auto*	Adoption Rate of Don't Text	Calculation 1 (based on industry) Total Claims Expense Caused by Cellphone Use	Calculation 2 (based on) Total Claims Expense Caused by Cellphone Use	Average
State Farm	18.7%	$27,044,000,000 [5]	53% (43 million auto policies)				
Scenario 1 (optimistic)				12%	$619,574,731	$395,599,632	**$507,587,182**
Scenario 2 (average)				8%	$413,049,821	$263,733,088	**$338,391,454**
Scenario 3 (pessimistic)				4%	$206,524,910	$131,866,544	**$169,195,727**
Allstate	10.2%	$18,484,000,000 [7]	50%				
Scenario 1 (optimistic)				12%	$337,949,854	$255,079,200	**$296,514,527**
Scenario 2 (average)				8%	$225,299,902	$170,052,800	**$197,676,351**
Scenario 3 (pessimistic)				4%	$112,649,951	$85,026,400	**$98,838,176**
Progressive	7.7%	$11,740,000,000	50%				
Scenario 1 (optimistic)				12%	$510,238,014	$162,012,000	**$336,125,007**
Scenario 2 (average)				8%	$340,158,676	$108,008,000	**$224,083,338**
Scenario 3 (pessimistic)				4%	$170,079,338	$54,004,000	**$112,041,669**
Hanover	0.58%	$2,974,400,000	65% (Personal) 15% (Commercial)				
Scenario 1 (optimistic)				12%	$19,216,756.38	$53,360,736	**$36,288,746**
Scenario 2 (average)				8%	$12,811,170.92	$35,573,824	**$24,192,497**
Scenario 3 (pessimistic)				4%	$6,405,585.46	$17,786,912	**$12,096,249**
			62.5%				

* *doesn't factor in difference in claims between type of insurance*

red numbers are estimated

Figure 5 - Auto Insurance Industry Market Opportunity Calculations by Company

Example Revenue Stream for Don't Text- Percentage of Savings Model			
Percentage of savings**	1%	2.5%	5%
(State Farm)	$1,691,957	$4,229,893	$8,459,786
(Allstate)	$988,382	$2,470,954	$4,941,909
(Progressive)	$1,120,417	$2,801,042	$5,602,083
** based on scenario 3 (pessimistic)			

Adoption Rate Case Study[8]	
1,000,000	use Snapshot Discount
12,000,000	total progressive customers
8%	**Adoption Rate**

[1] http://www.iii.org/facts_statistics/auto-insurance.html
[2] Virginia Tech Transportation Institute: http://www.distraction.gov/research/pdf-files/driver-distraction-commercial-vehicle-operations.pdf
[3] http://www.iii.org/facts_statistics/auto-insurance.html
[4] http://www.carinsurancecompanies.net/top-10-car-insurance-companies-by-market-share/
[5] http://www.statefarm.com/aboutus/_pdf/2012_annual_report.pdf
[6] http://www.statefarm.com/aboutus/newsroom/resources/fast_facts.asp
[7] http://www.allstate.com/resources/Allstate/attachments/annual-report/Allstate-Corporation-2012-Annual-

Figure 6 - Insurance Industry Example Revenue Stream

Appendix C- Consumer Market Opportunity Analysis

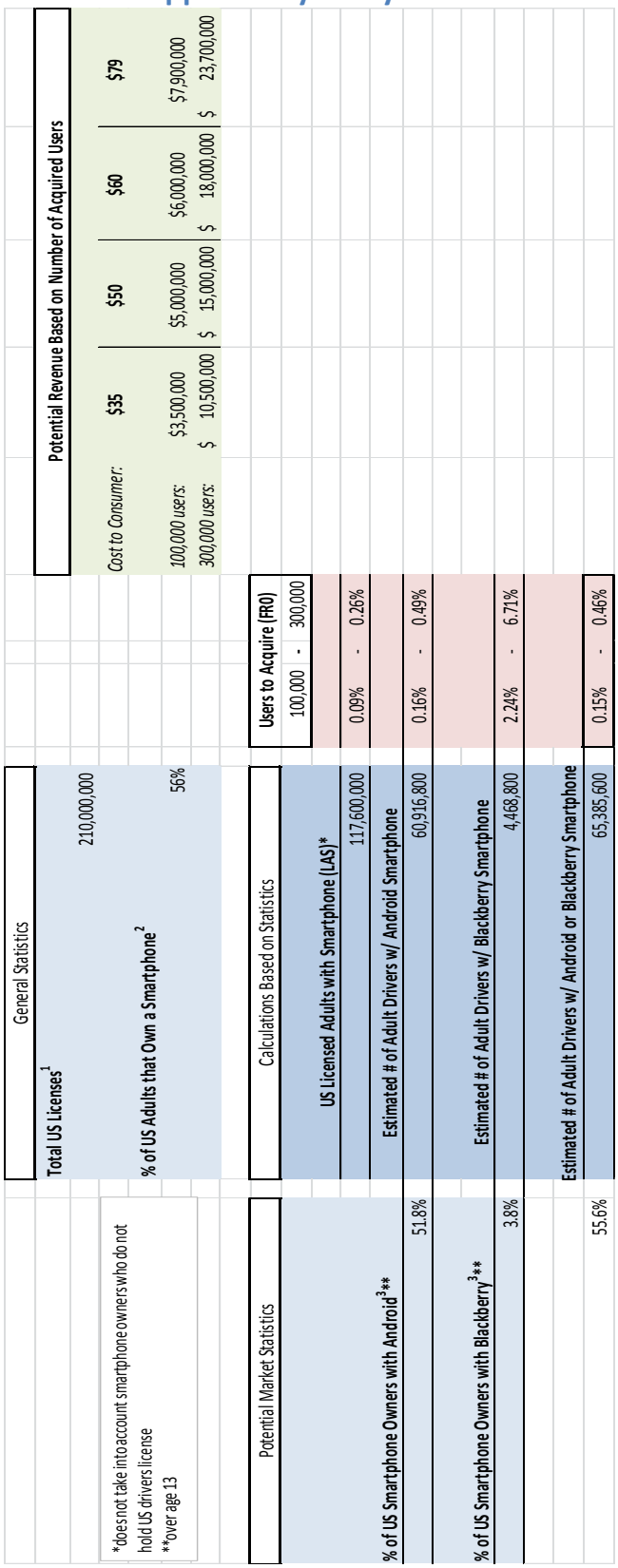


Figure 7 - Consumer Market Opportunity Analysis

Appendix D- Cell Phone Provider Market Opportunity Analysis

Given Statistics

Average Damages Sought:	Estimated # of Injuries/Deaths caused by distracted driving annually in the US[1]:	% of US Smartphone Owners with Android/Blackberry (over 13)[2]	% of Market Share of US Wireless Carriers (2012)[3]*:	
$10,000	425,000	55.6%	Verizon	33.7%
			AT&T	32.1%
			Sprint	17.3%
			T-Mobile	10.3%

*Assuming same percent market share for smartphones as phones in general

Calculations

% of accidents where party seeks damages from phone provider	0.125%	0.25%	0.5%	0.75%	1%
# of accidents per year when party sues cell phone provider	531	1,063	2,125	3,188	4,250
Cost of lawsuits per year if cell phone provider is charged each time	$ 5,312,500	$ 10,625,000	$ 21,250,000	$ 31,875,000	$ 42,500,000

Estimated Damages Paid by Carrier (50% payout rate)**

Verizon	$ 895,156	$ 1,790,313	$ 3,580,625	$ 5,370,938	$ 7,161,250
AT&T	$ 852,656	$ 1,705,313	$ 3,410,625	$ 5,115,938	$ 6,821,250
Sprint	$ 459,531	$ 919,063	$ 1,838,125	$ 2,757,188	$ 3,676,250
T-Mobile	$ 273,594	$ 547,188	$ 1,094,375	$ 1,641,563	$ 2,188,750

**Assumes carrier market share percentages are represented the same in distracted driving accidents

Figure 8 - Cell Phone Provider Statistics and Calculations

Potential Revenue to be Protected

						% of Accidents Prevented by Don't Text	Adoption Rate
Verizon	$ 6,221	$ 12,443	$ 24,885	$ 37,328	$ 49,771	25%	5%
AT&T	$ 5,926	$ 11,852	$ 23,704	$ 35,556	$ 47,408		
Sprint	$ 3,194	$ 6,387	$ 12,775	$ 19,162	$ 25,550		
T-Mobile	$ 1,901	$ 3,803	$ 7,606	$ 11,409	$ 15,212		
Verizon	$ 12,443	$ 24,885	$ 49,771	$ 74,656	$ 99,541	50%	
AT&T	$ 11,852	$ 23,704	$ 47,408	$ 71,112	$ 94,815		
Sprint	$ 6,387	$ 12,775	$ 25,550	$ 38,325	$ 51,100		
T-Mobile	$ 3,803	$ 7,606	$ 15,212	$ 22,818	$ 30,424		
Verizon	$ 24,885	$ 49,771	$ 99,541	$ 149,312	$ 199,083	100%	
AT&T	$ 23,704	$ 173	$ 346	$ 519	$ 692		
Sprint	$ 12,775	$ 165	$ 329	$ 494	$ 659		
T-Mobile	$ 7,606	$ 89	$ 178	$ 266	$ 355		

Example Revenue Stream for Don't Text- Percentage of Savings Model

Percentage of savings***	1%	5%	10%
(Verizon)	$ 498	$ 2,489	$ 4,977
(AT&T)	$ 474	$ 2,370	$ 4,741
(Sprint)	$ 255	$ 1,277	$ 2,555
(T-Mobile)	$ 152	$ 761	$ 1,521

***Based on 0.5% suing rate, 50% of accidents prevented, and 5% adoption rate

Example Revenue Stream for Don't Text- # of Units Sold (wholesale)

	$25	$35	$45
100,000	$ 2,500,000	$ 3,500,000	$ 4,500,000
300,000	$ 7,500,000	$ 10,500,000	$ 13,500,000

Figure 9 - Cell Phone Market Potential Revenue

Desired Adoption Rate By Cell Phone Provider						
	# of Customers	# of customers with Android/Blackberry	5% Adoption Rate	Desired Adoption Rate (100,000 users)		Desired Adoption Rate (300,000 users)
(Verizon)	111,300,000	61,882,800	3,094,140	0.16%	-	0.48%
(AT&T)	105,200,000	58,491,200	2,924,560	0.17%	-	0.51%
(Sprint)	56,000,000	31,136,000	1,556,800	0.32%	-	0.96%
(T-Mobile)	33,000,000	18,348,000	917,400	0.55%	-	1.64%

[1] http://www.distraction.gov/content/get-the-facts/facts-and-statistics.html
[2]http://thenextweb.com/mobile/2013/11/06/comscore-apple-takes-40-6-share-top-us-smartphone-maker-samsung-gains-android-loses-share/#!upRz9
[3]http://scenic.princeton.edu/network20q/wiki/index.php?title=AT%26T_and_Verizon_Wireless_Trends

Figure 10 - Desired Adoption Rate by Cell Provider

Appendix E- Rental Car Company Market Opportunity Analysis

Car Rental Company Caluclated Statistics				
Company[1]	**Fleet Size (2012)**	**Calculated Market Share (based on Fleet Size)**	**Estimated Public Liabilty/Property Damage Expense***	**Potential Revenue Protection**
Enterprise Holdings	941,064	51%	$ 613,700,000	$ 3,923,998
Hertz Global Holdings	366,000	20%	$ 238,681,110	$ 1,526,127
Avis Budget Group	300,000	16%	$ 195,640,254	$ 1,250,924
Dollar Thrifty Automotive Group	122,000	7%	$ 79,560,370	$ 508,709
Other	128,200	7%	$ 83,603,602	$ 534,561
Total	1,857,264	100%	$ 1,211,185,336	$ 7,744,319

*does not factor in insurance payouts (expenses not paid by company)

Hertz Case Study Analysis			
		Estimated % of Damage Caused by Cell Phone Related Distracted Drivng	**Respective Dollar Value**
Public Liability[2]	$ 332,200,000	23%	$ 141,151,000
Property Damage[2]	$ 281,500,000		
Total	$ 613,700,000		
Ratio to Fleet Size	652.13		
Potential Revenue Protection:	**$ 3,923,998**		
% of Android/Blackberry Users	56%		
Adoption Rate	5%		

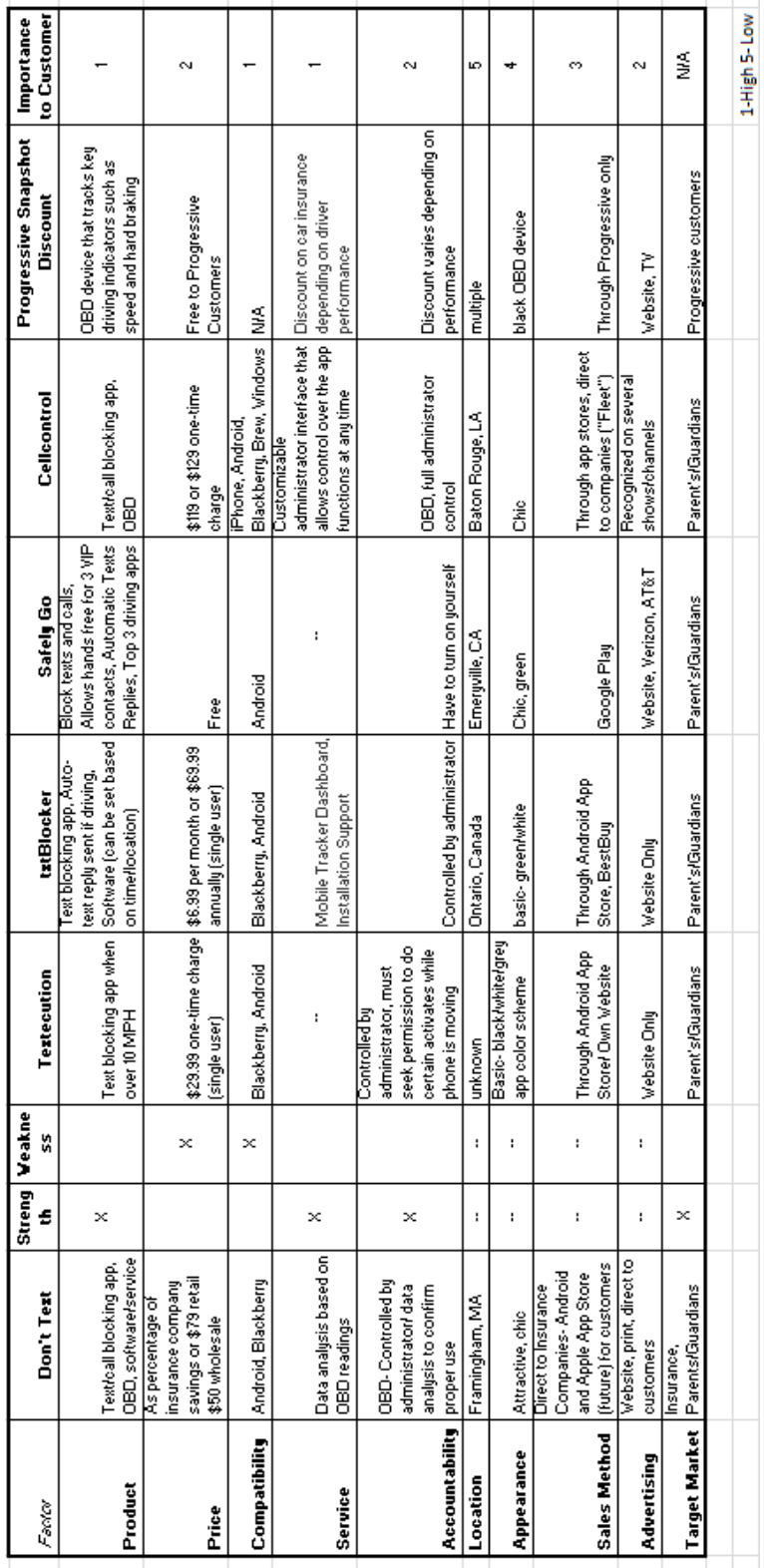
[1]http://www.autorentalnews.com/fileviewer/1650.aspx
[2]http://www.hertz.com/rentacar/abouthertz/index.jsp?targetPage=investorrelations.jsp

Example Revenue Stream for Don't Text- Percentage of Savings Model			
Percentage of savings	1%	5%	10%
Enterprise Holdings	$39,240	$196,200	$392,400
Hertz Global Holdings	$15,261	$76,306	$152,613
Avis Budget Group	$12,509	$62,546	$125,092
Dollar Thrifty Automotive Group	$5,087	$25,435	$50,871

Example Revenue Stream for Don't Text- # of Units Sold (wholesale)			
	$25	$35	$45
100,000	$ 2,500,000	$ 3,500,000	$ 4,500,000
300,000	$ 7,500,000	$ 10,500,000	$ 13,500,000

Figure 11 - Rental Car Company Market Opportunity Analysis

Appendix F- Competitor Analysis



Factor	Don't Text	Strength	Weakness	Textecution	txtBlocker	Safely Go	Cellcontrol	Progressive Snapshot Discount	Importance to Customer
Product	Textfcall blocking app, OBD, software/service	X		Text blocking app when over 10 MPH	Text blocking app, Auto-text reply sent if driving, Software (can be set based on time/location)	Block texts and calls, Allows hands free for 3 WP contacts, Automatic Texts Replies, Top 3 driving apps	Textfcall blocking app, OBD	OBD device that tracks key driving indicators such as speed and hard braking	1
Price	As percentage of insurance company savings or $79 retail $50 wholesale		X	$29.99 one-time charge (single user)	$6.99 per month or $69.99 annually (single user)	Free	$119 or $129 one-time charge	Free to Progressive Customers	2
Compatibility	Android, Blackberry		X	Blackberry, Android	Blackberry, Android	Android	iPhone, Android, Blackberry, Brew, Windows	N/A	1
Service	Data analysis based on OBD readings	X		--	Mobile Tracker Dashboard, Installation Support	--	Customizable administrator interface that allows control over the app functions at any time	Discount on car insurance depending on driver performance	1
Accountability	OBD- Controlled by administrator/ data analysis to confirm proper use	X		Controlled by administrator, must seek permission to do certain activates while phone is moving	Controlled by administrator	Have to turn on yourself	OBD, full administrator control	Discount varies depending on performance	2
Location	Framingham, MA	--	--	unknown	Ontario, Canada	Emeryville, CA	Baton Rouge, LA	multiple	5
Appearance	Attractive, chic	--	--	Basic- black/white/grey app color scheme	basic- green/white	Chic, green	Chic	black OBD device	4
Sales Method	Direct to Insurance Companies- Android and Apple App Store (future) for customers	--	--	Through Android App Store/ Own Website	Through Android App Store, BestBuy	Google Play	Through app stores, direct to companies ("Fleet")	Through Progressive only	3
Advertising	Website, print, direct to customers	--	--	Website Only	Website Only	Website, Verizon, AT&T	Recognized on several shows/channels	Website, TV	2
Target Market	Insurance, Parents/Guardians	X		Parent's/Guardians	Parent's/Guardians	Parent's/Guardians	Parent's/Guardians	Progressive customers	N/A
									1-High 5- Low

Figure 12 - Competitor Analysis

Appendix G- Survey Questions and Results

Question 1: What is your age?

#	Answer		Response	%
1	16-18		112	10.00%
2	19-21		520	46.43%
3	22-30		224	20.00%
4	31-40		66	5.89%
5	41-50		61	5.45%
6	51-60		90	8.04%
7	60+		47	4.20%
	Total		1,120	100.00%

Figure 13 - Survey Question 1 Results

Question 2: What is your gender?

#	Answer		Response	%
1	Male		557	49.73%
2	Female		563	50.27%
	Total		1,120	100.00%

Figure 14 - Survey Question 2 Results

Question 3: What type of cell phone do you own?

#	Answer		Response	%
1	iPhone		526	46.96%
2	Android		383	34.20%
3	Other		207	18.48%
4	I do not own a cell phone		4	0.36%
	Total		1,120	100.00%

Figure 15 - Survey Question 3 Results

Question 4: Do you hold a valid U.S. driver's license?

#	Answer		Response	%
1	Yes (if yes, what state is the car you primarily use registered in?)		1,042	94.04%
2	No		66	5.96%
	Total		1,108	100.00%

Figure 16 - Survey Question 4 Results

Question 5: What do you use your cell phone for while driving? (Select all that apply)

#	Answer		Response	%
1	Texting		286	27.61%
2	Checking Email		126	12.16%
3	Making Phone Calls		664	64.09%
4	Social Media		58	5.60%
5	Music		411	39.67%
6	GPS		579	55.89%
7	Other (please specify)		68	6.56%
8	I do not use my phone at all while driving		177	17.08%

Figure 17 - Survey Question 5 Results

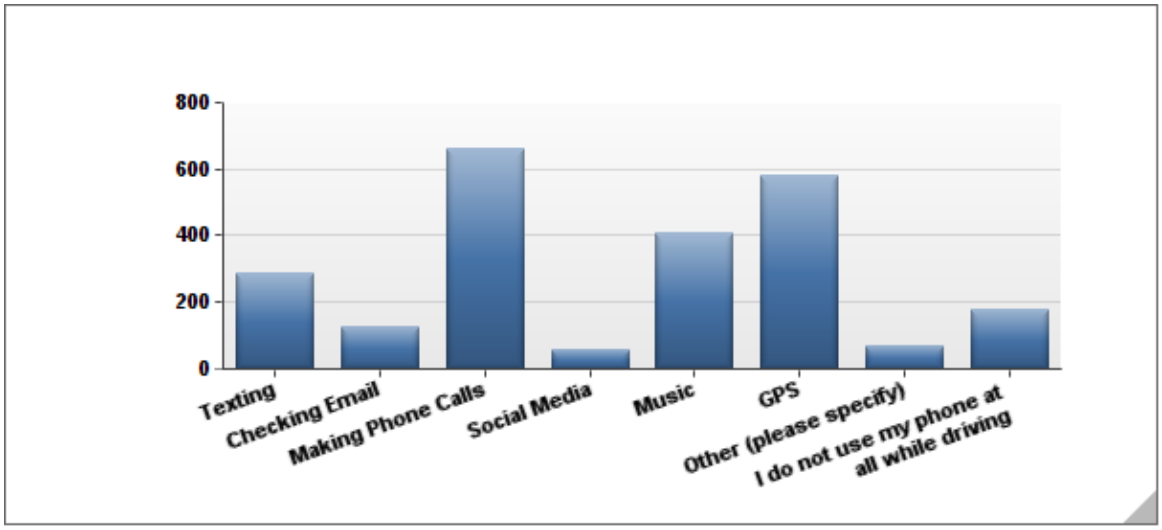


Figure 18 - Survey Question 5 Bar Chart

Question 6: How often do you use your phone for any purpose (other than music and GPS) while driving?

#	Answer		Response	%
1	Frequently (almost every time I drive)		75	9.25%
2	Sometimes (once in a while or only at red lights etc.)		338	41.68%
3	Rarely (only for special circumstances- i.e. running late, important phone call/email)		335	41.31%
4	I only ever use my phone for music and/or GPS		52	6.41%
5	I never use my phone for any purpose while driving		11	1.36%
	Total		811	100.00%

Figure 19 - Survey Question 6 Results

Question 7: How distracted from the road do you feel when using your cell phone to text message (or other activities) while driving?

#	Answer		Response	%
1	Not at all distracted		67	8.30%
2	Slightly distracted		374	46.34%
3	Moderately distracted		219	27.14%
4	Very distracted		147	18.22%
	Total		807	100.00%

Figure 20 - Survey Question 7 Results

Question 8: Have you ever had an experience where you feel that you had put yourself or others in danger while using your phone and driving?

#	Answer		Response	%
1	Yes (please explain incident)		165	17%
2	No		815	83%
	Total		980	100%

Figure 21 - Survey Question 8 Results

Question 9: If you were a passenger in a car, would you approve of the driver texting while driving?

#	Answer		Response	%
1	Yes, I am perfectly fine with the driver texting and driving		4	0%
2	Yes, if it is infrequent		131	13%
3	No, I would not approve		310	32%
4	No, I would not approve and would ask them not to text and drive		536	55%
	Total		981	100%

Figure 22 - Survey Question 9 Results

Question 10: Would you be willing to use a device and mobile application that prevented you from doing certain activities while driving such as texting or making phone calls if you were offered a discount on your car insurance?

#	Answer		Response	%
1	Yes		641	66%
2	No (please explain)		335	34%
	Total		976	100%

Figure 23 - Survey Question 10 Results

Question 11: Do you feel that having a device and mobile application that prevented you from doing certain activities while driving (such as texting or making phone calls) would make you a safer driver?

#	Answer		Response	%
1	Yes, I would be happy with any discount		424	43%
2	Yes, but only if discounts were very significant (i.e. greater than 25%)		270	28%
3	Yes, I don't use my phone while driving anyway		147	15%
4	No (please explain)		138	14%
	Total		979	100%

Figure 24 - Survey Question 11 Results

Question 12: Are you a parent?

#	Answer		Response	%
1	Yes		191	18%
2	No		860	82%
	Total		1,051	100%

Figure 25 - Survey Question 12 Results

Question 13: Would you be interested in purchasing a device for controlling and monitoring you child's use of their cell phone while they are driving?

#	Answer		Response	%
1	Yes		92	48%
2	No		61	32%
3	Other (please explain)		37	19%
	Total		190	100%

Figure 26 - Survey Question 13 Results

Other (please explain)
My children are all grown up
They are grown
No. She's 30 years old and lives out of state. She also had bluetooth:)
both are adults does not apply
My children are adults
My children are all adults
They are adults
would depend on the cost of the device
They are adults now
Depends on their age
All are adults now
No. they are all adults now.
Only if it also monitored fiddling with the radio, adjusting the ventilation, talking to passengers, reading books, swatting flies, etc.
Too old
They're adults
children are grown
Children are now adults
I'd say yes if my children were relatively new drivers, but they're all 25+ years of age.
adult children
My children are grown and out of the house.

Figure 27 - Survey Question 13 Explanations

Question 14: How much would you be willing to spend on a product like this?

#	Answer		Response	%
1	$0-$25		23	25%
2	$26-$50		32	35%
3	$51-$75		15	16%
4	$76-$100		13	14%
5	$101 +		9	10%
	Total		92	100%

Figure 28 - Survey Question 14 Results

Appendix H- Survey Cross Tabulations

	Yes (if yes, what state is the car you primarily use registered in?)	No	Total
Yes, I would be happy with any discount	272	0	272
Yes, but only if discounts were very significant (i.e. greater than 25%)	168	0	168
Yes, I don't use my phone while driving anyway	85	0	85
No (please explain)	92	0	92
Total	617	0	617

Figure 29 - Massachusetts Drivers and Insurance Discount Cross Tabulation

	Texting	Checking Email	Making Phone Calls	Social Media	Music	GPS	Other (please specify)	I do not use my phone at all while driving	Total
Not at all distracted	16	10	53	5	35	39	6	0	67
Slightly distracted	151	62	317	32	180	247	31	0	374
Moderately distracted	70	28	157	8	105	159	15	0	219
Very distracted	30	18	97	7	66	98	14	0	147
Total	267	118	624	52	386	543	66	0	807

Figure 30 - Level of Distraction and Phone Use While Driving Cross Tabulation

	16-18	19-21	22-30	31-40	41-50	51-60	60+	Total
Yes	70	302	125	37	27	59	21	641
No (please explain)	21	139	75	24	30	26	21	336
Total	91	441	200	61	57	84	42	976

Figure 31 - Age and Preventative Device Cross Tabulation

	16-18	19-21	22-30	31-40	41-50	51-60	60+	Total
Yes, I would be happy with any discount	43	198	93	20	20	29	21	424
Yes, but only if discounts were very significant (i.e. greater than 25%)	28	125	61	21	11	17	7	270
Yes, I don't use my phone while driving anyway	16	74	14	7	11	16	9	147
No (please explain)	4	46	31	13	16	23	5	138
Total	91	443	199	61	58	85	42	979

Figure 32 - Age and Insurance Discount Cross Tabulation

	iPhone	Android	Other	I do not own a cell phone	Total
Yes, I would be happy with any discount	207	138	79	0	424
Yes, but only if discounts were very significant (i.e. greater than 25%)	155	90	25	0	270
Yes, I don't use my phone while driving anyway	39	54	54	0	147
No (please explain)	57	51	30	0	138
Total	458	333	188	0	979

Figure 33 - Type of Phone and Insurance Discount Cross Tabulation

Pro Forma Profit and Loss	Year 1	Year 2	Year 3
Sales	$ 2,470,954	$ 5,271,996	$ 9,501,889
Direct Cost of Sales	$ 1,164,249	$ 2,483,949	$ 4,476,849
Other Costs of Sales	$ 3,950	$ 6,800	$ 10,200
Total Cost of Goods Sold	$ 1,168,199	$ 2,490,749	$ 4,487,049
Gross Profit	$ 1,302,755	$ 2,781,247	$ 5,014,840
Gross Margin %	53%	53%	53%
Expenses			
Payroll	$ 295,000	$ 375,000	$ 440,000
Marketing/Promotions	$ 19,750	$ 15,800	$ 11,850
R&D (non-employee expense)	$ 10,000	$ 7,000	$ 6,000
Depreciation	$ 3,233	$ 3,233	$ 3,233
Rent	$ 60,000	$ 60,000	$ 60,000
Utilities	$ 6,000	$ 6,000	$ 6,000
Insurance	$ 1,000	$ 1,000	$ 1,000
Payroll Taxes	$ 22,715	$ 28,875	$ 33,880
Other	$ 5,000	$ 8,000	$ 12,000
Total Operating Expenses	$ 422,698	$ 504,908	$ 573,963
Profit Before Interest and Tax	$ 902,772	$ 2,305,214	$ 4,474,757
EBIDTA	$ 906,005	$ 2,308,447	$ 4,477,990
Interest Expense	$ -	$ -	$ -
Taxes Incurred	$ 290,335	$ 675,767	$ 1,265,567
Net Profit	$ 589,722	$ 1,600,572	$ 3,175,311
Net Profit/Sales	24%	30%	33%

	Year 1	Year 2	Year 3
Direct Cost of Sales			
Cost of OBD Devices	$ 1,164,150	$ 2,483,850	$ 4,476,750
App Sales Cost (Apple St	$ 99	$ 99	$ 99
Total	$ 1,164,249	$ 2,483,949	$ 4,476,849
Other Costs of Sales			
Travel	$ 1,600	$ 3,200	$ 4,800
Travel Related Expenses	$ 1,800	$ 3,600	$ 5,400
Mock driving column	$ 500	--	--
Prototype	$ 50	--	--
Total	$ 3,950	$ 6,800	$ 10,200

	Current Assets	Depreciation
Servers	$ 7,500	$ 1,500
Computers	$ 5,200	$ 1,733
Total	$ 12,700	$ 3,233

Sales Estimated Based on 2.5% Percentage of Savings Model:
Year 1: based on selling to Allstate
Year 2: based on selling to Allstate and Progressive
Year 3: based on selling to Allstate, Progressive, and State Farm

Cost of OBD Devices Based On:
# of Accidents that Would Have to Be Prevented
Estimated Manufacturing Cost of $5 Per Unit (OBD Device)
10x More Devices Used Than What Prevent Accidents

Figure 34 - Projected Profit and Loss Statement

Appendix J- Projected Statement of Cash Flow

Pro Forma Cash Flow				
		Year 1	Year 2	Year 3
Cash Received				
Cash from Operations				
Cash from Sales		$ 1,853,216	$ 3,953,997	$ 7,126,417
Cash from Receivables		$ -	$ 617,739	$ 1,317,999
Subtotal Cash from Operations		$ 1,853,216	$ 4,571,736	$ 8,444,416
Additional Cash Received				
Non-Operating (Other) Income		$ -	$ -	$ -
Sales Tax, VAT, HST/GST Received		$ -	$ -	$ -
New Current Borrowing			$ -	$ -
New Long-term Liabilities		$ -	$ -	$ -
Sales of Other Current Assets		$ -	$ -	$ -
Sales of Long-term Assets		$ -	$ -	$ -
New Investment Received			$ -	$ -
Total Cash Received		$ 1,853,216	$ 4,571,736	$ 8,444,416
Expenditures		Year 1	Year 2	Year 3
Expenditures from Operations				
Cash Spending		$ 1,590,897	$ 2,995,657	$ 5,061,012
Bill Payments		$ -	$ -	$ -
Subtotal Spent on Operations		$ 1,590,897	$ 2,995,657	$ 5,061,012
Additional Cash Spent				
Non-Operating (Other) Expense		$ -	$ -	$ -
Sales Tax, VAT, HST/GST Paid Out		$ 154,435	$ 329,500	$ 593,868
Principal Repayment of Current Borrowing		$ -	$ -	$ -
Other Liabilities Principal Repayment		$ -	$ -	$ -
Long-term Liabilities Principal Repayment		$ -	$ -	$ -
Purchase Other Current Assets		$ -	$ -	$ -
Purchase Long-Term Assets		$ -	$ -	$ -
Dividends		$ -	$ -	$ -
Subtotal Cash Spent		$ 1,745,332	$ 3,325,157	$ 5,654,880
Net Cash Flow		$ 107,884	$ 1,246,579	$ 2,789,536
Beginning Cash Balance		$ 50,000	$ 157,884	$ 1,404,463
Cash Balance		$ 157,884	$ 1,404,463	$ 4,193,999

Figure 35 - Projected Statement of Cash Flow

Appendix K- Projected Balance Sheet

Pro Forma Balance Sheet				
		Year 1	Year 2	Year 3
Assets				
Current Assets				
Cash		$ 157,884	$ 1,404,463	$ 4,193,999
Accounts Receivable		$ 617,739	$ 1,317,999	$ 2,375,472
Other Current Assets			$ -	$ -
Total Current Assets		$ 775,622	$ 2,722,462	$ 6,569,471
Long-term Assets				
Long-term Assets		$ 12,700	$ 12,700	$ 12,700
Accumulated Depreciation (-)		$ (3,233)	$ (6,467)	$ (9,700)
Total Long-term Assets		$ 9,467	$ 6,233	$ 3,000
Total Assets		$ 785,089	$ 2,728,695	$ 6,572,471
Liabilities and Capital		Year1	Year2	Year3
Current Liabilities				
Accounts Payable		$ -	$ -	$ -
Current Borrowing		$ -	$ -	$ -
Other Current Liabilities		$ 132,617	$ 538,401	$ 1,206,866
Subtotal Current Liabilities		$ 132,617	$ 538,401	$ 1,206,866
Long-term Liabilities				$ -
Total Liabilities		$ 132,617	$ 538,401	$ 1,206,866
Paid-in Capital		$ 62,750	$ -	$ -
Retained Earnings		$ 589,722	$ 2,190,294	$ 5,365,605
Total Capital		$ 652,472	$ 2,190,294	$ 5,365,605
Total Liabilities and Capital		$ 785,089	$ 2,728,695	$ 6,572,471
Net Worth		$ 652,472	$ 2,190,294	$ 5,365,605

Figure 36- Projected Balance Sheet

Appendix L- Projected Business Ratios

Ratio Analysis				
		Year 1	Year 2	Year 3
Sales Growth		N/A	213%	180%
Percent of Total Assets				
Accounts Receivable		79%	48%	36%
Total Current Assets		99%	100%	100%
Long-term Assets		1%	0%	0%
Total Assets		0%	0%	0%
Current Liabilities		17%	20%	18%
Long-term Liabilities		0%	0%	0%
Total Liabilities		17%	20%	18%
Net Worth		83%	80%	82%
Percent of Sales				
Sales		0%	0%	0%
Gross Margin		53%	53%	53%
Selling, General & Administrative Expenses		1%	0%	0%
Profit Before Interest and Taxes		37%	44%	47%
Main Ratios				
Current		5.85	5.06	5.44
Quick		5.85	5.06	5.44
Total Debt to Total Assets		17%	20%	18%
ROA		75%	59%	48%
Activity Ratios				
Accounts Receivable Turnover		4.00	4.00	4.00
Collection Days		22.81	22.81	22.81
Inventory Turnover		N/A	N/A	N/A
Total Asset Turnover		3.15	1.93	1.45
Debt Ratios				
Debt to Net Worth		0.20	0.25	0.22
Current Liab. to Liab.		1.00	1.00	1.00
Liquidity Ratios				
Net Working Capital		$ 643,005	$2,184,061	$5,362,605

Figure 37 - Projected Business Ratios

Appendix M- Time Value of Money Analysis

NASDAQ

10 Yr Average Return Rate	7.82

PV Calculation- Projected Net Worth

Discount Rate	7.82%
Projected Net Worth (3 Years)	$5,365,605
PV:	$4,280,758
Average NPV (PV):	**$3,839,331**

NPV Calculation- Discounted Cash Flow

Discount Rate	7.82%
Net Cash Flow	
Year 0	$ -
Year 1	$107,884
Year 2	$1,246,579
Year 3	$2,789,536
NPV:	$3,397,904

Figure 38 - Time Value of Money Analysis