



# BLUE APRON- FINDING A RECIPE FOR SUCCESS

ENGMT 539 Group 5  
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## Introduction

Julia Child once said, “You don’t have to cook fancy or complicated masterpieces – just good food from fresh ingredients” (David, L., & Bacon, Q, 2014, p. 2). Blue Apron, a meal-kit delivery service company, strives to accomplish that goal. Food is a necessary ingredient for survival. As America’s culture becomes fast paced and people continue to spread themselves thin, meal-kit delivery companies are entering the market. A meal-kit delivery service designs meal options and allows the consumer to select different meals for the package. Then, the company compiles ingredients and ships them to the consumer’s home. Additionally, step-by-step instructions are included for the consumer to guide them on preparing a meal. As Lora Kolodny wrote, “Meal kit companies sold between \$1 billion and \$1.5 billion in 2016, according to industry estimates from Market Research and others. A Piper Jaffray note published in June 2016 predict the market will reach \$4 billion near-term, and \$36 billion in annual sales by 2026” (Kolodny, 2017).

Blue Apron has experienced loss of revenue and profit since entering the market. This financial impact stems from Blue Apron's supply chain, logistics, and manufacturing operations. They are still unable to reduce unit costs to the lowest possible levels while meeting consumers’ quality expectations. The objective of this report is to analyze Blue Apron, understand the values contributing to the success and failures of the operation, and recommend short and long term strategies for success.

## Company Background

Blue Apron is embarking on a business journey that can change the dynamics of the home cooking experience. Blue Apron was first founded by Matt Salzberg, Ilia Papas, and Matt Wadiak via humble beginnings in a small New York apartment. Salzberg and Papas did not have any food experience and had several failed startup ideas. To find this expertise, they turned to Matt Wadiak, a family friend of Salzberg, who possessed previous food industry experience. Matt quickly played an important role and rose up to resident food expert and Chief Operating Officer. Salzberg naturally became the Chief Executive Officer and Papas was the Chief Technical Officer. Although it was early on when they created these positions, Salzberg felt it was critical for business success on aligning roles to strengths. Starting August 2012, Blue Apron started shipping boxes to a few test customers with the following choices: fish, poultry, beef, and pork. In the early formation of the company, the team took deliberate measures to ensure customers were satisfied. For example, Salzberg personally fulfilled customers' orders and when inventory was low on certain ingredients, the team would personally go to a local market to ensure orders could be filled (Shontell, 2015).

Their first major financial milestone came in 2013 where they raised \$3 million from Salzberg's past employer Bessemer Venture Partners and other early venture capitalists (Shontell, 2015). In parallel, Wadiak set up smart menus by working with food industry experts. Since they aimed to create seasonal recipes, he forecasted out several months to a year in advance. Papas created a web interface that helped select delivery dates and a skip order feature when out of town. As the company grew, Salzberg expanded their service network from Manhattan to serve the west coast as well. After one year from the original \$3 million raised,

Blue Apron was delivering 1 million meals per month (Shontell, 2015). They continued garnering more customers by adjusting to consumer trends and creating dietary customization meals.

The next injection of life came in 2015 where Blue Apron received a massive \$135 million investment from Fidelity Management and Research Company, and previous investors. Why was this significant? With this large investment, Blue Apron was now valued at \$2 billion. To put that into perspective, they started their business in August of 2012 and only 3 years later they were worth \$2 billion (Shontell, 2015). This extraordinary growth earned them a “unicorn” status where only an elite group had the luxury of being valued 10 plus figures by investors (Kell, 2016). As mentioned before in 2014, one million meals were being served and in 2015 they ballooned to delivering 5 million meals per month. One year later in 2016, they were delivering an estimated 8 million meals (Shontell, 2015).

Blue Apron currently provides standalone pre-packaged meal kits ready to go where someone can just start eating once received. Additionally, they offer seasonally rotating selection of retail-ready meal kits in sustainable packaging for customers to pick up and cook at home. Lastly, with a focus on quick, easy-to-prep cooking and crowd-pleasing favorites, the retail meal kits provide an easy go-to solution for anyone stuck in a rut of “what should we cook”. If customers wish to get a weekly subscription service, it is performed on the online platform. There are two choices to start off which are meals for 2 people or meal for a family that feeds 2-4. Once that is selected, the consumer can select either 2 meal deliveries or 3 meal deliveries per week. After that selection, meals can be chosen from the weekly variety. There



are a few options, ranging from vegetarian, healthy options, and preparation time. Pictures and descriptions give the customers an idea on what to expect (Blue Apron, 2018).

How big is the market? In 2017, Blue Apron had a firm grasp of the market share at around 40%. But leading into this year, they have taken a dive and no longer sit king in the continuously growing market. As of March 2018, the meal-kit service was a \$5 billion industry. Blue Apron now holds a 35% market share. Meanwhile, competitor HelloFresh, with a new acquisition, sits on top with about 36% of the market and continues to push forward (Shontell, 2015). Later, metrics will be discussed as to what might be leading to this dramatic drop. Typically, it is not one single event that brings a business down but several issues that snowball.

Who are the customers? The average customer has a yearly income of at least \$50k/year but over 50% of the customers make over \$100k/year. These metrics illustrate that Blue Apron has not broken into the lower income brackets; in other words, right now it is not a meal service for all of America. Approximately 55% of the customers are between ages 25-44. Most of the orders are for 2 people, with only 21% of the orders being for families. Blue Apron has tried to capitalize on what the average person experiences. According to a recent IDEO study, 43% of people have the hardest time deciding what to cook. Blue Apron tries to fill that void by giving customers a set of recipes that will please their taste buds (Blue Apron, 2018).

Figure 1 below summarizes the end to end value chain of Blue Apron (Blue Apron, 2018):



Figure 1: Blue Apron End Value Chain

## Vision and Mission

As stated on their website, Blue Apron's vision is as follows: "Our food system—the way in which food is grown and distributed complicated and making good choices for your family can be difficult. We are changing that: By partnering with farmers to raise the highest-quality ingredients, by creating a distribution system that delivers ingredients at a better value and by investing in the things that matter most—our environment and our communities. This will be a decades-long effort, but with each Blue Apron home chef, together we can build a better food system" (Blue Apron, 2018).

## Goals, Objectives, and Strategies

Blue Apron has a primary goal of delivering a meal kit "experience" directly to a patron's door without the hassle of supermarket shopping or wasteful excess food. Blue Apron strives for clients to experience "discovering new recipes, ingredients, and cooking techniques to preparing meals with families and loved ones to sharing photos and stories of culinary

triumphs.” (Blue Apron, 2018). It is hard to argue against Blue Apron’s success at achieving this goal. They have grown from a small startup in 2012, to a market share leading behemoth earning a revenue of \$881 million in 2017 (Molla, 2018).

The company specifies their objectives as to serve more consumer segments and deepen relationships with existing customers. Blue Apron describes their avenue to achieving these objectives as the growth strategy. Blue Apron’s growth strategy can be further broken down by the following (Blue Apron, 2018):

- ***“Increase market penetration with our core product.*** As a young brand, we believe we have an opportunity to grow awareness and to attract new customers to our core product.
- ***Expand our core product to fit more lifestyles.*** As we expand our operational capabilities, increase the automation in our fulfillment centers, and grow our supplier network, we plan to expand our core product by offering greater flexibility in the number of recipes per order and greater diversity in the number of recipes from which customers may choose.
- ***Broaden our product portfolio.*** We are focused on opportunities to launch new products that further create an integrated brand experience.
- ***Develop new brands and new channels.*** We believe we have built a powerful brand that we can leverage to further develop additional new brands and channels.
- ***International expansion.*** We have built a trusted brand, proprietary technology, processes, and a diverse set of competencies that we believe would enable us over time to pursue attractive opportunities outside of the United States.”

In addition to the strategies above, Blue Apron has worked on expanding the medium in which clients can obtain their meal kit experience. They have deployed their meal kits in a limited amount of Costco stores as an attempt to reach into the offline customer segment (USA Today, 2018). This pilot ended in November because Costco needed more shelf space (Nickle, A., 2018). Blue Apron has also opened its meal kit sales to jet.com, in hopes of that same day delivery that's offer from the website will retain the interest of its existing customers (Splitter, 2018).

## Business Model

Blue Apron's market is a value-added resale. For example, the company purchases ingredients for meals and then resells them to consumers with extra features. Traditionally, a customer visits the grocery store to purchase meal ingredients. However, Blue Apron's service provides convenient delivery, exact portions, and step-by-step instructions for meal preparation. Overall, Blue Apron has four branches that generate revenue. Blue Apron offers personalized meal kits which can feed either two or four people. These meal kits are shipped to customers' homes under a program called Blue Apron meals. To compliment these meals, Blue Apron delivers personalized wine boxes (Blue Apron Wine). Their third business venture is called Blue Apron Market. The Market sells cookware, wine glasses, spices, and other long shelf life items. Lastly, the BN Ranch is a premium supplier of grass-fed beef and pasture-raised poultry. Blue Apron's operations can be illustrated in Figure 2 below:

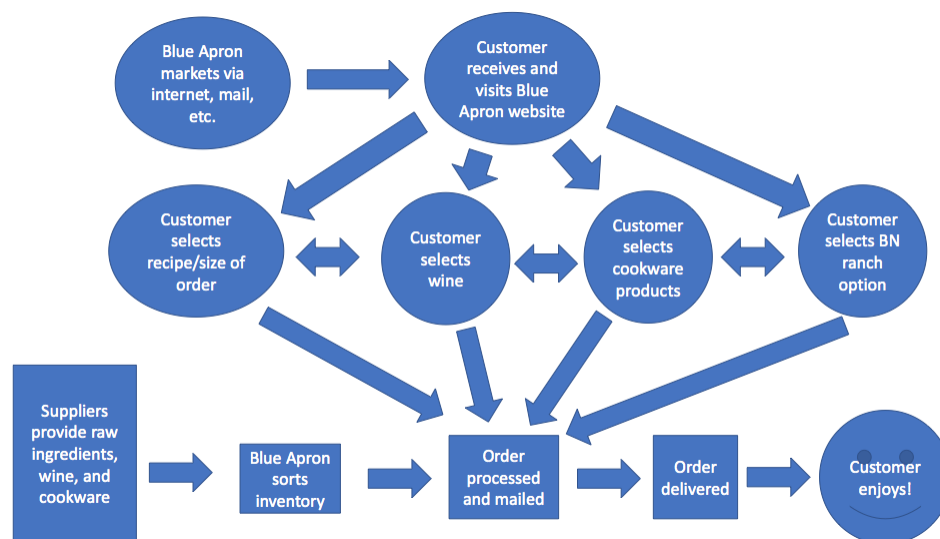


Figure 2: Blue Apron Business Model

Additionally, Blue Apron has expressed interest in expanding their company into other markets. For example, Blue Apron announced in March 2018 that pre-portioned boxes of its

recipes would be sold in grocery stores by the end of the year (McGrath, M., 2018). In May 2018, Blue Apron began selling pre-packaged meal kits for families of four at Costco. The meal kits are sold at 30% off from the original price (Peterson, H., 2018).

## Company Performance

### Financial Performance

Although Blue Apron received generous funding while starting their company, their financial performance has suffered since entering the public market. The company entered public stock market on June 29, 2017. Blue Apron Holdings Inc. is sold on the New York Stock Exchange (NYSE) with the symbol APRN. Initially, Blue Apron's shares started at a \$10 offering price. They sold 3.6 million shares of Class A common stock and they closed at \$9.34. However, their stock price has been continuously dropping. When the stock market closed on November 23<sup>rd</sup> 2018, Blue Apron's stock was \$1.09. The figure below shows Blue Apron's stock price since inception of June 29, 2017 (NYSE: APRN, 2018):



Figure 3: Blue Apron Stock Price

If this stock price continues to drop and fall below \$1.00, there is a possibility that Blue Apron could be delisted. Delisting company stock occurs when a company can no longer meet the requirements to be listed on an exchange and are removed either voluntarily or involuntarily. This action does not change the ownership stake in the company and nothing officially changes in terms of the company's ability to conduct business. However, delisting can make it more difficult for a company to raise money, and in this respect, it sometimes is a first step towards bankruptcy. A potential solution to prevent delisting can be found in the section titled 'Engineering Analysis'.

As part of their third quarter 2018 presentation, Blue Apron calculated their cumulative net revenue of \$715 million since October 1<sup>st</sup> 2017 (Blue Apron, 2018). Based on their recent financial statements, it appears that Blue Apron meals contributes the highest amount to their revenue. However, their current liabilities are greater than their current assets. Consensus earnings per share (EPS) forecasts by the Nasdaq shows Blue Apron losing money until 2021, when the company analysts expect Blue Apron to break even (Nasdaq, 2018).



## Strategic Performance

From a strategic standpoint, Blue Apron uses a multi-level marketing strategy to engage consumers. In 2017, marketing cost was \$154 million which was 17% of net revenue (Blue Apron, 2018). The budget breakdown for their marketing is as follows in Figure 4:

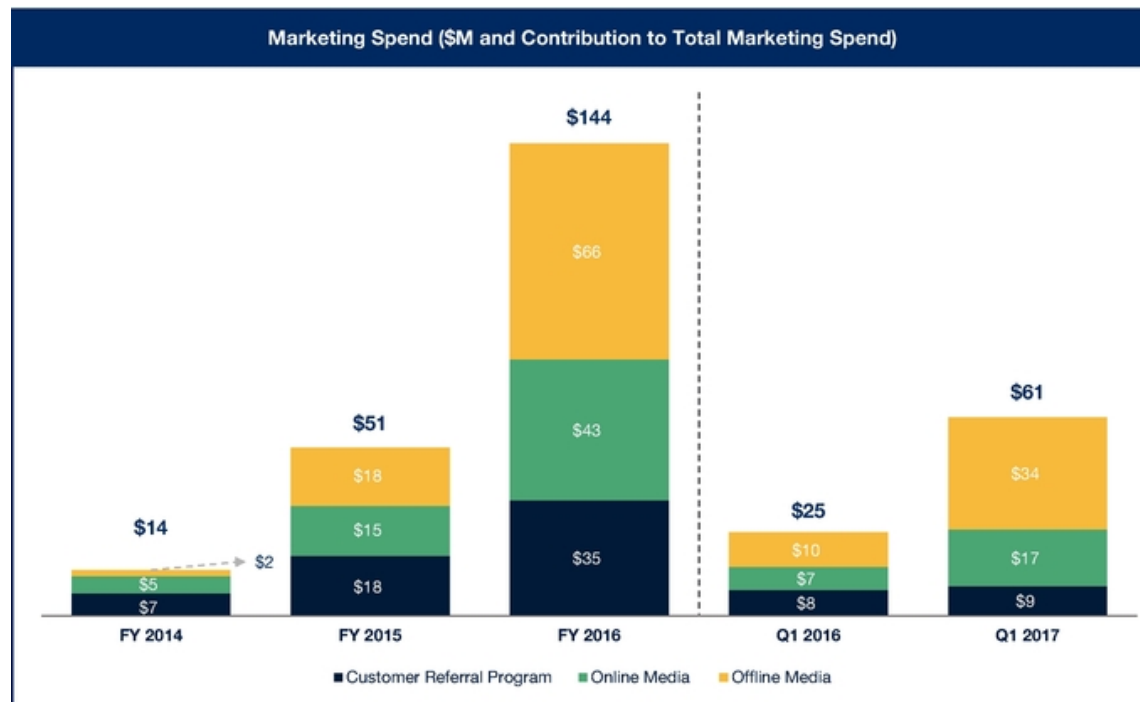


Figure 4: Marketing Spend

In 2016, Blue Apron spent \$35 million on their referral program. The market strategies used are a combination of social (i.e. viral) and direct advertisement. Currently, Blue Apron uses multiple social media accounts to reach customers. They use different platforms such as Facebook, Twitter, Pinterest, Instagram, Google+, and LinkedIn. These accounts are used to publish new recipes and gain interest. Blue Apron stated in their 2017 annual report that their customers have been their best marketers. The 2017 annual report states 42% of their customers were acquired through their customer referral program (Blue Apron, 2018).

From a digital perspective, Blue Apron uses the following platforms to market themselves:

- Podcast ads
- YouTube sponsorships
- Display Ads
- Sponsored Reviews via Native Ads

From an offline perspective, Blue Apron uses the following platforms to market themselves:

- TV Advertising
- Radio Ads
- Direct Mail

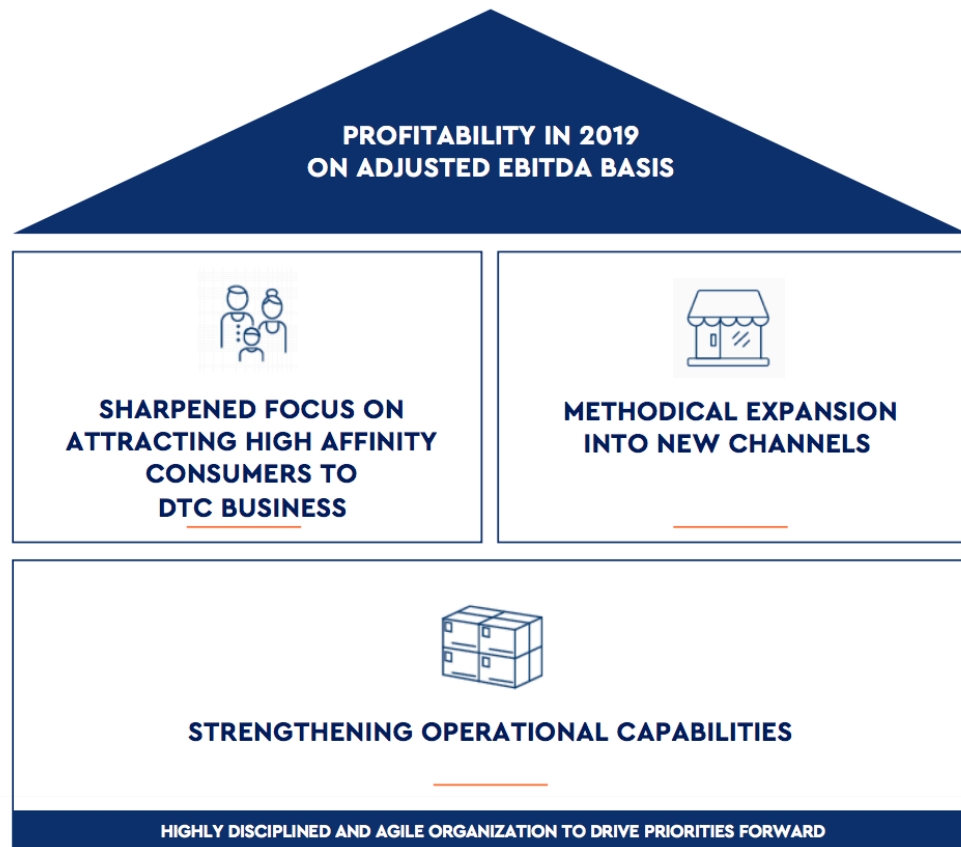
Their operational strategic approach includes having thoughtfully placed fulfillment centers across the country to complete orders. Currently, Blue Apron has fulfillment centers in Richmond, CA, Arlington, TX, and Linden, NJ.

In order to grow, Blue Apron is dedicated to expanding on their current brand model. In January 2018, Lightspeed Research performed a Brand Awareness survey commissioned by Blue Apron. Blue Apron was a leader in brand awareness. Other companies within the category included AmazonFresh, Blue Apron, FreshDirect, Green Chef, HelloFresh, Home Chef, PeaPod, and Sun Basket, and others. The image below (Figure 5) illustrates Blue Apron's brand positioning. They attract three different types of customers: people who are excited about cooking, those who are aspiring to grow as chefs, and then people who dread cooking dinner.



Figure 5: Blue Apron's Brand Positioning

Blue Apron's growth strategy is to build upon their existing platform to gain profitability. As illustrated in Figure 6 below, Blue Apron announced during their 2018 3<sup>rd</sup> quarter investor presentation their strategy for growth (Blue Apron, 2018):



*Figure 6: Blue Apron's Growth Strategy for 2019*

Blue Apron hopes to continue to solidify and expand on their core business first. Then, Blue Apron plans on opening retail stores. Lastly, their goal is to develop on-demand meals or on-demand pickup options for clients.

### Market Performance

Blue Apron competes with many different companies for market share. As previously identified in their brand recognition survey, a few of Blue Apron's competitors include: AmazonFresh, Blue Apron, FreshDirect, Green Chef, HelloFresh, Home Chef, Part N Parsley, PeaPod, and Sun Basket. It is important to note that HelloFresh acquired Green Chef in March 2018; however, the terms of the agreement were not disclosed (HelloFresh, 2018). Additionally, Kroger announced on May 23, 2018 a merger agreement with Home Chef. The initial

transaction price was \$200 million and future payments of up to \$500 million over five years are contingent on achieving certain milestones, including significant growth of in-store and online meal kit sales (Kroger, 2018). Lastly, the company Plated was acquired by Albertsons on September 27, 2017 (Hirsh, 2017).

In order to compare these companies within the industry, please refer to Table 1:

*Table 1: Grocery and Meal-Kit Delivery Services Summary*

<b>Company</b>	<b>Category</b>	<b>Price (most expensive)</b>	<b>Shipping Cost</b>	<b>Notes</b>
AmazonFresh	Grocery delivery	\$14.99 per month plus groceries	Free	Amazon Prime membership needed - \$99.00 per year
Blue Apron	Meal-kit delivery	\$9.99 per serving	Free	None
FreshDirect	Grocery delivery	Minimum order of \$30	\$7.99	Prices based on delivery to greater Philadelphia area
Gobble	Meal-kit delivery	\$13.99 per serving	\$6.99	None
Green Chef	Meal-kit delivery	\$12.99 per serving	\$6.99	Acquired by HelloFresh
HelloFresh	Meal-kit delivery	\$9.99 per serving	\$7.99	None
Home Chef	Meal-kit delivery	\$7.99 per serving	Free with purchase over \$45	Acquired by Kroger
Martha & Marley Spoon	Meal-kit delivery	\$12.00 per serving	Free	None
PeaPod	Grocery delivery	Minimum order of \$60	\$60-\$75 order - \$9.95 delivery fee \$75-\$100 order - \$7.95 delivery fee \$100+ order - \$6.95	None
Plated	Meal-kit delivery	\$11.95 per serving	Free with purchase over \$60	Acquired by Albertsons
Purple Carrot	Meal-kit delivery	\$13.00 per serving	Free	None

Blue Apron seems competitive in price compared to their competition. Blue Apron requires clients to select two or three meals for the box; all the meal-kit delivery competitors also require the same commitment.

The following graph illustrates the number of customers over time since Blue Apron's Q3 of 2016, as compared to their largest direct competition, HelloFresh:

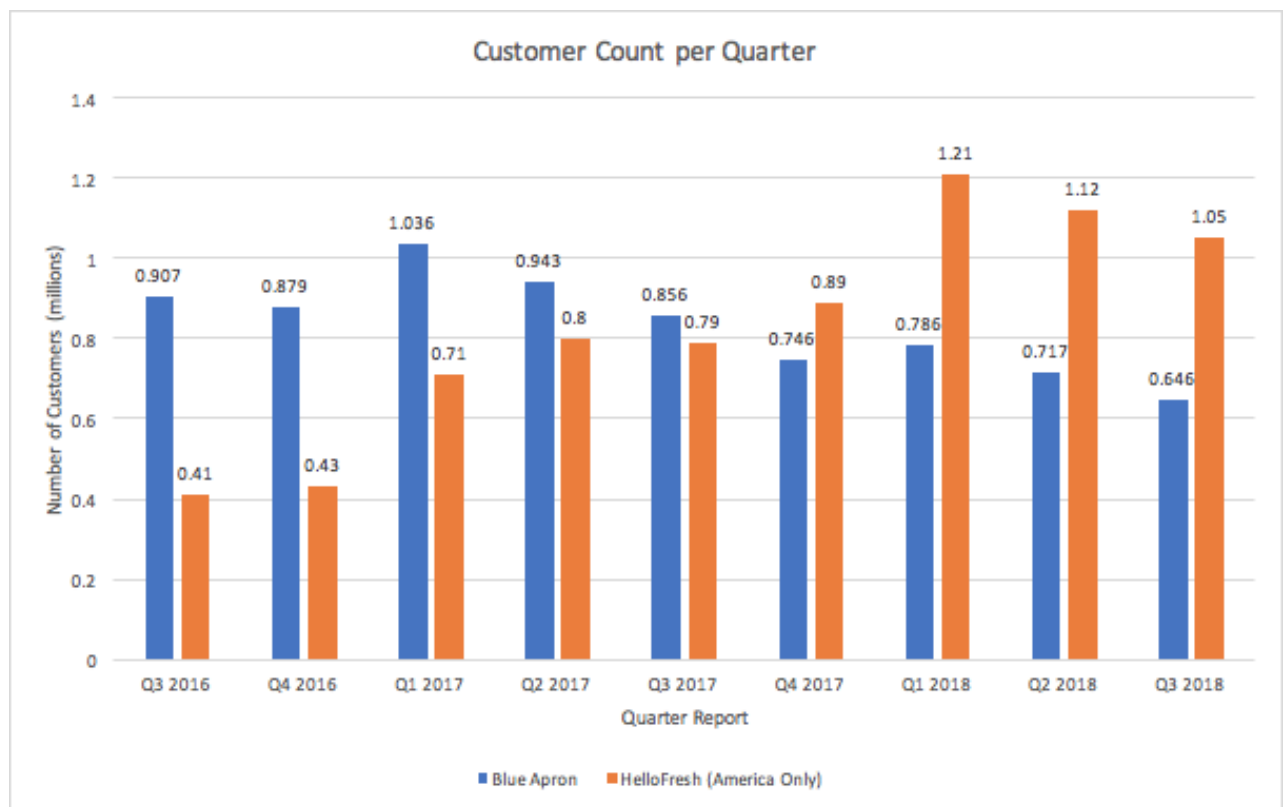


Figure 7: Customer Count for Blue Apron and HelloFresh per Quarter

Based on the quarterly reports provided by Blue Apron and HelloFresh, it is important to note the steady decrease in customer count for Blue Apron, while HelloFresh has seen an increase since Q3 of 2016. HelloFresh acquired Green Chef in March 2018. Thus, the numbers prior to Q2 of 2018 illustrate HelloFresh's success independent of the Green Chef acquisition. Both companies have seen a decrease in customer count in 2018, which might be attributed to the general industry struggle to maintain clients (PYMNTS, 2018).

The following graph explains the value of both Blue Apron and their main competitor, HelloFresh (CB Insights, 2017).

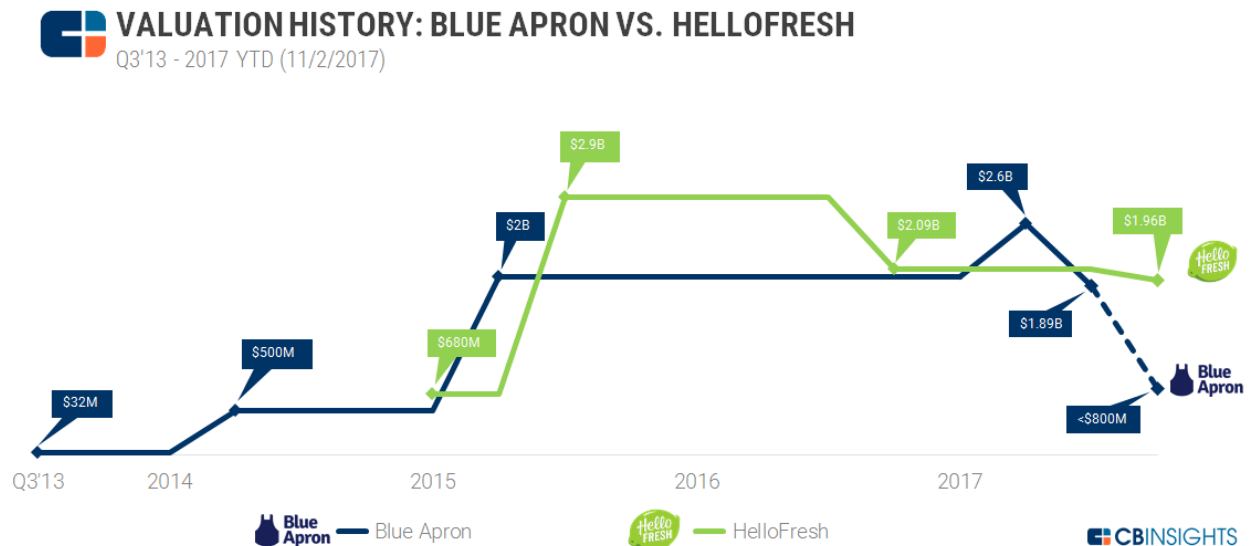


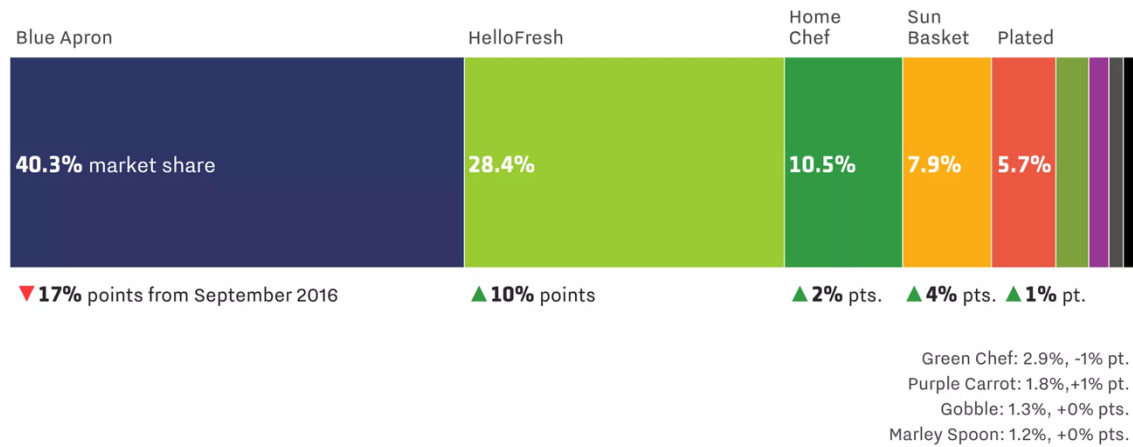
Figure 8: Valuation History of Blue Apron and HelloFresh

The steep decrease in Blue Apron value occurs at the same time as when they entered the public stock market. Since entering the market, Blue Apron has had layoffs, lost investor confidence, and customer base. Meanwhile, HelloFresh has experienced an increase in sales.

Figure 9 illustrates the market share of the meal-kit delivery service in September 2017 (Molla, 2017).



## U.S. meal kit market share in September 2017



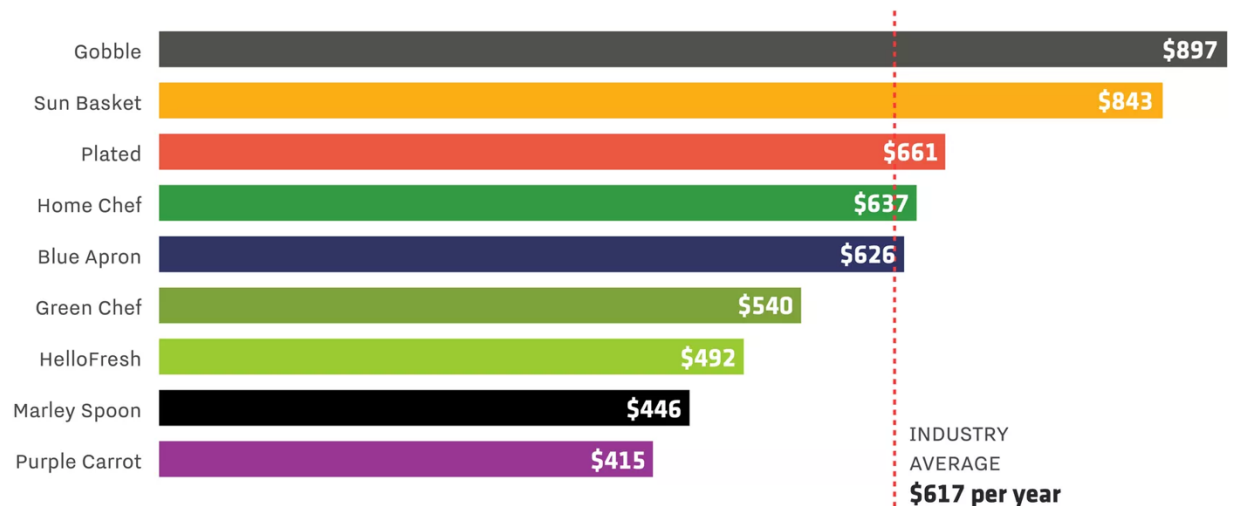
Source: Second Measure | Includes meal kit services with market share above 1%

**recode**

Figure 9: U.S. Meal Kit Market Share in September 2017

Although Blue Apron comprised 40.3% of the market share, that statistic was a 17% decrease since September 2016. HelloFresh experienced a 10% increase within that same timeframe. Another metric to compare companies within this industry is the average first-year spend on meal kits within the United States. The chart below states the mean gross spending with each company (Molla, 2017):

## Average first-year spend on U.S. meal kits



Source: Second Measure | Mean gross spending across monthly cohorts from Oct. 2015-Sept. 2017

recode

Figure 10: Average First-Year Spend on U.S. Meal Kits

The industry average is \$617 per year. In other words, a user spends on average \$617 within the first year of using the service. The company Gobble led the pack with users spending \$897 within the first year. Blue Apron was just above the average at \$626.

### The Analysis of 4P and Key Ratios (Profitability, Liquidity, Leverage, etc.) that Measure Financial Performance

Blue Apron's business can be analyzed through the use of the 4Ps. This analysis illustrates Blue Apron's position within the target market (Urban Millennials).

- **Product.** From a buyer's perspective, Blue Apron offers a meal kit. From Blue Apron's perspective, they offer a meal time "experience". A meal time experience that provides wholesome food to complete the recipe with little to no waste. Blue Apron contributes a variety of meal options (meat, fish, or veggie centric meals), quality (food is included from fishers, ranchers, based on season, etc.), and packaging (all food is portions out separately, thus easy to prepare. It is sealed and chilled on your doorstep).

- **Price.** The service is subscription based \$60 a week costs for three two-person meals. Meal kits are delivered weekly and subscribers have the option of skipping each week. Each single serving is approximately \$10. Blue Apron is priced in the middle of the market for a meal kit delivery service (McLaughlin, 2018). Recently, they have also partnered with GrubHub in New York to deliver single kit meals in less than 30 minutes.
- **Place.** The meal kit service must be ordered online and can be ordered from any electronic device connected to the Internet. The tools for this are: direct to customer doors using a 3<sup>rd</sup> party mail service that's trackable (Channel), can be delivered most anywhere nationwide (Coverage) and can be bought on jet.com (Location). They also experimented with Costco, where their kits could be purchased directly from Costco outlets as well.
- **Promotion.** Blue Apron primarily uses internet ads and commercials for advertising. It also utilizes social media to have the cooking experience noticed by others. A description of the history of the meal is attached to every kit so people are more inclined to share their experience with others (Public Relations). Blue Apron does run first shipment promotions as a way to entice new customers (Sales Promotion).

Figure 11 illustrates the market mix for Blue Apron.

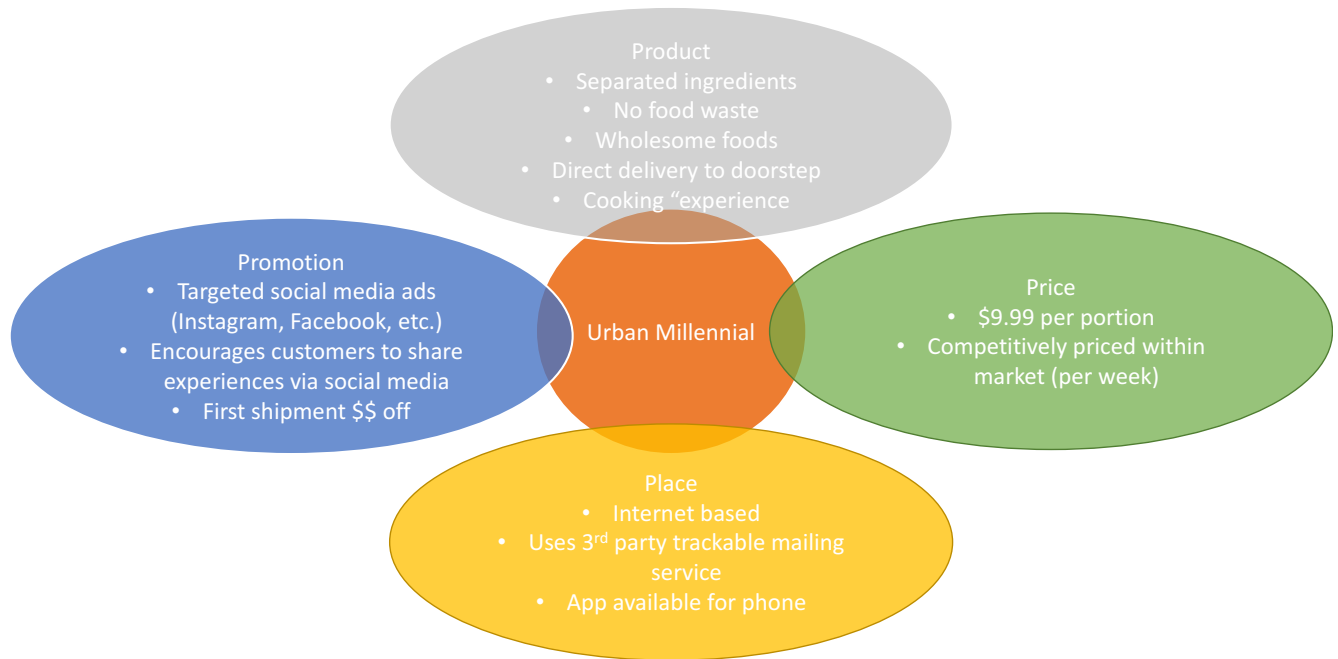


Figure 11: 4P's for Urban Millennial using Blue Apron

Key ratios that measure Blue Aprons financial performance are as follows:

**Profitability Ratio (FY '17)** - Many of these ratios are not good because they are negative (Morningstar, 2018).

Return on Equity = -464.66

Earnings Per Share = -1.64

Return on Invested Capital = -110.65

Return on Assets = -53.13

Net Profit = -210

**Liquidity Ratio (FY '17)** - These values illustrate Blue Apron can easily cover its liabilities over the next twelve months (Reuters, 2018).

Current ratio = 2.74

Quick ratio = 2.3

**Leverage Ratio (FY '17)**- This is not an ideal ratio for leverage. Blue Apron is very dependent on borrowing (Morningstar, 2018).

2.31

**Efficiency Ratio (FY '17)** - This is considered the maximum optimal ratio for Blue Apron's ability to turn resources into revenue (Morningstar, 2018).

50%

**Dividend Policy Ratio (Q2 '18)** - This ratio is not good. Since it is negative, the shareholders will likely not receive a payment (Blue Apron, 2018).

<u>Dividends</u>	4771	-14.53%
Net Income	-32836	

## Management Characteristics

### Background, Philosophy, and Qualifications of Top Management

The founders Matt Salzberg, Ilia Papas, and Matt Wadiak blended their diverse strengths and knowledge right from the inception of Blue Apron. Each of the three founders come from three totally different fields that essentially formed the backbone of the company. While Matt Salzberg was a qualified as a strategist with a degree in Business Management, Ilia Papas came from a computer science degree and had already been in the field of e-commerce and Matt Wadiak was a trained culinary specialist. The founders saw a unique opportunity in building a unique food industry by putting their skills together, the idea was not to deliver food but rather to make home cooking accessible to everyone. After the company went public in June 2017,

Matt Salzberg stepped down from the role of CEO, making way for an experienced Bradley Dickerson to lead the ship into new waters.

Matt Salzberg: holds a degree in Economics from Harvard University and an MBA from Harvard Business School. Prior to Blue Apron, Salzberg worked as a senior associate at Bessemer Venture Partners and as a private equity analyst with The Blackstone Group. After stepping down from the role of CEO at Blue Apron, he has been heavily involved as an angel investor and a board member at Embark Veterinary which he also co-founded.

Ilia Papas: holds a bachelor's degree in computer science from Tufts University. Ilia was a director and technical architect at Optaros in Boston, where he led Walmart.com to launch a new platform for their Health category. He also helped architect, build, and launch RueLaLa.com, a popular private-event retail site, and has built solutions for CNN, PUMA, Turner Broadcasting, and Macy's (Crunchbase, n.d.). Ilia presently serving as the CTO at Blue Apron.

Matthew Wadiak: a graduate of The Culinary institute of America in Hyde Park, NY and believes that the best food is made at home and has been pursuing his passion for food for over 20 years. He began his career by cooking for chefs Charlie Trotter and Paul Bertolli and later spent several years sourcing and importing rare ingredients, such as white truffles, for chefs and food companies around the world. In 2004, Matthew founded Cooks' Venture, a catering and events company. Wadiak wrote the first 350 recipes for Blue Apron and tested all of them in his apartment. In July 2017, Wadiak stepped down from his role as COO and currently is serving in an advisory role. In an interview with Foodtank, Wadiak had mentioned that there is a pressing need to fix the food system and that Blue Apron saw an opportunity in fixing this by using technology to connect farmers to consumers (Foodtank, 2016).

### Corporate Culture and Values

Blue Apron believes that they are building a consumer lifestyle brand emphasizing on the “emotional human connections” formed through cooking experiences. The intangible product that they provide their consumers is an experience of cooking that extends from discovering ingredients to recipes and techniques. Blue Apron understands that a meal experience is further enhanced when cooking with loved ones and families while sharing photos and stories of their “culinary triumphs”. The phrase “a great recipe is composed of incredible ingredients” is a core Blue Apron philosophy. Blue Apron commits to sourcing fresh, high-quality ingredients from farmers, ranchers, fishermen, and artisans year-round, changing recipes every week based on the season and often feature specialty ingredients not readily available elsewhere. They also partner with sustainability experts to create better standards for growing food and raising animals. The company believes these changes will lead to better outcomes for the environment, guaranteed markets for farmers, and higher quality ingredients for the home chefs (Blue Apron, n.d.).

Blue Apron’s structure combines three founding core sectors. Fulfillment, technology, and corporate sections of the organization collaboratively aim in delivering to the customers as well as stockholders. The company works to fulfill the direct needs of the customers. Technology is the backbone of the organization that brings together culinary experts, supply chain managers, technical data analysts, and engineers to assist users from online subscription to designing a cookbook. While fulfillment and technology focus on bringing value to consumers, the corporate side supports the company and delivers to stockholders in addition to improving the company’s market share. They effectively and efficiently use Strategic Zone

Skipping, which facilitates quick and reliable delivery, from farms to customers. Food-prep centers receive expedited ingredients and send them as packaged kits to the destination centers in line-haul refrigerated trucks, thereby maintaining superior quality, from farm to consumer. The pressure involved in meeting key standards for transportation requires optimum warehouse efficiency. Blue Apron has also invested in kitting automation, in order to supplement its inventory management and boost workplace quality (Garmen, 2018). Blue Apron hired Alan Blake on board as the chief supply chain officer to focus on the importance of supply chain and operations management. He is an accomplished leader with more than 30 years of experience in the industry (Acosta, 2018) Their second quarter results in 2018 states that operational efficiencies created through enhanced fulfillment center processes resulted in 400 basis points COGS improvement year-over-year (Blue Apron, 2018).

### Organization Structure

Overall, Blue Apron's organizational structure can be categorized as a functional structure. A functional organization is best suited as a producer of standardized goods and services at a large volume and a low cost. All coordination and common support services, such as human resources, legal, finance, etc., are centralized in the functional structure. This organizational structure promotes efficiency and reduces cost. Meanwhile, it eliminates redundancy in positions. At the executive level, Blue Apron has many individuals serving as leadership. Figure 12 offers the hierarchy of the senior leadership team.

It is difficult to determine exactly all the groups that report to these leaders. However, based on different job openings available online, clearly there are many departments and functions necessary for Blue Apron's operation. For example, there are many individuals in the



fulfillment centers compiling ingredients for orders. These fulfillment employees report to supervisors and managers of the distribution centers. Additionally, Blue Apron possesses an engineering team, information technology groups, customer service representatives, and more.

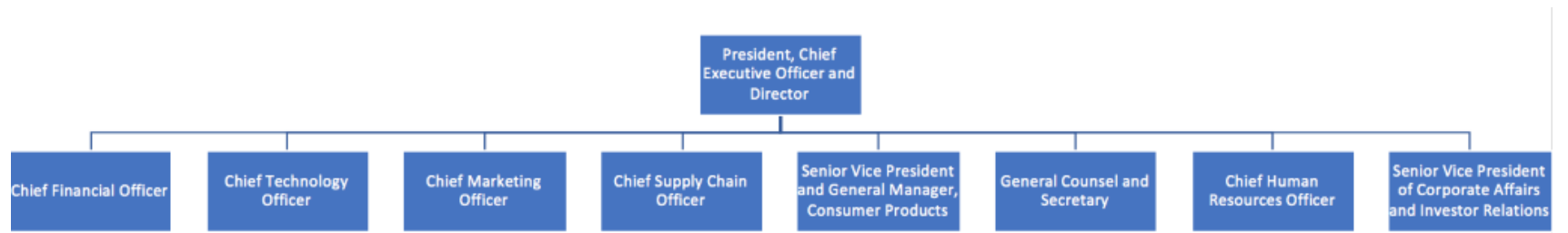


Figure 12: Blue Apron Executive Team

## SWOT and Analysis of Core Competencies and Capabilities

An analysis of a Blue Apron's strengths, weaknesses, opportunities, and threats (SWOT)

is a helpful investigation of a company's position within an industry. It can help a company uncover opportunities that they are well-placed to maximize on. The knowledge gained from understanding the weaknesses in the business can assist Blue Apron to manage and eliminate threats. Overall, a SWOT analysis can help craft a strategy that will help Blue Apron become unique and successful within the meal kit market. Figure 13 illustrates Blue Apron's strengths, weaknesses, opportunities, and threats as a company (Creately, n.d.).

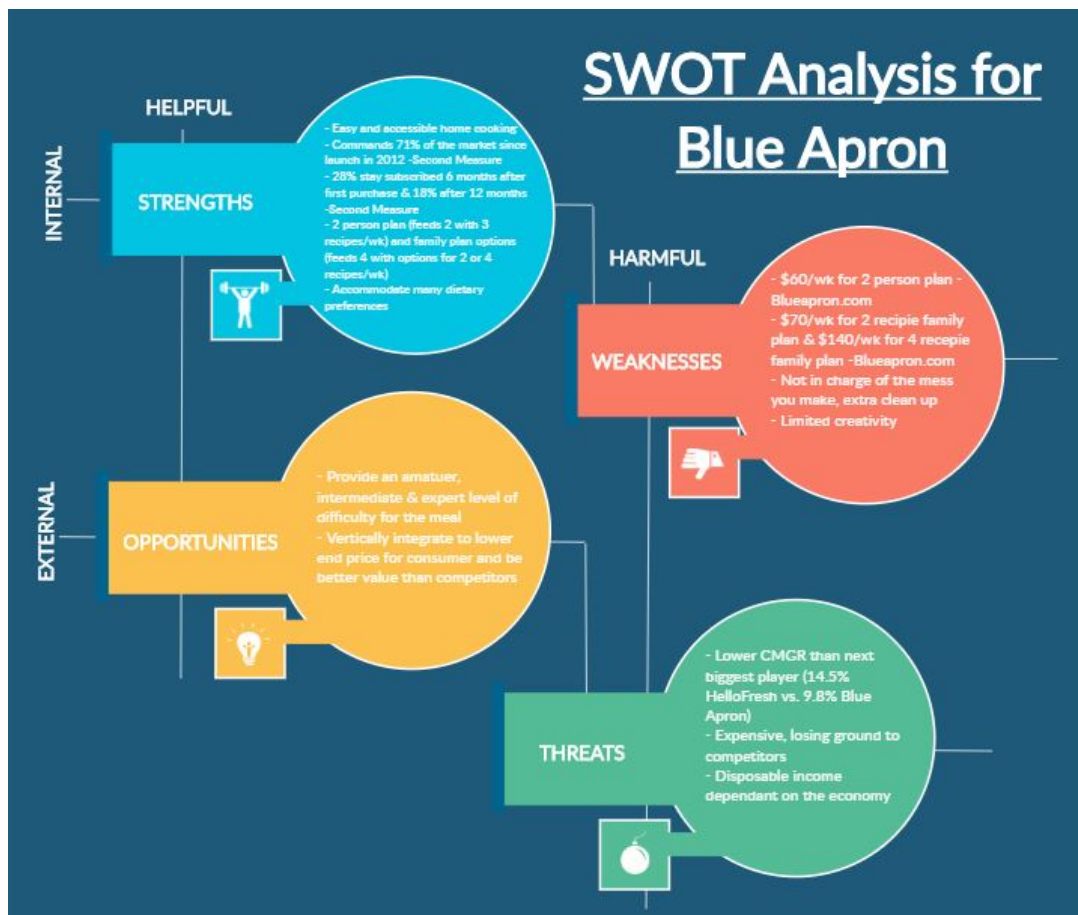


Figure 13: SWOT Analysis for Blue Apron

Blue Apron idealizes the following aspects as a set of core strengths to the organization and investors (Blue Apron, n.d.):

- *“Powerful and emotional brand connection:* We believe that we have developed a powerful and emotional connection with our customers by consistently engaging with them through multiple touchpoints and by the experiential nature of our products.
- *Superior products at compelling values:* We believe the efficiencies in our value chain enable us to provide fresh, high-quality ingredients at attractive price points.
- *Constant product innovation:* Our constant product innovation process enables us to attract new customer segments and improve our engagement with existing customers by strengthening our connection with them
- *Attractive unit economics:* Our business model enables us to deliver attractive unit economics driven by our ability to efficiently acquire new customers, engage existing customers, and effectively execute across our fulfillment center operations.
- *Hard-to-replicate value chain:* We have made substantial investments in supplier relationships, talent, infrastructure, technology, and data to build an interconnected value chain.”

Recent events in the Blue Apron’s falling stock prices and losing market to competitors makes us reevaluate carefully any misconceptions and distinguish strengths, weakness, opportunities and threats.

1. There is no strong connection with the customers, statistics point out that approximate duration of any customers’ subscription period lasts to an average of 6 months. This

translates to a simple question of how much does marketing the product to attract a new consumer worth, compared to retaining an existing consumer.

2. “Supply Chain and Logistics are not optimized for unit cost” is according to Brittain Ladd a business strategist, the important problem that needs attention in the meal kit delivery industry. As we know by now that a single meal delivery is inefficient and expensive than a set of 3 meals.
3. Supply chain management in food and beverage industry is inherently complex due to the short shelf lives and health impacting standards posing challenges beyond mere package handling.
4. Another article about the scaling problems at Blue Apron states that “the company’s specialty is food, not logistics and the stakes are higher than an ordinary restaurant takeout”.
5. While there are a lot many who feel that Blue Apron meals are not a substitute for grocery shopping, instead it could be considered as a replacement of eating out at a restaurant. While this is mostly true, there was comment from a consumer that changes perspective as he says “...but Blue Apron has helped us save money and lose weight – if I am not going to the supermarket I’m not buying those Oreos or potato chips that aren’t part of that meal.”

While these are only a few of the issues that have been identified looking at the company as an outsider, the understanding of the intricate workings of this machinery from the inside may completely change the idea and problem may be deep rooted in the fabric of the food industry.

## Industry Analysis

### The Industry and Key Success Factors

Blue Apron is a meal kit company which operates in the food industry. The valuation of food industry in 2014 was around \$1.5 trillion. The meal kit industry generated around \$2.2 billion in 2017, which is a small percentage of the entire food industry. However, the meal kit industry is expected to go beyond \$10 billion by 2020, an increase by 350% from 2017. Hence, it is very important for companies like Blue Apron to focus on factors that could highly influence its performance and position in the industry. Some of these vital factors include access to an assured source of quality raw materials, identification of recipes that cater to different audiences, an efficient supply chain, competitive pricing, effective sales and marketing strategies, and production capability.

#### Expenditures for food at home and away from home

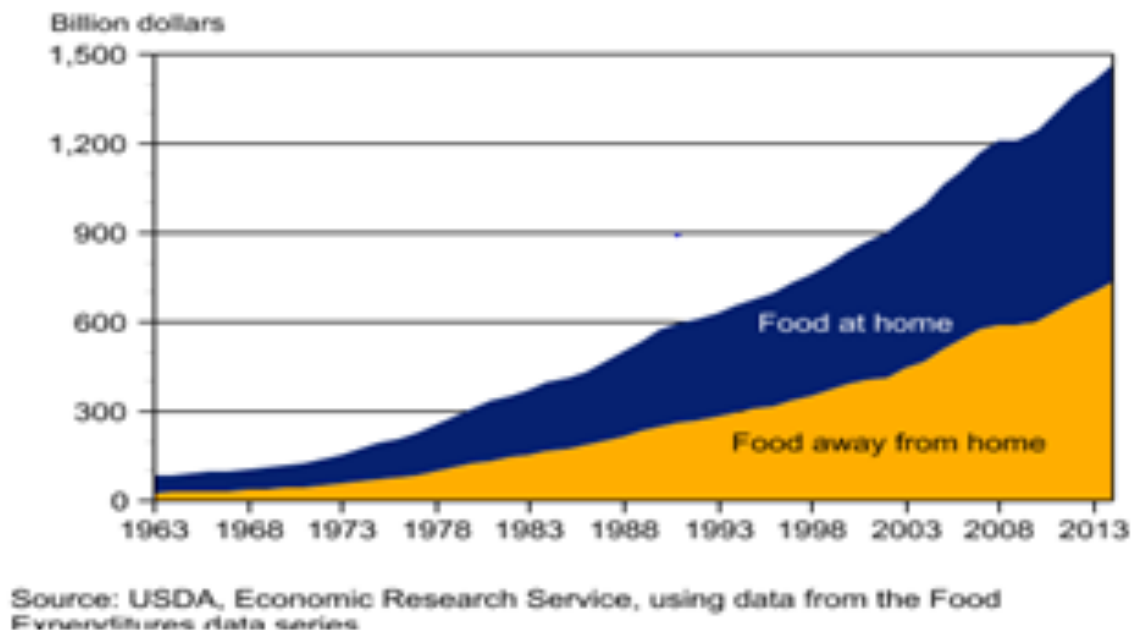


Figure 14: Food Expenditures at Home or Away from Home

### Economic Characteristics

The demand curve for Blue Apron is represented as follows in Figure 15:



Figure 15: Blue Apron Demand Curve

Here the X-axis represents the number of servings ordered and the Y-axis represents the price per serving. We can see that the price per serving is inversely proportional to the number of Servings ordered. The demand curve may shift to the left or right depending upon the change in influencing factor other than the price. For example, a positive sentiment or news about the company in the market may shift the demand curve to the right and vice versa.

The change in demand of a product when the price changes is known as the price elasticity. The price elasticity for Blue Apron was calculated as shown below while considering both increase and decrease in price. The price elasticity was found to be greater than 1. This implies that the change in quantity demanded is proportionately larger than the change in price. Hence, any further increase in price would lead to decrease in revenue and any further decrease in price would lead to an increase in revenue.

		<u>Q1=4</u>			<u>Elasticity</u>
		<u>Q2=16</u>			
		12	127.79		<u>1.066546</u>
		20	71.89		
<u>servings</u>	<u>Total price</u>				
4	27.95				
6	39.94	<u>Q1=12</u>			
8	51.92	<u>Q2=16</u>			
12	75.88	4	175.72		<u>1.047699</u>
16	99.84	28	23.96		
		<u>Q1=16</u>			
		<u>Q2=4</u>			
		-12	127.79		<u>1.066546</u>
		20	-71.89		

**Price Elasticity > 1**

Figure 16: Elasticity of Blue Apron

The law of supply states that higher the price, larger the quantity supplied, all other factors been constant, and hence it will be an upward moving curve with quantity supplied on X axis as independent variable and price as a dependent quantity on Y axis (NetMBA, n.d.).

Blue Apron makes it convenient for its customers to try new foods, by selecting fresh ingredients that might be unfamiliar to the customers, paired with a stepwise recipe guide, and delivering all of this to your doorstep at 60% less money of what consumers might otherwise expend, as mentioned by Elizabeth Crawford in an article in 2014 (Crawford, 2014).

Blue Apron purchases ingredients in bulk and can negotiate a better price for these goods. They also exclude the middle man in the supply chain as they shop directly from hundreds of local farmers and save a considerable amount. They also only deliver the exact portion that would suffice the respective serving to avoid wasted food.

In addition to engaging customers, Blue Apron delivers results for suppliers. They expose the suppliers' products to customers through deliveries and also present suppliers and entrepreneur stories on the company blog. Therefore, customers can also directly contact these suppliers. This strategy helps in brand endorsing and brand building. They also partner with



small scale start-up suppliers that do not have enough production to team up with retailers. As a result, Blue Apron quickly realized the potential of this market when they saw their sales zoom from approximately \$80 million in 2014, to \$800 million in 2016.

### Key Technology Trends

E-commerce within the food and beverage industry is believed to be still in its initial stages, but is growing quickly according to LEK research, a London based global management consulting firm with its head-quarters in Boston. E-Commerce was 2% of the sales in 2017 and is estimated to be between 9% to 25% by 2025 as per Karen Weisberg (Weisberg, 2018).

The future trend in this industry has been shown by a company called Myxx. This company connects its consumers directly to the retailer's cart, hence enabling them to easily shop for all the ingredients from the retailer's e-commerce cart. Customers can enjoy such meals at a fraction of cost as compared to other players, and without the hassle of having to sign up for subscription, as mentioned by Brittain Ladd (Ladd, 2018).

This is the age of Artificial Intelligence, and it is expected that companies will use this technology to improve their line of operations. Automation can immensely improve the quality of food products delivered. For example, instead of relying on human eye, machines with bar code scanners can scan different aspects of food materials. Green vegetables can be scanned for a desired shade of green as the benchmark and a filter that rejects the product if the deviation is more than, say 20%. They can do the same with other products, like firmness of tomatoes, onions and fruits like cantaloupe. Machines can also have a material analyzer to detect the acidic content of meat and it could help them immensely improve the customer's end experience.

## Key Consumer Needs

Blue Apron has managed well to attract high earning customers, who are very busy with work and other activities, who don't mind spending it with meal kit companies, instead of spending it in restaurants. However, it needs to cater to a much wider audience, on a consistent basis, including people from different economic statuses. Now-a-days, people have started caring more about their food than ever before. The whole idea of knowing what you eat, who grows your food, where does it come from, has made this whole experience of meal kits very exciting and luring for customers. Companies just need to strike the right chords with customers, with regards to the quality of the products, delivery time, pricing and portion of food. They should also encourage customers to give feedback and only then can they complete the loop, by working on these feedbacks and improving the necessary areas.

## Five Forces Analysis

### Competition in the Industry

Although E-commerce just contributes to over 2% in sales in the foods industry today, the competition amongst meal kit companies operating in this segment is fierce. There are more than 150 meal kit companies today, operating in the United States. As a result, there is little degree of flexibility or freedom that Blue Apron can exercise to improve its statistics and they must act quickly and make decisions. For example, Blue Aprons biggest competitor, HelloFresh, acquired Green Chef to become the market leader in United States controlling 36% of the market as of 2017, compared to Blue Apron at 35%, which saw a decline in its market sales compared to a year before, as reported by Rani Molla (Molla, 2018).

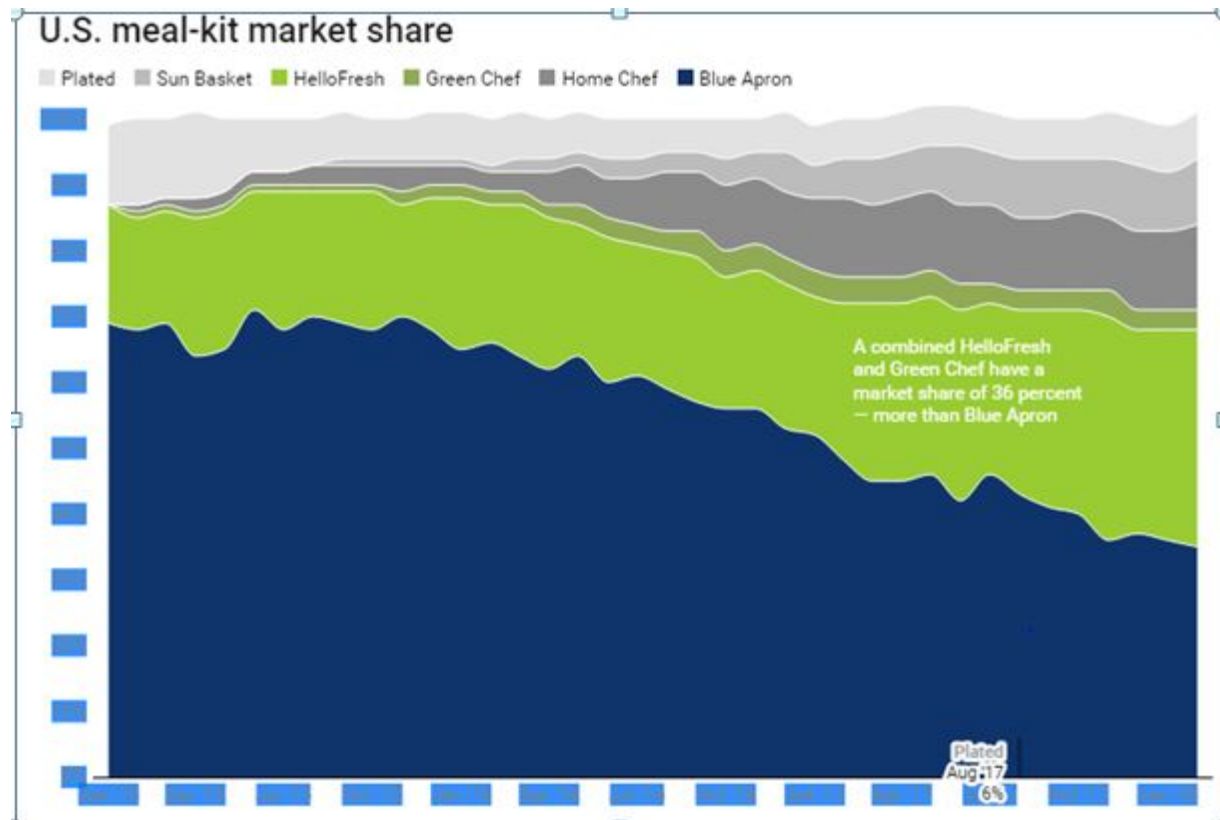


Figure 17: U.S. Meal-Kit Market Share

#### Potential of New Entrants

A list of potential companies along with some information is presented in Table 2.

Table 2: Potential New Entrants of Meal-Kit Delivery Market

Product Name	Subscription	Price/Serving (USD)	No. of Recipes offered per deal per week	No. of servings (adult) per recipe	Shipping Cost (USD)	Preparation Time (minutes)	Special Features
Blue Apron	Required	\$7.49 to \$9.99	2 to 4	2 and 4	Free	20 to 60	Eight menus per week, unfamiliar ingredients make a rich experience, occasional menus from guest celebrity chefs. Optional wine pairing service also available
Plated	Required	\$9.95 to \$11.95	2 to 4	2 and 4	Free above \$60	20 to 60	Over 20 new recipes each week. Optional desserts.
HelloFresh	Required	\$7.87 to \$9.99	2 to 4	2 and 4	\$7.99	20 to 60	Ingredients labeled and separated. Lunch and dinner variation.
Freshly	Required	\$8.99 to \$12.50	4 to 12	1	Free	N/A	Meals are fully cooked right before delivery. Breakfast options also available.
Dinnerly	Required	\$4.99	3	2 and 4	\$8.99	20 to 50	Only six ingredients per recipe to save time. Recognized as budget friendly.
Gobble	Required	\$11.99 to \$13.99	2 to 12	2 and 4	\$6.99	15	Pre-chopped vegetables and many pre-cooked components to keep prep time under 15 minutes.
EveryPlate	Required	\$4.99	3	2 and 4	\$8.99	20 to 35	Only five recipes to choose from which enables affordable pricing and a generous portion of food.
One Potato	Required	\$8.72 to \$9.95	2 to 3	2 and 4	\$7.99	20 to 60	Good combinations for adults, teenagers, and children.

### *Power of Suppliers*

Blue Apron purchases its products from local entrepreneurs, farmers, and small start-ups. However, these farmers and entrepreneurs may also sell their products to other similar companies. If they do not have an exclusive contract with Blue Apron, they could sell their products to different companies at the same time. On the other hand, even small start-ups could negotiate terms in their favor, to make things more difficult for Blue Apron as the supplier grows. As previously discussed, Blue Apron had a pilot project with Costco. However, it was not an exclusive deal, and Costco sold products from other brands too. Costco insisted that Blue Apron lower its prices by 30% before they could sign a deal to maintain the market share, as reported by Elizabeth Crawford (Crawford, 2014).

### *Power of Customers*

Ordering three meals at once and waiting a week for them to arrive may not always fulfill a customer's need. Hence, it is difficult to maintain a steady base of loyal customers. It is necessary to maintain a good quality of ingredients and wide variety of food recipes to keep customers excited about this service. There are more than 150 companies in the market and it can be very tempting and easy for customers to try other online meal kits. On the other hand, major retailers like Amazon and Walmart have an advantage, as they can provide good deals to their sellers, owing to their deep pockets, well established supply chains, and customer foot falls, and have them sell their products at lower rates, further intensifying and aggravating the competition for Blue Apron.

### *Threat of Substitute Products*

Retaining customers has been one of the major problems faced by all meal kit companies. Customers can easily turn to ready to eat products, heat and eat under 2 minutes products, available at the retail stores like Amazon, Walmart or place an order with GrubHub or similar online platforms. Large players and restaurants are always ready to gain market share, even when the slightest opportunity arises.

### *Competitor Analysis*

Blue Apron faces competition not only from within the segment of the food industry it operates in, but also from outside the segment of the meal kit industry. Firstly, the competitors from within the segment have adopted different strategies to stay in the competition. For example, its biggest competitor HelloFresh acquired a smaller meal kit company Green Chef to increase its business and customer base. On the other hand, to make their offline presence felt, HelloFresh also teamed up with a Dutch retail giant operating in United States, Ahold Delhaize. Starting June 2018, 581 Stop and Shop and Giant (Landover) stores in the Northeast and Mid-Atlantic, which are managed by Ahold Delhaize, have started selling HelloFresh products in their stores, as reported by Russell Redman (Redman, 2018).

Many companies are purchasing smaller companies to gain market share. Kroger, a major retail player, announced in May 2018 that they were acquiring Home Chef for a potential \$700 million deal. Walmart also plans to start selling its Meal kits in its over 2000 stores, throughout the country by the end of this year, as reported by Brett Molina, 2018. Blue Aprons very first major competitor Plated was acquired by Albertsons, one of the largest US grocers, in May 2017, which has around 2,300 stores across the U.S.. Amazon already sells products by Tyson and Takeout kit. Marley Spoon Inc, one of the competitors of Blue Apron, teamed up

with famous Home Cook Chef Martha Stewart to start Martha and Marley. Marley Spoon Inc. also started an affordable and budget friendly meal kit delivery segment by the name Dinnerly in 2017.

### Major Issues/Problems

Judging from their released earnings on Reuters, it is very apparent that Blue Apron has had rapidly declining revenue since March 2017 (Reuter, n.d.). The issues that contribute to this decline are the fact that they have had trouble sustaining quality in their service as well as maintaining their once dominant control of the meal kit market.

#### Issue #1: Sustaining Quality in Service

Quality is a very important aspect of a meal. If there is sensed lacked lack of quality to a product, customers are inclined to jump ship from a service. This is exactly the case for Blue Apron. The graphic below shows the many causes that contribute to the overall issue of quality.

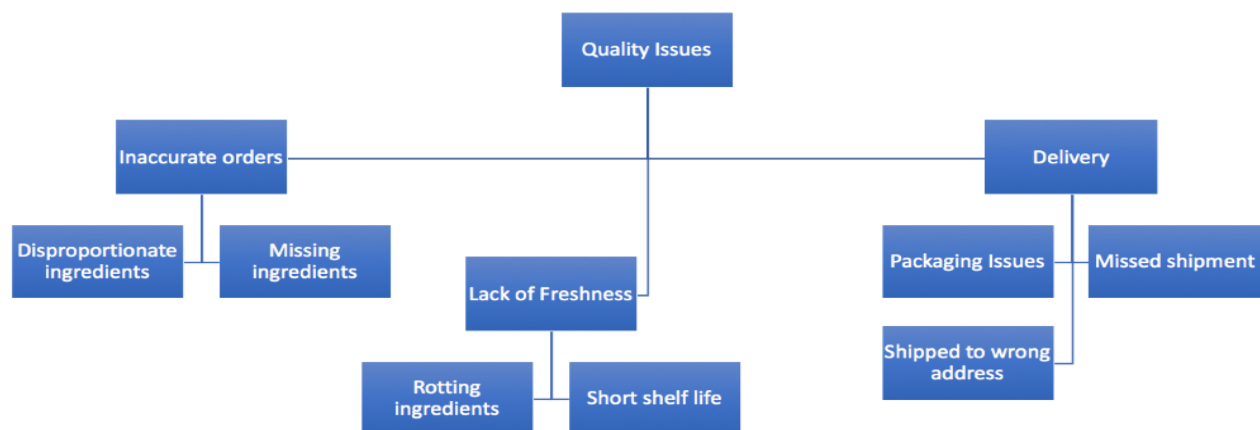


Figure 18: Issue Tree for Identified Issue #1

Accounts of all the above causes are littered amongst review websites. The most frequent seems to be a lack of freshness. A business insider article by Ashely Lutz describes the first red flag of the service as quality issues. She wrote, “The produce often arrived wilted, and I felt as if I had to either use it immediately or throw it away. This was particularly an issue with

ingredients like arugula and cilantro but also happened with squash, which generally keeps for much longer.”(Lutz, A., 2017). This sort of sentiment is echoed by many reviews on consumeraffairs.com. One reviewer, Terri of Colby, WI, is quoted saying, “At first, we were THRILLED. The selections were a little more 'exotic' (to our Midwestern palates) and contained foods we weren't familiar with. The first month, everything was EXCELLENT. Then we started to notice some little changes...the produce didn't look as fresh...the box was poorly packed leading to damage and leaks.” Another reviewer, Janice of Franklin, TN, voiced “3 days late 3 times in a row. Very disappointed as I base meal planning on these deliveries and the last 3 orders have been late and food ruined. Blue Apron did reimburse me but ??? since I can no longer depend on Blue Apron. Customer Service didn’t even call me or attempt to tell me if they talked to FedEx about poor delivery.” Other areas of concern are the employees working at the warehouses. Blue Apron has hired unskilled workers to keep up with demand which, in combination with poor management, has led to the numerous health and safety violation (Kosoff, 2016). The entire logistics of getting fresh food right to your door has been an issue for Blue Apron since its inception.

The impact of this issue is felt in the area of customer retention. These quality issues contribute to nearly two-thirds of Blue Apron subscribers cancel after the first three months of service (McCarthy,2017). The figure below shows customer retention over a year period from when acquired. Retaining customers saves Blue Apron money. Much of their marketing is targeted to acquiring new customers, which comes in at a price tag of \$460 per customer when dividing marketing by customers acquired over 12 months (Taylor, 2017).



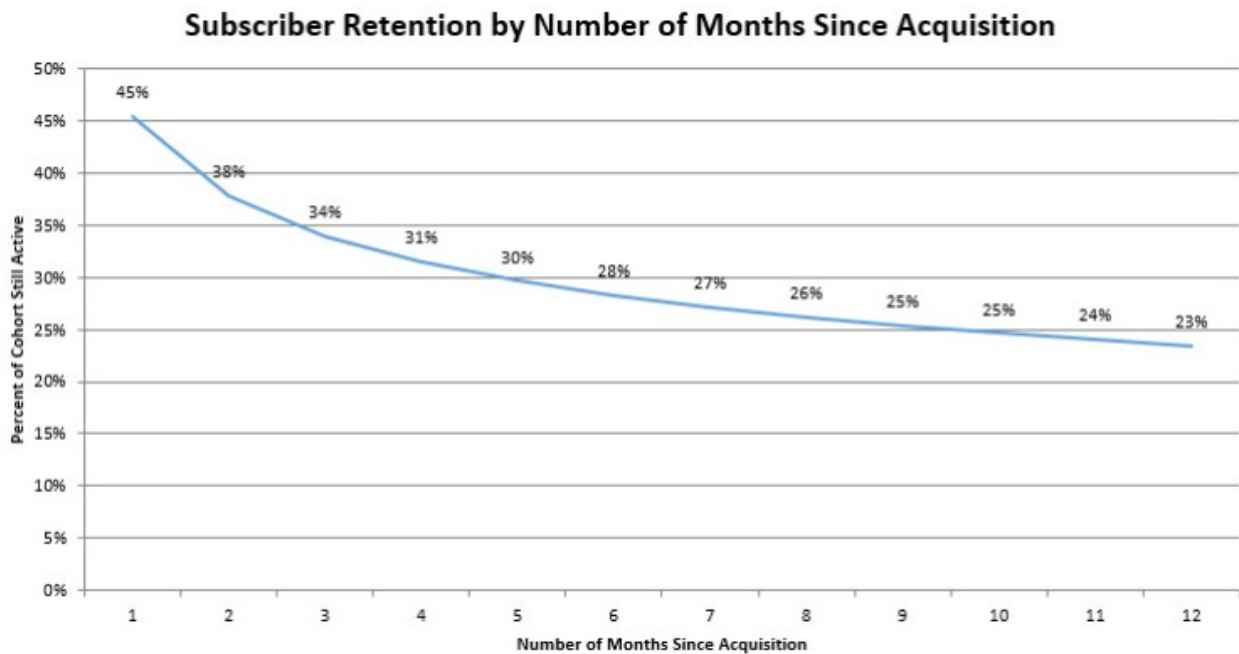


Figure 19: Subscriber Retention

#### Issue #2: Loss of Market Share

Fierce competition has arisen over the last 6 years in order to challenge Blue Apron at its business model. The rising popularity of a meal kit services has brought about a competitive environment of companies that are fighting for a share of the market. The market generated \$5 billion in revenue in 2017 (The Meal Kit Delivery Services Market, 2018). Many big-name players such as Walmart and Amazon are joining in the meal kit market. These companies bring very deep pockets and already have a great source of established fulfillment centers. HelloFresh has recently taken the largest share of market. Just this year it owns 36% of the market, overtaking Blue Apron (35%) as the largest provider of home meal kits (Molla, 2018). This trend has become a serious issue for the company. The causes of this issue are depicted in Figure 20.



Figure 20: Issue Tree for Identified Issue #2

The impact felt here is investor confidence. Blue Apron is a publicly traded company and their share value is hovering just over a dollar. They have lost 88% of their stock value since its IPO 17 months ago. This is mainly due to the optics of market share loss. The company just doesn't look as profitable as it once did which could hurt their brand recognition in the future.

## The Engineering Analysis

Earned value management (EVM) is a technique used for measuring project performance and progress in an objective manner (Humphreys & Associates, 2016). The method illustrates cost and schedule variance to a variety of project types. It was originally developed by the United States Air Force. EVM provides a disciplined, structured, objective, and quantitative method to integrate technical work scope, cost, and schedule.

Schedule and cost variance illustrates a project's performance and progress (EVM PARCA, n.d.). It is important to ensure sound planning and resourcing of all tasks required for good performance. These two variances provide an early warning of performance problems

since it compares the planned value and the actual costs of activities to their corresponding earned values (Stratton, n.d.). Schedule Variance (SV) shows the variance in time expressed in monetary terms. Schedule Variance is calculated by subtracting the planned value (PV) from the earned value (EV). If the result is greater than zero, the project is ahead of schedule. If the result is negative, the project is delayed. Cost variance (CV) illustrates the variance in cost expressed in monetary terms (Vanhoucke, 2011). This variance is the earned value (EV) from the actual costs (AC). If the value is over zero, the project is under budget; similarly, the project is over budget if the value is negative.

Although EVM provides helpful information, it does not deliver a complete picture (Russell, 2011). EVM is efficient in providing information on the project budget and costs status. It calculates the cost and time performance indices of a project and estimates the completion cost and time of a project. It serves as an early warning to program managers that the project is in trouble. A group can use this information to identify areas and root causes of schedule slippage and cost overruns. However, EVM could improve in a few areas in order to accommodate real life. It cannot accommodate tasks performed out of sequence. Additionally, the approach fails to consider what work has already been done or include the quality of work (Dodson, Guilherme, Carvalho, 2015). EVM cannot track if the work accomplished is meeting the quality requirements defined by the project's stakeholder throughout the project execution.

This tool could assist Blue Apron in assessing and tracking their budget and operational cost. There is a possibility that Blue Apron could be delisted. As previously discussed, delisting

company stock occurs when a company can no longer meet the requirements to be listed on an exchange and are removed either voluntarily or involuntarily. This action can be difficult for a company to raise money, and in this respect, it sometimes is a first step towards bankruptcy. Thus, it is critical for the company to analyze and manage their schedule and cost variance.

Another engineering analysis tool that Blue Apron could benefit from using is Six Sigma. Six Sigma is a tool that has been instrumental in process improvement across many industries. In true definition, “Six Sigma is a disciplined, data-driven approach and methodology for eliminating defects (driving toward six standard deviations between the mean and the nearest specification limit) in any process – from manufacturing to transactional and from product to service.” (ISixSigma, n.d.) Everything is a process; where there is repetition of a process, then there is an opportunity to start trending data. Blue Apron has many key indicators where the opportunity exists to perform trend analysis and deep dive into the factors affecting customer service. Blue Apron could use Six Sigma in a few ways to help improve their customer satisfaction including incomplete orders, delivery delays, and product order changes.

Missed or delayed shipments is another category that could benefit from Six Sigma principles. Blue Apron does not utilize their own form of transportation and delivery, instead choosing to rely on a commercial shipper like FedEx. Blue Apron collects data on how many deliveries made it on time to the destination and how many did not. This data could be studied and used to better estimate when shipments should leave the warehouse to give the shipper enough time to transport the package to the final destination. Should there be a person hired to be responsible for tracking shipments? A Blue Apron “Fulfillment Specialist” gets paid \$12.05

which translates to \$25,064 per year not including benefits (Indeed, n.d.). By reviewing the number of complaints and product volume, the total number of Fulfillment Specialists can be estimated. If an analysis of shipment data shows that Blue Apron has a satisfactory level of packages which “leave warehouse on-time”, it would be reasonable to conclude that customer facing delays are the fault of the shipper. One way to mitigate that issue may be to work out a contract with a shipper based on delivery performance. Other shippers with better performance can be evaluated.

Additionally, product changes due to customer not wanting a shipment or wanting a different meal substitute needs to improve as well. Time required to make changes has a short window each week so if the customer gets busy then they will either get charged for a non-needed shipment or receive meals they didn’t want. Blue Apron can use Six Sigma to reduce the cycle time for reacting to customers that change their mind. A business should be able to react to customer changes in an efficient manner. A software optimization effort could assist Blue Apron with examining the entire supply change and be able to react to change quickly. Implementation of these tools can be found below in the ‘SARS Analysis’.

## SARS Analysis

Blue Apron needs help in the form of alternative analysis. This mathematically back decision tool can guide Blue Apron to select the best alternative to overcome their issues in both the short and long term. Five key criteria were identified, and weighted values assigned to each based on importance. The criteria assisted the team translate the Blue Apron decision making problem to a numbers-based rating system. This approach lead to a clear numerical solution. The Strategic Alternatives are weighed on scalable elements such as; a)

Implementation Time, b) Initial Investment, c) Reoccurring Cost, d) Potential Growth, and e) Potential Customer Retention.

### Weighted Key Factors

When analyzing each alternative, it is important to give some higher or lower weight depending on what the group thought is crucial based on short vs. long term solutions. The following weights in Table 3 were given to analyze the alternatives:

*Table 3: Key Criteria for SARS Analysis*

Key Criteria	Short	Long
Implementation Time	40%	5%
Initial Investment	10%	20%
Reoccurring Cost	5%	20%
Potential Growth	5%	25%
Potential Customer Retention	40%	30%
Total	100%	100%

### Scoring Scale

There will be scores assigned to every alternative based on the criteria. A score of “1” signifies the best option and a score of “3” is the lowest ranking selection.

### Issue #1: Sustaining Quality in Service

The goal of this analysis is to formulate alternatives for improving and upholding high standards in quality of service. These strategies should enable Blue Apron into unexplored directions to address quality as an inherent part of the operations with minimal cost burden to the status quo. In order to lead Blue Apron into a competitive alternate strategy, three key factors were identified: a) Inaccurate Orders b) Lack of Freshness and c) Delivery.

The following Short-term alternatives were suggested by the team for issue #1:

#### Short-Term Alternative #1: End of Line Checklist

Based on statistical price comparisons, Blue Apron is one of the more expensive options and as a result, the customer expects industry leading quality. Once the meal kit box is closed, the consumer expects to open a box with quality ingredients and all items inside. Every hand that touches the product should be a quality check but the one that plays the most important role is the last hand that seals the box. The team suggests that the last person packing the recipe sheets do a quick check of all the items. This alternative will have added cost because there will be a person spending more time checking a box. The data gathered from this checklist could help the company identify issues within the production line. From there, Blue Apron could implement targeted training or support as needed.

Estimated implementation time: 10 weeks

#### Short-Term Alternative #2: Gemba Walks

Gemba walks are one of the most under rated tools because there is a misconception that it is expensive to implement. In this case, these walks involve investing manager time in the heart of each process. Blue Apron Fulfillment managers will take weekly walks around the plant following the value stream. A key thing to consider here is to not focus on the people and mainly on the process. People out on the floor might be on alert and take offense to being watched by upper management. It is critical that management explains the purpose of the walks. One thing to reiterate to the employees is that the company is looking at the different aspects on how to improve because it is in a critical state with customer complaints. After time, employees will understand that all employees need to stay committed to quality. The cost involved in this alternative is hard to quantify because it is unknown as to how many

management employees there are in a fulfillment center. Management employees are typically under the salary structure so it we will assume that the money invested for this approach is just time of their daily tasks redirected for a 30-minute walk of the floor. If we look at our daily tasks at work, we know that we always have time to spare in our day. In Blue Apron's case, the management can spare 30 minutes to an hour on a weekly basis to perform the walks. You can gather your findings and present them to your quality engineers and have them perform a deep dive. There is no added cost for investigating further because Blue Apron already employs quality engineers and it is there job to perform this type of work.

Estimated implementation time: 6 weeks

#### Short-Term Alternative #3: Training Refresher of Fulfillment Center

New employees tend to follow the strict guidelines that are imposed by companies right from the gate but often we see that over time we lose sight of the company quality goals. This alternative is aimed to have the entire fulfillment center take refresher training every year. With this approach, we seek to tie in all employees to one goal and reiterate the importance of the work they perform daily. Cost associated with this alternative is a big investment because even if it is a one-hour training it can equate to hundreds of thousands of dollars across the entire company.

Estimated implementation time: 16 Weeks



## Issue #1 Short-Term Alternative Results

Table 4: Scoring of Short Term Alternatives for Issue #1

	<b>Criteria</b>	Implementation Time	Initial Investment	Reoccurring Cost	Potential growth	Potential Customer Retention
	<b>Weight</b>	40%	10%	5%	5%	40%
<b>Alternative #1</b>	End of Line Check List	2	2	3	2	1
<b>Alternative #2</b>	Gemba Walks	1	1	2	3	2
<b>Alternative #3</b>	Training Refresher of fulfillment Center Employees	3	3	1	1	2

Table 5: Total Scores for Short Term Alternatives for Issue #1

		<b>Unweighted Score</b>	<b>Weighted Score</b>
<b>Alternative #1</b>	End of Line Check List	8	1.55
<b>Alternative #2</b>	Gemba Walks	9	1.55
<b>Alternative #3</b>	Training Refresher of fulfillment Center Employees	10	2.4

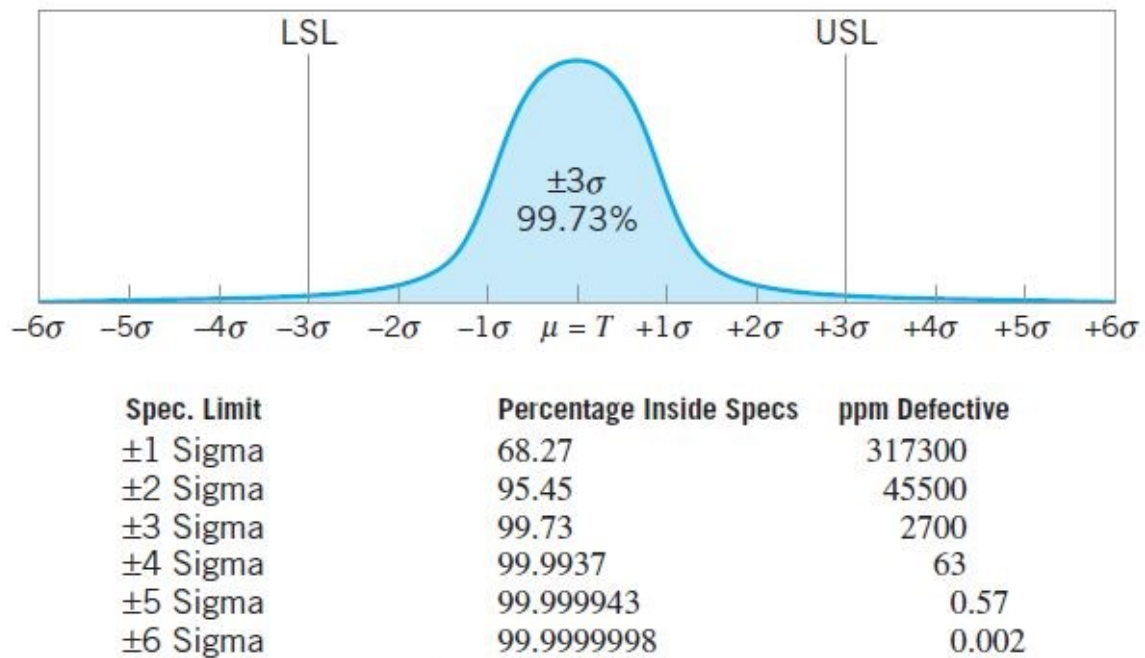
After ranking all the alternatives and incorporating the weight scale we see that alternative #1 and #2 have the same score. Since there is a tie, the group decided that End of Line Check list would make a bigger impact since it is the last line of defense before the box is closed.

The following long-term alternatives were suggested by the team for issue #1:

### Long Term Alternative #1: Lean Six Sigma Process

Six-sigma aims at reducing the variability in the product quality characteristics to the highest order such that failures are extremely unlikely. Figure 21 illustrates an ideal

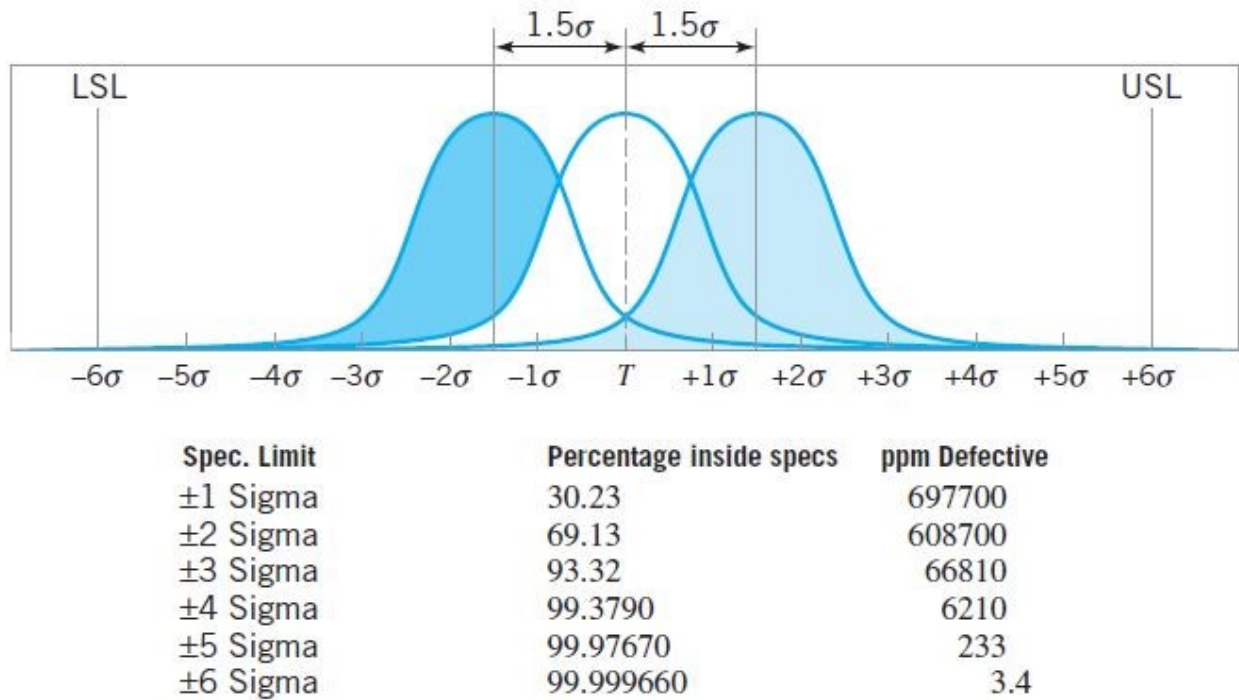
representation of a six-sigma process with the allowable failure limits.



(a) Normal distribution centered at the target (T)

Figure 21: Ideal Six-Sigma Process

Blue Apron currently operates a branched fulfillment where the process of operation may vary from one another, in which case the above representation of a single process technique is modified as shown in Figure 22.



(b) Normal distribution with the mean shifted by  $\pm 1.5\sigma$  from the target

Figure 22: Normal Distribution of Six-Sigma

This minor shift in process is  $1.5\sigma$  from the central mean which allows for a maximum of 3.4 defects or failures for a million deliveries made, if a six-sigma process was to be implemented. Although such implementation is costly and operationally burdening, six-sigma processes are modified to Lean Six Sigma processes which focuses on eliminating wastage, including value added process, and reducing the process variability. It is unlikely that all the concerns related to quality would be resolved by moving towards six-sigma, but it would significantly reduce the errors in the process while also maintaining a uniformity in the process.

Product changes due to customer not wanting a shipment or wanting a different meal substitute needs to improve as well. Time required to make changes has a short window each week so if the customer gets busy then they will either get charged for a non-needed shipment or get a meal they don't want. Blue Apron can use Six Sigma to reduce the cycle time for

reacting to customers that change their mind. A business should be able to react to customer changes in an efficient manner.

An incomplete order or spoiled ingredients delivered can be a huge disappointment for a customer relying on Blue Apron's services. Six Sigma can help by trending internal processes within the packaging warehouse. One example is focusing on the two-person meal boxes and the goal is to get near zero missing ingredients. The power of Six Sigma is choosing how much the company wants to invest into quality based on expected return. Step one is collecting data as to how many customers are getting incomplete orders to determine severity of the issue. Once the issue is confirmed, the next step is to define an acceptable confidence interval for which you want to have certainty that the package is correct. For example, the company could want to have 92% or 99% confidence that the packaging is correct. The logical stance is higher confidence is desired but the increase the confident level costs more for quality. The cost to continue the way Blue Apron operates without a final inspection station is \$0 but the confidence level is 0%. It is unrealistic to inspect 100% of boxes because that seems costly and thus would affect the product cost. Typically, companies select and inspect a sample size. A Blue Apron packager has a wage salary of approximately \$12.32 per hour (Indeed, n.d.). So, a single packaging inspector will cost around \$25,626 per year. How much revenue does one customer truly bring in and what is the cost of bad publicity of each customer? This is when you start to look at the cost of quality. A 2-person meal subscription costs \$60, it is estimated that for every 1 star in a review you might see a value change of 5-9% in revenue (Toister, 2016). The calculation summary tables below show the average impact per person. Overall, if incomplete orders or bad ingredients attribute to a 1-star impact, improving this category can

increase revenue between \$8.9M-16.2M (Yearly Revenue \* 1 Star improvement in Reviews).

The yearly cost of an inspector/s (not including benefits) seems reasonable if the return in investment is as mentioned. Blue Apron would be able to hire around 350-630 (Expected savings/Cost for inspector) inspectors and still break even.

*Table 6: Estimation of Revenue Using Six-Sigma Process*

<b>Givens</b>	
Cost/week	\$60.00
Weeks/Year	52
Yearly Revenue/customer	\$3,120
Number of Subscriptions	746,000 (Mazzilli, 2018)
Revenue as of 8-18-18	\$ 179,600,000 (McCormick, 2018)

	Expected yearly additional revenue
1-Star Review Impact @5%	\$8,980,000
1-Star Review Impact @9%	\$16,164,000

Estimated implementation time: 16 months

Long Term Alternative #2: Dispersion of Macro strategic centers to Micro fulfillment centers  
 Having major distribution centers probably worked when starting up but as the business grows so does the range to consumers. Blue Apron does not have enough capital to take on similar large-scale branches across the nation but if it changes its logistics model to smaller fulfillment centers then it does not have to take on too much capital projects. One of their distribution centers in Richmond, Ca is about 425,934 square feet which is about 652ft x 652ft. (Loopnet, n.d.). Blue Apron needs to break some of these large locations down to something smaller scale. If you cut this size into 3 strategic centers across California or neighboring state,

then it comes out to 141,978 square feet locations (376ft. X 376ft.). Using estimates of \$3.17/sqft (Barry, n.d.), operating cost we see that the smaller locations will be \$450K. Blue Apron could have lower operational costs by having larger locations because the cost/order is dropped given the large amount of resources available. A large warehouse like the one currently at Richmond can be \$2.73/sqft. (Barry, n.d.). So, this means that Blue Apron would pay \$62,400 (450k minus 387.6k) premium per location if the centers were broken into three locations instead of one. The extra cost could possibly be made up by the sales profit and quicker turn around to customers. There is an advantage to having closer fulfillment centers to customers because then there is an opportunity to use local ingredients, have lower shipping cost, and quicker reaction time to customer changes. This extra \$62K could be a wash in the grand scheme of things.

Estimated implementation time: 19 months

#### Long Term Alternative #3: Streamline Supply Chain to improve feedback loop

In order to improve operational efficiency, Blue Apron will need to improve the entire cycle from when the customer places an order until the customer receives it. This alternative aims to address the need for a quick feedback loop. A new enterprise software can help tie the business together no matter where the consumer or Blue Apron locations are. Some great features to integrate into the software are managing customer suggestions or comments. Once customers input this information into the interphase it can flow back to multiple levels of the organizations to react to issues in a timely manner. With many competitors in the market it is always crucial to have a pulse of the business. For example, suppose Blue Apron receives feedback that customers are starting to have ingredient issues. Then, Blue Apron would want the customer feedback interface to quickly relay that information back to the vendors and

upper management. Unfortunately, Blue does not have this in place causing some delayed reactions to market feedback.

A software optimization effort and putting a few people in to manage it can cost up to \$360,000 (Barry, n.d.). Once this software optimization system gets put into place then you can look at the entire supply chain to ensure that everyone is aligned to a system that adapt to changes at a faster pace. This is what sets most business apart from amateurs. Figure 23 offers an example software optimization tool that Blue Apron could invest in and utilize.

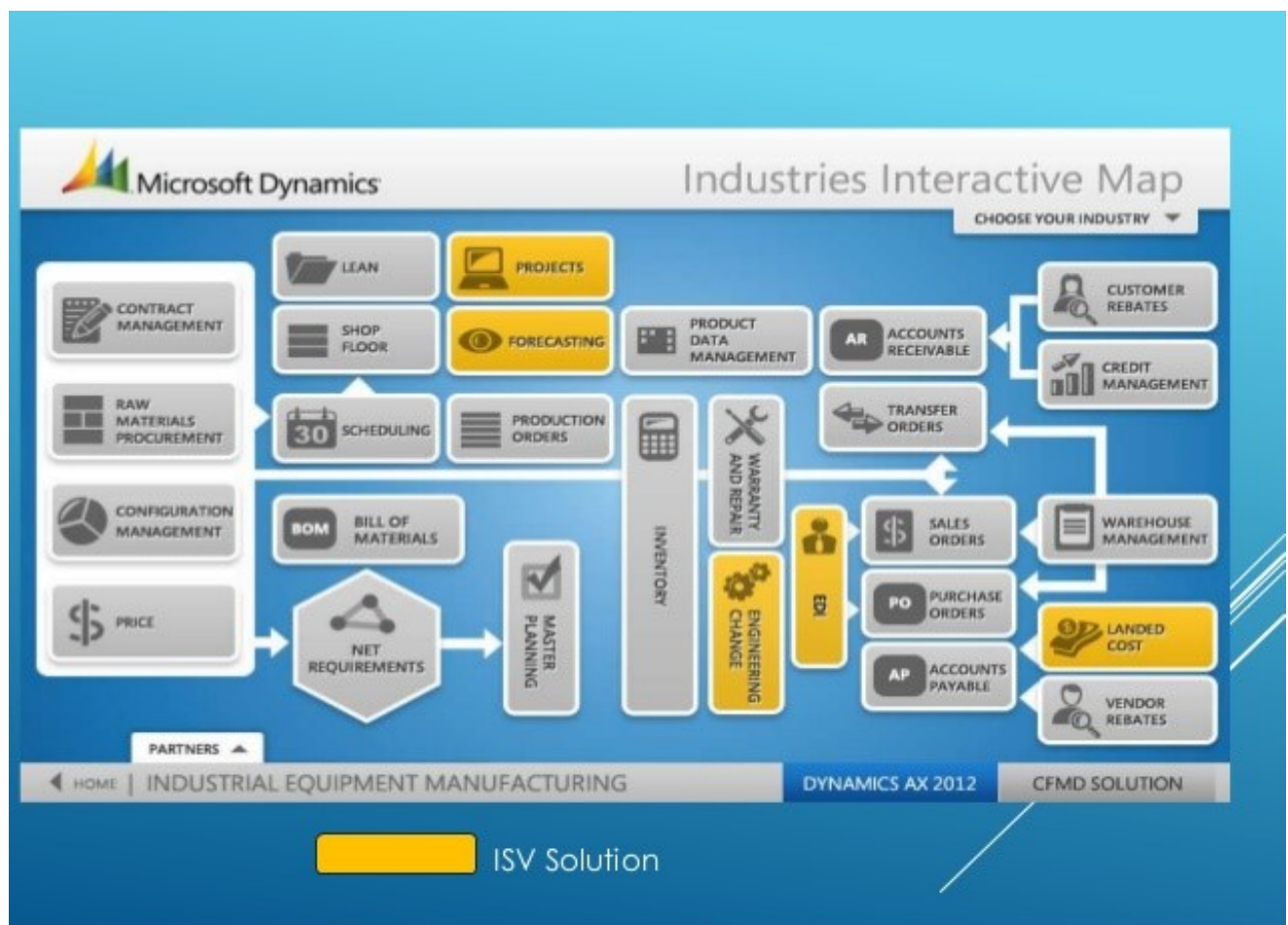


Figure 23: Potential Software Optimization Tool

Estimated implementation time: 10 months

## Issue #1 Long-Term Alternative Results

Table 7: Scoring of Long Term Alternatives for Issue #1

	Criteria	Implementation Time	Initial Investment	Reoccurring Cost	Potential growth	Potential Customer Retention
	<b>Weight</b>	5%	20%	20%	25%	30%
<b>Alternative #1</b>	Lean Six-Sigma	2	3	2	2	3
<b>Alternative #2</b>	Micro Fulfillment Center	3	2	3	1	1
<b>Alternative #3</b>	Supply Chain Feedback	1	1	1	3	2

Table 8: Total Scores for Long Term Alternatives for Issue #1

		Unweighted Score	Weighted Score
<b>Alternative #1</b>	Lean Six-Sigma	12	2.5
<b>Alternative #2</b>	Micro Fulfillment Center	10	1.7
<b>Alternative #3</b>	Supply Chain Feedback	8	1.8

Referencing our metrics scale, we know that the lowest score would indicate the best and highest score would be the least desirable option. In this case, Alternative #2 would be the best option to use.

## Issue #2: Customer Retention to Combat Against Tough Market Share

Blue Apron is facing an uphill battle keeping customers after they have signed up and attracting new subscribers.

The following Short-term alternatives were suggested by the team for issue #2:

### Short Term Alternative #1: Dig into the social media platforms

Electronic communication media is a key aspect in developing and tapping into the customer base that has yet to be showcased the characteristics of the meal-kit providers like Blue Apron. While today the exposure to any company like Blue Apron is amplified by social media presence, it is imperative that Blue Apron do not neglect television or print media that



appeals to a whole other generation. Selective and smart marketing strategies are important and the focus must be on identifying who the potential customer is.

Cooking shows on television or cooking channels on YouTube have regular viewers, these viewers are generally food enthusiasts and often interested in trying a new flavor or spice. Targeted advertisement to such an audience can be effective and efficient, this way Blue Apron can cater to customers for whom the service could reduce the greater hassle. The above process could assist with customer profiling and the driving factors for the subscription. Some Americans may not have a similar enthusiasm for cooking and eat simple dishes on a regular basis. It would be difficult to convince such a customer to participate in a meal-kit plan and this is where a wild social media trend could play a role. Promoting new and innovative online food trends could encourage and nudge new customers into the way of Blue Apron. For example, Blue Apron could start a new #hashtag or promote a day in month for a well-known food dish such as burger day or sandwich day.

Estimated implementation time: 9 weeks

#### Short Term Alternative #2: Create a Loyalty Program

This alternative tries to address the need for keeping a customer that has stuck with the membership after a certain amount of time. Blue Apron needs to explore retention of customers through the use of a loyalty program. As previously discussed, many competitors exist. In society, being a part of a “limited edition” group always gives people a sense of importance or warm feeling of attention. So, if Blue Apron implements a system where subscribers get to unlock special recipes such as desserts then they might be excited to stay with the service. Another option for the loyalty program is the more tenure as a customer, the

customer could receive a discount for the service. As Graham illustrated in 2014, consumers highly value loyalty programs to save money and earn rewards (Graham, 2014):

## Why Customers Participate in Loyalty Programs

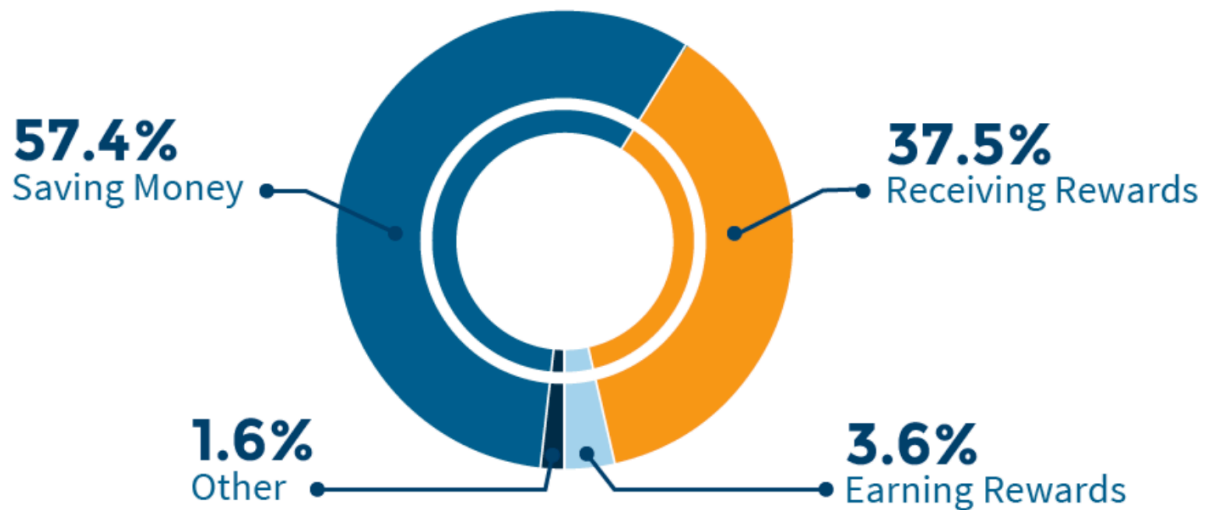


Figure 24: Customer Loyalty Pie Chart

Based on Graham's study, the majority of people who participate in loyalty programs to either save money or receive rewards. Blue Apron can use this research to maximize the potential of the program.

Estimated implementation time: 12 weeks

Short Term Alternative #3: Pair up with brick and mortar stores for cooking demonstrations

One way to get in front of consumers faces in a tightly contested market is by going to the source which is local food stores. We have seen that Costco lets companies come in to put on a display their products. Our team is suggesting something along those lines but on a routine basis across major chains. There will be two people employed for each major city (New York, Los Angeles, San Francisco, DC, Houston, Chicago) and they will travel around to smaller neighboring cities. A typical customer experience Blue Apron employee makes \$35,000 so for each city it will cost \$70,000/yr and all together \$420,000 per year not including benefits

(Indeed, n.d.). This will only be a one-year approach in hopes that the word gets out that Blue Apron is an excellent alternative to scrounging for meal ingredients each week.

Estimated implementation time: 10 weeks

## Issue #2 Short Term Alternative Results

Table 9: Scoring of Short Term Alternatives for Issue #2

	Criteria	Implementation Time	Initial Investment	Reoccurring Cost	Potential growth	Potential Customer Retention
	<b>Weight</b>	40%	10%	5%	5%	40%
<b>Alternative #1</b>	Tap into Social Media	1	1	2	1	2
<b>Alternative #2</b>	Develop Loyalty Program	3	2	3	3	1
<b>Alternative #3</b>	Local store Cooking Demonstrations	2	3	1	2	3

Table 10: Total Scores for Short Term Alternatives for Issue #2

		Unweighted Score	Weighted Score
<b>Alternative #1</b>	Tap into Social Media	7	1.45
<b>Alternative #2</b>	Develop Loyalty Program	12	2.10
<b>Alternative #3</b>	Local store Cooking Demonstrations	11	2.45

Referencing our metrics scale, we know that the lowest score would indicate the best and highest score would be the least desirable option. Although alternative #3 has a lower sum score, with the weighted scale it becomes the least desirable option. After all the weighted scores have been tallied, Alternative #1 is the best option in the short term.

## Issue #2 Long Term Alternatives

The top ten states in the United States account for more than 54% of total U.S. households and these states account for more than 57% of Blue Aprons customers. These states include California, New Jersey, and Texas, where Blue Apron has its fulfillment centers

(Blue Apron, 2018). In addition to its fulfillment center at Richmond, CA, the company had leased out 430,000 square feet of space at Fairfield in California. This facility has machines and systems to mass produce meal kits for distribution along the west coast. California itself contributes to around 15 % of Blue Aprons customers (Glover, 2017). On the east coast, the company has invested heavily in a fulfillment center at Linden, New Jersey. They call it an on-time-in-full rates fulfillment center, which is spread over a sprawling 495,000 square feet. This is an automated fulfillment center and they have invested in automated kitting at this facility as well. They have been able to reduce their workforce from 2,000 to just over 800. Linden supplies more than 50% of countrywide demand (Blue Apron, 2018). As of January 2018, the company had over 3,980 employees and 80% of the employees were engaged in fulfillment roles (Blue Apron, 2017).

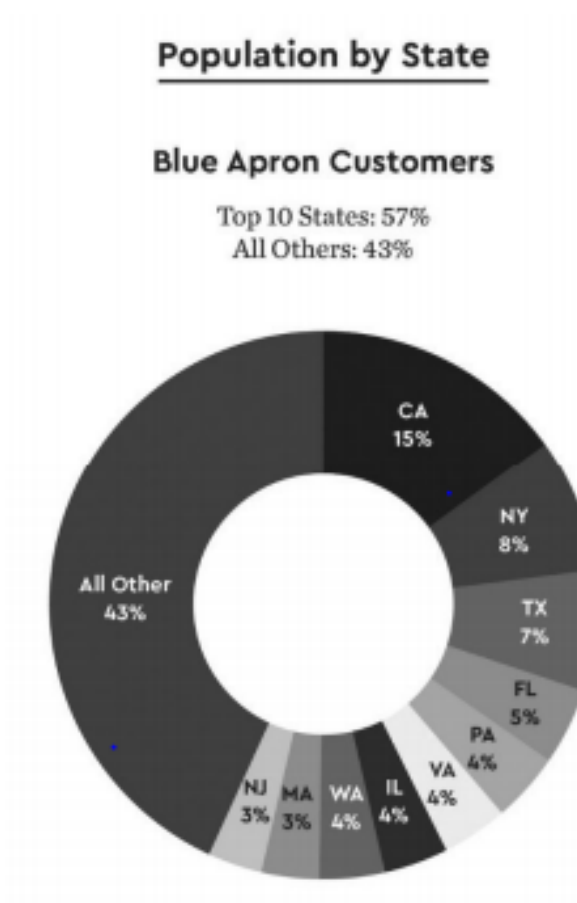


Figure 25: Blue Apron Customers by State Pie Chart

The following Long-term alternatives were suggested by the team for issue #2:

Long Term Alternative #1: Digitalizing smaller fulfillment centers

Blue Apron has aggressively invested in digitalizing its fulfillment centers. Hence, it would be a good idea to use micro fulfillment centers, as mentioned in short term recommendations and then digitalizing these centers can ultimately help scale up the operations in the long run. Digitalizing smaller fulfillment centers can be a good long-term solution, as Blue Apron profits majorly from optimizing its fulfillment centers and has around 80% of its workforce in these operations.

Estimated implementation time: 21 months

### Long Term Alternative #2: Focus more on marketing strategies

We can see the relation between marketing spending and revenue from the graph below:



Figure 26: Blue Apron Revenue and Marketing Expectations

It can be seen that revenue earned is directly proportional to marketing spending. Blue Apron had to cut down on their marketing expenses after they experienced loss in revenue. HelloFresh, Blue Apron's competitor, on the other hand took advantage of this loop hole, by effective marketing to increase their customer base. Blue Apron can focus more on their marketing strategies by effectively using data analysis to tap into market sentiments in these major grossing states to effectively forecast the demands and accordingly manage their warehouse inventory orders and market them to maximize the utilization of the raw materials ordered.

Estimated implementation time: 19 months

Long Term Alternative #3: Starting a subsidiary, targeting a particular section of population or acquiring smaller regional competitor working on a different business model with a good customer base.

It would be a good option to start a subsidiary company under Blue Apron that caters to a specific sect of population, to diversify its customer base, instead of diversifying its service under the same sect of population. For example, Martha and Spoon allocate a part of their revenue towards Dinnerly. They started this subsidiary to offer affordable meals (\$5.00 per

portion). Blue Apron could also acquire a smaller regional company with a different business model and a good customer base, specifically, in the major grossing states.

Estimated implementation time: 26 months

## Issue #2 Long Term Alternative Results

*Table 11: Scoring of Long Term Alternatives for Issue #2*

	<b>Criteria</b>	Implementation Time	Initial Investment	Reoccurring Cost	Potential growth	Potential Customer Retention
	<b>Weight</b>	5%	20%	20%	25%	30%
<b>Alternative #1</b>	Digitalizing smaller fulfillment centers	2	2	1	3	3
<b>Alternative #2</b>	Focus on marketing strategies	1	1	3	1	1
<b>Alternative #3</b>	Starting a subsidiary/ acquiring regional competitor working on a different business model	3	3	2	2	2

*Table 12: Total Scores for Long Term Alternatives for Issue #2*

		<b>Unweighted Score</b>	<b>Weighted Score</b>
<b>Alternative #1</b>	Digitalizing smaller fulfillment centers	11	2.35
<b>Alternative #2</b>	Focus on marketing strategies	7	1.4
<b>Alternative #3</b>	Starting a subsidiary/ acquiring regional competitor working on a different business model (acquisitions are better	12	2.25

## Recommendation and Implementation Plan

### Recommendations

As a summary from the above analysis, Group 5 recommends the following solutions in the table below:

*Table 13: Short and Long Term Recommendations for Blue Apron*

Issue	Recommended Short Term Solution	Recommended Long Term Solution
#1 - Sustaining Quality in Service	Implement check list at end of assembly line	Capitalize on social media marketing
#2 – Loss of Market Share	Retire macro-fulfillment centers and establish micro-fulfillment centers	Focus on marketing strategies

### Implementation Plan

Blue Apron is currently experiencing a critical time where change is necessary to survive.

The following is a detailed plan on how the company should implement the proposed strategies to regain market share.

#### Issue #1 Checklist Implementation Plan (Overall: 10 weeks)

1. Management and floor leaders to have a sit-down meeting to discuss checklist ~1 week
  - a. Establish goals of checklist
  - b. Determine layout of the checklist template
2. Publish into company database. ~1 week
3. Coach employees on checklist. ~3 weeks
4. Implement checklist and collect data ~ 4 weeks
5. Follow-up meeting regarding checklist ~1 week
  - a. Review checklist versus predetermined goals (step 1a)
  - b. Review customer feedback
  - c. Revise checklist as needed



Estimated Cost to Implement = \$207,296.98, calculations found in Appendix A.2

Issue #1 Macro to Micro Fulfillment Centers (Overall: 19 months)

1. Review current lease agreements to determine flexibility. ~1 month
2. Review open locations across the United States that can fit the needs of quick relocations. ~2 months
3. Management and consultants to meet to discuss overall plan for splitting into smaller units. ~1 month
4. Select and negotiate lease agreements. ~3 months
5. Determine and plan re-mobilization of fulfillment centers. ~6 months
6. Implement re-mobilization plan. ~6 months

Estimated Cost to Implement = \$561,600.00, calculations found in Appendix A.2

Issue #2 Tap into Social Media (Overall: 9 weeks)

1. Identify a social media expert. ~3 weeks
  - a. Determine if social media expert exists within company
  - b. Hire a social media expert
  - c. Perform a focus group study
2. Hold meeting for management and social media expert(s) to discuss and plan goal of social media experiment. ~3 days
3. Reach sponsorship agreements with social media platforms. ~2 weeks
4. Implement social media platform plan (YouTube, Instagram, Facebook, etc.) ~2 weeks
5. Collect data and review ~3 days
6. Based on reviewed results, invest more resources into successful platform ~ 1 week

Estimated Cost to Implement = \$175,288.46, calculations found in Appendix A.2

Issue #2 Focus on Marketing Strategies (Overall: 19 months)

1. Marketing team perform analysis ~3 months
  - a. Review impact of previous marketing strategy
  - b. Record impact of recent budget cut for marketing
  - c. Compare marketing budget to competitors
2. Management to review existing marketing process and future goals of marketing ~1 week
  - a. Discuss results from marketing team's analysis
  - b. Determine future budget for marketing
  - c. Document future goals of marketing strategy
3. Budget developed for marketing. ~1 week
4. Develop marketing advertisements ~6 months
  - a. TV/Online video commercial
    - i. Write script for TV commercial
    - ii. Shoot TV commercial
    - iii. Edit and finalize TV commercial
  - b. Still advertisements
    - i. Identify set
    - ii. Shoot still images
    - iii. Edit and finalize still ads
5. Implement marketing strategy ~ 4 months
  - a. TV/Online video commercial

- i. Reach out to TV stations and YouTube and roll ads
  - b. Still advertisements
    - i. Reach out to main social media platforms and roll out big ads.
- 6. Regroup team and review if there is an avenue that is will attract and retain more customers with the ads being invested in. ~2 weeks
- 7. Begin investing more resources into the area that is generating a higher level of customers. ~3 months

Estimated Cost to Implement = 1.28 million, calculations found in Appendix A.2 (Park, 2018)

## Conclusion

Blue Apron entered the meal-kit industry as a strong competitor. Over the past few years, Blue Apron has lost market share and the faith of its customers and investors. The stock price hovers right above \$1.00 while competitors continue to gain momentum. In order to regain trust and clients, short term and long term recommendations have been outlined. In the short term, Blue Apron can implement a quality checklist and utilize social media. These short-term ideas will please current customers while attracting new clients. Over time, Blue Apron can explore the long-term recommendations. These include building micro-fulfillment centers and evaluating the marketing strategies. The intent of these solutions are to decrease shipment length, improve food quality, and assess Blue Apron's largest expense. It is time for the company to put the apron on and get cooking. The hope is these solutions will be a recipe for success!

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## Appendix

### *Appendix A.1:*

#### **Responsible author of section**

- Introduction
  - Stephanie
- Company Background
  - Pascual
- Goals, Objectives, Strategies
  - Owen
- Company Performance
  - Stephanie
- Management Characteristics
  - Background, Philosophy, and Qualifications of Top Management
    - Avinash
  - Corporate Culture and Values
    - Avinash
  - Organization Structure
    - Stephanie
- SWOT AND ANALYSIS OF CORE COMPETENCIES AND CAPABILITIES
  - Avinash
- Industry Analysis
  - Pratik
- Major Issues/Problem
  - Owen
- Engineering Analysis
  - Stephanie
- SARS Analysis
  - Intro
    - Stephanie
    - Pascual
  - Issue #1 Long Term Alternative #1
    - Intro
      - Avinash
    - Six sigma cost break down
      - Pascual
  - Issue #1 Long Term Alternative #2
    - Pascual
  - Issue #1 Long Term Alternative #3

- Pascual
- Issue #1 Short Term Alternative #1
  - Pascual
- Issue #1 Short Term Alternative #2
  - Pascual
- Issue #1 Short Term Alternative #3
  - Pascual
- Issue #2 Short Term Alternative #1
  - Pascual
- Issue #2 Short Term Alternative #2
  - Pascual
- Issue #3 Short Term Alternative #3
  - Pascual
- Issue #2 Long Term Alternative #1
  - Pratik
- Issue #2 Long Term Alternative #2
  - Pratik
- Issue #2 Long Term Alternative #3
  - Pratik
- Long Term vs. Short Term Recommendation and implement plan
  - Pascual
  - Stephanie
  - Owen
- Conclusion
  - Stephanie
- Paper format/editing
  - Stephanie

*A.2 Calculations of Implementation Costs*

<b>Calculations for Checklist Cost</b>		
# of Fulfillment center employees		
3184		
# of supervisors	Total of fulfillment checklist performers	# of hours spend analyzing checklist
159	3025	40
# of hours spent on checklist	# of hours spent on checklist per work day	
637	0.2	Labor cost of data analyzers
		\$41.91
Labor cost per hour for supervisors	Work days spent doing checklist	
\$30	20	
	Labor cost of fulfillment workers	
	\$15.00	
Total cost of training checklist	Total cost of performing checklist	Total cost to analyze checklist data
\$19,104.00	\$181,488.00	\$6,704.98
<b>Total Cost to Implement \$207,296.98</b>		

<b>Calculations for Micro Fulfillment Centers Cost</b>
3 Large Fulfillment Centers each split into 3 Micro Centers
Each Micro Center would cost a premium of
\$62,400.00

<p><b>Total Cost of Micro Fulfillment Centers</b>  <b>\$561,600.00</b></p>
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Calculations for Social Media Tap		
		Team of 4
Hire Social Media Expert	Ad Deal	# of hours spend analyzing data
\$71,250.00	\$100,000.00	24
		Labor cost of data analyzers
		\$42.07
<p><b>Total Cost of Social Media Tap</b>  <b>\$175,288.46</b></p>		

Calculations for Marketing Strategies	
<b>Cost for local tv ad (30 seconds)</b>	<b>Cost for local tv ad (30 seconds)</b>
\$ 1,500.00	\$ 1,500.00
<b>Number of Major Cities</b>	<b>Number of Smaller Cities</b>
10	50
<b>Number of Ads to perform in each Major City</b>	<b>Number of Ads to perform in each smaller City</b>
40	5
<b>Total Cost in Major City Ads</b>	<b>Total Cost in Smaller City Ads</b>
\$ 600,000	\$ 375,000
<b>Major City TV Ad Cost</b>	\$ 600,000
<b>Smaller City TV Ad Cost</b>	\$ 375,000
<b>Total TV Ad cost</b>	\$ 975,000
<b>Google Ad Costs (per click)</b>	
\$ 2.00	
<b>Number of clicks for 1 year</b>	
150000	
<b>Google Ad clicks total Cost</b>	
\$ 300,000.00	
<b>Total Marketing Strategies Cost</b>	
\$ 1,275,000.00	