Healthy Food Alternatives

By:

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CIS315

Healthy Food Alternatives: Competing with fast food in price, service, and accessibility.

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Abstract Problem:

A majority of our current society relies heavily on quick and inexpensive food. Their current solution is the market of fast food. Healthy food is currently way too expensive and way too inaccessible. Consumers are not willing to spend the time or extra money on their own health. Our group is going to focus on negotiating the fast food accessibility and inexpensive prices, within an entrepreneurial driven resolution. This paper represents a problem driven research, outlining the context of food options in the US consumer market.

Contents

Introduction

Our studies on the problem of inaccessible healthy food show that:

1. Cheap, accessible, and quick are what customers are prioritizing over health.
2. Long term fast food relationships are very well established with the government.
3. Organizing an established, efficient structure for communication and processes will help understand how effective we have to be to compete.
4. Obesity declines in relation to enhanced prevalence of healthy food. Gathering data on sourcing healthy food to customers must be expected in our business strategy.
5. Competition against the already well-established fast food companies would be difficult if there is not enough funding and support.

We have five analyses that represent our findings, each with their respective in-depth discussion as to how to go about our design.

Initializing and creating the Venn diagram

In order to understand and discuss relationships and similarities within our idea, we must create a Venn diagram. The Venn diagram will set up a good image in our heads on how to approach our business problem. We had 2 variations of our Venn diagram due to revisions on our approach

BEFORE
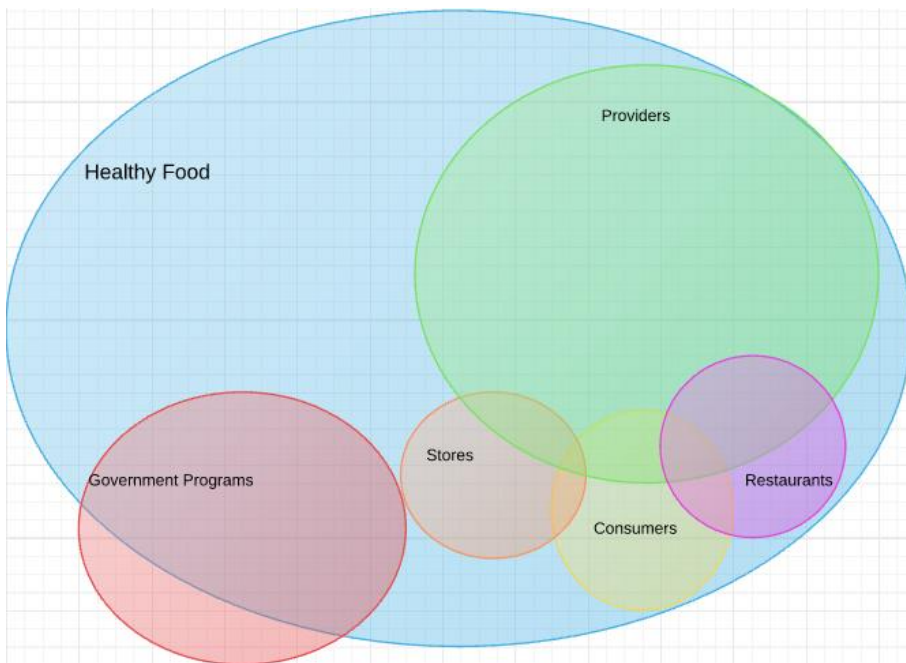
AFTER

The Venn diagram revealed several issues and observations:

1. Our original plan was focusing too much to the providers as opposed to the customers
2. We learned that the government will likely not provide help to our business
3. Our revised diagram offered a more plausible approach
4. Accessibility, fast, and cheap were going to be what customers want most
5. Implementing a service of healthy food delivery was a formidable option

For our first diagram, we were set with the idea that the reason people choose to make poor food choices was because of the low incentives to do so. Wit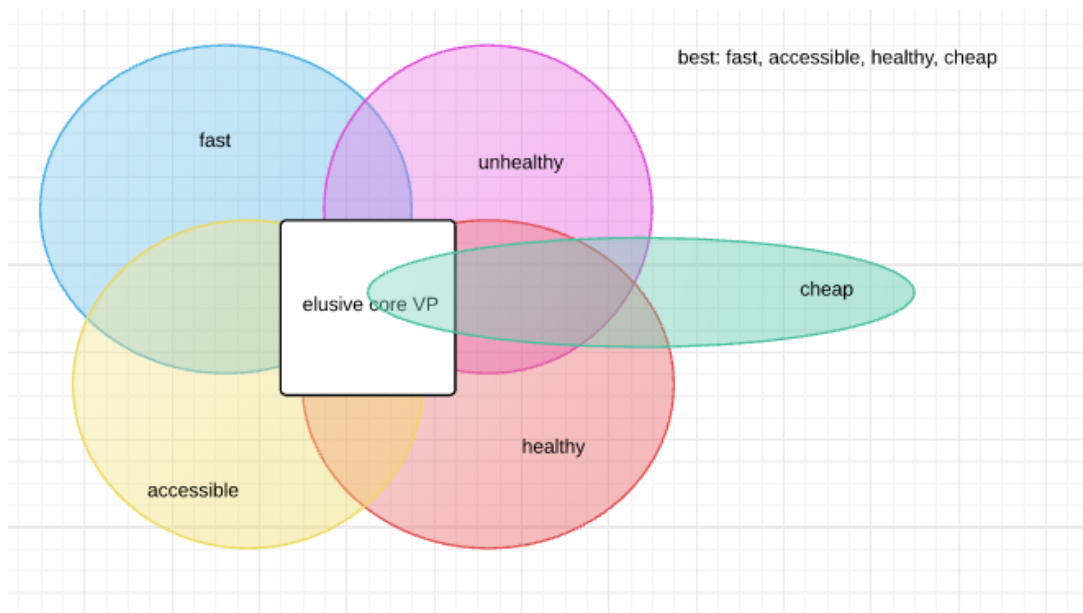h this in mind, we were trying to bring the government into the picture. We believe that the government could create programs or offer subsidies based on personal enrollment from customers who choose healthier options over processed, unhealthy foods. Realistically, we realized that the government was most likely going to create any program of such sort, thus, forcing us to re-think our approach.

With our revisions, we were able to analyze a potential problem as to why people make poor food choices. Most customers are willing to sacrifice health for the following things: Accessibility, speed, and price. Most often than not, customers will eat things that are fast to get, local, and cheap on the wallet. We established a zone called "elusive core VP" where we can abuse the fast food model and apply it to healthy alternatives while mirroring most customer's requirements. We can make contracts with farmers which will guarantee them business if we can find the demand for customers that are willing to eat healthy. We can approach this several different ways, but what is most important is maintaining a steady demand just like fast food chains rely on.

Takeaway

Conclusively, we are able to establish the idea of our elusive core VP by implementing common fast food practices such as ease of access, delivery, and price to our healthy food model. We've also concluded that many are putting their own time and money ahead of their own health. With these findings, we can construct our business design accordingly.

Analyzing the PESTLE Framework of Our Industry

To develop a concept in marketing principles and strategic management for our problem regarding healthy food costs, a precise tool to track the situation that we will be functioning in is needed before we can launch our project into full motion. Doing this will leave us with a bird's eye view of the whole environment from numerous angles that we will want to check and keep a track of while contemplating on our ideas and plans.

PESTLE Diagram

Political
MOVEMENT FROM VOTERS TO INFLUENCE THE GROWTH OF HEALTHY ALTERNATIVES & INDUSTRIES

Economic
SHIFT OF WEALTH FROM FAST FOOD GIANTS TO THE HEALTHIER ALTERNATIVE BUSINESSES

Social
AFFECT GENERAL CONSENSUS WHEN VIEWING NON-HEALTHY FOOD PRODUCTS

Technological
ADVANCEMENTS IN PRACTICES USED TO PRODUCE HEALTHY ALTERNATIVES

Legal
LAWS ARE SET TO STANDARDIZE THE PRICES OF SPECIFIC FOOD ITEMS DEPENDING ON MANY VARIABLES

Environmental
LESS GENETICALLY MODIFIED FOODS & CHEMICALS IN THE ENVIRONMENT;

Political/Economic
PUSH ECONOMIC GROWTH TOWARDS HEALTHIER ALTERNATIVES

Technological/Economic
IN ORDER TO MAKE ALTERNATIVES CHEAPER FOR CONSUMERS, INVESTORS CAN FUND R&D TO IMPROVE EFFICIENCY

Social/Environment
IMPLEMENT HEALTHIER LIFESTYLES & COMMUNITIES

RESULT
Reduced obesity, healthier lives, longer life expectancy in the population

There are certain questions that we needed to ask ourselves during this analysis, and these questions gave us an insight into what things to keep in mind as we move forward. Our observations in this PESTLE analysis were:

1. **What is the political situation of the country and how can it affect our industry?** We concluded that in order to have a thriving healthy food industry, there must be an influence from the general public to demand the growth of healthy food alternatives and industries.

2. **What are the prevalent economic factors?** Less healthy alternatives for food in our current market tend to be the highest financial gainers. Fast food giants become the economic leaders of the industry while the market for healthy food businesses is much lower in scale. We also discovered that, in a Harvard-published study, researchers found "that healthy food is more expensive than junk" (Bekiempis, 2014), which resulted in the statistic that "eating a healthy diet costs approximately $1.50 more per day".

3. **How much significance does society have in our market and what are the causes?** Society often plays a huge role in the general consensus of food products on the market today. We

see multiple ads, commercials, posters, and etc. advertising "unhealthy" fast food to us day-to-day. "Healthy" food alternatives, on the other hand, often get portrayed as bland and boring when compared to unhealthy food in advertisements. Additionally, there are many people in our society today that view it as abnormal or will make negative comments to you if you eat healthy all the time, let alone if you consider yourself a vegetarian or vegan.

4. **What technological advances are likely to pop up and affect our market's structure?** There are always impending new advances in technology in our world today, and because of this, we concluded that there are advancements in technology practices that can be applied to our industry in order to produce healthy alternatives. This analysis is especially important to us if we are to have a service of delivering healthy food to customers and clients. It is said; "as consumers look to reduce time, effort, and energy, online food shopping will also continue to grow in the next 2 decades" (Basu, 2015). New technologies will enable retailers "to deliver an augmented shopping experience [that] will help companies engage with customers through personalized offers and product suggestions to fit with diet and lifestyle. (Basu, 2015).

5. **Are there any legal factors that regulate the food industry? Can there be any change in the legislations?** The government, including the USDA and FDA in America set laws and regulations concerning food and food-related products. This would interfere with our business and its practices if we do not take this particular aspect into consideration during the initial forming stages. There are many variables, such as food laws and restrictions, which we must take into account while handling food.

6. **What are the environmental concerns for the industry?** There are no concerns in our industry; in fact we want to better the environment with our business. We want there to be less genetically modified and grown foods and less chemicals in our environment, something that is currently contributing to polluting our atmosphere.

All these aspects of PESTLE will contribute to and are very crucial for our business. In regards to the political and economic observations, we want to use these to push economic growth in our industry and help better the lives of individuals who choose to eat healthy. We also want our business to lead to technological and economic benefits, such as making the healthy alternatives cheaper and more accessible to consumers. This will possibly lead to investors funding our industry's R&D to improve efficiency.

Takeaway

Obesity decline is linked to the amount of availability of healthy food in a demographic area. Finding a strategy to enhance this availability is the priority of our business. Conclusively, we

want our observations to combine to encourage healthy lifestyles and possibly even help allow a longer life expectancy in the population.

Applying a Value Stream and Kan Ban Analysis

Initially, the complexity of our chart made us hard to identify exactly where the source of kan ban was in our journey towards more affordable and healthy food options. However, after some help from professor Bund, we had a more well-made and smooth flowing chart that made it easy to identify the problem and the potential solution.

First Draft:
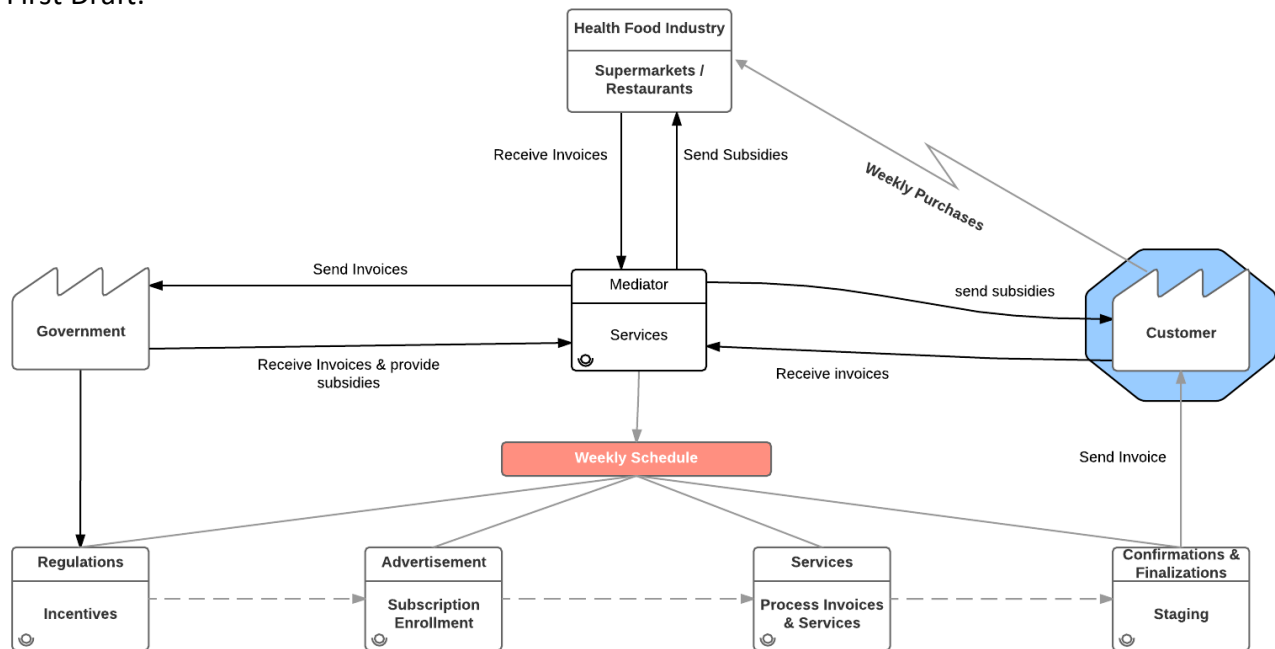
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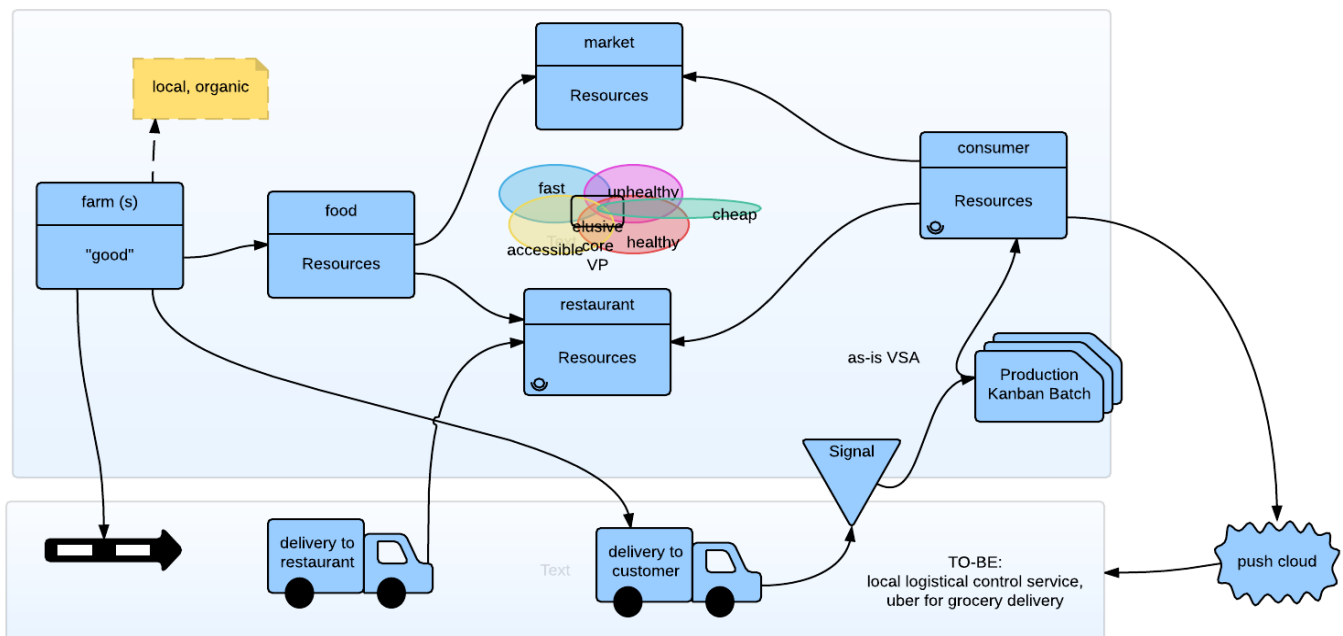
Main Points:

1. The service provider or mediator between the farms and the source of kan ban
2. The source of kan ban: The individual consumers, restaurants, etc
3. The market that is affected by the kan ban produced by our service
4. The cloud service that facilitates the communication between us and the customers
5. The push of good food (organic) from the farms to us to deliver

In our initial diagram, either the customer, the service provider, or the government could have been the source of kan ban. The community or society could have received some kind push from some source that would have spurred them to demand cheaper healthier food and thus establishing the kan ban. The service provider could have been huge entrepreneurs with a vision for huge profits in a fresh market if they could get the service off the ground – similarly to Uber's massive part in the market. Lastly, the kan ban could have come from the government who realized that the country's obesity rate has become too high and that something must be done.

Ultimately, in our first draft our service would arise to meet the customer's kan ban. With help from the government as shown in our weekly schedule, we would receive legislation and subsidies from the government to help fuel the growth of our business. This is necessary because in a massively dominating fast & unhealthy food industry, it would be incomprehensible for an expensive start up to be successful without huge financial risks.

With money in hand, our service is able to advertise itself with help from the government and start garnering subscribers to our service. Our service allows customers whether it be restaurants or customers to send us their receipts and the sort to receive either subsidies from the government. Alternatively, we also considered the possibility of having customers visit their family physician to have a health check-up and if their health and weight improves after a certain amount of time, they could submit that as well for additional subsidies. A last alternative we considered was having the customers just file all healthy purchases within their taxes and receive the monetary reward as part of their tax refund. Finally at the last stage of our week, we would confirm all the invoices sent in by the customers and finalize the files to forward to the government in order to receive further subsidies.

The lines between the parts of our diagram are fairly simple, representing the exchange of invoices and receiving and distribution of subsidies between our service, the government, the markets, and the consumers.

In theory, we believe our service would have been successful because it finally gives people a huge incentive to take a step forward because honestly being paid to be healthier sounds like a win-win to us. However, due to professor Bund's intermediation, we realize that this is in

practice extremely unlikely due to the huge infrastructure established by the fast food & unhealthy industry and backed by the government to maintain the status quo. Therefore, with our revised diagram, we eliminated the government from the picture and cemented the consumers and restaurants as the kan ban.

In our new draft, we simplified the diagram by completely removing a whole player from the field which also allowed us to add additional details to certain parts of the diagram without overcomplicating it. The upper blue box in our diagram represents the status quo and the bottom is where we come in to solve the problem. Our end game is to merge both boxes to establish a new status quo.

If we take a look at the state of the taxi industry a few years ago, sure it was fine but the majority of people dreaded it because it had a few glaring issues:

- It was expensive
- Utilized generic 'ugly' cars
- Long time negative stigma towards taxi drivers
- Not easily accessible

Then came Uber which revolutionized the industry, solving most of the issues listed above. This example is extremely similar to our second diagram – also what our service strives to become.

The service we provide would essentially to be a mediator between the farms to the consumer and restaurants at a cheaper price than they could get at their local supermarket. We would utilize the cloud services to receive the signals provided by the consumers and restaurants to meet demand via door to door delivery via trucks.

A huge concern may be the accessibility of nearby farms to deliver fresh produce. So to address this, we would initially only make our service available in areas that can meet demand with the quality and freshness of the food as priority. If our service proves to be successful, it may influence the growth of new local farms that would be able to satisfy the kan ban of customers that live a ways away from large scale farms.
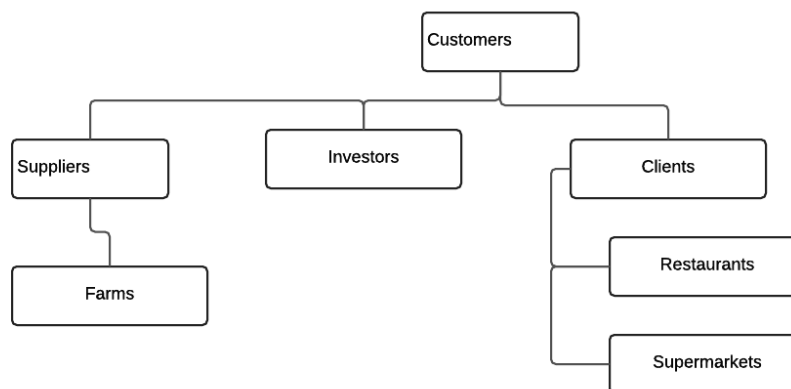
Another argument could be that a service for this already exists – Amazon fresh. This service albeit amazing from what we have heard, it is very costly and is not feasible for the majority of people, servicing only the middle and upper class. Our service on the other hand strives to be able to be affordable to any American, not only the upper echelons in society.

Takeaway

In the current food market, unhealthy food is typically much cheaper than the healthier stuff. The kan ban from the consumer influences the restaurants to have healthier choices as well. With all this kan ban from the restaurant and consumers, the farms would also be pressured to provide healthier choices to satisfy the newfound kan ban. Due to this, the restaurants will always want to utilize our service alongside the consumers due to the lower price from removing the supermarket intermediary. After reviewing both diagrams, it is clear that the revised diagram is less complex, yet more practically implementable.

Applying an Organizational Hierarchy Study

In order to give our problem domain a structure, we have devised an organizational hierarchy study mapping that lead us to our current situation. The hierarchy we have created in order to provide healthier food alternatives to people at lower prices will aid us in developing a process and come up with a solution for our problem domain.

```
                          ┌──────────┐
                          │ Customers │
                          └──────────┘
              ┌───────────────┼────────────────┐
        ┌──────────┐    ┌──────────┐      ┌──────────┐
        │ Suppliers │    │ Investors │      │  Clients  │
        └──────────┘    └──────────┘      └──────────┘
              │                         ┌───────────────┐
        ┌──────────┐                    │  Restaurants   │
        │   Farms   │                    └───────────────┘
        └──────────┘                    ┌───────────────┐
                                        │  Supermarkets  │
                                        └───────────────┘
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This organizational study gives us a better understanding of the process and the necessary steps it will take to get healthier foods to consumers. It also will give our idea better order and communication to tackle our problem. First, we begin with the problem of how we are going to get healthier foods to the consumer at a reasonable price while not being able to compete with the ordinary unhealthy fast food chain restaurants. Second, In order to gather interest in our idea, we need to gather interest from people that will invest in our idea. If we are able to have investors believe that this is a major problem, possible consumers will also be able to believe and opt for healthier food. Once investors are interested and decide to back us with their

resources, we then go to the suppliers. The suppliers will be able to attain large amounts of healthier foods at a lower price because they will be buying in bulk. The product will be bought locally from farms, organic and non-organic.

Once the product is acquired, the product will begin its destination process. The product will go to clients such as local restaurants, farmers markets, and local supermarkets that are in support of our idea of eating healthy at an affordable price. This is where the consumer will be able to buy our products. Ultimately, the consumer will dictate whether the healthier foods we provide are a better choice than unhealthy fast food restaurants.

Takeaway

From this Organizational Study Diagram, we conclude that it will guide us toward the right direction by helping us see the big picture as to how the product will go from the crop to the consumer at an affordable price. This diagram will also alleviate and help with the solution to decrease obesity and give everyone the right to be able to afford healthy food that is as fast and affordable as its counterpart.

Applying a Data Flow Diagram Analysis

The following Data Flow Diagram continues the demonstration of a previously proposed business plan that permits the customer purchase of organic and healthier foods with an added reward benefit to accommodate the high prices.
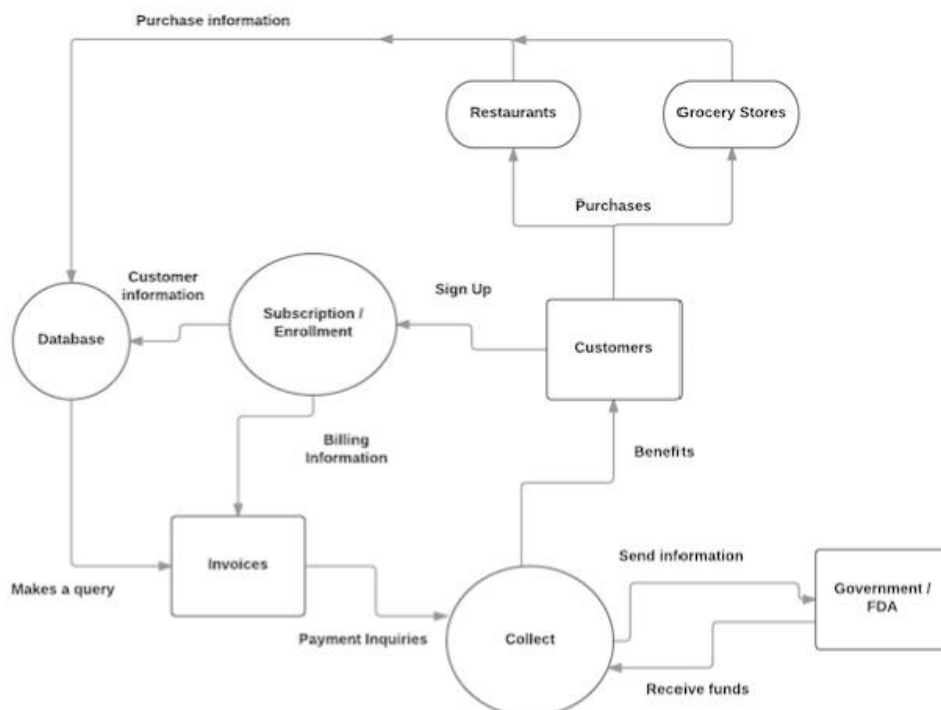
As a group, we realized that healthy food providers have failed to promote healthy eating to the population because of expensive food prices. We found that it is best to perhaps include some sort of rewards program for healthy food shoppers with the assistance of the government. The following Data Flow Diagram demonstrates a business plan to make purchasing expensive healthier foods with an added benefit, to deal with the high price. This involves customer enrollments for a subscription plan, restaurants and grocery stores that serve as the primary food providers for the customers, the core database that stores customer subscription information and food purchasing data provided by restaurants and grocery stores, and the government that provides subsidies to existing members and food providers. Subscribed customers who enroll in this program receive benefits from the government through tax forms. The government receives customer subscription information through the database. The amount of benefits per customer varies among purchase frequency. Purchase information will be sent to the database from the food providers (restaurants and grocery stores). The database will then create queries for validation and payment information will be sent to the government. The government will finally send out funds and subsidies will be dispersed to customers. However, it is quite difficult to rely on the government to agree on such a program, considering the fact that the government is the entity that controls less healthy food progression.

Takeaway

Going off of this, we learned that it is tough to compete against less healthy food providers without some sort of strong, determining factor or entity such as the government. Overall, with this dilemma at hand, we believe that our service could fill a huge gap waiting to be filled. People want healthy food but there is really nothing really motivating them with its high cost and lack of availability. At the end of the day, without the kan ban signaling an action, our service would not exist – something we believe our country desperately needs.

Abstract Solution:

Following the presentation of our problem in the previous analysis, we have found a few ways on how to approach these problems and turn them into solutions. Within our market, we have a few strengths that we must optimize in order to be competitive, while at the same time mitigate the weaknesses that we may encounter. This paper will represent the solutions at hand to each problem stated in the previous analysis.
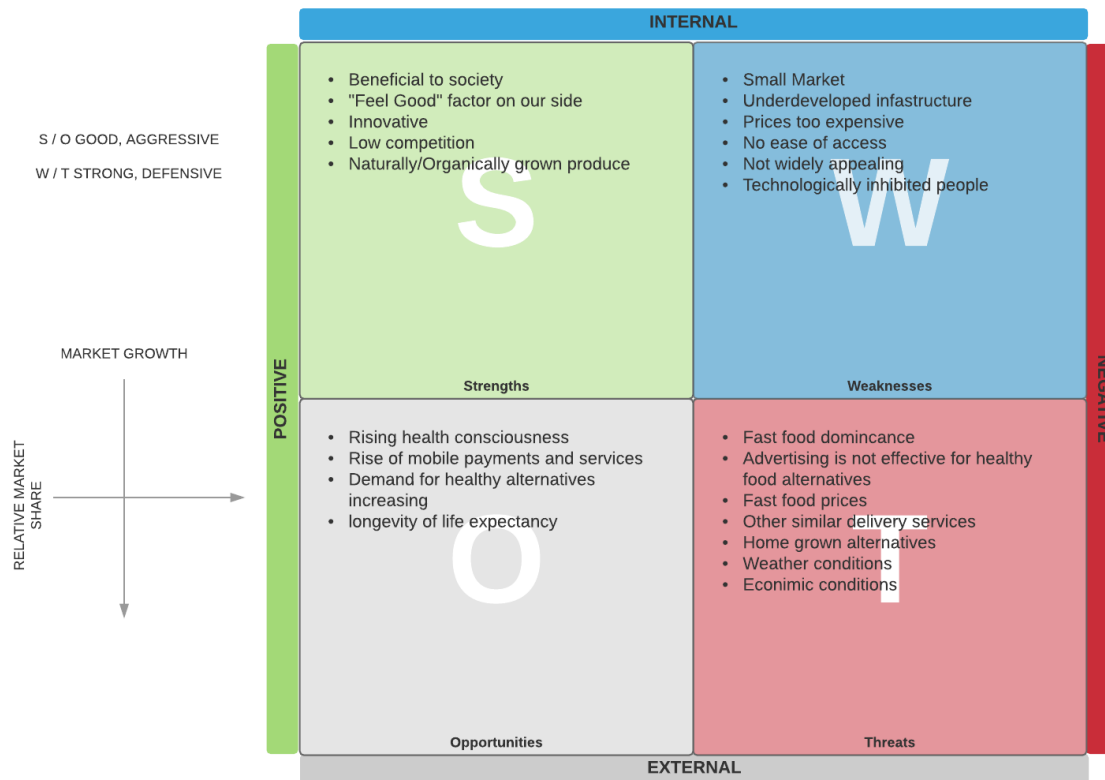
Introduction

Our studies on the problem of inaccessible healthy food show that:

1. Cheap and convenient are what the public prioritizes over health. This can be combated by enhancing our strengths with the "feel good" attitude, while mitigating the minor weaknesses we may have.
2. To avoid the hassle of interweaving with the relationship of fast food and the government, a solution would be to establish a very good relationship with our customers, such as AMAZON has with their customer base.
3. Cheap and accessible is the primary key to our solution. Avoiding direct head-on competition with fast food is easily achieved the alternate methods of promotion such as social media.
4. Obesity declines in relation to enhanced prevalence of healthy food. Providing a groundwork, rules, policies, and assets to allow for better healthy food distribution will help solve the obesity issue.
5. In order to combat against fast food giants, we must prove confidence with our structure. As a solution, establishing a tool to encourage stockholders and investors would provide a great backbone in funding towards our project.

We have five analyses that represent our solutions, each with their respective in-depth discussion as to how to go about our design.

SWOT Diagram

In order to uncover opportunities that are well placed to exploit in our industry, as well as by understanding the weaknesses of our business, we can manage and eliminate threats that would otherwise catch us unaware. By looking at our self and our competitors using the SWOT framework, we can craft a strategy that will help distinguish us amongst our competitors, so that we can compete successfully in our market.

INTERNAL

S / O GOOD, AGGRESSIVE

W / T STRONG, DEFENSIVE

POSITIVE

NEGATIVE

MARKET GROWTH

RELATIVE MARKET SHARE

Strengths (S)
- Beneficial to society
- "Feel Good" factor on our side
- Innovative
- Low competition
- Naturally/Organically grown produce

Weaknesses (W)
- Small Market
- Underdeveloped infastructure
- Prices too expensive
- No ease of access
- Not widely appealing
- Technologically inhibited people

Opportunities (O)
- Rising health consciousness
- Rise of mobile payments and services
- Demand for healthy alternatives increasing
- longevity of life expectancy

Threats (T)
- Fast food domincance
- Advertising is not effective for healthy food alternatives
- Fast food prices
- Other similar delivery services
- Home grown alternatives
- Weather conditions
- Econimic conditions

EXTERNAL

Our primary motive in using this framework was to help us develop a full awareness of all the factors involved in our business. To do this, we carefully analyzed and examined our internal and external factors. These are our observations in regard to our strengths, weaknesses, opportunities and threats:

1. **Strengths.** What advantages does our organization have? What do we do better than anyone else? We concluded that we are a company that is highly beneficial to our society today as a whole. We promise to provide the best source of farm-fresh and naturally/organically grown food available on the market in order to give people the choice to live a life-long healthy lifestyle. We give these choices to people who want to make a change in their lives or continue making healthy choices. Global health and wellness revenue is "expected to reach $1 trillion by 2017" and "organic and natural foods brought in almost $91 billion in revenue last year"(Health Food Franchises, 2016). With more than a third of Americans being diagnosed clinically obese, there's no better time for us to start a health food service. This will, in turn, give a "feel good" factor to our business as an entirety because our aim is to help people improve their lives. We are highly innovative in how we will establish this goal. Not many people on the market today are trying to give people these options in food choices on top of delivering their

orders fast and efficiently through an extremely easy-to-use website and mobile application interface and giving them incentives to continue coming back to us.

2. **Weaknesses.** What could we improve? What should we avoid? What are people in our market likely to see as weaknesses? The food industry today is huge and full of good opportunities, but we realized our market could be considered niche in a world where fast food companies and their delivery services dominate. The healthy food industry is considerably smaller when compared to the fast food industry; there are not many widely known or worldwide "fast and healthy" food establishments or businesses. It is an underdeveloped business infrastructure that we will have to take into consideration. We must also recognize the monetary cost that will be necessary in order to provide our service to our customers. Our goal is to have our food prices be cost-efficient and delivered on a timely basis. Given the labor required to meet these requirements to deliver our products, we must take this in to account when pricing our products and service. Another aspect we must consider is that our service is catered to the technologically savvy generation. There are still many people who find it difficult or don't like to order online or through mobile payments, so we will have to leave these people out of our target audience.

3. **Opportunities** What interesting trends are we aware of? What changes in social patterns or lifestyle changes on both a broad and narrow scale is there? We determined that the world today is in a state of rising health consciousness. Industries in the "health" category have been steadily rising over the years and more and more people are beginning to do things like head to the gym and focus what they're putting into their body. Analysts suggest, "one out of every five Americans is heading to the gym, or at least paying for a membership" (Fitness Industry Analysis, 2016). This puts our industry in a pretty sweet spot; a largely unhealthy and overweight population is demanding healthier alternatives and looking for ways to improve their lives and get in shape. This is where we will come in, because a major contribution in all these processes is through eating healthy food. We have the opportunity in this service to dive into the fitness and health industry. Also to note is that, because our industry is on the rise and our niche of food delivery is so small, we are in a great position to capitalize on this aspect. In doing this, we will eventually be able to mold ourselves into leaders of the category of fresh and healthy food delivery. Furthermore, the recent surfacing of mobile payments and services becoming more popular than ever gives us even more of a motivation to push forward with our business. Businesses such as Uber, who provide people with on demand services through mobile and online applications, are mainstream now and we believe that we, too, can be in this position when it comes to food delivery.

4. **Threats.** What obstacles do we face? What are our competitors doing? Fast food establishments are huge in our society. Everywhere around the world, fast food brands are huge and instantly recognizable. Brand recognition can hinder our service because many people are reluctant to try new things especially when it comes to food. When
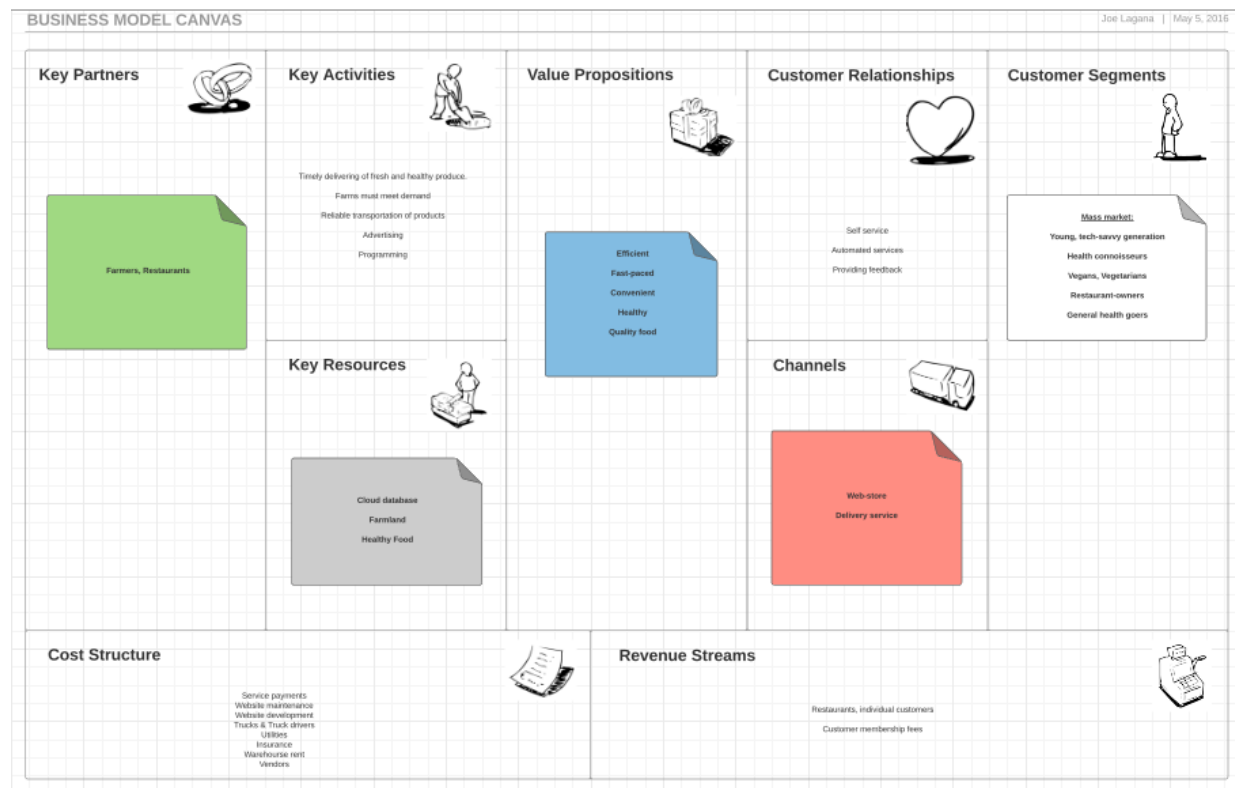
given the option to order out, for example, people might want to go for pizza instead of considering our delivery service. Additionally, appeal has everything to do with advertisements and many people see healthy food as much more unappealing than a hamburger or pizza. This will make it harder to compete with other major food industry advertisements. We also noticed that a major threat in our industry is the prices. Many healthy food items on the market today cost considerably more than their "unhealthy" alternatives. This can discourage people from wanting to buy into these items if they are on a budget or want to go the cheaper route. Furthermore, there are already established food delivery services on the market right now, namely Amazon Fresh, who is a brand recognizable next-day and early morning delivery service of fresh groceries and everyday essentials. This would be one of our major competitors. Meal delivery and prep services for dieting such as Atkins and South Beach Diet would be considered competitors against our business, as well. When using farm-fresh ingredient we must also realize the possible threat of weather and economic conditions, which have high percentages to change at a moment's notice. We can't predict the possibility of a stock market crash or a drought occurring, which can have adverse effects on our business.

Takeaway

Our analysis of our market's strengths, weaknesses, opportunities, and threats forced us to methodically and objectively look at what we had to work with and what the marketplace is offering. All these aspects of SWOT will contribute to and are very critical for our business to succeed. In regards to the weaknesses and threats observations, we want to use these to help motivate us and help us to capitalize off of. We can craft our business plan to emphasize the advantages of our strongest features while exploiting opportunities based on marketplace weaknesses.

Business Model Canvas

The following Business Model Canvas takes off from the SWOT diagram above that helps sculpt a value proposition for the business in providing a healthier alternative for the general population.

BUSINESS MODEL CANVAS — Joe Lagana | May 5, 2016

Key Partners
Farmers, Restaurants

Key Activities
Timely delivering of fresh and healthy produce.
Farms must meet demand
Reliable transportation of products
Advertising
Programming

Key Resources
Cloud database
Farmland
Healthy Food

Value Propositions
Efficient
Fast-paced
Convenient
Healthy
Quality food

Customer Relationships
Self service
Automated services
Providing feedback

Channels
Web-store
Delivery service

Customer Segments
Mass market:
Young, tech-savvy generation
Health connoisseurs
Vegans, Vegetarians
Restaurant-owners
General health goers

Cost Structure
Service payments
Website maintenance
Website development
Trucks & Truck drivers
Utilities
Insurance
Warehouse rent
Vendors

Revenue Streams
Restaurants, individual customers
Customer membership fees

As a group, we understand that healthy food providers have had a hard time promoting healthy eating to the general population because of expensive food prices. We found our following Business Model Canvas provides a compelling solution to this issue, and generally shows an overview of how our business would operate.

Our value propositions include efficient, fast-paced, convenient, healthy, and quality food service to our customers, of which are goals we seek to accomplish. Our cash inputs leading to revenue streams will give the business the opportunity to expand to accommodate larger areas that would like similar services. Our infrastructure consists of key activities, key resources, and key partners. The most important activities in executing our company's value proposition includes timely delivery of fresh and healthy produce through reliable transportation, meeting demands in farms, and advertising our company's goal of spreading awareness of healthy eating. Our key resources include an established cloud database to store customer information and purchases, and farmland that carry the supply of healthy/organic foods. Farmers and restaurants serve as our key partners to optimize operations and reduce risks of the business model by focusing on their respective core activities.

The business model also delivers our value proposition to our customers through different channels, and also identifies the type of relationship we want to create with our customer segments. Our web store will act as the primary channel to reach customers, and our local delivery service will deliver foods ordered from the web store to homes. To ensure the survival, success, and growth of this specific business, we realized that self-service, automated services and co-creation would be the best forms of customer relationships.

Cost structure mainly consists of many general expenses, such as service payments, website maintenance, development, salaries, utilities, rent, insurance, and vendors. Our revenue

streams consist of subscription fees from customers and sales of healthy/organic foods. We are hopeful that this entire operation will help expand the business to other areas and successfully achieve our outlined goals.

Takeaway

The survival, success, and growth of healthy/organic food consumption in the general population will ultimately be decided by how well the critical aspects of the business are utilized. A solution to this would be on how well we promote and establish relationships with the general public. A good relationship to customers such as with AMAZON would be a primary example as to how we can establish a good foot-hold in the market.

Initializing and creating the Ishikawa Diagram

In order to understand the causes that influence the lack of healthy alternatives, we drew an Ishikawa diagram. This diagram will list causes and organize them so we can better understand on how to approach a solution to this problem. Individualizing and organizing the problems will help us establish a framework for an efficient solution.
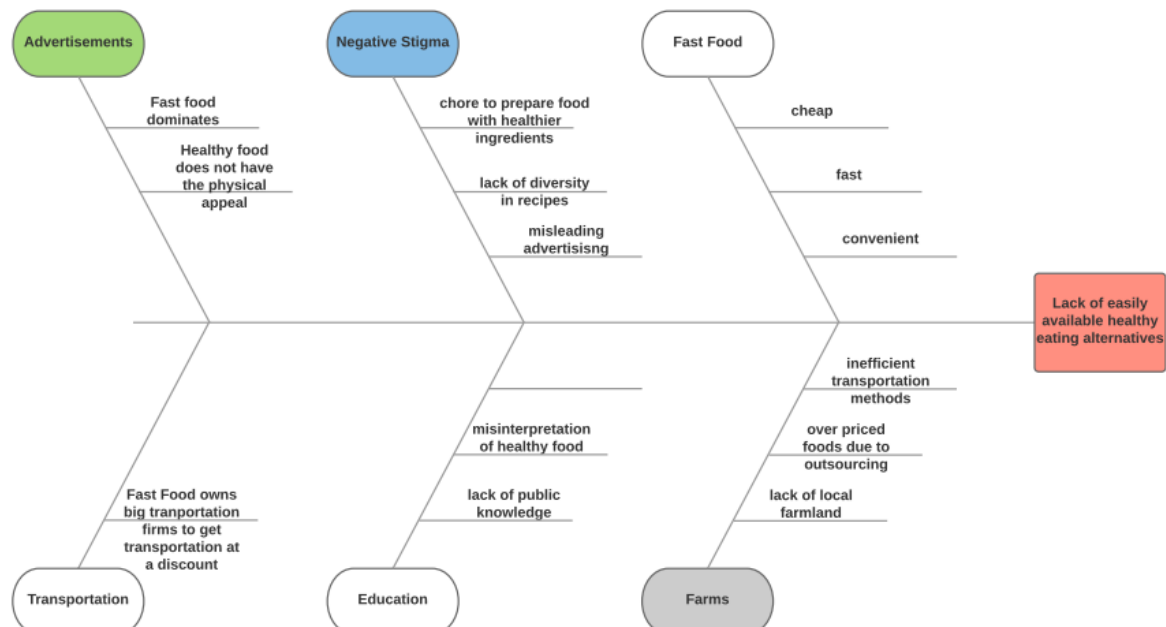
The Ishikawa diagram points us to several causes:

1. Farms are at a huge disadvantage if they do not use mass production techniques
2. The public is lacking knowledge on healthy eating
3. Transportation and fast food are linked together to provide success in their business
4. Advertisements are primary dominated by fast food and have a better "appeal factor"
5. Healthy food inherently has a negative stigma applied to it that makes it harder for people to prepare or take seriously
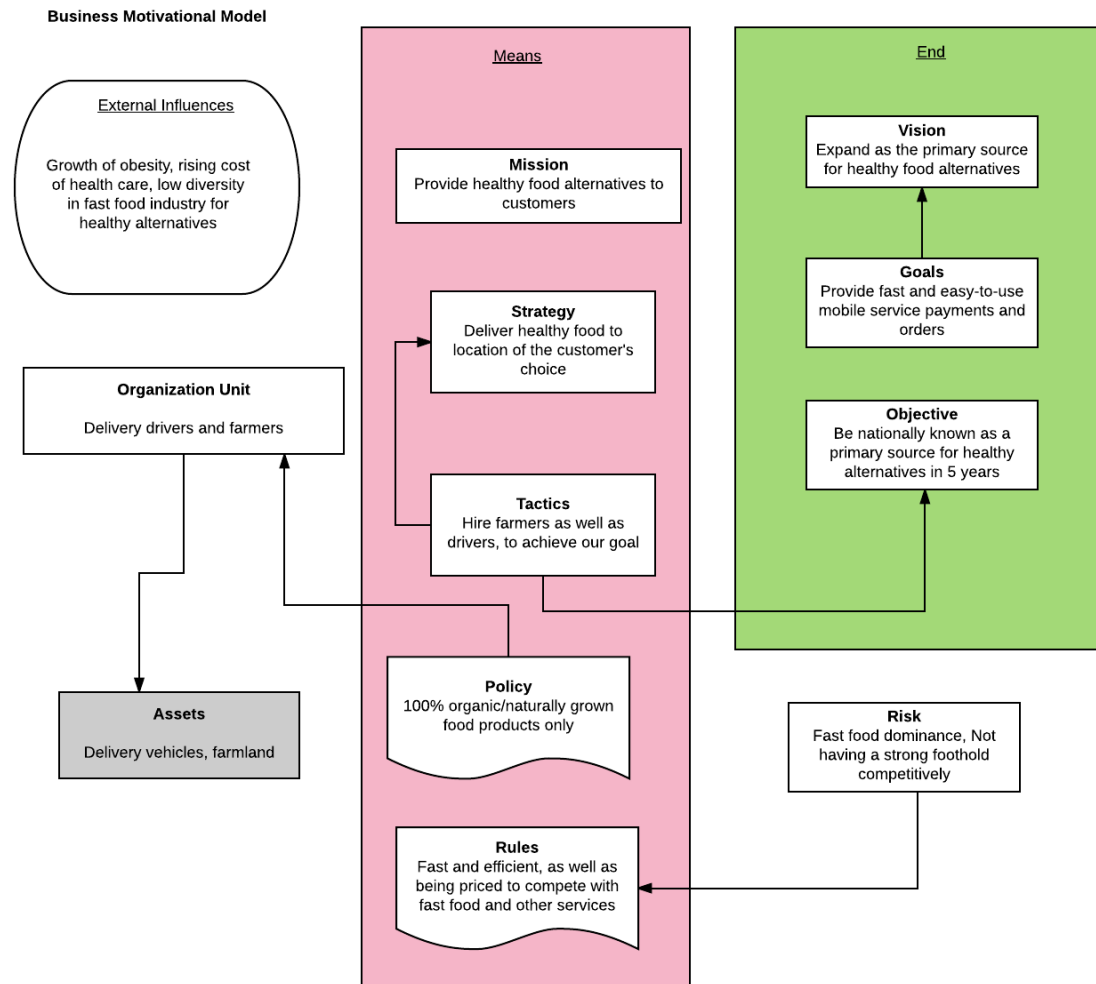
For our first diagram, we established the root causes as to why people avoid healthy food. The Ishikawa diagram allows for better organization and helps us approach our solutions more effectively. The primary cause to our problem is the fact that fast food has a giant role to play in the dominance to advertisements, transportation, and big farms.

Takeaway

Conclusively, the main causes to the problem are the strong and firm hold that fast food has on the industry. In order to establish a solution, we cannot try to out-compete the fast food industry. Instead, we have to approach it a different way. Using the vast range of social media, we can utilize promotions for coupons or events that are "shared" by users to attract other users to try our service.

Initializing and creating Business Motivational Model Diagram

We have created a Business Motivational Model that will allow us to develop our business plans for our problem domain. This model illustrates three important key elements that will aid in the success of our business plans. These elements for the business plans are the end, the means, and the influencers. The end element will suggests the final outcome the business wants to achieve. The means element suggests the methods and strategies that will be used in order to achieve the ends. The influencer element will suggest the things that will shape and or impact the business.

Business Motivational Model

External Influences

Growth of obesity, rising cost of health care, low diversity in fast food industry for healthy alternatives

Means

Mission
Provide healthy food alternatives to customers

Strategy
Deliver healthy food to location of the customer's choice

Tactics
Hire farmers as well as drivers, to achieve our goal

Policy
100% organic/naturally grown food products only

Rules
Fast and efficient, as well as being priced to compete with fast food and other services

End

Vision
Expand as the primary source for healthy food alternatives

Goals
Provide fast and easy-to-use mobile service payments and orders

Objective
Be nationally known as a primary source for healthy alternatives in 5 years

Risk
Fast food dominance, Not having a strong foothold competitively

Organization Unit
Delivery drivers and farmers

Assets
Delivery vehicles, farmland

In our Business Motivational Model, for the end element, our vision is quite simplistic and straight forward. Our main goal is to make it easier for the consumer to be able to access our product in a way that is convenient for the. Providing a fast and easy to use mobile service payment will help our business get closer to our end goal. The payment service will only strengthen our vision to expand our business enough to be the primary source for healthy food alternatives for the consumer population. Being the primary source for these consumers will put us a step ahead of our competition (Fast Food Restaurant Chains). In order to achieve this, our objective is to set a realistic time frame that will let us know how we are doing. The time frame that we set to achieve this is five years.

Our methods and strategies for our business plans are as follows. Our mission is to provide healthy food alternatives to consumers at a reasonable and affordable price to everyone. In order to achieve our mission, one of our tactics is to employ and work with local farmers in order to be able to acquire our product. Once the product and negotiations between the farmers and our business is complete and ready to begin the process, we would then begin to

hire local drivers. This is where our strategy comes into place. Our strategy will be to use these drivers to deliver the products to the consumer to a location of their choosing. Another strategy that will help us achieve our end is the policy that we have set. This policy has to do with demanding that the farmers only provide us with 100% organic products. However, we run the risk of failure due to fast food restaurants' dominance in the industry. This prevents us from setting a strong foothold in the industry. Having rules to discourage and end this dominance will help us in achieving our end. The rules that we have set forth are to provide an affordable product with a fast and efficient method to get the product from point A to point B.

Takeaway

External influences and assets that will positively shape our business are as follows. First, due to high obesity rates in the nation, people will want to begin to eat healthy and live a healthy lifestyle. Another influencer is the rising cost of healthcare policies. Rising costs will encourage people to eat healthy as well. Developing an infrastructure that has groundwork of rules and policies within our business will help reach our goal more effectively.

BMPN Diagram

The BPMN utilizes a flow chart technique whose primary goal is to help bridge the gap between the technical and business users, providing a simplified visualization of the business processes that occur within the company. Applied to our project, the BPMN is used to illustrate: the processes that end users encounter, the operations of our promotional team, the backend structure of sources and providers, and lastly the technical framework to store data.

1. Front end user navigation of the website
2. The procedure to develop a target audience and the means to promote our service
3. The method of physically putting our service into action
4. The approach in which we retain our customer's data
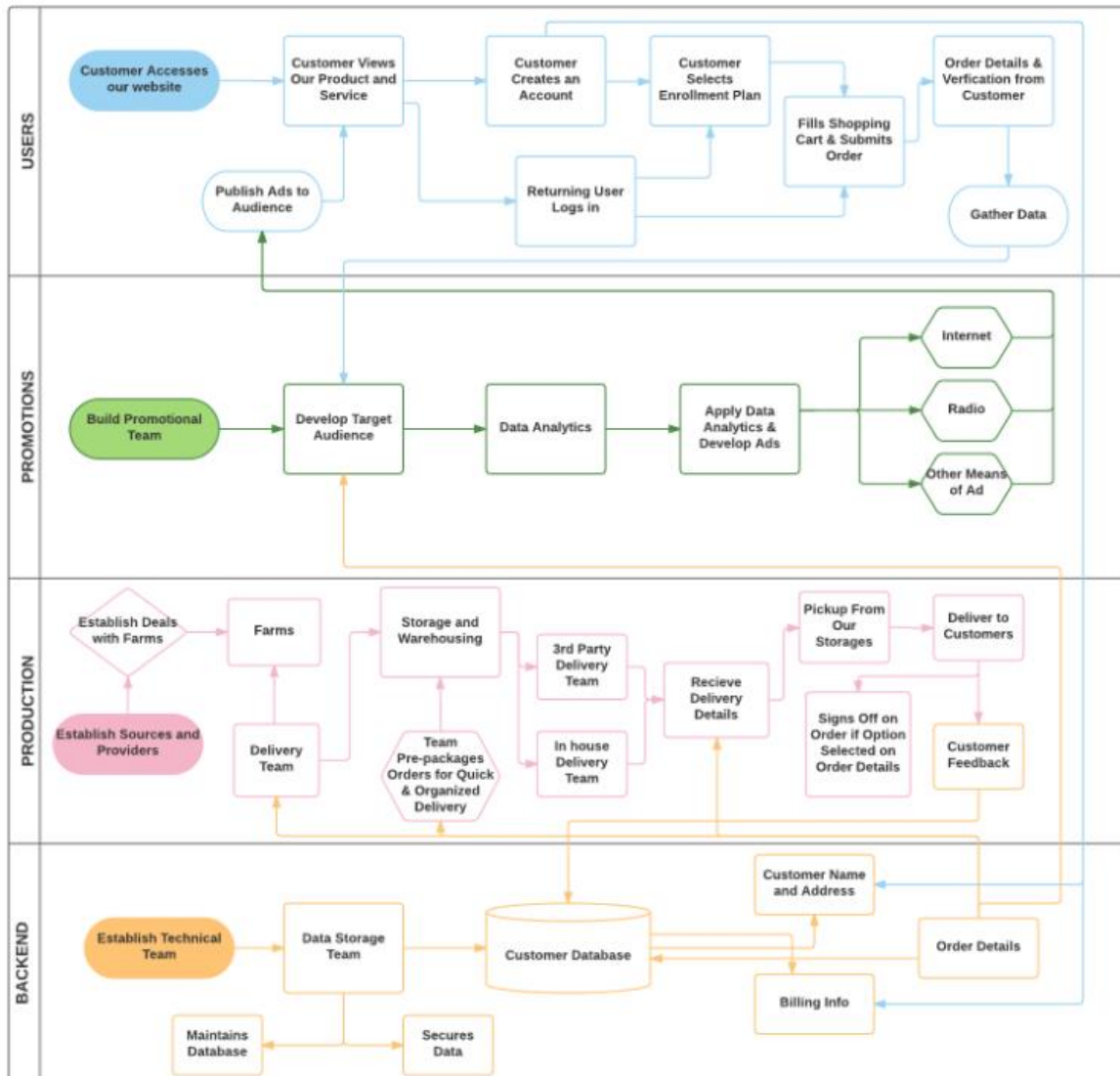
Our chart begins with either a returning user or a new user. New users will input their basic information along with their billing information both of which is then stored within our database. They will both view a homepage; the new user will view a default page whereas the returning user will receive a personalized homepage based on their past purchases or interests. This page is automatically generated using data stored within our database pulled from past orders or based on products that are often purchased together, etc. A new customer would create an account then proceed to choose an enrollment plan, fill their shopping cart, the finally review their order to verify and finalize their order. We then gather the data from the customers and save it in a database which is then sent to our promotions team.

The promotions team's primary job is to understand the user on a personal level to be able to design default and personalized pages to cater to increase the chances of a new or to help retain current customers. They use the data gathered from customers to develop a target

audience and then analyze the data to see the most useful or efficient means to advertise our service. From there, we advertise via internet, radio, newspaper, or whatever other means that is deemed most effective for our target demographic. For example, this would mean Facebook ads for the younger generation or newspaper ads for the older adults. These ads will contain a reference to our online website which would propel prospective customers into our user processing flowchart.

Our upper management will be in charge of establishing sources and providers for our service. This entails forging deals with farms for decent profit margins, the rental of warehouses or some form of storage to store the produce, and the employment of either third party delivery trucks or the purchase of our own trucks and drivers to deliver the produce. The delivery trucks will then receive orders to pick up a sufficient amount of produce to store at our warehouse. At our warehouses, we will have employees package the orders in organized bundles to allow quick and efficient deliveries. The drivers will receive multiple delivery orders sent from our database then pick up the bundles from our storage facility and delivery it to our customers. We would then ask for customer to sign off on the order if they chose that option in their initial order online. If they don't require a sign off we could drop it off in front of their store if they are not home. If the customer requires a sign off but are not home, we charge them a perishable foods fee due to the perishable nature of produce. Afterwards we will wend a customer feedback survey via email and send the customer responses to our database to be used by our promotions team.

In our backend technical processing, we have our data storage team that keeps our servers and data up to date and secure. The database contains all the customer information we receive including basic customer information, billing information, order details, etc. The database is where all the orders for drivers and warehouse workers come from. Furthermore, it is also where our promotion team receives data to better improve our name and customer base.

Takeaway

The BPMN is an extremely useful tool to allow otherwise technically illiterate people to easily understand the business processes that happen at each level. It allows stakeholders to a better understanding of the business, acting as a common language for anybody and everybody to understand.

Deployment Strategy

The final step to our project is to implement our strategy and layout a generic skeleton as to what work will be done. Using UML, we can begin to actually use some web-design and development tools to bring our project to life.

Introduction

With our solutions stated in our previous solution statements, we can now formulate and apply the plan of attack for our business model.

1. UML Structuring with diagrams will be essential to allow for a better understanding on how the entire database system and website will work. In our projected diagrams, we can also come together with ideas as to how to make the system more fluid and efficient.
2. Using the work breakdown structure diagram to make changes to an already existing industry by taking advantage of the new technological advances. We can effectively account for programming/working hours and costs (320 hours). Additionally, this allows us to make changes to the project if necessary.
3. In order to reassure that customers are satisfied with our service, we must allot our data accordingly by mapping an efficient cloud/networking system. The system will communicate with our suppliers, customers, and our tech department to ensure data reliability and fast service.
4. With our structuring complete, we can therefore move onto UI mockups and website framework. Our website will have to implement all of our strategies, as well as be appealing to first time users to draw more customers. From here, we can utilize the framework to develop a user-friendly environment to allow customers to navigate with ease.
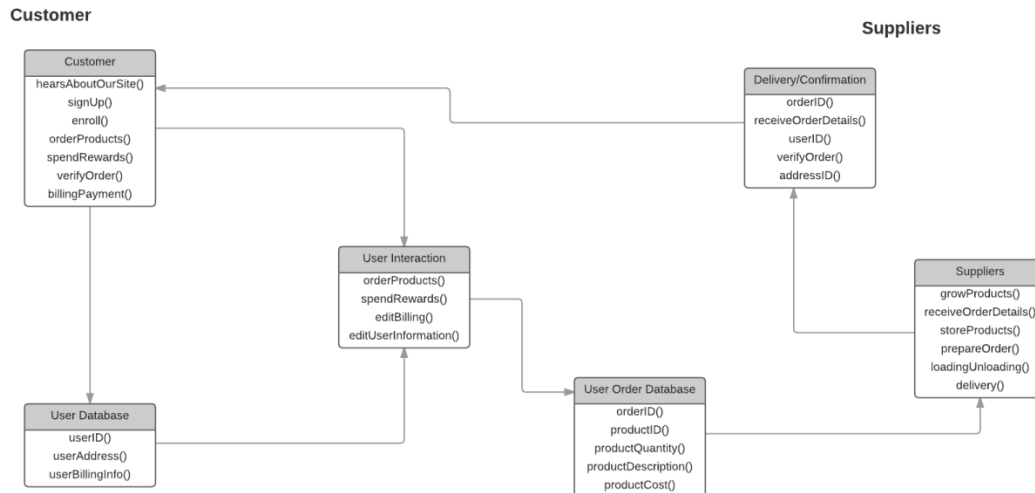
The Use Case Diagram

For our software solution, we intend to create a database to store customer information and their purchases/orders. Our database would also store customer purchases for use of reward earnings. The database would send this information to our suppliers, whom are growing and storing organic/healthy foods in a warehouse. Delivery trucks would then be sent out to deliver ordered products and confirmation and verification will be sent back to the database.

The use case diagram simply acts as a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. As demonstrated in the above use case diagram, the user (customers) interacts with our business website. Ordering food/products, spend reward points, and enroll for memberships are the many options available to the user. The suppliers interact with the users by delivering grown and stored food/products that are ordered by the users. Analytics gather data from customer interactions and the machine-learning layer gathers data on user preferences. This data is applied and sent to the supplier to better understand how to expand to other areas and better serve customers. Advertising simply involves creating ads and promotions to be better reach to a wider audience.

The Class Diagram

Customer

Suppliers

Customer
hearsAboutOurSite()
signUp()
enroll()
orderProducts()
spendRewards()
verifyOrder()
billingPayment()

Delivery/Confirmation
orderID()
receiveOrderDetails()
userID()
verifyOrder()
addressID()

User Interaction
orderProducts()
spendRewards()
editBilling()
editUserInformation()

Suppliers
growProducts()
receiveOrderDetails()
storeProducts()
prepareOrder()
loadingUnloading()
delivery()

User Database
userID()
userAddress()
userBillingInfo()

User Order Database
orderID()
productID()
productQuantity()
productDescription()
productCost()

The class diagram above simply describes the structure of our system by showing the system's classes, their attributes, operations, and the relationship among objects. Our diagram begins with the customer class, which contains the attributes of hearing about our business, enrolling for a membership, ordering our products, and optionally spending rewards earned from buying. Customer orders are organized and ordered by user id, address, and billing info, all of which are stored within the user database class. All information from the customer and user database classes are then stored and inherited towards the user interaction class that shares several attributes (orderProducts, spendRewards) from the customer class. Their functions are self-explanatory, and are transferred over to the user order database class. The attributes within this class include the order id of the customer purchase and the product id of the food bought. It also includes the quantity, description, and cost of the products. This information is sent to the supplier class to carry out and deliver the listed order. This carries onto the Delivery/Confirmation class that simply verifies the order and has been delivered.

Deployment Diagram

The deployment diagram for our problem solution is straight forward. We have composed a diagram that is pictured below with the components that will help us accomplish our end goal. As you will see below, our diagram focuses on the hardware that is needed for users to be able to interact with our system. In order for users to receive their products, a number of things and procedures have to happen first. First, the user will be able to have access to our servers through a mobile device or through a personal computer. The user is then directed via the internet to the database where all his account information will be stored for future use. He then gets access to our servers.

Deployment Diagram
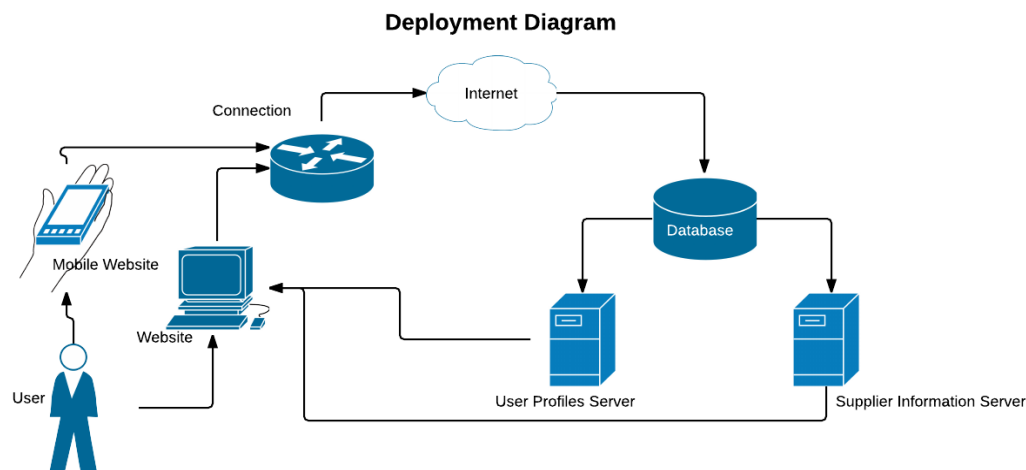
Sequence Diagram

A sequence diagram models the collaboration of objects based on a time sequence. We constructed a sequence diagram in order to show in detail how each phase of the process interacts with each other in helping solve our problem solution. The sequence diagram helps us see in detail the necessary steps it takes for the customer to receive the final products. In our diagram, in order for the customer to be able to have access to our server, they have to create an account. Once their account is created, their user information is stored in our database for future use and easy accessibility. The user then can interact by logging in to our system, editing personal account information, and by placing an order. When the user places an order, he will authenticate his order by acknowledging the items being purchased. Once the order is placed, the order goes directly to our suppliers. The suppliers have to verify the authenticity of the order before beginning on each order. When the supplier puts together the order, the delivery personnel receive the order ID from the supplier in order to pick up from the warehouse. The

last step is to deliver the order to the user/customer. The process keeps repeating for each and every customer.
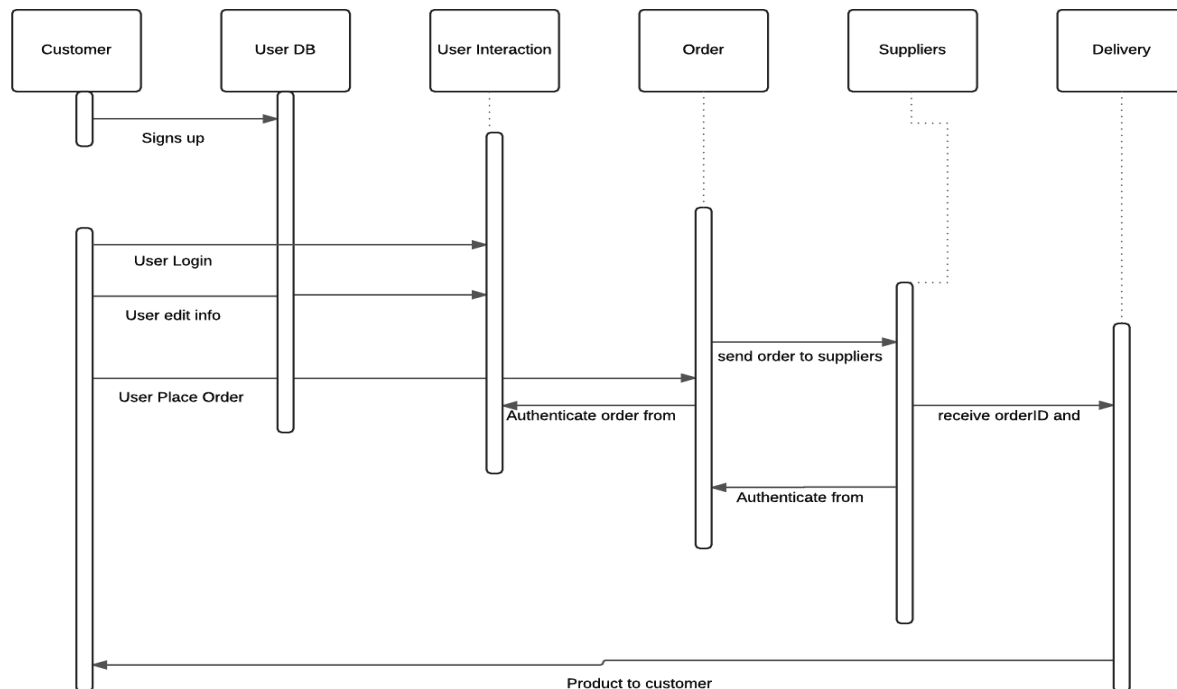
Takeaway

Our intended software solution will take every skill learned in UML to create a viable healthy food business. From the Use Case to the Sequence diagram, these graphs establish a critical layout in otherwise difficult procedures. Without this mapping, we may be unsure on how to tackle problems or milestones

The Work Breakdown Structure Diagram (BPI)

The Work Breakdown Structure diagram allows us to carefully devise teams and assign tasks per team. This also allows team members to dynamically change and update the plan of attack depending on fluctuations that may occur.

Work Break Down Structure (BPI)

SAP PROJECT SYSTEM						OTHER PROJECT TOOLS
Level 1 WBS			CIS311 Project2			Project Name
	Wk 1	Wk 3-5	Wk 5-9	Wk 9-10	Wk 11-12	
Level 2 WBS	Initiation Phase	Planning Phase	Execution Phase	Controlling Phase	Closing Phase	Phase
Level 3 WBS	Project Evaluation	Project Management	Project Management	Project Management	Project Management	Task
	Planning	Execution	Exectuion	Execution	Finalization	
	Developing Layouts Using UML	Design Database for Users	Development of website	Test	Open to Public	
	EstablishTeams	Design Database for Inventory	Development of website-database integration	Debug	Grand Opening	
	Establish Tasks	Design Database for Rewards/Points	Advertisement and promotions		Promotions	
	Establish Team Responsibilities		Establish working links between users + food storage/products + database information			

1. Initiation phase: Assign teams and tasks **(40 hours)**
2. Planning Phase: Develop and plan the "skeleton" of the project **(80 hours)**
3. Execution Phase: Developing the "guts" of the project. This is where a majority of the grunt work is **(120 hours)**
4. Controlling Phase: The later end of the execution phase. Primarily for testing and debugging from the previous execution phase **(40 hours)**
5. Closing Phase: Putting the business open to the public and other promotional events involved in that (**40 hours)**

The work breakdown structure can be related to in a sense of a BPI Model. BPI stands for business practice improvement, and what we are doing with our business, supports our model. We are trying to enter a fast food market by utilizing the benefits and appeal of fast food in order to get customers; however, we are going to approach this at a different angle because the fast food industry is so well established. We are not re-hauling the fast food system, nor are we going to leave the system the same. What we are going to do is try to take advantage of the new technological opportunities to improve efficiency.

The initiation and planning phases are what really get the ball moving for the team. These phases give a good projection as to how long the rest of the project will take. Depending on the working hours needed, this is the prime stage to make any changes and adjustments.

Furthermore, the "skeleton" that is developed here also gives a baseline as to the amount of working hours are needed for the remaining phases.

The execution and controlling phases go hand in hand, however the controlling phase is entirely dependent on the execution phase. The execution phase will involve the "guts" of the project. Developing the website and integrating it with the database for the users will take a majority of the project time allotted for this phase. The controlling phase would consist of finding and fixing tiny errors and ensuring the systems run smoothly.

Lastly would be the closing phase. This phase is primarily used for promotional purposes as well as grand openings for the public. The site goes online and begins to provide services for our new customers. Additionally, this final stage can calculate costs for the project to see if we are over or under budget.

Takeaway

Conclusively, using the WBS, we can allocate working hours and costs more effectively. We can also make changes in this step if necessary. Total projected hours for our project at hand would be **320 hours.** With this budget in mind, we can also track the budget for the project and allot money accordingly.

Defining the Cloud and Networking

With the aim of supporting the IT services we will offer our users, we must enable the required processes needed for our business to be successful in supporting our customers and clients. To ensure this, we focus on defining the use of cloud and networking components, which we will then build a resilient application support through. In defining a suitable cloud and networking framework, we will be able to develop a unique outlook of our service so that we will be fully equipped to handle any situation both on a business level and IT level of understanding.
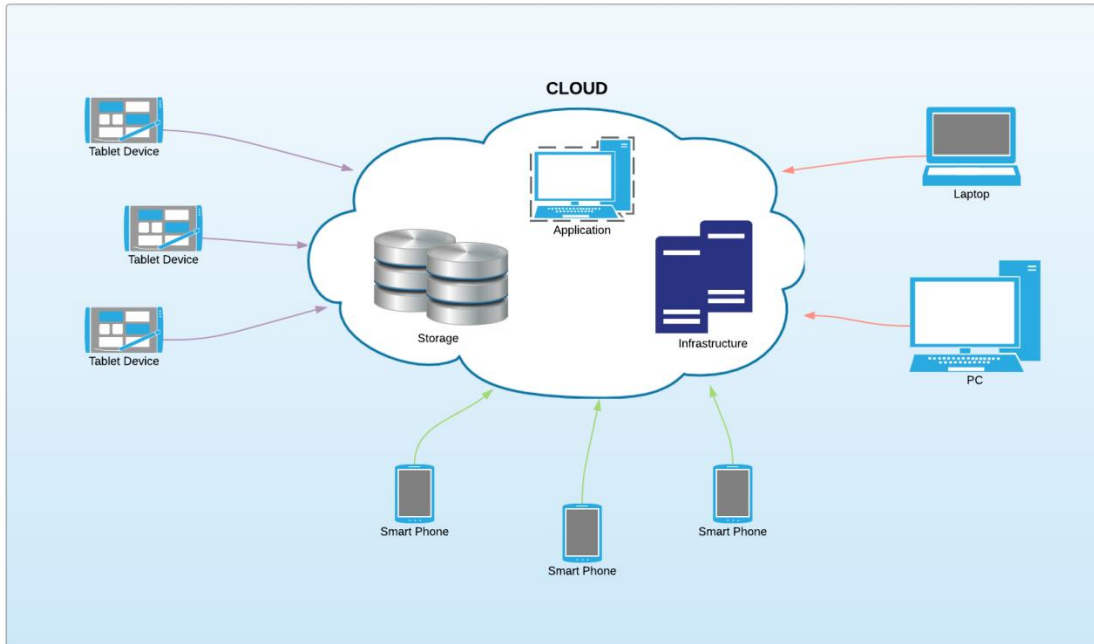
We developed this blueprint to show a plan of our cloud service and its networking components. Each of these components will act as a technical point of contact, so that we can easily handle our application and whichever systems issues or incidents that disrupt the service they depend upon, as they are known. Since we are dealing with production issues in these matters, they have potential to cause harm to our business if we do not deliver immediate attention and resolution as soon as a problem occurs. To do this, we must be able to offer reliable advice about each networking component in order to deliver detailed and accurate application support to any customer or client in need.

All data related to our business will be handled through a cloud service. We came to this decision because, since we will be operating as a small business start-up, a cloud service will allow us to reap the benefits of not having to implement physical infrastructure like file and e-mail servers, storage systems or software. Our cloud service of choice to support our business will be Microsoft's Azure. Microsoft reports Azure is relied on by "more than 66 percent of Fortune 500 companies" (What Is Azure, 2016), which gives us tremendous confidence in its abilities and reliability. Using this service will allow us to be productive right from the start, through the use of its integrated tools, pre-built templates and managed services. This will make it much easier, faster, and more cost-effective for us to build and manage our business. What we most like this service for is its guarantee to the protection and privacy of our data. We want our customers and clients to feel safe and secure when using our service, so we feel Azure will best suit our needs in this aspect.

In our cloud service we will have storage and infrastructure components, in addition to our applications. The virtual servers available on our cloud will hold all our shared files, programs, and the network operating system of our business. They will provide access to network resources for all the users of our network. We will also need the capabilities of virtual database storage systems. These systems will act as leverage between content-based addressing and unique data protection. They will provide us an optimal platform for distribution of performance and capacity for production and repurposed database copies (Database Storage, 2016). Furthermore, Azure will be able to assist us with the development and deployment of our web and mobile applications, while also offering features for us to conduct analytics, management, and security.

Takeaway

One of the main priorities of our business is ensuring that all our customers and clients are satisfied with our service. In terms of how our services are delivered, we will need employees with intuitive IT ability. With our clearly defined cloud and networking components, our support will easily be able to fix any application or systems incident that disrupts our service. Our applications support will be able to demonstrate competent IT literacy and ability around our applications and systems. We will then be able to offer consistent, professional advice about each networking component in order to deliver our promised quality of support to any customer or client who may be in need.

Wireframe UI Mockup

With only the BPMN, it is rather hard to visualize what a web page actually looks like. Having a wireframe will be effective at visually communicating to the person who requested the website their vision. The wireframe is simple but shows enough to easily implement revisions based on feedback. It saves the developer a lot of time by not wasting his time on designing potentially unwanted features by the client.

Main Points:

1. The wireframe of the website based on the BPMN
2. Feasibility of applying the features within the BPMN onto the sample website
3. The simplified nature of the wireframe vs an actual page

In our wireframe, as shown on our site (http://eatwelleathealthy.weebly.com/) we strived to create our vision of the user interface as defined by the BPMN. On our homepage, a user has 2 options: to register or to login. Afterwards, they either choose their enrollment plan after registering if they are a new customer, or choose to fill their shopping cart from the produce page as a returning customer. Furthermore, any user could choose any of the other pages to visit at any point. However, customers who aren't logged in would not be able to visit the billing page. Our sample website, however, has it open to view since it is merely a wireframe of the website structure.

Our wireframe is very surface level and while it does have sample layout corresponding to its page's purpose, all the descriptions are filled with lorem ipsum. The majority (everything but our users tab) of the variables on the BPMN were omitted due to the complexity and large amount of time it would take to model the BPMN with wireframes accurately. Due to the fairly convoluted relationships between the boxes, it is unfeasible to go beyond what the users see.

A wireframe should not be as complex as to have links to more detailed pages. For instance, our login page doesn't have a link or popup to a login page. While a completed website would require much more detailed planning and child pages, our wireframe only includes the parent as seen on the surface.

Takeaway

Every project in every field cannot function properly without sufficient planning. In the case of UI design, the planning via wireframes is critical in order to cut time, costs, and to improve functionality with more user feedback at earlier stages of development. With the BPMN and wire framing, we were able to create a tangible overview of what we envisioned our site to be.

Sources

Basu, J. (2015, February 26). Eco-friendly innovation will shape the future of the food industry. Retrieved April 26, 2016, from http://www.foodnavigator.com/Science/New-technologies-to-shape-the-future-of-food-supply

Bekiempis, V. (2014, October 10). Healthy Food Is Growing More Expensive than Unhealthy Food: Study. Retrieved April 26, 2016, from http://www.newsweek.com/healthy-food-more-expensive-unhealthy-food-study-276161

"Health Food Franchises." Health Food Franchises. Fra, n.d. Web. 01 June 2016.

Sena, Matt. "Fitness Industry Analysis 2016 - Cost & Trends." Fitness Industry Analysis 2016 - Cost & Trends. Franchise Help, 2016. Web. 01 June 2016.