SHMAP Comprehensive Plan

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Executive Summary

Retailers, department stores, and other businesses fill their stores with thousands of products leaving customers to search the shelves for their desired goods. SHMAP will provide locations of store products on a map to enhance and improve the shopping experience of the customers. While our software as a service (SaaS) will be sold as a business-to-business sales model, the shopping locator service is meant to meet the needs of improve the experience of the end users.

The scope of our project will include the work that is to be completed before mobilization of the development of the product. The product will need to demonstrate the ability to inform the user where an item is in the store, which aisle it is in, and where in the aisle the item is.

Our company's value proposition combines a shopping map with analytics into pre-existing mobile applications. Additionally, SHMAP will provide analytics to the companies so they may choose to make changes to their store layout based off of customer behavior.

The competitive environment of the shopping locator service consists of retail stores with locators within their apps and the companies who create those services. Although our company has a few competitors, our service has a competitive advantage due to our combination of analytics and a location service and the depth of our location service. In order to sell directly to companies, we will be utilizing direct sales and sales calls.

SHMAP will utilize a subscription-based revenue model. The amount of the annual fee will depend on the package the company needs. We will sell our service to our primary audience, which consists of companies that have small-to-medium sized stores.

The stakeholders we have established for SHMAP include customers and end users, suppliers, business partners, functional managers, and organizational groups. In order to meet the needs of our stakeholders, we established a project life cycle and work breakdown structure. Additionally, we identified specific goals and objectives that will be measured to ensure we are meeting the needs of or project team.

There are three main organizational structures that are necessary to create and sell our service: marketing, programming, and service development. SHMAP will heavily rely on direct sales of the service, development, and user experience and analytics.

SHMAP's management team consists of five digital communications students who have at least three years of experience in the marketing, programming, business, and selling fields. Through our coursework and internships, we have extensive problem solving and group thinking skills that will assist us in the development of SHMAP.

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Introduction

Our shopping locator service will provide a combination of a company's inventory with our location service. This will be integrated into a the specific company's app, paired with analytics provided by SHMAP. Our comprehensive plan explains in detail: scope, value proposition, market opportunity, competitive environment, competitive advantage, market strategy, finance and budget, stakeholders, project life cycle, work breakdown structure and schedule, measurement and metrics, organizational development, management team, communication and decision making, and SHMAP's plans for the future. By defining each of the preceding items, SHMAP will develop and design a successful service that will affect the customer's shopping experience.

Scope

The scope of our project will include the work that is to be completed before mobilization of the development of the product. In order to ensure we are going in the right direction with the scope and the overall project, we consulted our stakeholders and gathered requirements.

Project Scope

Our group members will need to complete our comprehensive plan to finish planning how we strategize in moving forward with our project. Before development of the product, we will need to acquire the supplies to create it first. Our supplies include programs to develop the project, inventory from the stores, an analytics service, and cloud software. We will need to create the frontend and backend development of the product and conduct usability testing. Finally, after the creation and development of the product, we will need to design and generate a campaign for the product and use marketing strategies to promote our product.

Product Scope

The product will need to demonstrate the ability to inform the user where an item is in the store, which aisle it is in, and where in the aisle the item is. It will need to have capabilities for integration with another app. For the initial development of the product, we will create all the necessary aspects without plugging it into a pre-existing app.

Value Proposition

There are a few elements within our service that are not unique, such as analytics and location services (in general); but, the way we deliver the service to companies is unique. Our service combines a location-based feature that uses a store's layout and plugs into a pre-existing mobile application, with all the analytics from consumers use. In addition, we will be creating a template for the location service. We will have a general structure for the store location feature and the inventory and layout will change per store. Offering our product as a subscription service and

integrating into a pre-existing app will allow us to integrate our overall service into a company much more efficiently (time and cost wise) than if we were to build an internal system for each company.

While we are utilizing a business-to-business model, our service benefits both consumers and companies. The biggest benefit from the location aspect of the service is the reduction in search time, which in turn improves customer experience. Unlike similar stores who have a location feature *(see competitive environment)*, our location service will visually display the location of items on a map of the store. This feature will enable customers to have a fast and efficient experience while shopping in a brick-and-mortar store and employees can go about their daily tasks without receiving excessive questions that take them away from their work. The analytics feature will also improve customer experience if used fittingly by companies. Additionally, the inventory integration into the service itself will provide a unique feature and will allow our service to update based on the specific store's inventory. If companies look at the analytics we provide they may choose to make changes based off of customer behavior on the app and improve customer experience by making their shopping experience easier, which may in-turn give them a larger profit.

Market Opportunity

In order to determine if there is a place for our service in the marketplace and an overall need, our team developed personas and conducted extensive customer research on both of our target audiences.

TARGET AUDIENCE

Our primary audience for our service is companies that have small-to-medium sized stores. Our secondary audience and end-user is the customers of the companies we are working with.

PERSONAS

To better understand our two audiences, our group created two personas **(See Appendix A).** The company persona consists of store managers who oversee small-to-medium sized stores with a fair number of repeat customers. Due to the fact that new customers outweigh employees on the floor of the store, employees can't help every customer find items. The store has a website and an app, which they would like to expand. Our end-user persona consists of middle-aged users who are tech savvy and also looking to save time. Because they live a busy life picking up their kids, making dinner, working, and caring for their house, they are looking to grab the items that they already saw online for a quick shopping experience.

CUSTOMER RESEARCH

To solidify the desirability of our product, we organized surveys and interviews for our primary and secondary audience. We interviewed five local store managers to obtain general background information on their app and how likely they would be to incorporate a location service into their current app **(See Appendix E)**. Additionally, we shared an online survey with friends, family, and others on social media to reach our end-user audience **(See Appendix B)**. With two different audiences, we were able to gain feedback from approximately 71 people (66 end-users, 5 companies). While customers indicated that they found stores neither very easy nor very difficult to navigate, the majority indicated that they would use a location service feature if it was available. On the other hand, the responses we received from companies were difficult to analyze as a whole because of the uncertainty with corporate questions and the small number of responses.

PRIMARY AUDIENCE

We interviewed five store managers from Staples, Kohl's, PetSmart, Boscov's, and Hobby Lobby in the Lebanon, PA area. Many of the store managers were unable to answer our questions fully because as a local store they are unable to make executive decisions for their store without corporate. The sole manager that fully answered our interview questions replied that he would do anything to help the customers when asked if he would use our location service. Other stores indicated that corporate might or that they probably would because "the customer is first," but they were unsure. It also became evident that companies do not recognize the need for this service, even though their consumers might. When we asked the store managers to rate how easy they feel it is for consumers to find staff/products in their store, some gave very high ratings, which as a group, we feel may not be entirely accurate and could be biased. When marketing this service to companies in the future, we may need to show them that consumers do in fact have difficulty in their store and would benefit from our service.

SECONDARY AUDIENCE

When asked how easy it is to locate a store employee or products, 84.2% of survey responses were above a three on a 1-5 likert scale **(See Appendix C, Graph A).** When participants were asked if they would use a mobile application that could locate store items on a map, 66.7% of users responded "yes", while 22.7% percent responded with "maybe" **(See Appendix C, Graph B).** This shows that even though the numbers in the first question seem to indicate that customers don't have a high degree of difficulty with location, there is a particular problem area in locating items in a store. Another statistic that we found to be interesting was that when participants were asked what they use a store's mobile application for, the second highest response was for a "product search". 27.9% of participants said that they use a store's mobile application for product search, while the primary reason was to find coupons and specials.

ANALYSIS

While we conducted two surveys with different questions, we were able to analyze and determine that there is some degree of desirability from both audiences. This may indicate that there is not an overwhelming *need* for this service in general, but there may be a want or need for it in specific stores because our data shows that customers do have difficulty finding items within stores.

Competitive Environment

Our service has direct competitors, such as Shopgate and Shopify who build apps for retail stores, and a few indirect competitors such as Lowes, Home Depot, and Walmart. Companies that build apps for retail stores are our direct competitors because we are both developing a product/service for a company. However, there is no information on whether those companies also create location services for the items in the store as well. Shopgate is a company that builds apps that allow integration between ecommerce platforms and mobile payment companies and Shopify is a company that builds apps for ecommerce and retail. Lowes, Home Depot, and Walmart are our indirect competitors because within their mobile website or app, they have a location service for the products in their store. The system has the aisle number under their product, but it does not say where the aisle is within the store and some do not include where in the aisle the product is. These stores are indirect because they have a location service in their app or mobile website, but they do not build the service and/or app themselves. While all of these companies are similar to SHMAP, it is difficult to state a clear competitor because we are first movers and no other companies are currently creating our unique service.

While other stores are implementing part of what we want to incorporate in our service (or some version of it), they do not have everything that our service will include. We will include a location service that tells the user where exactly in the store the item is and customer based analytics together as one service. Our competitors do a good job of giving the basic information on where their products are in the store, but they do not give a complete explanation of where to find their products. Our service will provide all of the information a customer will need to find the item in the store and companies will receive data and statistics on their customers' use of the app.

Competitive Advantage

Although our company has a few competitors, our service has a competitive advantage due to our combination of analytics and a location service and the depth of our location service. Our location service will be able to tell a user where in the store an item is located, what aisle it is in, and where in the aisle the item is. The large amount of information will afford a lower cognitive load on the user. Our competitors do not have this full feature in their mobile apps and websites and are not using their location services they do have, effectively. We will also have the

advantage of incorporating analytics in with the service so the companies can get feedback on their customers and improve customer experience. We will have the advantage of being the first mover into this marketspace where we combine our location service with analytics.

Our product will also have the advantage of having the ability to be integrated into other apps. Other businesses typically have to create a whole new app and make it usable on all devices to bring in as many customers as they can. With our product, we will not be building a new app but developing a system of integrating our service into a pre-existing app. We will have an advantage with building this type of service because we will not have to build a full app which means less development. Cutting out of all the excess development allows us to offer our service at a more efficient rate (time and cost wise). We will also be utilizing a general template which allows us to simply add specific elements and information for specific stores. Building a new app could also cause many problems and offer a disadvantage because we would have to convince the customers of the businesses the app is trustworthy and helpful. If we integrate our service into other apps, customers are already using those apps and have trust in them.

Market Strategy

For our market strategy we will mainly be focusing on business-to-business sales. In order to sell directly to companies we will be utilizing direct sales and sales calls. This will be done by calling and visiting prospective companies in order to build relationships and develop trust in our brand. This is our primary market strategy in order to have face-to-face relationships with our customers so that we can then create the best personalized service for their specific company.

Another way that we are going to market to our primary audience is by word of mouth. As our brand grows and we acquire more customers, competitors for those companies will want to be able to have a service that keeps them up to date with the competition. If they hear about our service through different companies, they may consider working with us to develop a system for their own app. This way our service can spread to the different competitors' mobile applications. Our secondary audience, the companies' customers, will also be a way of spreading our service. If our service is of value to the customer and they like to shop at stores that utilize our services, we will utilize customer loyalty and word of mouth to spread our services to other competing stores with similar customers.

Additionally, we will be creating a small amount of marketing materials to assist with our direct sales and bring in some indirect sales as well. The main marketing material we will utilize is a fully functioning website. Many of our competitors have a website that provides useful information about their product and its uses and a way to contact the company. We feel that a developing a website with similar features would be very beneficial. We are also planning to create small digital advertisements that can be targeted to individuals in our target audience.

Finance & Budget

To determine the financial inputs and outputs of our service, our team has developed a business-to-business revenue model that uses a complex pricing model, as well as an initial budget. We also made sure to consider all of the resources we will need to create a successful service and any constraints we may encounter along the way.

REVENUE MODEL

For our service, we will be utilizing a subscription-based revenue model. As previously mentioned, we are creating a two-part service that consists of both a location service and the corresponding analytics. Companies will pay one fee for both services as opposed to paying for two separate services. Originally we were going to charge a monthly subscription fee, but after collecting feedback from store managers and doing research on similar companies, we have decided to charge an annual fee. However, in the future we may create a monthly option as well.

PRICING

The amount of the fee will depend on the package the company needs. Packages will be based on the amount of stores a company has. The minimum number of stores a company must have is five and the maximum is 400. To determine the price for each package, we will create a monthly price that we feel covers the costs of running/creating our service and that will still give us a small profit. We will then multiply that price by 12 to find the yearly cost, and multiply it by the store number that corresponds with the package. Instead of creating a unique price for each company, we will use the median of the number of stores for each group. For example, if the group is 5-25 stores, the number we would use in the price is 15. To help get an idea of a pricing range, we researched similar companies and the Retailer's Association. To get a general understanding of how our pricing would work, **please view Appendix G (Prices displayed may not be our final prices).**

BUDGET

A budget is a very important part of any company. It is important to keep track of how much money you have, how much you anticipate to make, and the allocation of funds. For our service/product, we developed a revenue model and pricing plan that is based on a yearly subscription **(See Appendix G)**. The companies that we are working with will pay one fee when they begin utilizing our services and will then pay that fee on an annual basis. This means that our income may vary from time to time. Our income not only depends on the price (based on number of stores) for each company, but the number of stores we are working with at one time. If we are only working with one company, that means we will only receive income once a year. In the future we may need to consider a monthly option to get by, but we feel as though the pricing model we have set up will provide us with a significant amount of income, even with just one company.

On the output side, we have a few expenses that will need to be taken care of on a regular basis. Since we are running a business-to-business model, we need to put a decent amount of time and money into sales and marketing. Our main concern will be hiring a sales team to go to businesses and market our product to them. This will most likely be our largest expense and the cost will depend on the amount of people that we hire. To start, we would like to have five team members that are devoted to direct sales. We plan to pay them each $28,000 (national average) per year, which will add up to $150,000 total per year. As the time goes on, the wages may increase as well as the size of the team. We will also need to allocate around one thousand dollars for any additional marketing expenses including paid advertisements, a domain name, and hosting costs.

Our second highest expense will most likely be cloud storage, since we will be used the cloud to store our service and for analytics purposes. Cloud services are tricky to estimate costs for because companies develop a complex pricing system that is based on a number of factors including the amount of storage, data storage, and network usage. Since we have not created a to-scale prototype and we do not know the number of stores we will be working with, it is difficult to get an estimated cost. We will also be using an analytics service to gather user data from our service. The pricing of the analytics service will most likely vary based on the number of sites we need to implement them on, but the cheapest/best service we are looking at at the moment (Clicky) charges a $150 yearly fee for 30 sites. Ideally, we would use the pro-version of Google Analytics, but will need to get in contact with them for a pricing estimate.

We don’t anticipate many additional expenses at the time. In the future, we may need to consider outsourcing some of the work, especially the code for the system. If we were to outsource our work, it would most likely be priced by hour, at about $40 per hour. We are hoping to keep the work within the team, but we will evaluate the pros and cons of outsourcing after developing our first prototype.

While we are still unsure of some costs and expenses, we’ve been able to establish a ballpark number for our yearly expenses. The sales team, marketing efforts, and analytics will cost us about $151,150. That is our base number and a few thousand dollars should be added to account for the cloud storage and for other basic costs such as keeping the lights on.

In order to alleviate some of these costs/startup costs, we may look into crowdfunding. Once we are ready to start creating and implementing our service, we may create a kickstarter campaign to gain funding from stakeholders.

RESOURCES

In order to create a successful product/service, we will need to utilize multiple resources. While developing the location system, we will need to utilize a text editor and our knowledge of coding languages such as HTML, CSS, and jQuery. This will be necessary to develop databases that hold customer (company) data, the actual location feature, and the front end of our service. The software that we create through our coding will be designed for a mobile device and will be compatible with iOS and Android.

The system that we develop will be able to be integrated with any store because we will be creating a template. The technology we create can be distributed wherever needed and certain elements will be altered to make it personal for each store.

The inventory lists and store layouts provided to us by the companies we are working with will also be imperative. Because our location service is based on the location of items within a specific store, it is important that we have data on the inventory's current position to assist consumers with their search. The layout allows us to show a user a visual representation within the app of where the item they are searching for is located within the store. Since the inventory of a store constantly changes, along with the location, we will receive inventory lists on a regular basis.

In addition, we will need to utilize multiple pre-existing services. We will utilize an analytics service that allows us to track analytics on the use of our service within the app. We will then analyze those analytics and hand them over to the company. We will also need to use a cloud storage to host all of our different elements and potentially a hosting service for our website.

CONSTRAINTS

One of the biggest constraints our group will face is time. We will have approximately four months to develop our service. The group has done a fair share of planning in the past four months, but there are still a lot of unknowns that remain. Time is mostly a concern with the development because it will involve a fair amount of development. Our group has not developed anything similar in the past, so the development may require a lot of trial and error. In return, this may cause us to fall outside of the time period we developed in our WBS, which may then alter the other stages. Even after we are happy with the system, we will still have to conduct usability testing which could lead to revisions.

Another constraint we will encounter involves our resources. As mentioned before, our main resources will come from the companies we are working with. Our service relies heavily on up-to-date inventories and store layouts to provide accurate locations. Since it is not our information, we can only use the information that the store sends us. If the store doesn't send us

information on a regular basis, we will most likely not be able to create the experience we are hoping for. In addition, since we are utilizing pre-existing systems for the inventory, analytics, and cloud storage, we will have to abide by their rules and try to make our system work well with what they have developed.

Our third constraint will most likely involve the quality of our service. The main concern with quality is the integration into a company's pre-existing app. As of right now, we are not familiar with the specifics of the integration process, but we assume that it may differ for different operating systems. If it does differ, it could affect the appearance or other important elements of our service. In addition, it may be difficult to style the system to fit in nicely with the company's pre-existing app.

Stakeholders

A stakeholder is an individual who may affect or be affected by a decision, activity, or the overall outcome of our project. Our stakeholders include our project team as well as entities outside of our small group. Stakeholders will play a large role in our project from the beginning phases till the end. In order to create a successful product/service, it is important to determine our stakeholders early in development so that we may consider their needs and requirements during the processes. The stakeholders we have established include customers and end users, suppliers, business partners, functional managers, and organizational groups.

CUSTOMERS

One of the most important stakeholders for our company is the customers, as our success mainly revolves around them. Our customers will be companies with small to medium sized stores.

Customer Experience

The customers require a service that will help them improve the customer experience in their store. They need a service that not only directly assists customers but also allows them to make additional decisions about customer experience. In order to make the additional changes, they will need feedback in the form of analytics that tell them important information such as what items people are purchasing together and which items are searched for the most.

Integration

The stores we will work with don't have the money to go out and create a location service on their own, so they will be relying on us to create a location-based service and integrate it into their pre-existing mobile application. They will expect us to alter that section of the app and no other aspects (unless necessary/approved).

Ease of Use

While the customers may not directly be using our service on the front-end, they need some way to update their inventory and layout either on the back-end or in another front-end system. Since many of the stores we interviewed indicated they update their inventory on a fairly regular basis (daily, weekly), it's important that they can easily use a system to update the information in a timely manner. If the stores will be inputting the data on their end, they will need a system that allows them to input/send data from their inventory in a certain format, such as XML.

Regular Updates

As discussed in the ease of use section, the stores change their inventory on a regular basis. It is important that these changes are updated fairly quickly because it will alter the accuracy of the current system. They need us to either create a system that allows them to upload this data or to update the database on our side in a timely manner.

END USERS

Much like the customers, the end users play an important role in our success as a company. The end users for our service are the consumers who use our location service when shopping in a store.

Navigation

The end users require a simple way to navigate a store. Consumers typically try to get in and out of a store quickly, so they need a service that will show them not only what aisle a product is in, but also where that aisle is located in the store. The easiest way to give this to them, is by integrating a map into the app.

Ease of Use

As mentioned in the navigation subsection, consumers want to complete their shopping fairly quickly. The amount of time they spend in the store using our app will depend on a few factors including the accuracy of our system, the speed of the user, and the usability of our service. Since our user will be in the store with a goal, they most likely won't want to stand and mess around with their phone for an extended period of time. They need a service that is not only quick as far as server speed, but is also simple enough that it takes a short amount of time on their end. We need to develop an easy-to-use front end system that requires the least amount of steps while still covering all the bases.

Mobile

Since they will be in a store, users need our service to be mobile so that they can use the app on their phone while shopping as opposed to searching for items before leaving the house. It also needs to be integrated into a pre-existing store app because most consumers won't be willing to

download two different apps for one store or may not trust an outside party's app. In addition, the consumers need the app to work with their specific phone. iPhones and Androids have different operating systems and we need to ensure that the system we integrate into the app will work with both systems (and any other popular additional operating systems).

SUPPLIERS

As we will have a large amount of data and systems, our team will need a place to store our service. A cloud software will be the easiest and most inexpensive route to take. The cloud software will be where we store our service, therefore we will need to decide which one would best suit us in our position. Some are Google Cloud Platform, Amazon Web Services, Microsoft Azure, Office 365, Dropbox, iCloud, or others. This software will also help us with our analytics that we are providing for the companies with our location service. The analytics will provide customer feedback for the companies that choose to have our service for their business.

The cloud software will not require much from our business besides us keeping up with our payments for the storage space. They will also require us to ensure that we are using their services properly.

Besides the cloud software supplying us with storage and analytics, the retailers that choose to use our service will also be our suppliers. To have our service be integrated into their mobile app or website, they will need to supply us with their inventory. We will not be able to create an accurate location service for them if they do not give us a complete list of their store's inventory.

The businesses who choose to use our location service are requiring us to provide a fast, easy way to update their inventory in our service in an appropriate format. The businesses that require us to use the inventories they give us to make an accurate location service.

BUSINESS PARTNERS

Since our service is so complex, we will need the help of both internal and external business partners. Our business partners are individuals with which we have an agreement, who work with us to ensure the creation of a successful product and service.

Internal

Every member of our group is invested into our company as business partners. Currently, we all hold equal stock of our company. Dr. Kline and Dr. Ritchie are also acting as advisors and sponsors for our business.

Our business partners require us to do our part of the work to make the company successful and meet all deadlines. They also require constant communication. Since our service will have many

different parts, a few different departments, and multiple customers, it is important that we are all on the same page and work together to ensure success.

External

External business partners are individuals/companies that we would establish relationships with in order to build and progress our business. Some partners that we see in the future would be an analytics company such as Google analytics that will help us manage and collect data within our service. Another business partner that we will build a relationship with, would be a cloud storage company that will also provide services that can better the functionality and storage of our service.

Another option in the future would be partnering with a company that could help us make certain aspects of our service more efficient, such as creating a new inventory system. In cases similar to that, the company would need to understand how our system works, what type of technical requirements we need, potential access to our back-end, and constant communication from our team.

FUNCTIONAL MANAGERS

Each member of our group plays a management role in our business because there are currently only five of us working on this project. Once we become a larger team and can develop different teams for the different departments of our business, we will be able to have key individuals take on management roles for each department. The crucial departments of our business that will allow it to function and run are marketing, sales, customer service, research and development, finance, human resources (HR), and Information Technology (IT). Each department of our business will be managed by an administrative figure when our business becomes profitable and able to provide a stable income for the employees. The key individuals who will hold these positions will have considerable knowledge of the skills being used to perform expertly on the project.

These key individuals will require us to hold executive meetings with them on a regular basis. This will ensure that everything is running smoothly and the business is staying profitable. By meeting with them on a regular basis, we will receive regular updates on how the business is going and how we are meeting our objectives. In these meetings, they will also expect us to give them goals and to update their to-do lists, so we can improve our business and make sure we are advancing forward and not staying stagnant while our competitors innovate ahead of us.

ORGANIZATIONAL GROUPS

When our service is fully launched and profitable, the marketing, sales, research and development, information technology, finance, and HR departments will be most affected by the project team. These departments support the business environment and therefore, are stakeholders that would be tremendously impacted by decisions by our team.

Changes in project scope, cost of the service, organization, and number of consumers subscribed to SHMAP, will impact our stakeholders and how they will manage their departments. For example, an increase in SHMAP's subscription service will directly impact the market, sales, and finance team, completely changing how the execute their workload.

Much like the functional managers, these departments need to be in constant communication with the rest of the company so that they can alter different aspects of their work. These departments will also need to work alongside other departments. Many tasks may overlap or simply require multiple minds to finish. For example, marketing and sales may work closely together to develop new sales pitches and marketing strategies.

Project Life Cycle

Over the past four months, we have progressed through several stages of the project life cycle. We followed the PMBOK model of the project life cycle of initiating, planning, executing, controlling, and closing. The processes contained within each stage are defined below.

INITIATING

In the initiating stage of the project life cycle, we created a project proposal with our initial idea and some of our goals that we wanted to accomplish. After reviewing the idea and the goals that we set for our project, we gained commitment from each of our five team members. We then gained commitment and approval from our sponsors, Dr. Kline and Dr. Ritchie, to proceed with our project.

PLANNING

When planning our project we first defined the scope of our project. We determined the type of supplies that we needed, such as the programs to develop the project, inventory from the stores, and cloud software. We determined that we needed to go through the development and usability testing of our product. A campaign and marketing strategies were also needed to create and promote our brand. We also determined what the goal of our final product will be a functional location system with the intention of being integrated into a pre-existing mobile application.

Along with planning the scope of our project, we developed a feasibility report and a viability report to examine our project goals and expectations and a desirability report to determine the

need/want for our service. We were able to develop a schedule, determine our revenue model, WBS, and metrics plan.

EXECUTING

According to our GANTT chart and schedule, we are currently aligned with our business goals and objectives. We are at the beginning of our executing phase that will continue on into the majority of next year. In the next few months, we will be focused on the development of SHMAP and refining of our product through usability testing and prototyping. We will also be prospecting potential customers for our service.

CONTROLLING

We are controlling our project by comparing it to the deadlines and objectives we have set when we defined the scope of the project. Currently we are aligned with our schedule and project goals. We have made adjustments throughout the first semester of our project life cycle in order to stay on track with the progress of our project. We analyzed costs, risks, scope changes, and other factors that could have had negative implications on our project objectives or schedule and we worked through them.

CLOSING

We have not yet undergone the final closing process for SHMAP because we are still at the very beginning of the execution process. We are about to undergo the closing process for the planning portion of our project life cycle. We will conclude with the explanation of our progress so far this semester, and our expectations for the upcoming year during the executing phase of the project life cycle. We will then receive feedback on our progress and our goals for the upcoming year, and then modify our project plan if there are any aspects that we feel need to be included in the development of SHMAP.

Work Breakdown Structure (WBS) & Schedule

Our WBS for the development of SHMAP is broken into six sections: planning, market research, product/service design, marketing, and project management. Under each section, we define multiple tasks that our team will execute. To view the WBS, view **Appendix H.** Additionally, we created a GANTT chart to schedule all of the tasks included in our WBS. The GANTT chart effectively documents 100% of the work that it will take to develop SHMAP and also includes documentation of whether the task has been completed, in progress, or not started. To view the GANTT chart, view **Appendix I.**

Measurement & Metrics

Metrics and measurements are an important part of every project. There are many different types of measurements, but overall they can provide insight on progress/success, help discover any issues, and allow for easy evaluation of processes.

In our Metrics Plan, our group created five goals to achieve for our project: schedule tasks/milestones are on track, perform successful usability testing on our prototype, successful prototype (without plug-in), successful planned integration into a company's app, and developing marketing assets. With each goal we decided a corresponding objective. Our group also describes what we will measure, how we will measure it, and when we will measure each goal and objective. To view the Metrics Plan, view **Appendix J.**

Organizational Development

There are three main organizational structures that are necessary to create and sell our service: sales and marketing, software development, and service development.

SALES AND MARKETING

As mentioned in previous sections, since we are B2B, we will rely heavily on marketing and direct sales. We will have a sales team that focuses solely on going out to businesses and completing direct sales and/or making direct sales calls. This department is so crucial because if companies don't know about our company and the service we are offering, we won't be making any sort of profit. Though probably not as important as sales, marketing is still crucial. A few team members will be in charge of our marketing efforts which could range from our website to direct/targeted online advertisements.

SOFTWARE DEVELOPMENT

Software development will be a pretty large part of the development of our project. Since we are using a template system and just changing certain details for each store, most of the development will come early on in the process. In general, our developers will need to utilize a text editor as well as a cloud service. Our developers will mainly be responsible for working with store inventories and creating the location feature itself. In order to map the locations of products, we will need inventories from all the stores we work with. The information from those inventories will then go into a database that is created by our developers and can be regularly updated. As far as the location service goes, our development team will create code that will emphasize the area of a store's map that corresponds with the product they are searching for. Once the overall structure is developed, the development team should only have to update databases and input store layouts.

SERVICE DEVELOPMENT

The service development team will be creating both a usable service and assisting our client with the overall usability and customer experience for their store. This team will consist of individuals with roles in user experience and analytics. The biggest task this team faces is creating the interface that will plug into the pre-existing app. The development team will create the back-end, but the service development team will create the front-end that will allow users to search through categories or directly search for a product. The team will also be responsible for collecting the analytics from the service using Google analytics or a similar service. After collecting the analytics, the team will analyze it and hand them off to the company.

Management Team

To accomplish our project objectives we have formed a five member team of digital communication students. Digital communications is a major that consists of six concentrations: design, business technology, videography, user experience, communications, and programming. Each of us have at least three complete years of experience in all of these concentrations working within the major and completing internships. The majority of our expertise lies in the user experience, communications, and design fields.

Along with the formal qualification of our major, we have also have taken multiple courses in business, HTML5, programming, marketing, and selling. In these classes we have also been able to develop and refine our problem solving and group thinking skills.

We have specified team roles that consist of: project manager, promotion and sales, programming, finance and accounting, analytics, and user experience. Defining our roles allows us to collaborate on a more organized level to accomplish our goals.

Communication & Decision Making

When dealing with the communication and decision making aspects of our project, our group handles them with equal input to create the best possible outcome. Our group made unanimous decisions in the project name and logo, the different responsibilities in the group, and how we executed meeting schedules and completing our plans and objectives. We typically make group decisions by adding individual input on a situation and then conferring with the rest of the group. We work through the decisions and each person's individual input in order to create the best possible solution or finished product. When working out differences, we take into consideration the wellbeing of the entire project and we decide on the best solution. We encourage each other’s input when communicating and making decisions because we would rather have a good quantity of solutions to choose from to solve a problem or make a decision.

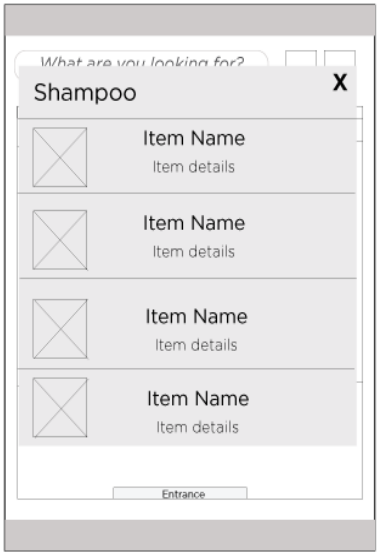
Going forward, when making decisions we will continue to offer individual suggestions in order to come to the best result. This would ensure that we will come up with the best possible solution that would align with our project objectives and goals. If we encounter disagreements, we will use voting and consider all alternatives to come up with the best solution. Additionally, by following our GANTT chart, we will have to set up time limits for making a decision to ensure we are on track with our schedule. We will also choose the best decision for our overall group, allowing each member to expand on their personal skills, while executing the development of SHMAP.

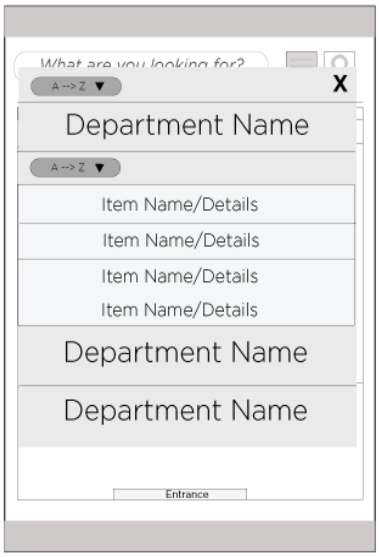
Future Planning

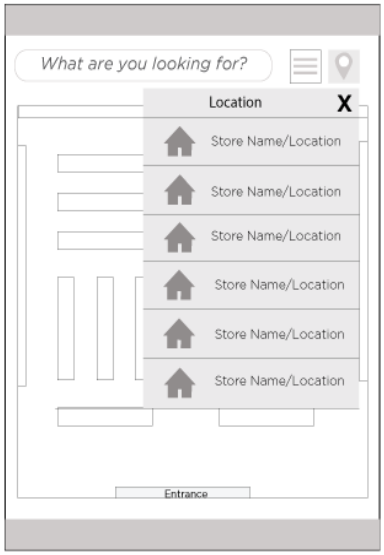
Our team has spent the last four months moving through the initiating and planning phases. After presenting a concept, conducting research, collecting the necessary information, and developing a plan, we are ready to move onto the executing phase.

During the execution phase, our main concern will be the development of our plugin. During development, the team will create the front end of the plugin, a system that connects with the databases to show the location of the item on the screen, and the actual databases on the backend. We have devoted the first two weeks of the semester to the development of the frontend of our system. In the frontend, users will be able to search for items through a search bar or through departments. They can browse and select the correct item and then the location will show up on the screen with any necessary details. The users can also pick the store they are shopping at in case they can't turn location services on or they want to look for items in a store they are not currently in. The initial concepts for the frontend can be seen in our wireframes located in **Figure A**. After the frontend development is complete, we will run usability testing to ensure ease of use of the interface.

FIGURE A:







After the development of the frontend, the team will go to work on different elements in the back end. We have scheduled five weeks each for the development of databases/database structure, the inventory/location feature, and our integration method. After each of those areas are completed, we will have a prototype that can be put through usability testing.

Once we have a successful prototype, we will need to start working on our marketing strategies. As previously mentioned, a lot of our sales and marketing efforts will revolve around a direct sales team. To prepare for the end of the semester, we will need to develop guidelines and determine what we want in a sales team. We may also begin to create an actual sales team. Additionally, we will need to create a fully-functioning website to promote our service and any additional elements such as advertisements.

Finally, before we hit the market with our service, we will need to finalize any pricing and budget numbers. As of right now a lot of our numbers are just estimates, but by the end of the semester we may have more of an idea what our service will cost us and a better estimate of our annual income.

Conclusion

SHMAP will create a unique shopping locator service that uses a company's pre-existing app and inventory to create a location service and combines it with user analytics. Through extensive research and consideration of elements such as scope, value proposition, market opportunity, competitive environment, competitive advantage, market strategy, finance and budget,

stakeholders, project life cycle, work breakdown structure and schedule, measurement and metrics, and organizational development. Our management team will conduct the tasks discussed in our comprehensive plan to develop a successful service that can be marketed and sold to businesses in the retail industry.