Online Local Food Platforms: A Nantucket Case Study

An Interactive Qualifying Project
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ABSTRACT

In 2016, the nonprofit organization Sustainable Nantucket adopted the online platform WhatsGood to facilitate farm-to-restaurant transactions within their community. The purpose of this project was to analyze the results of the pilot program and advise Sustainable Nantucket on which online platform they should use in 2017 and beyond. We compiled a list of features desired by three stakeholder groups: administrators, producers, and consumers, and used this list to evaluate the local food platforms WhatsGood, FarmersWeb, and Local Food Marketplace. Assessments showed that WhatsGood is the most suitable online platform for Sustainable Nantucket's needs because of its low cost, mobile application, and willingness to collaborate through future development.

EXECUTIVE SUMMARY

Early American lifestyles were dominated by agriculture. Colonists had to procure their own food due to the logistical challenges of importing goods. Locally based food production was the norm; people either grew their own food or bought food from their neighbors (USDA, 2000). This dependence on one another for essentials of life created a collective social mentality. Communities survived, thrived, or even perished based on their ability to reliably produce food. Farming was an integral part of these early American communities, and the source of food helped define local cultural identities. In more recent times, industrialization of agriculture has alienated the public from growing their food sources and has led to widespread environmental degradation (Hinrichs, 2000). In response, many communities are looking to get back to their roots with local food (Ciuchta, O'Toole, 2016). This call to action has created a global local food movement to make local food more commonplace in the average citizen's diet. The island of Nantucket, once an intensely agricultural community, is among those seeking to revitalize their local food system and increase self-sufficiency.

The local food movement is best epitomized in farm-to-table initiatives. These focus primarily on educating the general community about picking location and nutritional value of their food, and providing quick local food access for individuals and food businesses such as cafeterias and restaurants. These programs function through local food education and distribution programs (Hyder 2011). In addition to having readily available access to healthy local food, communities in turn have a positive social impact on the livelihood of local farmers (Grubinger, 2010). The combination of health and social benefits to the community is the backbone of the farm-to-table movement.

On the island of Nantucket, the non-profit organization Sustainable Nantucket, in addition to other roles in the local food system, facilitates a farm-to-restaurant program. In conjunction with their Nantucket Grown brand, which denotes food businesses that are locally sourced, they created a delivery service for orders from local farms to restaurants. In an effort to make sales and purchases easier for farms and restaurants on the island, Sustainable Nantucket also ran a pilot program in 2016 with a company called WhatsGood, a Rhode Island-based company designed to connect chefs to sources of local food through an online platform. Our team was asked to investigate the pilot program from the different perspectives of the stakeholders and evaluate options moving forward. The purpose of this project was to provide our sponsors at Sustainable Nantucket with a recommendation stating whether to continue their relationship with the local food platform WhatsGood, or to switch to a different online food coordination platform.

Methodology and Key Findings

Our team first focused on creating connections with key informants as identified by our project liaisons at Sustainable Nantucket, representing three stakeholder groups: coordinators of the local food system, producers (farmers), and consumers (chefs). Through conversations with these key informants, we determined which features of an online platform each stakeholder group desired.

Our findings in terms of stakeholders' expectations of an online platform are shown below in Table 1.

Online Platform Expectations:

Coordinator (Sustainable Nantucket):

- View orders and delivery information
- Define a closed network for Nantucket Grown members
- Quick technical support
- Communication between producers and consumers
- Integration and education before 2017 season

Producer (Farmers):

- Mobile application
- Push notifications
- Product photo uploading
- Percentage of sale-based fee for platform service

Consumer (Chefs):

- Mobile application
- Push notifications
- Inventory list: local and updated

Table 1: Stakeholder Online Platform Expectations

	WG	FW	LFM
Overall:			
Mobile App Capabilities			
Closed Network			
Administrative Capabilities			
Delivery Coordination			
Tutorial of the use of platform			
Quick customer service response			
Producer:			
Upload/Delete produce & Generate pick list			
Real time inventory quantity update			
Contact consumer on platformabout order changes			
Upload produce photo			
Hide items with zero inventory			
Marketing Tips			
Custom price list			
Review order histories			
Consumer:			
Look up products by produce type / producer			
Contact producer on platform about order changes			
See photo of produce & Review order histories			
Online payment			
Add/Delete item in shopping cart			
Push Notifications			
Email Notifications			

Currently exists
In development
Does not exist
Did not test

Table 2: Feature Status Spreadsheet

Next, we used these expectations to evaluate three local food platforms: WhatsGood, FarmersWeb, and Local Food Marketplace. To complete these evaluations, we contacted representatives from all three companies, and either set up an online demonstration with them, or received permission to test their platforms using trial accounts. After observing platform functionalities, we determined which features each of the platforms could perform.

After individual platform evaluations, we compared the three platforms to determine which was most suitable for Sustainable Nantucket's needs. To compare the platforms, we created a feature status spreadsheet and cost analysis table, and examined other critical areas like business model and technical support. The feature status spreadsheet shown in Table 2 uses colors to display whether the desired features exist, are in development, do not exist, or were not tested.

Cost Analysis – Platform Comparison:

The cost analyses shown in Table 3 and Table 4 were performed under the conditions of 10 farmers making $2,000 and $10,000 per year respectively. These annual profits were selected as realistic scenarios for local Nantucket farmers. The tables below display each of these conditions for the three platforms.

	WhatsGood 1.5% of sales	**FarmersWeb** 3% *of* sales $40 or $75 flat rate	**Local Food Marketplace** Billed to SN
Fee 1:	$30/year	$60/year	Setup Fee $1,498 (first year)
Fee 2:	N/A	N/A	Account & Application $2,976/year
Fee 3:	N/A	N/A	Content & Member Management $1,176/year
Cost per farmer:	**$30/year**	**$60/year**	**$565/year**
Total Cost:	**$300/year**	**$600/year**	**$5,650/year**

Table 3: Platform Cost Analysis @ $2,000 Gross Annual Sales

	WhatsGood 1.5% of sales	**FarmersWeb** 3% *of* sales $40 or $75 flat rate	**Local Food Marketplace** Billed to SN
Fee 1:	$150/year	$300/year	Setup Fee $1,498 (first year)
Fee 2:	N/A	N/A	Account & Application $2,976/year
Fee 3:	N/A	N/A	Content & Member Management $1,176/year
Cost per farmer:	**$150/year**	**$300/year**	**$565/year**
Total Cost:	**$1,500/year**	**$3,000/year**	**$5,650/year**

Table 4: Platform Cost Analysis @ $10,000 Gross Annual Sales

This analysis showed that WhatsGood and FarmersWeb are very affordable and flexible for small farmers, who do not want to be overwhelmed by large fixed rates. Even if each farmer made $10,000 in one season, their fee would be substantially less than the fixed rate of Local Food Marketplace.

Business Model Comparison:

Sustainable Nantucket currently holds the role as an independent facilitator of the Nantucket local food system, which oversees the fulfillment of individual transactions between farmers and chefs, but does not require those transactions to be placed through them. In this model, shown in Figure 1, order logistics are made through the online platform, business transactions are made between the farmer and chef, and Sustainable Nantucket provides the delivery service.

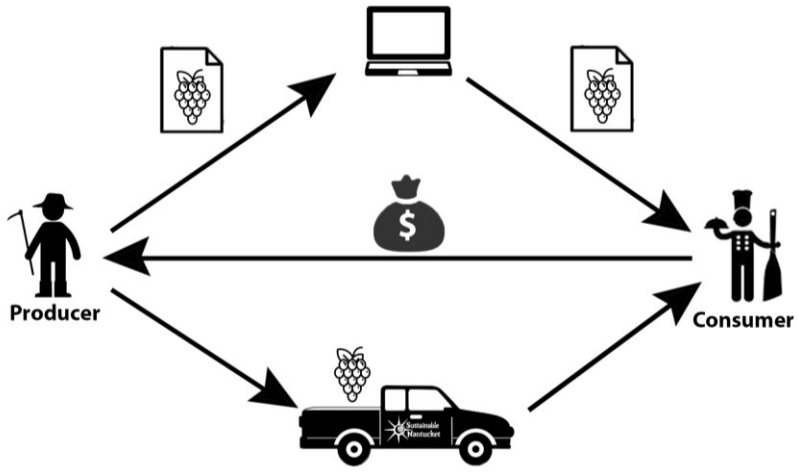

Figure 1: Sustainable Nantucket's Current Business Model

In comparison, another popular business model for a local food system is the local food hub, shown in Figure 2. A food hub is set up with a central administrator that all business transactions and movement of products must go through. In the case of Nantucket, Sustainable Nantucket would have to be the central administrator and assume more administrative responsibilities to fulfill this role.

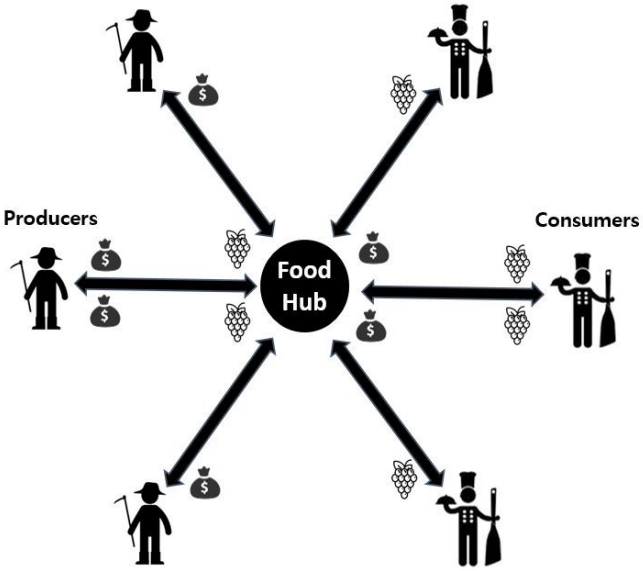

Figure 2: Local Food Hub Business Model

However, the participants of the Nantucket local food system enjoy having the personal relationships with their business partners and the change to a local food hub would reduce these interactions. Based on business model support by the platforms, both WhatsGood and FarmersWeb offer the foundation for Sustainable Nantucket's current facilitator model. Local Food Marketplace was created for the local food hub model and the Nantucket local food system is not interested in switching business models.

Platform Comparison Summary:

Through feature, cost, and model comparison, we determined that the online local food platform WhatsGood was best suited for the Nantucket local food system. It was competitively priced for all of the tools and features included, and many features which WhatsGood did not currently have are in development. In addition, it supports Sustainable Nantucket's current business model as an independent facilitator.

Our final project activity was to consider other findings we discovered through our work in the Nantucket local food system. We developed recommendations to maximize the value of WhatsGood communication with platform support, and potential future projects involving Sustainable Nantucket and the island's local food system.

Recommendations

Our team sees potential for a mutually beneficial partnership to continue developing between Sustainable Nantucket and WhatsGood. We believe that our recommendations support Sustainable Nantucket in their mission to build a more locally based and self-reliant food system on Nantucket through providing education, expanding production, increasing demand, and improving distribution.

Based on the foregoing inquiries and findings, our team constructed the following recommendations for Sustainable Nantucket, WhatsGood, and the participants of the Nantucket local food system. The goal of these recommendations is to increase the efficiency of communication between parties and provide possible opportunities for improvement and expansion of the current of local food system.

Recommendation List:

1. Sustainable Nantucket should continue their partnership with WhatsGood.
2. Sustainable Nantucket should establish regular communication for the production season with WhatsGood.
3. WhatsGood should reach out to Nantucket local food system participants during offseason for platform problems and upgrades.
4. Nantucket local food system participants should primarily report platform bugs in the onsite chat bar.
5. Farmers and chefs should keep each party updated on their business status through production season.
6. Farmers and chefs should perform cooperative planning before each production season.

7. Sustainable Nantucket should investigate new local food marketing strategies (e.g., group sampling boxes).
8. Sustainable Nantucket should investigate the expansion of their delivery service to include seafood providers and larger island farms.

Conclusion and Acknowledgments

The community of Nantucket has a unique local food system. It has definite geographical borders and services a largely fluctuating, transient population. As a tourist town with a long history of independence and self-sufficiency, Nantucket places great importance on identity, which translates to its communal pride in eating local food. The evaluation we performed of Nantucket's local food system travels beyond the physical and cultural borders that isolate the island. Local food systems are more than just farmers' markets and roadside stands. They involve sales to individuals and food professionals, and a myriad of distribution methods. Using an online platform to sell and buy local food can enhance the effectiveness of distribution, and picking the right platform for a community is critical. Furthermore, many of the values present as driving forces in Sustainable Nantucket's mission are common to local food organizations across the country: support for local farmers and businesses, sustainable agriculture, and community self-reliance. Communities searching for a local food online platform will hopefully find our report helpful as they assess their own needs.

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CHAPTER 1: INTRODUCTION

Agriculture has long played a crucial role in the fabric of American society. While courage and cannon won our independence, it was agriculture that allowed our nation to grow into the world power it is today. Farming in America began as a necessity as transportation logistics made it difficult for colonists to import supplies, and colonists thus had to procure their own food. As the population grew and spread across the continent, each new community found a way to sustain themselves. Locally based food production was the norm; people either grew their own food or bought food from their neighbors (USDA 2000). Agriculture also fostered a sense of community pride, self-sufficiency, and independence. However, as the country grew and the majority of the population moved into urbanized areas, the close contact the typical American had with food production decreased. This process of rural-to-urban flight was accelerated by the Industrial Revolution, the Green Revolution, and globalization of the food trade (USDA, 2000). While these changes reduced labor needs and increased production, they alienated the public from their food sources and led to widespread environmental degradation (Hinrichs, 2000). In response, many communities are looking to get back to their roots with local food (Ciuchta, O'Toole 2016). The island of Nantucket, once an intensely agricultural community, is among those seeking to revitalize their local food system and increase self-sufficiency.

Nantucket's local food system faces many of the same challenges as other communities around the country, such as competing economically with traditional food markets such as grocery stores; satisfying both consumers' and purveyors' financial needs; providing a stable supply and demand of products; working out an efficient and timely delivery system; streamlining the tedious process of product searches for wholesale buyers. Overall, the main goal, which provides its own challenges, is bringing safe, appealing food to people in the community (Hinrichs, 2000). Farms on Nantucket can help supply restaurants with the ingredients they need. However, many Nantucket farms are small and/or new to the field, which makes it difficult to establish these farms in the local food market (personal conversation, John Kuszpa, 2016). While there is a food delivery system in place on the island, it is small in scale and does not service all of the community's farms and restaurants. This delivery system uses an online local food coordination platform to organize orders between farms and restaurants, then delivers food from a central drop-off location to restaurants. As of fall 2016, the capacity of the delivery system is comprised of coolers in the bed of a pickup truck. Current participation in the delivery system matches its carrying capacity, but there is little room for expansion should more farms choose to participate or volume of product increase. Furthermore, the current participation is limited to a small percentage of the restaurants on the island and a handful of farms. Growing the capacity of the transportation system while simultaneously making it easier for farms to sell and restaurants to buy could help increase the demand and use of local food.

Local food systems differ from region to region, the unique constituents of each system make it distinct from its neighbors. However, they do often follow a common structure. Many local food systems are facilitated by management or distribution organizations that help promote local food use and coordinate sales between local purveyors and customers. Examples exist nationwide, including LoCo Food Distribution (2016) and Valley Food Partnership (2016) in Colorado and

Backyard Produce and Market (2016) in Virginia and the Carolinas. On the island of Nantucket, the non-profit organization Sustainable Nantucket manages a portion of the local food system (Sustainable Nantucket). While the aforementioned local food distribution and management organizations have their own robust online sales capabilities, Sustainable Nantucket does not. In an effort to make sales and purchases easier for farms and restaurants on the island, Sustainable Nantucket partnered with a company called WhatsGood, a Rhode Island-based company designed to connect chefs and other food professionals to sources of local food through an online platform.

In 2011, a team of students from Worcester Polytechnic Institute (WPI) worked with Sustainable Nantucket to create the "Nantucket Grown" brand (Pacheco, Limone, Chadwick, 2011). This designation denotes the products grown on-island, and is awarded to restaurants on three levels: bronze, silver, and gold. Their level is based on their percentage use of local products. In addition to providing a reputation as an active member of the local food community, a "Nantucket Grown" designation also grants its members access to Sustainable Nantucket's farm-to-restaurant delivery service on the island.

Figure 3: Nantucket Grown Logo (Sustainable Nantucket, 2012)

Though Nantucket has made strides toward greater self-sufficiency in producing and distributing locally sourced food, obstacles still remain. For example, as an island reliant on ferry service for transporting goods and people to the mainland, Nantucket users can access WhatsGood's off-island user profiles, but transportation of goods is inconvenient and not included in Sustainable Nantucket's delivery system. Additionally, many farms and restaurants on Nantucket do not use the online WhatsGood platform at all, relying instead on more traditional communication methods. Some producers who have used WhatsGood on Nantucket in the past have since stopped. While studies have shown that the most successful local food systems operate based on personal relationships, online platforms can greatly increase the efficiency of ordering and organizing local food distribution (Hinrichs, 2000). One advantage of the small scale, close knit community of Nantucket is that an online platform for selling local food could likely be implemented without sacrificing face-to-face interactions and personal familiarity with purveyors that generate trust and vested interest in a local food supply.

The purpose of this project was to provide our sponsors at Sustainable Nantucket with a recommendation stating whether or not to continue their relationship with the local food platform WhatsGood. Through our partnership with Sustainable Nantucket, we researched the needs of local farmers and local food consumers on the island. This was achieved through interviews and focus groups with local food system stakeholders, as well as through analysis of the WhatsGood website and mobile application. Based on our research and analysis of WhatsGood and other platforms, we constructed a recommendation for Sustainable Nantucket's online platform usage in the 2017 season.

CHAPTER 2: BACKGROUND

We researched the information presented in this background chapter to gain an understanding of the motivations for using local food and the challenges of implementing reliable local food systems and distribution services. In order to understand the application of these systems on Nantucket, we researched the historical significance of agriculture, the movement toward returning to local food, and food distribution services on a national and local scale. The following chapter presents information on these topics to lay a foundation for our project.

2.1 A Brief History of American Farming

Agriculture in America traces its roots back to the early days of colonization. Isolated from their homelands by thousands of miles of ocean, settlers were forced to produce their own food. Agricultural practices focused on producing enough food for the community. Non-farming citizens had vested interests in the prosperity of farms, as they depended on their counterparts to supply the main source of food. Farming was not run with a focus on profit, but rather on the continuation of local society (Cochrane, 1993).

This era of pure survival agriculture did not last long. Later stages of colonization saw the establishment of successful farming operations as communities learned effective cultivation methods for the new soils and climates. Having mastered subsistence farming, colonists were soon able to produce surpluses. Areas with an abundance of food could then devote some of their production land to the growth of cash crops (Cochrane, 1993).

During this period, the labor needed to manage and operate farms was strictly human. While some animal power could be used for transportation, the processes of planting, tending, and harvesting crops was reserved for human hands (Cochrane, 1993). The necessity of food production and high labor demand on farms forced community involvement in one form or another from a majority of the members of the community. Indeed, at the time of the American Revolution, 90 percent of the colonies' population lived in rural agriculture communities (AFBF, 2015). Therefore, a high percentage of those rural agriculture families participated directly or indirectly in farming activities.

The first major decline of citizen participation in the agricultural process occurred as a result of the Industrial Revolution in the late 18th and early 19th centuries. Interchangeable parts and standardized production of metal pieces enhanced the labor yield of individuals by creating precisely machined equipment. These tools allowed farms to make greater use of animal labor, and to perform tasks such as planting and harvesting with greater speed and ease (USDA, 2000).

During the 19th century, the United States underwent a period of expansion. The Louisiana Purchase in 1803 opened up vast swathes of unclaimed land to settlers (USDA, 2000). Communities sprang up across the West—much as they had in the early days of colonization. However, unlike colonial agricultural communities, frontier farms did not always rely on the support of a local community. Farmers could purchase high-quality, manufactured equipment instead of relying on local craftsmen. The large size of farms encouraged by settlement initiatives such as the Homestead Act often isolated farming families from their neighbors (USDA, 2000).

The larger farms and better tools developed throughout the 19th century led to a decrease in the portion of the population involved in farming. Fewer people could feed more of the population, allowing more people to move to urbanized regions and take up jobs in newer manufacturing industries. By the time of the Civil War, the percentage of Americans living on farms had declined to 64 percent (AFBF, 2015). Full mechanization of farm labor, coupled with the advent of synthetic chemical fertilizers and newly bred strains of hardy, highly productive crops further reduced agricultural labor requirements through the turn of the century. In 1920, during the midst of this "Green Revolution," only 30 percent of Americans were directly involved with agriculture (The New York Times, 1988).

American agriculture now had the ingredients required for its transformation from a survival strategy to industry. Farm equipment continued to become more reliable, powerful, available, and affordable. Synthetic fertilizers, herbicides, and pesticides were constantly being created and refined. Farms were consolidated from smaller family units into large company-owned production lots. Breeds of plants were constantly being cultured to increase crop resilience and output. The ratio of yield to labor-hours grew at an astonishing rate, exceeding national demand even as urban populations rapidly outstripped rural ones.

In the latter half of the 20th century, globalization of the food trade and direct genetic engineering of plant strains further embedded agriculture as an industrial practice. Foods were grown on a large scale and shipped worldwide ensuring steady, reliable sources. Some examples of this are American Midwest grain farms and Latin American fruit plantations. Genetic modifications to fruit—such as bruise resistance and the ability to ripen unattached from the plant—allow it to be distributed more effectively. The past two centuries have led to unprecedented levels of food abundance in the United States. Currently, only two percent of the population is employed in agriculture, but the country remains a major exporter of edible goods (The New York Times 1988, USDA 2016).

Despite the food security industrialized agriculture lends to the country and the world, there has, in recent years, been a revival of interest in locally grown, sustainable food products. While the motivations for local food movements vary by person and organization, most concerns revolve around environmentalism, health, quality, and community.

While the use of heavy machinery and application of large quantities of synthetic fertilizers can increase yields, both practices threaten ecosystem stability. Even the most efficient farming methods require a large area of land, disturbing natural habitats. Furthermore, soils that are overworked can be rendered sterile (e.g. the American Dust Bowl), and runoff containing excess nutrients or silt from an un-vegetated field can contaminate local waterways (Fitzgerald, 2003). Even once grown, products today still have a long way to go to reach a consumer's table. The agricultural goods may be shipped across the nation from California, or imported from Central America. These far-travelling foods have a significant carbon footprint with the biggest contributor to greenhouse gas emissions being transportation, and may generate large volumes of waste from packaging (Lescot, 2012). The move for locally sourced, sustainably produced food does much to amend these issues. Because the foods are produced close to where they are consumed, the emissions from transportation and required packing materials are often

significantly reduced. Additionally, organic regimes that limit or do away with synthetic applications to their fields, multi-culture fields that grow more than one type of crop, off-season cover crops which stabilize the soil and take up excess fertilizers and revival of human-labor-intensive methods, can all mitigate the environmental impacts of food production.

Local, organic, and sustainable products also address some of the health concerns brought about by industrialized food. The heavy use of engineered chemical pesticides, herbicides, and fertilizers in food production can expose consumers, as well as the growers, to hazardous substances if improperly handled. Some newer agricultural practices, such as genetically enhanced crops, livestock antibiotics, and hormone manipulation could have potentially detrimental impacts on the environment or public health, through their full impacts are not yet fully understood (Fitzgerald, 2003). Organic production reduces the risks from hazardous agricultural chemicals. Contamination of an industrial food supply can rapidly spread high volumes of contaminated food over a large area. Well known "food scares" from recent years include an outbreak of E. coli associated with spinach in 2006, and the worldwide scare of beef contaminated with horsemeat in 2013. While organic production does not eliminate the risk of Local sources also prevent widespread dangers from contaminated foods and allow buyers to personally choose the exact product they are interested in. Consumers can address their questions or concerns about products directly to the growers.

Local and sustainable agriculture does not draw consumers simply out of fear or concern over the alternative. It also attracts buyers with high quality, fresh products and familiar faces (Ciuchta, O'Toole, 2016). Because of the short travel time from the farm to the table, produce can be fresher than that shipped over long distances. Furthermore, products do not have to be tough enough to withstand a rough trip, allowing suppliers to grow and sell a wider variety of more delicate food variants. In some cases local agriculture can use a pick-your-own system in which customers can directly harvest their own food. Local sources are also part of the community. The idea of buying food from a neighbor and being able to directly witness the production process can be an appealing alternative to the bar-coded, heavily-packaged commodities that populate grocery store shelves (Ciuchta, O'Toole, 2016).

Industrial agriculture does play a crucial role in the food supply of the United States and the world. It generates an abundance of food and has given most of the American population the ability to pursue a lifestyle of their choosing. However, in creating such security and freedom it relies on energy intensive growing, impersonal marketing, and practices that pose potential long-term environmental health impacts. Organic, sustainable, and local food production methods provide a potential respite from the industrial agriculture system.

2.2 Organic and Sustainable Farming

Many local food production systems are identified by organic and sustainable practices. Although separate terms, the words "organic" and "sustainable" are similar and complementary to each other when attributed to farming. "Organic" is defined by the United States Department of Agriculture (USDA) as the creation of "products using methods that preserve the environment and avoid most synthetic materials, such as pesticides and antibiotics" (USDA, 2016). However, the term

can be expanded to include ideas relating to the conservation of land fertility, fair lodging conditions for farmers, and access to fresh, healthy foods (Classroom Video Ltd. 2008).

While "organic" defines how one should treat the land that is used to farm, "sustainable" also refers to treatment towards the community and their needs. Akinyemi (2007) in his book on sustainable agriculture refers to it as "the management and conservation of natural resources, and it is based on the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations". Sustainable farming is focused on continuing growth and stability of the community through ideas relating to communal security and access to food.

2.2.1 Objectives and Methods of Sustainable Organic Agriculture

Collectively, organic and sustainable farmers want to conserve the health of the farmed land and the impacted community. They aim to educate the public on efficient use of environmental and nonrenewable resources, sustain farm operations' economic viability, and enhance farmer quality of life (Gold, 1994).

When considering the specific objectives of farming, organic sustainability can be broken down into three dimensions: biological, economic, and social. The biological dimension considers how products could be grown to reduce their impact on the biological habitat of other living organisms. The economic dimension refers to the market system and how different marketing, labeling, growing, and other actions affect income flow to a farmer or buyer. Lastly, the social dimension refers to connections between different groups in a community, and how to make organic sustainability a desirable communal goal (Akinyemi, 2007).

These goals and dimensions of sustainable organic farming can be attained through programs such as educational initiatives, utilization of economic incentives, development of new farming techniques, and reduction of artificial chemical applications. As a result, Akinyemi (2007) argues that these programs can create food access and security to the community, increase local income generation and economy, increase productivity of farms, and ensure fair living conditions of farmers and continued conservation of farmland fertility. Although there are many positive impacts that stem from sustainable, organic agriculture, there are also challenges that make organic farming practices difficult to implement.

2.2.2 Key Challenges of Sustainable Organic Agriculture

Some key challenges of sustainable organic agriculture include politics, environmental sustainability, food security and the lack of a supportive food market (Akinyemi, 2007, Verma, 2015). The politics challenge stems from the level of governmental involvement in farming. Many farmers argue that the government should have limited involvement in agriculture, but that they should still show a large interest in the wellbeing of the farming industry (Akinyemi, 2007). They believe that the government should create a platform from which agriculture can grow and thrive, then leave it to do so on its own.

Environmental sustainability challenges are compounded by the limited agriculturally-fit land that is still available worldwide. The majority of good agricultural land already exists as farmland.

This creates problems for new farmers who do not have land. Many communities resort to deforestation in order to create farmland. However, the act of making farmlands from existing forests is not environmentally friendly, and is generally only a short-term solution (Akinyemi, 2007). The only viable solution to the lack of land is to boost the productivity of current farms to meet demand. However in order to boost productivity, farmers may resort to artificial pesticides and fertilizers which degrade the land quality thereby undermining sustainable farming practices (Verma, 2015).

An additional challenge is the limited supply of freshwater. Currently, agriculture uses significant part of the global freshwater supply, leaving a smaller supply available for human and wildlife consumption. This problem exists to a greater extent in under-developed countries, where the freshwater supply typically comes from a local river or well. Water supply provides a challenge because produce and livestock also require water to grow and live. A possible solution to this challenge lies in the idea of a direct supply of water to the farm through irrigation systems that decrease spillover losses since water is transported through pipes from the source to the farmlands (Akinyemi, 2007). This reduction of water losses could allow more water to go to humans and wildlife.

Food security and its effects in the food market is another challenge of sustainable, organic farming. Sustainable, organic products often have higher prices compared to non-organic products grown by large, industrialized farms. The price difference is primarily a result of the lower crop yields of organic farms, and is due to the elimination of artificial fertilizers and pesticides and decreased size of farms (Verma, 2015). As a result, organic sustainable farms are forced to sell their products at a higher price in market, leading to reduced sales compared to industrialized farms. The broad solution and goal for organic food in the market is improvement of access, management, and administration of land to so that overall yield and profit improve (Akinyemi, 2007). In addition, farmers should communicate about farming techniques and crops so that the food system becomes diversified and transportation to market can be a collaborative effort. As a result, overall food safety, nutrition, and availability could increase in the market system without any predictable negative impact to the consumers or growers (Classroom LTD.).

2.3 The Farm-to-Table Movement

Values reflected in the sustainable and organic agriculture movement are mirrored by those in the farm-to-table movement. Both focus on small-scale, low impact agriculture without the use of artificial applications and consumption of produced goods within the community.

The farm-to-table movement traces its origins to the late 1960s and early 1970s, when a small group of restaurant owners, chefs, and consumers in California wished to return to eating patterns that existed before the advent of industrialized agriculture (Hyder, 2011). Before modern transportation existed, people had to rely more on local food. Additionally, a lack of effective preservation techniques, especially for produce, forced people to eat fresh, seasonal food.

In the mid-nineteenth century, food production was industrialized with the development of railroad networks and preservation techniques. This advancement allowed companies to

preserve and ship food to people who had moved to cities during the Industrial Revolution. In the late nineteenth century, the refrigerated railcar was developed; allowing not only canned food, but fresh meat and produce to be shipped over long distances. This industrialization progressed even further in the mid-twentieth century as consumers began to prefer the processed foods that they could prepare quickly on a busy day. These developments in the food industry, supported by increasingly sophisticated and extensive advertising, all caused people to eat less fresh, local, seasonal food and to instead prefer heavily processed food due to its convenience (Hyder, 2011).

Advocates of the modern farm-to-table movement assert that fresh, local food tastes superior to food picked before ripeness for shipping or processing. Additionally, they wish to educate consumers about seasonality and length of growing season of the produce purchased in grocery stores. The average US citizen does not seem to realize that the huge variety of produce supplied to them year-round in stores is not grown year-round in their region.

2.3.1 Challenges and Motivations of the Farm-to-Table Movement

There are many passionate parties working to maintain local food systems all around the world. Although they are passionate about their work, they also face many challenges. Joint participation in a local, sustainable food system by farms and restaurants indicates a shared commitment to values such as community health and environmental consciousness. Unfortunately, the producers and purchasers do not always agree on how to realize these values, rendering collaboration and mutually beneficial changes difficult. For example, farmers tend to have an idealistic approach to the problem. A survey of locally operating farmers in Michigan reported that 77 percent of them sold food primarily for the satisfaction of community involvement. While they do charge money for their products, they operate on narrow profit margins and can only fill orders based on seasonal availability (Matts et al., 2015). Further evidence for the humanitarian attitude can be found in a USDA report on farmer employment. According to the study "more than half of America's farmers work a job off the farm" (WFP, 2010). Finally, farms participating in local programs are often small, socially driven organizations rather than serious livelihoods (Day-Farnsworth et. al., 2009). By contrast, restaurants are for-profit businesses operating on strict budgets, with a need for consistent volume flow of ingredients (Matts et al., 2015). The nature of the demand put forth by restaurants can be daunting to small or new farmers, and may deter them from participating in an organized farm-to-restaurant program. Restaurants may also abandon the program simply because of inconveniences—suppliers are not always able to meet their demands, or may be unwilling to, as bulk sales cut into their already thin profits.

Successful partnerships between local food suppliers and restaurants depend on compromise, open communication and crafting of what Bauermeister (2016) calls "collective identity". Aligning the operational logistics of two very different systems and philosophies must rest on the shared values conferred by participation in a local food system. Both sides must understand that they have a shared mission, a shared stake in the community, and that they may have to sacrifice small-scale goals for the sake of achieving larger objectives (Bauermeister, 2016).

Achieving this level of coordination is only possible through personal interaction. The organizations must come together to streamline their economic codependence and understand their equal but disparate roles in the greater social movement.

2.3.2 Economic and Social Impacts of Local Food

Once restaurants and farms can work together on a collective mission, there can be a positive impact on the community. Buying locally not only brings benefits to the individual consumer, local environment and local economy, but also plays an important role in the local social distribution. For the individual consumer, environment, and local economy aspect, locally grown food tastes better. "The crops are picked at their peak, and farmstead products like cheeses are handcrafted for their best flavor." (Grubinger, 2010). Products that are being imported has to spend a long time during the transportation process. Because of the need of products to be able to survive packing and stay longer freshness, the modern agricultural system, especially for the large-scale production, usually has "limited genetic diversity" for products (Grubinger, 2010). Small local farms are more aiming on growing many different varieties of products to provide a long harvest season and the best flavors. Also, buying local food could help keep taxes down. "According to several studies by the American Farmland Trust, farms contribute more in taxes than they require in services, whereas most development contributes less in taxes than the cost of required services" (Grubinger, 2010).

In the social aspect, local food help builds community (Grubinger, 2010). When you buy direct from a farmer, there is a "time-honored" connection being built between producer and consumers. Also, knowing farmers gives insight into growing seasons, the land, and food. Which is also a good opportunity for people to teach young generations about nature and agriculture. (Grubinger, 2010). By supporting local farmers today, it helps to ensure that there will be more farms tomorrow. That is a matter of importance for "food security, especially in light of an uncertain energy future and our current reliance on fossil fuels to produce, package, distribute, and store food" (Grubinger, 2010).

Local food systems can present many positive economic and social impacts into communities. Advertising these benefits is a main component of local food systems, showing consumers the advantages of utilizing their local markets.

2.3.3 Farm-to-Table Marketing

One major goal of the farm-to-table movement is to strengthen the connection between consumers and the land (Hyder, 2011). There are several historical marketing methods used to encourage farm-to-table purchasing; farmers' markets, pick-your-own operations, entertainment farming, and mail order are some of the methods that will be discussed.

Farmers' markets were popularized in the 1970's. Today, they mainly feature produce but can also include eggs, milk, chickens, baked goods, crafts, and more (Tippins, Rassuli, Hollander, 2002). There are two types of farmers' markets in the United States: certified and non-certified. These two divisions were created to avoid deceiving customers, making them think that they were buying products direct from growers. Certified farmers' markets are required to guarantee

that the person selling a product is the person who grew it. Violators of this rule are subject to fines or revocation of selling privileges at the market. An incentive for farmers to sell at certified markets is that it exempts them from federal size, packaging, and container requirements on their products (Tippins, Rassuli, Hollander, 2002). Non-certified farmers' markets are not regulated as strongly, allowing re-selling of products to occur by people who did not grow them. However, sellers at the markets try to maintain a fair and comfortable atmosphere by holding each other accountable.

Pick-your-own operations are another popular marketing method, which dates back to the 1930s. Originally, the need for this method stemmed from a shortage of migrant workers on farms. The seasonal, cheap labor of migrant workers decreased dramatically with the Great Depression because people were not coming to the US for work, leaving farmers with no one to pick their produce (Tippins, Rassuli, Hollander, 2002). Pick-your-own operations were created by farmers advertising labor as a fun family activity. Pick-your-own operations allow people to go onto farms and pick their own food. Common products harvested in this fashion are apples, blueberries, strawberries, and pumpkins. This marketing method is successful not only due to the aspect of fun in taking a trip to the farm to pick food, but also due to the elimination of intermediary parties, causing direct interaction between consumers, their food, and the people who grow it.

Entertainment farming is a marketing method promoted mostly to consumers living in cities. Examples of entertainment farming include walking trails, hayrides, and petting zoos. The excitement of experiencing something out of the ordinary is what makes this method successful. These activities give people from more urban surroundings a "taste of country living" (Tippins, Rassuli, Hollander, 2002). Visitors have the opportunity to see the farm, get up close and personal with crops and animals, and even to sample and purchase the farms' products.

Mail Order farming was, historically, one of the less successful marketing methods for farms. In 1913, the United States Postal Service created the "Rural Free Delivery parcel post service" (RFD, Encyclopedia Britannica). This service required mail carrier to bring mail straight to the door of farms rather than making farmers travel to the post office to pick up mail. Farmers attempted to use this program to their favor, shipping out goods from their farms. However, this marketing method was not highly successful due to long shipping times impacting food freshness. In more recent history, improved communication and delivery systems have created an outlet for high quality and specialty produce, which can be marketed to a larger sample of the population. With the invention of online markets, coordination between grower and consumer has become smoother and more time efficient.

2.3.4 Farm-to Restaurant Programs

The global food system contains a wide variety of food from all over the world, which provides year-round availability of fresh food. However, a challenge is the growing demand for processed and packaged food globally, which stems not only from daily individual demands, but also from the needs of the culinary industry. As time goes by, the food system "raises a host of social, economic, and environmental questions, such as food safety and security, care for the

land on which food is produced, and affordable access" (Shawn, 2011). "In response to the industrial food system, there has been much discussion regarding creating a sustainable food system" (Shawn, 2011).

Farm-to-restaurant programs, as illustrated below in Figure 4, are a widely used food supply system for restaurants in the US, making more local food available at nearby restaurants. In a typical farm-to-restaurant program, farmers publically display their inventory on an online platform so that participating chefs can order products and have them delivered to their restaurants.

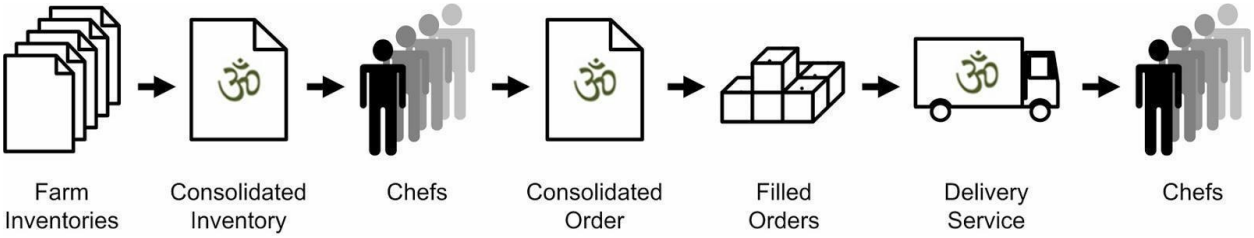

Figure 4: Farm-to-Restaurant Process (Om Organics, 2016)

Farm-to-restaurant services provide customers with a way to support local agriculture other than farmers' markets. In addition, Farm-to Restaurant programs provide farmers with a valuable, direct market (Shawn, 2011).

2.3.5 Challenges of Farm-to-Restaurant Systems

While chefs may be interested in using more local food, it is not always an easy process. Chefs have busy schedules during their workdays, so it is difficult to find time to go through lists of products from multiple sources, place calls to each, coordinate deliveries, and go to physically get the food (Farm Fresh RI, 2014). Also, farmers may not be available to move the products to their destinations. Even chefs and farmers both participate in the local food distribution; it is still difficult to complete orders. If there is an online platform of orders, it is still unavailable to people while working unless it has mobile app capabilities. Considering the season, weather, and other influencing factors, products that are available and the products that consumers need could be different (Project Green Leaf, 2016). It is also hard to maintain the consistency and reliability of the system (Project Green Leaf, 2016). "Multiple restaurant delivery arrangements may be needed to justify time and costs of small specialized orders" (Project Green Leaf, 2016). Which may bring extra costs on the delivery service, and cause the delivery system unaffordable for both consumers and providers. (Project Green Leaf, 2016).

2.3.6 Advantages of Farm-to-Restaurant Systems

The farm-to-restaurant system is a form of connection which could benefit both restaurants and organic farms (Om Organics, 2016). For restaurants, chefs can get a source of freshly picked organic food directly from local farms. "On the agricultural side, the system provides farms more reliable outlets for their products" (Om Organics, 2016). These outlets give

farms a more secure plan while they are increasing the quantity and variety of products they grow. Also the system can provide farmers a clearer view of what chefs are looking for and have a better plan for the following growing season. Encouraging farm-to-restaurant systems will also drive more people to join the community of local organic farming (Om Organics, 2016).

2.3.7 Examples of Farm-to-Restaurant Programs

Throughout the United States, farm-to-restaurant programs have been utilized to increase the amount of local food used in the regional community. The following sections highlight some of the successful farm-to-restaurant programs in the nation.

2.3.8 FarmersWeb: New York City, NY, USA

FarmersWeb is online software used by farms across the United States to manage their business transactions. This software allows farmers to manage all of their buyers by allowing farms to list products and availability, receive orders on or offline, create picklist and packlists, packing slips, and invoices, and coordinate logistics and deliveries. Farms can create custom delivery zones with active days, order minimums and lead times, and use these features to coordinate deliveries with other farms or third party logistics providers.

Buyers can search for producers and food produced within 150 or 300 miles or nationally of their location. Buyers can see farm information, up to date availability of items from farms, and whether or not items are available for delivery. Then, farmers can buy items directly from farmers. (Aaron Grosbard of FarmersWeb, 2016).

2.3.9 LoCo Food Distribution, Valley Food Partnership: Colorado, USA

The state of Colorado has multiple examples of farm-to-table, local food initiatives. Two prominent programs, LoCo Food Distribution and Valley Food Partnership, take different approaches in their efforts to keep food within the community.

LoCo Food Distribution operates within an area known as the North Central Front Range of Colorado. This territory is broken into four distinct regions: Northern Colorado, Denver, Boulder, and Colorado Springs. The center for the company is in Fort Collins. According to LoCo's website, they "deliver locally grown and locally processed food to restaurants, grocery stores, caterers, and institutions" and "make the connections between producers and wholesale purchasers." To accomplish this, they use an online catalog of products from participating suppliers (all of which are within a 400 mile radius of their office in Fort Collins) and make deliveries from the farms to the customers with a fleet of trucks. They cater to large-scale purchasers over individuals, maintaining a $200 minimum value for orders to encourage high-volume shipments. Smaller orders require a $15 delivery charge. On their website, LoCo Food Distribution cites concern over food quality for the employees' own children, desire to use local products in their own businesses, and interest in maintaining a healthy local economy as motivations for starting the company.

Valley Food Partnership, located in the Uncompahgre Valley in western Colorado, though championing similar values to LoCo Food Distribution, goes about attaining their ends in a different manner. Instead of concentrating on the delivery end of local food, they focus on promoting the use of local products and support for producers in their regional communities. Their efforts fall under

three main categories: "Community Education and Outreach," "Local Food System Infrastructure," and "Policy" (Valley Food Partnership, 2016). This broad activism helps to increase supply by assisting new and communal farms and teaches communities the economic, health and social benefits of local food. They also work to make suppliers more available to purchasers by lobbying for local-friendly policies and improving marketing and distribution systems. Like LoCo, their site has a directory for local products, but unlike LoCo, they do not sell or deliver. In addition to offering a database of available products, Valley Food Partnership lists several food distribution systems, including the Southwest Farm Fresh Cooperative, La Familia Gardens, and Farm Runners.

2.3.10 Farm Fresh Rhode Island: Rhode Island, USA

Farm Fresh Rhode Island (FFRI) is an independent organization that facilitates transactions for a monetary percentage of sales (Raiford, 2014). FFRI is a non-profit organization similar to Sustainable Nantucket that works to provide stable incomes for farmers and increase accesses for local community to more "healthy, locally grown food" (Ciampa, 2013).

"FFRI's Mobile Market Wholesale Distribution Program is a nationally recognized model for a transparent food distribution system" (Ciampa, 2013). This program allows customers such as restaurants, stores, employers, and schools to order from over "50 local farms through a single online system and get the delivery from a single truck" (Smith, 2013). The main idea for the program is to make it simple for both farmers and chefs to use, which also gives chefs access to higher quality and variety of products from a large number of farms. (Farm Fresh RI, 2014).

Farm Fresh Rhode Island also has an extensive field planning program. It helps farmers determine what to plant and harvest throughout the year, and shares this information with consumers. On their website this plan is available in the calendar in Figure 5. While this figure only shows the planned availability of vegetables, the website also includes sections for fruit, herbs, and sweeteners.

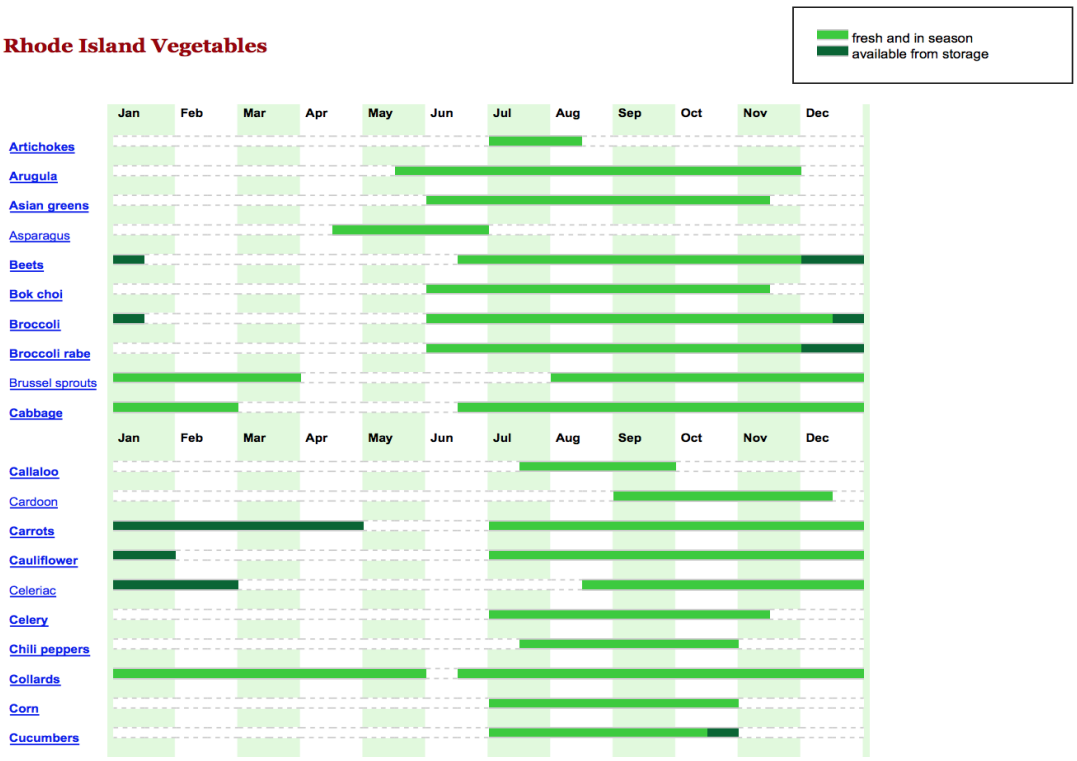

Figure 5: Harvest Calendar (Farm Fresh Rhode Island, 2016)

2.3.11 Backyard Produce and Market: Virginia, North Carolina, South Carolina

Food distribution via online platform is developing nationwide, and Backyard Produce and Market of Virginia, North, and South Carolina provides another perspective on how such a platform is run. Backyard Produce and Market carries food from surrounding farms into cities such as Charlotte and Richmond. While they do maintain a minimum order size, some of their services cater to the wider public rather than exclusively to wholesale purchasers. Some unique programs include the Variety Basket Subscription, in which users pay a fee and are given a regular supply of select products, and the Wellness Program, in which companies may sign up for convenient, on-location deliveries for their employees. They also offer organic and non-organic certified suppliers alongside a number of other customizable products. Perhaps most unique is their purchasing system. Instead of cash payment per order, customers can sign up for a weekly "point" allotment. These points can then be spent each week on the available selection of products. Unused points can be accumulated and if a buyer finds their plan to be insufficient, they can add points to their subscription.

2.3.12 WhatsGood

Like Colorado, Virginia, and the Carolinas, New England has a great deal of locally produced food available. Difficulties such as determining availability, finding adequate transportation, and negotiating prices are not rare to those who seek local products. Sometimes even purported local products, once obtained, can be less legitimate than claimed. In his essay *BUY LOCAL…made in China*, Matt Tortora (2015) cites these struggles as his motivation for creating WhatsGood.

WhatsGood is an online marketplace specifically designed and managed to facilitate communication between local suppliers and wholesale purchasers. It attempts to make purchasing a diverse list of locally sourced foods a smoother, simpler, and more efficient process. Operations for the platform are focused within the Greater New England region. Though it runs with a small staff of only eleven people, WhatsGood connects over 400 buyer accounts with more than 450 purveyors from New England and the surrounding states (WhatsGood, 2015).

Using the market is relatively simple. Buyers search for products and are given a list of results from the sources near them. Purchases can be made through the site for a variety of products, ranging from produce to seafood to goods such as preserves or oils. There is no cost for having an account, and no contract or subscription necessary. However, WhatsGood does receive 1.5% of each purchase price. While the company does facilitate communication and streamline the connection between buyer and seller, it does not provide solutions to some of the logistical difficulties of purchases. For example, it provides no transportation. The delivery of goods to consumer must be resolved outside of the site and often involves third party delivery systems.

2.3.13 Food Sustainability Organizations

Food sustainability organizations, such as Sustainable Nantucket, collaborate with farm-to-restaurant programs to strengthen the community's interest in local food. The majority of these food sustainability organizations exist as nonprofit organizations. The United States Internal Revenue Service defines nonprofit organization as group dedicated to aiding a certain social cause or advocating for a certain point of view. Any revenue that is generated by the organization must be used to advance the social mission. In terms of agricultural nonprofit organizations, they must aid in the betterment of working conditions for engaged parties, improvement of goods quality, and increase of production efficiency (IRS 2016). Food sustainability organizations can provide local food delivery services, educational classes for children, farmer workshops, and farmers' markets in the community's downtown. These programs provide different ways of access into expansion of the local food market.

Food sustainability organizations exist throughout the nation, but are especially prevalent in Massachusetts. For instance, on Martha's Vineyard, there is a program called the Island Grown Initiative that focuses on improving the current local food movement. It was started in December 2007, and currently operates out of Edgartown, but has made impacts on other areas of the island including Oak Bluffs (IGS, 2016). One area of improvement is the development and implementation of hydroponics on the island through their farm hub program. Hydroponics is a form of agriculture that utilizes mineral solutions to grow produce in water instead of traditional soil based agriculture. The main advantages of hydroponics include a decrease in necessary growing space and, when used in a greenhouse setting, agriculture can be extended to the full year (Hufstader, 2016). In addition to hydroponics, the farm hub program runs farmer workshops and the cultivation of a community garden. Another area of social impact is their farm to school program, which educates local children about benefits of farming. There are seven schools on Martha's Vineyard, and Island Grown has representatives that go into all of these schools to teach sustainability curriculum (IGS, 2016).

Another exemplary food sustainability organization is Community Involved in Sustainable Agriculture (CISA). Operating out of Pioneer Valley in western Massachusetts, CISA is a non-profit organization hoping to strengthen farms and community around local food economy. The main program they run is called "Local Hero." It is a campaign used to promote local farms and businesses. The program acts as a certifying brand to publicly show that those farms or businesses are locally sourced. Currently, the program has 270 farms and 150 active restaurants. In general, CISA is an overseeing organization that has no financial stake in any individual farm or business, but focuses more on creating and maintaining connections between the two parties. They are also one of the more established organizations in Massachusetts, and therefore act as a parent organization for other "buy local" programs to "ensure agriculture continues to thrive in the Commonwealth" (CISA, 2016). The organization recently received a $595,000 federal grant from the USDA to be used towards farmer workshops in Pioneer Valley, but also run workshops in other communities and food sustainability organizations including the South Shore, Cape Cod and Islands (Recorder, 2016). Many organizations impacted by this federal grant use its funding to run community programs on farming and local food. One example of these programs is Sustainable Nantucket, which is discussed below.

2.3.14 Sustainable Nantucket

Sustainable Nantucket (SN) is a nonprofit organization on Nantucket working on expanding the island community's use of the locally based and self-reliant food system. SN was started in hopes of increasing locally grown food; currently, most of the food purchased on the island is industrially grown food shipped from the mainland. Sustainable Nantucket's main objectives for the island include expanding agricultural demand and production, increasing access to local food, educating the community about sustainability, and overall stewardship of environment (Sustainable Nantucket, 2016). The organization hopes to create community confidence in local growers, strengthen Nantucket's economy, and reduce industrialized agriculture, thereby increasing nutritional value and decreasing the distance from farms to kitchen tables.

Sustainable Nantucket runs several small programs and events for the Nantucket community. Their Farm-to-School program is one of these, and caters to the schools of the island. The goals of the Farm-to-School program are to teach students and school officials about healthy food options, connect local farms with school cafeterias, and help in the construction of school gardens. By teaching these lessons and exposing the community to this programming, SN aims to make the school system a healthier environment.

Another one of Sustainable Nantucket's programs is their weekly Farmers and Artisan Market in downtown Nantucket. This market provides local vendors and farmers with a venue to sell their products, maintain their connection with the thriving downtown environment, and unite seasonal visitors with the permanent residents of Nantucket. With the Farmers and Artisan Market event, SN welcomes the general community to come experience locally grown food with the people behind the scenes.

Sustainable Nantucket also houses their own organic branding known as Nantucket Grown. The idea behind the brand is to provide an easily recognizable logo, shown in Figure 6, which can

show the community that the food and produce at a local business (farm, restaurant, store, etc.) is locally sourced.

Figure 6: Nantucket Grown Logo (Sustainable Nantucket, 2012)

Three different levels of the brand (Gold, Silver, and Bronze) correspond to different percentages, ranging from 5-100%, of locally sourced materials. Nantucket Grown grew from collaboration between Sustainable Nantucket and a 2011 WPI IQP team, which created the infrastructure, requirements, and check-up system for the brand (Pacheco, Limone, Chadwick, 2011). The use of the brand was implemented in 2012. In addition to the brand, Nantucket Grown also produces a newsletter and other promotional media. There are also incentives to participate in the Nantucket Grown program, including access to the farm-to-restaurant delivery service, early notification of the commercial fisherman docking in the harbor, and featured spots in Sustainable Nantucket's seasonal food festivals. The aim of these incentives is to target farms, restaurants, and other food businesses to take the initiative to be locally sourced.

Additionally, SN runs a program called the Community Farm Institute (CFI), which focuses on expanding farming on Nantucket. The "incubator farm," as SN deemed it, is located on Hummock Pond Road. Although the CFI is not certified organic, the farmers use sustainable agriculture techniques including low/no tilling of the soil, solar panels on farm structures, composting areas with a buffer zone from growing areas, and drip irrigation. There are currently four levels of involvement in the program: new farmers, apprentice, full time, and volunteer. Both new and established farmers can attend workshops and activities at the Hummock Pond Farm in order to learn more about organic farming. In addition, they plan to help farmers connect with the local food market and restaurants. Beginner farmers have experienced difficulty in entering the local market, especially understanding which produce to grow and creating a relationship with restaurants. CFI helps by providing experienced knowledge and facilitating new local market relationships (Sustainable Nantucket, 2016). The aim of the program is to increase overall sustainable agricultural production and distribution on Nantucket.

As part of their effort to increase local food consumption, Sustainable Nantucket has partnered with the online platform, WhatsGood, to create the pilot food delivery service that was implemented in summer 2016. The platform has achieved some success on the island, but there are challenges prohibiting widespread participation.

2.3.15 Successful Local Food Systems

In typical local food delivery systems, a small group of people coordinates between suppliers and consumers using online catalogues of products and delivery systems. However, analyses have shown the most successful local food operations hinge on a just few principles, including:

- Community support
- Organization
- Data tracking and management
- Personal interaction.

Furthermore, while online catalogs have formed the backbone of modern local food distribution, they are not the defining trait in success stories. The online model merely adapts the local distribution model to the conveniences of the modern era.

Community support is understood to be essential to the local food operation. Mission statements from LoCo Food Distribution, Valley Food Partnership, Backyard Produce and Market, and WhatsGood all reflect their interest in improving the food system for their community. However, there may be a discrepancy between mission and reality. Support from the community goes beyond just buying—if consumers are not involved in the farming itself, then their relationship with the supplier "may begin and end with the bag of vegetables" (Hinrichs, 2000). In other words, they have no interest in the farms besides what they can get out of them. Because local food systems find it difficult to rival industrial-scale purveyors in terms of convenience and consistency, buyer apathy can threaten their survivability. One form that thus far has proven most successful is crafting community accountability is the Community Supported Agriculture (CSA) model.

In a CSA, the normal purchase system is replaced with a subscription or share-like value. Instead of purchasing individual products, consumers pay a yearly or seasonal fee that gives them access to a portion of the farm's total produce. CSAs offer advantages over the traditional market system. One is shared responsibility. In a normal system, the farmer is only paid if he can bring products to market; a bad harvest impacts the grower, but no one else. However, in a CSA the buyers pay in before the season—their money is spent as an investment rather than as a purchase (Ciuchta, O'Toole, 2016). Farms are made to be a shared resource, like a waterway or power source, rather than a grocery store. Risk is distributed among the community rather than being solely burdening the farmer. This distributed risk can then help to improve the supply. Specialization in crops is ordinarily risky for farmers. A bad year or lost crop can spell financial disaster for growers that have no alternative product or source of income. Instead, they grow a diversity of products, so that if one fails they can rely on another. In a CSA model, the adoption of risk by consumers makes specialization a less dangerous proposition for the farmers, allowing them, if they choose, to narrow the selection of products they focus on. They have more resources to devote to a shortened roster of products, allowing them to enhance their infrastructure and equipment. Supplies for the foci of specialization increase, and farms that ordinarily would compete can now cooperate. For example, small-scale operations often find packaging an expensive, challenging operation, but if they are specialized, they can devote

enough resources to the packaging of their specific product that they can mimic the efficiency of a larger supplier (Nelson, Stroink, 2013). In some cases, funds from the CSA are redistributed among farms to encourage specialization in needed, but less profitable products.

Unfortunately, even a well-run CSA may find it difficult to compete with the efficient operation of an industrial-scale supplier. As a result, in order to remain viable, local food distribution systems must approach the efficiency of conventional food markets. To do this, they must tailor their services to business based on transaction history and maintain stable markets. Adaptable services that change according to the needs of the stakeholder are crucial in competing with industrial-scale suppliers. By collecting data on spending habits and delivery preferences of their patrons, a distribution system can make on-target suggestions and service offers. Anything that raises the level of convenience in their system reduces the edge of a mainstream, consistent supply. Successful local food distribution systems must also take over the tedious role of supply management from the buyers (Hinrichs, 2000).

As expressed by companies such as LoCo and WhatsGood, one major obstacle to restaurant owners looking to adopt local food supplies is the effort it takes to find, organize, and negotiate on products. Ideal distribution systems streamline this process, allowing farmers to submit their products and buyers to find and purchase them based on their current needs. The system itself should do the legwork so that the purchase is as easy as getting it from a larger distributor. Lastly, competitive local food distributors must stabilize the market for both ends of the transaction. Suppliers must be confident that the system can provide them with the customer base they need throughout their operation seasons. Due to the perishable nature of their goods, farms are not likely to invest in a system that can lead to unexpected delays in product sales. Consistent buyers, such as "subscribers" or schools, would be ideal participants in a local distributor's service (Day-Farnsworth et. al., 2009). On the other end, buyers must be able to rely on local food sources for consistent products. In the case of restaurants, being unable to offer certain menu options because their suppliers did not maintain a constant stream of product is a major deterrent. One option to combat the possible irregularity of local supplies is to augment the community producers with outside or less-local products (Day-Farnsworth et. al., 2009). While this flies in the face of logical operation and goals of local food systems, it can help build trust and loyalty between buyers and their suppliers. If customers know that the system will be able to supply them even in the event of a poor yield, they will be more likely to commit.

Interpersonal relationships based on trust and loyalty, are at the heart of local food systems. Even with highly efficient, well-managed communication and distribution of quality products, such systems can only flourish when they capitalize on familiarity and face-to-face interaction. Analysis of local food systems throughout the United States and Canada suggest that while safety, quality and accessibility are necessary for any food system, it is the personal nature of local food that gives it a pulse. The biggest draws to local systems are that customers are well acquainted with their suppliers, trust them to have community and customer in mind, and have a mutually respectful relationship (Hinrichs, 2000). In this area, Nantucket has a significant advantage over locations using similar food distribution systems. The island is a relatively small community with definite borders and a limited number of participating farms and customers. It

is feasible for purveyors and purchasers on Nantucket to meet in person and become familiarized. Networking events, such as meet-and-greets, or friendly cooking competitions could generate publicity for local food while connecting a significant portion of the system participants.

CHAPTER 3: METHODOLOGY

Mission:
Our mission was to provide a recommendation to Sustainable Nantucket about online platform usage for the 2017 season and onward.

Objectives:

- Assess stakeholder views on 2016 WhatsGood pilot program and expectations of an online platform
- Test and assess online platforms WhatsGood, FarmersWeb, and Local Food Marketplace
- Construct a recommendation for SN about future platform use
- Compile insights on improvements for Nantucket local food system operations

Objective 1: Assess stakeholder views on 2016 WhatsGood pilot program and expectations of an online platform

To gather data about previous experience with WhatsGood and corresponding food delivery service, we acquired contact information for participants in the delivery system, held a focus group with key informants, performed follow-up interviews about their experience from different perspectives of the food delivery system, and created a summary of participants' experiences and suggestions for the system.

Sustainable Nantucket coordinated our initial contact with each participant and asked for their participation in our project. Due to the seasonality of the local food market and the timing of this project, a majority of the food delivery system stakeholders had left Nantucket for the winter, so contacts were limited to a select few individuals. These participants served as our key informants, including stakeholders from WhatsGood, administrators of the delivery service, and participating farmers and restauranteurs. The data and input received from these individuals were treated as the overall opinion of their respective stakeholder group, since they were assumed to have the best interest for the Nantucket local food system. In order to gain information on the Nantucket local food system, we held a focus group and follow-up interviews, which are all explained further below.

Focus Group:

On November 2, 2016, Sustainable Nantucket held a brown bag lunch meeting with the new representative from WhatsGood, Todd Sandstrum, as well as key informants from the Nantucket local food system. At the beginning of the meeting Sustainable Nantucket introduced us, along with the present farmers and chefs, to Todd. Sustainable Nantucket then presented a summary of the pilot program featuring WhatsGood that they ran in the 2016 season. We then presented a timeline of our project and talked about our goals in conjunction with Sustainable Nantucket's. This section of the focus group addressed the features which SN considers necessary if they were to commit to continued use of WhatsGood.

Following our presentation, we started discussion about experience with WhatsGood. We provided a series of guiding questions:

- What was your experience with using WhatsGood during the pilot program?
    - What worked well with the program?
    - Did WhatsGood make selling/buying produce easier?
    - Have you continued to use WhatsGood?
- Did the original WhatsGood website/app meet your needs?
- What specific obstacles did you face when using WhatsGood?
- What functions are necessary in order for you to use WhatsGood as your primary means of selling/buying local food?

We also asked the WhatsGood representative to elaborate on developments in their software, including:

- Recent changes in the software
- Mobile app development
- Current and potential solutions to problems identified by farmers, chefs, and administrative users
- The plans for development of anticipated or requested features

After the focus group, we had a brief meeting with Todd to review the material from the meeting and discuss communication moving forward.

***WhatsGood* Representative:**

After our focus group with Sustainable Nantucket, Todd Sandstrum, and Nantucket local food stakeholders, we were put in contact with Will Araújo, the Head of Products at WhatsGood. We spoke regularly with both Todd and Will, providing us with access to both the business and technological sides of WhatsGood.

At the focus group, we talked to Todd about the challenges that Nantucket's WhatsGood users faced and what features WhatsGood was implementing to resolve those issues. Our next step was to secure testing permission from WhatsGood. We needed to access the service under a mock purchaser account to test the platform. We created a consumer account and were given permission by WhatsGood to perform test transactions with John Kuszpa's producer account on WhatsGood. Subsequent communication with Todd and Will was focused on reporting glitches we found in testing and requesting updates about resolution of those errors.

John Kuszpa:

John Kuszpa fills multiple roles in Sustainable Nantucket's local food system, including Community Farm Institute manager, independent small farm owner, and administrator of the local food delivery service. We interviewed him in regards to his responsibilities as the delivery director. Our group volunteered to work with him on his plot at the Community Farm Institute, which provided us with an opportunity to informally interview John on topics such as:

- Costs placed on Sustainable Nantucket, restaurants, and farmers by WhatsGood

- Procedures for ordering, pickup, and delivery
- Timing and dates of deliveries

Additionally, we discussed the WhatsGood experience from both his producer and delivery director's perspective. This included how he started his farm, Lazy Man Gardens, on Nantucket, difficulties he faced with start-up, and creation of relationships with the restaurants. We also talked about business relationships he has with restaurants he sells to, his expectations of these relationships, and the process of selling his produce on WhatsGood, including obstacles faced in doing so.

Local farmers:

Similar to the interview performed with John Kuszpa, we explored the experience of small farmers on Nantucket with other local farmers. We interviewed Carl Keller of Boatyard Farm. Carl sells many products locally, but he stopped using WhatsGood when he lost mobile capabilities. We interviewed him on topics such as:

- His products and clients
- The process he performs to sell produce
- Obstacles he faced with selling produce through the local food system
- Desired features of an ideal online platform

These topics helped us gauge the effectiveness of the Nantucket local food system through the perspective of a stakeholder who prefers interactions person-to-person rather than online. Additionally, it provided us with insight into improvements that could be made to the online platform and educational programs, which could be created to assist farmers in selling their products locally.

Chefs of local restaurants:

Interviewing chefs provided an additional perspective on use of WhatsGood. We talked to chefs to learn the process of buying local products on Nantucket and to discuss the obstacles to obtaining food from on-island farms. Bruce Sacino, the Executive Chef at The Westmoor Club, expressed interest in interviewing with us after the focus group. We interviewed him to learn more about his unique perspective on WhatsGood as a consumer as well as to collect information, which could be useful to starting farmers, focusing on topics such as:

- What kind of products he buys locally
- What units of measurement he expects when buying produce
- Communication preferences when dealing with small farms

We also presented some ideas our group developed for an ideal platform and asked for feedback.

Once all of the key informant interviews were completed, our team compiled a list of all of the features desired for an online platform to use as in evaluating WhatsGood and other online platforms. This feature list was broken down by expectations voiced by the Sustainable Nantucket, farmers, and chefs. In discussion of an online platform, Sustainable Nantucket assumed the role as the coordinator on the platform, farmers are the producers, and restaurants are the consumers.

Objective 2: Test and assess online platforms WhatsGood, FarmersWeb, and Local Food Marketplace

In order to test and assess the operations of online local food platforms, we mainly focused on testing and analyzing the platforms for basic functions and user-friendliness. We used the list of features mentioned above to analyze the suitability of online platforms to Sustainable Nantucket's needs. We tested WhatsGood and FarmersWeb on their websites and their mobile platforms from both the producer and consumer sides. FarmersWeb has a "logistics provider" account type, which we also evaluated. We were not able to receive testing capabilities for Local Food Marketplace, so we evaluated it based on a demonstration set up with the founder, Amy McCann. Some tests ran on the platforms are listed in Table 5 below. These evaluations of the online platforms were recorded in separate evaluation forms that highlight the key features that the respective platform offered and brief description of how it works.

Type of user	**Testing Focus**
Producer	• Possibility and ease for producers to upload their produce • Possibility and ease for producers to delete their produce • The amount of time for the platform to update product information • Possibility and ease for producers to contact consumers and change order information
Consumer	• Ease for consumers to view certain type of product • Convenience for consumers to contact producers and change order information • Ease for consumers to view and place orders
Administrative User	• Possibility and ease for an administrative user to generate a list of orders before each delivery time • Possibility and ease for an administrative user to create a closed group for Nantucket Grown producers and buyers

Table 5: Platform Testing Topics

We then constructed a spreadsheet with platform features and their current status on WhatsGood, FarmersWeb, and Local Food Marketplace indicated by color. As we encountered necessary features, which the platforms did not have, we contacted representatives from those platforms to inquire about the potential for those features to be created. Using the feature status spreadsheet and specific platform evaluation forms, the team analyzed the platforms in terms of suitability with respect to the needs of the Sustainable Nantucket participants.

Objective 3: Construct a recommendation for SN about future platform use

Feedback from platform representatives about what improvements they have made and their plan for future improvements factored heavily into our team's recommendation to Sustainable

Nantucket. In addition to the representative feedback and platform evaluations, we also performed a cost analysis of the three platforms. We used all of the data listed above to create a final recommendation to Sustainable Nantucket about what platform to use in the 2017 season and onward. The most important factors, which we considered were existing features on the platforms, upcoming features, business model, mobile capability, and cost. Lastly, we previewed our recommendations and rationale to Sustainable Nantucket in a PowerPoint presentation and used their feedback in finalizing our project report and public presentation.

Objective 4: Compile insights on improvements for Nantucket local food system operations

Through the data gathering discussed in the first objective, we received information from the stakeholders on their overall experience in the Nantucket local food system and possible improvements for the upcoming season. We took into consideration the ideas that were raised in the interviews and focus group and created a list of recommendations for Sustainable Nantucket to explore in the future either internally or externally with another student group. These areas included platform education and expansion opportunities.

CHAPTER 4: FINDINGS AND ANALYSIS

In the following chapter, we present platform expectations expressed by the stakeholders of the Nantucket local food system. We evaluated three platforms, WhatsGood, FarmersWeb, and Local Food Marketplace, based on these expectations as well as basic platform functionalities. After evaluating each platform, we listed our key findings and their relationships to the stakeholder's expectations. After the evaluations of each platform, we compared them with each other to determine which was most suitable for the Nantucket local food system and the needs of Sustainable Nantucket's stakeholders.

4.1: PLATFORM EVALUATION

The interviews and discussions that we had with participants in Sustainable Nantucket's local food distribution system yielded critical information about necessary features of an online platform from several perspectives. While stakeholders with similar roles in the system often reiterated one another's ideas, no single group fully understood the other's needs. The administrators, the producers of goods, and the consumers in Sustainable Nantucket's local food system each expect a distinct set of capabilities from the online platform they use. Listed below are the expectations specific to the different Nantucket stakeholders, with further explanation following.

Coordinator Expectations:

- View orders and delivery information
- Define a closed network for Nantucket Grown members
- Quick technical support
- Communication between producers and consumers
- Integration and education before 2017 season

Producer Expectations:

- Mobile application
- Push notifications
- Product photo uploading
- Percentage of sale-based fee for platform service

Consumer Expectations:

- Mobile application
- Push notifications
- Inventory list: local and updated

Coordinator Expectations:

View Order and Delivery Information:

In the past, Sustainable Nantucket faced challenges in finding a way to keep a list of orders confirmed for delivery. John Kuszpa, as the delivery executor, relied on farmers to contact him with order information as the only way for him to create a list of orders for delivery. In addition, there

was a lack of confirmation on the content of the orders. When orders are placed through an online platform, Sustainable Nantucket should receive confirmation and order information. Knowing who placed which orders allows coordinators and delivery personnel to hold suppliers accountable for fulfilling orders and consumers for completing payment. Sustainable Nantucket needed the capability to see which producer needs to provide an order, the contents of the orders, and delivery destination.

Define a closed network for Nantucket Grown members:

The Nantucket Grown brand is an exclusive membership given only to locally sourced food businesses. Additionally, as an incentive of the Nantucket Grown brand, the local food delivery service coordinated by Sustainable Nantucket needed to be closed to users of a platform who are not members of the Nantucket Grown brand. Member management capabilities reduce competition from non-members and ensure that the delivery service can deliver the confirmed orders. Sustainable Nantucket needed the capability to set up a closed network on a platform so that only Nantucket Grown brand members place orders for delivery.

Quick technical support:

In use of an online platform, farmers and chefs can experience bugs or glitches. If an online platform is not able to function properly for a period of time, then that can result in a loss of sales for producers, and frustration for both producers and consumers. Quick technical support from the online platform provider would minimize sales lost and overall frustration. To accomplish this expectation, the online platform needed the support team behind the platform to be accessible and responsive to technical problems and glitches.

Communication between producers and consumers:

Both producers and consumers needed to be able to communicate with each other through an online platform, removing some organizational burden from coordinators. Farmers and chefs needed an easy, effective way to discuss order details, changes, or cancellations. The ability to communicate directly through the platform would streamline the ordering process and reduce strain on Sustainable Nantucket for coordination outside of the delivery service. Producers and consumers needed the capability to communicate order information to each other via the online platform.

Integration and education before the start of 2017 season:

In order for effective implementation, Sustainable Nantucket needed an online platform provider capable of full functionality prior to the 2017 season, and time for proper education to be given to all users. The 2016 pilot program with WhatsGood had some bumps in the road, and Sustainable Nantucket did not want to put their stakeholders through another year of challenges. Thus, any upgrades to WhatsGood, the platform used in the pilot program, or the implementation of a new program, needed to be complete before the start of the 2017 season.

Producer Expectations:

Mobile App:

Farmers needed the freedom to upload, remove, and change their inventories in real time to accurately reflect their product inventory. Farmers spend a significant portion of their time working in the field away from a computer, which requires an Ethernet or Wi-Fi connection. The stakeholders of the Nantucket local food system specified the desire of a mobile application rather than general mobile capability due to the typical user-friendliness of apps. Thus, it was crucial that an online platform provided a mobile application.

Push Notifications:

Farmers needed notifications that could be pushed to their devices since a majority of their day is spent in the field. Push notifications provide more convenience than email notifications, which can get overwhelmed among other messages. Notifications related to order logistics needed to be sent directly to their devices.

Upload Product Photo:

Farmers need to display their products in a flattering and descriptive way. One major advertising method for food is the use of product photos. Farmers want the capability to upload a photo on a listing along with other product specifications. Photos demonstrate the quality of a product, which could otherwise be challenging. Producers needed the ability to post photos of their products and have them displayed to consumers.

Percentage of sale-based fee for platform service:

Producers are typically responsible for paying for online platforms. These platforms typically charge users based on one of two payment methods: a percentage of sale rate, or a flat rate. Most of the farmers on Nantucket run relatively small-scale operations. They preferred to pay a percentage of their profits to the platform rather than a flat-rate fee. Flat rates applied equally to all farms favor larger scale producers, who would be paying a smaller fraction of their profits. In addition, fees based on percentage of sales simplify offseason account management. Instead of switching account types to a free subscription for the off-season months, percentage-based bills naturally reduce to zero when no sales are made in the winter months. Additionally, farmers who still produce food during the winter months have the option to sell these products on a percentage-based platform. With a flat rate, that producer would needed to pay for an entire month on the service to make a single sale. Nantucket local food producers needed a fee based on a percentage of their sales so that they are not overwhelmed by large charges in their small operations.

Consumer Expectations:

Mobile App:

Similar to farmers, chefs needed the capability to use their mobile devices to access an online platform. Chefs cannot have a computer with them during long hours in the kitchen. The ability to view available inventory and add products to an order throughout the day as needed was a necessary feature for consumers.

Push Notifications:

Chefs wanted notifications when items were back in stock, and if order statuses changed. Similar to producers, notifications on their mobile devices are more convenient and accessible than emails. Consumers needed push notifications to alert them on order and product changes.

Inventory List: Local and Updated:

Chefs needed to be able to filter their searches by producer and availability. Similar to coordinators, they wanted a closed system where they could only access producers on Nantucket. Their product lists should not be cluttered with off-island producers or out of stock items. These products clutter their product lists, and make purchasable items more difficult to find. In order to eliminate out of stock listings filling their views, the platforms needed an option to hide or deactivate items with zero inventory.

4.1.1: WhatsGood Evaluation

WhatsGood was the platform used by Sustainable Nantucket in their 2016 pilot program. During the pilot program, WhatsGood switched from their first version to a second, less functional version, eliminating some features, which Sustainable Nantucket's stakeholders needed. This switch caused some frustration for the participants of the Nantucket local food system. Fortunately, WhatsGood made major strides with their new software, and updated many features and functionalities for the 2017 season. Our team did an evaluation of WhatsGood based on the platform expectations of each stakeholder group of the Nantucket local food system. Listed below are our key findings from the evaluation of the online platform. For our detailed evaluation form for the platform, please refer to Appendix A - WhatsGood Evaluation.

Figure 7: WhatsGood Logo (WhatsGood, 2012)

WhatsGood Findings:

1. Consumer iOS application is user-friendly with intuitive commands.
2. Producers and consumers must connect to place orders.
3. Producers and consumers can communicate on the platform.
4. No push notifications.
5. WhatsGood is still in development.

1. Consumer iOS Application

Mobile capability was a crucial feature for Sustainable Nantucket to have in an online platform. WhatsGood currently has a fully functional iOS app for consumers. This app was user-friendly, had a simple layout, and met Nantucket's consumers' needs. One highlight of WhatsGood's mobile app were product photos. They were visible on the home screen, rather than having to open listings to view them. Although this was seemingly an insignificant feature, but it made shopping more convenient for the consumer, and provided an eye-catching display for farmers' products. After an interview with the head of products at WhatsGood, we determined that WhatsGood would be releasing full functionality on mobile apps for consumers and producers on both iOS and Android platforms in time for the 2017 season.

2. Producer and Consumer Connections

One unique feature on WhatsGood was that to place an order, a consumer must be connected with a producer. If the consumer and producer and are not connected, then the consumer must request to connect with the producer. This feature would help to create SN's closed network, which only includes Nantucket Grown Brand members. Producers can accept or decline connection requests, leaving them with their own network of connected buyers. If a producer declines a consumer's request for connection, they are temporarily blocked from each other. The producer's account would not reappear to the consumer for six months.

3. Producer and Consumer Communication

Another unique feature on WhatsGood was the capability for producers and consumers to communicate on the platform over invoice comments. This feature ensures that both producers and consumers are updated if there are any changes on orders. Both producers and consumers can comment on invoices, and the other party would receive an email notification alerting them of the new comment. This communication option provides added convenience for users, making it possible for them to alert each other on order changes without leaving the platform to utilize a different communication medium such as calling or emailing.

4. Push Notifications

WhatsGood does not currently have push notifications on their website or consumer mobile app. Push notifications are alerts which appear immediately on either a website or mobile device. On a mobile device, these notifications appear on the locked home screen even when the corresponding application is not in use. Currently on WhatsGood, email notifications are the only way to find out about order confirmations, changes, or cancellations. Sustainable Nantucket's stakeholders have

expressed a desire for push notifications so that important information about orders was not lost in a sea of emails, but rather pushes past less urgent information on their devices.

5. WhatsGood's Development

WhatsGood is a developing platform. They provide many of Sustainable Nantucket's needs, but there are still many features that the platform does not perform. However, since WhatsGood is still in a developmental phase, there is a large opportunity for additional necessary features to be developed. WhatsGood's technical developers are working on many new features to be released before the 2017 season. For example, as mentioned above, they are developing mobile apps for consumers using Android and producers on both iOS and Android platforms. This developmental period can be both advantageous and a limitation for Sustainable Nantucket. At this point, WhatsGood is in the position to offer a strong partnership to Sustainable Nantucket, offering good response to their needs for new or updated features. For example, consumers on Nantucket expressed frustration with the number of out of stock listings in their lists of available products. In the coming weeks, WhatsGood will be releasing a product deactivation feature, giving producers the chance to hide their products which have zero inventory, reducing clutter for consumers. Another example was Sustainable Nantucket's need for order confirmation notifications. The delivery coordinator was not given a list of orders for delivery at this point in time. However, the Nantucket WhatsGood representative developed a work-around for this administrative function, offering to add Sustainable Nantucket's delivery email to all Nantucket producer accounts (with permission) as a secondary email for order confirmations. This would give the delivery coordinator email notifications of all confirmed orders in Sustainable Nantucket's network, allowing him to compose a list of orders for delivery. Both of these examples exhibit WhatsGood's willingness to create either short or long term solutions for Sustainable Nantucket's needs.

Summary of WhatsGood:

Sustainable Nantucket worked with WhatsGood in their 2016 pilot program. This pilot program presented a few issues, including WhatsGood switching Nantucket to a newer version of the platform that did not satisfy the participants' needs two weeks into the program. However, the platform provider has made strides and commitment to Sustainable Nantucket to provide the requested features through short and long-term solutions. Currently, they satisfy the basic functions of an online platform as well as a majority of the stakeholders' specific expectations. WhatsGood is still in a developmental phase, which means that it is still possible for the platform to adapt to fit all of Nantucket's users' needs.

4.1.2: FarmersWeb Evaluation

FarmersWeb is a widely used online platform in the New England region, especially in the New York area. Due to its popularity, we decided to evaluate it as a candidate for Sustainable Nantucket's use in the future. Listed below are our major findings from the FarmersWeb evaluation. For our detailed evaluation form for the platform, please refer to Appendix B – FarmersWeb Evaluation.

Figure 8: FarmersWeb Logo (FarmersWeb, 2016)

FarmersWeb Findings:

1. Logistics provider account provides capabilities for delivery coordinator.
2. Ability to deactivate products from inventory list.
3. Advanced management of order financials.
4. No mobile app, just a mobile friendly website.
5. No option to create a closed network.
6. Limited producer-consumer communication on the platform.

1. Logistics Provider Account Capabilities

FarmersWeb has a separate account specifically for the logistic provider, which allows a delivery coordinator to set up organization of deliveries. This account comes with the capability to set up delivery zones by geographical boundaries (state, city, county, etc.) or construct a custom zone. In addition, the logistics provider can set delivery days, fees, and order cutoffs. Producers on the platform can connect to a logistic provider to facilitate the delivery of their orders. Once orders are given to the logistics provider, they can view details on the orders, including producer and consumer information, order content list, and associated delivery payments. The logistics provider functionality would allow Sustainable Nantucket to view a list of orders for delivery and their corresponding details.

2. Ability to deactivate products from inventory list

FarmersWeb gives the producer account the ability to individually deactivate products from their inventory list. This feature is applicable to a producer who runs out of a product, and does not want the out of stock listing distracting their consumers from their available products. If the producer wishes to offer the product again to consumers, easily they can reactivate the product. The deactivation feature would allow consumers to view only available products, and not have a list cluttered with out of stock items.

3. Advanced management of order financials

FarmersWeb offers management of order financials for producer, consumer, and logistic provider accounts including invoices and multiple payment options. The platform consolidates the orders that have been processed into a list, which the user can search for by certain criteria (order number, buyer, seller, etc.). FarmersWeb also has both online and offline ordering and payment options. Online payment is specifically by credit card, where offline payment is determined by agreement by producer and consumer. In addition, FarmersWeb has the ability to set up terms of

payment for specific consumers. These terms would allow a consumer to purchase products now and pay later on a day agreed upon by them and the producer. Although these services would be functional and helpful to a larger-scale food network, there is a low level of applicability to Sustainable Nantucket's small farm-to-restaurant system. On Nantucket, each producer only does business with a few restaurants. Currently in the system, producers and consumers individually organize their orders, and have not communicated any difficulties with order payment. This feature would be more applicable in a larger local food system.

4. Mobile friendly website

FarmersWeb has a mobile friendly website that can be accessed via mobile device. The website, when accessed on a mobile device, provided the same functions as when it was accessed on a computer. However, the user friendliness on the mobile device decreased since bars and tabs were shrunk down to fit the mobile screen. The participants of the Nantucket local food system have expressed specific interest in a mobile app. Mobile apps tend to provide a more user-friendly and intuitive experience than mobile friendly websites. Our evaluation of FarmersWeb's website on a mobile device supported this statement. We found it challenging to determine how to execute several commands, such as adding details to a product listing. FarmersWeb partially fills Sustainable Nantucket's need for a mobile platform, but it does not fulfill their need for a user-friendly mobile application.

5. Option to create a closed network

On FarmersWeb, connection of accounts occurs between producers and their logistics provider. Producers can connect with a logistics provider specific to the Nantucket area in order to provide delivery options. The connection between producers and consumers occurs through order placement. Once a consumer places an order with a producer, the producer can view the information on the consumer. However, if there is no order established between the producer and consumer, then the producer cannot view the consumer account. In addition, when a consumer is viewing product lists from local producers, the search is limited geographically to a 150-mile radius from the consumer. This feature is beneficial to producers who run businesses on the mainland, but for the unique location of Nantucket Island, this product search would list producers who are on the mainland. The addition of Cape Cod producers to the producer list for Nantucket consumers would not create the closed Nantucket network that Sustainable Nantucket has expressed as a specific expectation of their online platform. If Nantucket producers were added to the FarmersWeb platform, their products would be listed first for Nantucket consumers. However, any listings within the 150 mile radius would still appear on the product list.

6. Order communication on the platform

When an order is placed on FarmersWeb, the consumer can add a comment, which will be sent along with the order to the producer. At the time of evaluation, there was no communication between producers and consumers on the platform once orders were confirmed. Once the producer had received the order, all communication had to be completed outside of the platform via phone or email. This limited communication on the platform required producers and consumers to take the

extra step to establish communication outside of FarmersWeb. Participants of the local Nantucket food system have expressed that the consolidation of order communication on the platform would be more convenient and efficient for them. Since evaluation, we received notification that FarmersWeb has allowed producers and consumers to continue commenting on invoices after orders are confirmed. However, we were not able to test this feature, because we were notified of its existence after we finished evaluations and deactivated our trial FarmersWeb accounts.

Summary of FarmersWeb:

FarmersWeb is a platform that offers the unique features of the logistic provider account and ability for producers to deactivate products in their inventory list. These capabilities addressed two main expectations of participants in the local Nantucket food system. However, FarmersWeb did not provide an opportunity to create a closed Nantucket system or allow communication over the platform. Overall, FarmersWeb is applicable to local food systems on the mainland and their limitation of local product searches to a 150-mile radius from the consumer. Specifically for Nantucket, FarmersWeb is not as applicable because ordering and delivery must be restricted to Nantucket Grown brand members.

4.1.3: Local Food Marketplace Evaluation

Local Food Marketplace is the most advanced platform we evaluated. We learned of this platform from John Kuszpa of Sustainable Nantucket, who had done initial research on Local Food Marketplace in spring 2016. John recommended that we look further into the platform and evaluate its application to Sustainable Nantucket's needs. Unlike the other two platforms, Local Food Marketplace is a service designed for a group of producers and consumers rather than individual participants. Below are the key findings of Local Food Marketplace from our evaluation, which was strictly based on the demonstration of the platform. For our detailed evaluation of Local Food Marketplace, please refer to Appendix C – Local Food Marketplace Evaluation.

Figure 9: Local Food Marketplace (Local Food Marketplace, 2016)

Local Food Marketplace Findings:

1. Provides a customizable, exclusive platform.
2. Offer both website and mobile app options.
3. Has administrative options.
4. Uses a food hub business model.

1. Customizable, exclusive platform:

Local Food Marketplace is completely customizable. Users get a customized web page and have the option to get a customized mobile app for their local food system. Thus, Local Food Marketplace could be customized to fit Sustainable Nantucket's needs. Only producers and consumers that are in the Nantucket Grown brand would be given permission by Sustainable Nantucket to create an account. By limiting the producers and consumers to Nantucket Grown brand participants, Local Food Marketplace fulfilled Sustainable Nantucket's necessary feature of a closed Nantucket network.

2. Website and mobile app options:

Local Food Marketplace offers their platform on both a website and mobile app. The functionality of the platform was not impacted when switching between those two. In having a fully functional mobile app, Local Food Marketplace satisfied the Nantucket producers and consumers need for a mobile app, because they spend the majority of their daily time with mobile devices rather than computers.

3. Administrative options:

Local Food Marketplace, in addition producers and consumers, offers an administrative account. This account allows administrators to limit the producers and consumers who have access to the platform, and coordinate all orders that go through the platform. The administrator can review all amounts, prices, and information about the producer and consumer for each order. These abilities could create a closed Nantucket network and give Sustainable Nantucket the capabilities that were necessary for the delivery coordinator. Although these administrative account capabilities could satisfy some needs of Sustainable Nantucket, the account is not offered on a mobile app. It is assumed that administrator of the platform works from a computer instead of a mobile app. This assumption does not apply to the Nantucket local food system since the delivery coordinator is not in the office for the majority of his workday.

4. Food hub business model:

Local Food Marketplace is aimed towards local food hubs. This means that one organization runs the system, coordinating all orders and ultimately eliminating interaction between producers and consumers. The food hub business model varies greatly from the Sustainable Nantucket's current business model. Although food hubs are functional and successful in other communities, their business model does not line up with Sustainable Nantucket's stakeholder's needs. Many of the small-scale producers on Nantucket value their interactions with their consumers and the chance those interactions offer them to make personal connections. With a platform like Local Food Marketplace, that personal interaction between producer and consumer is lost, since transactions must go through the food hub. Local Food Marketplace limits the capabilities of the producer and consumer, primarily catering to the administration of the local food hub.

Summary of Local Food Marketplace:

In order for our team to recommend the platform Local Food Marketplace for use in the Nantucket local food system, Sustainable Nantucket would need to switch their business model to a food hub organization. This would give them more authority over the Nantucket local food system, but it may also cause tension with their stakeholders who enjoy the personal element of the current system. Thus, stakeholders may not be willing to make a financial investment in a platform which is taking away one of their favorite aspects of being a member of the Nantucket local food community.

4.1.4: Developing an eCommerce Platform for Local Food Coordination

eCommerce Findings:

1. Not Good for Nantucket

During meetings with Sustainable Nantucket, we discussed the creation of their own online store as alternative to adopting an existing online local food platform. Sustainable Nantucket previously had an online store on their website, but this was discontinued due to lack of use.

Shopping cart software comes in two major types: hosted and non-hosted. Hosted software is pre-built by a company and then customized by their clients. It is fast and cheap to set up. With the help of a professional, an organization can set up an online store through hosted 'eCommerce' on the time frame of days to weeks. Even if they did not have professional assistance, an organization could make an ecommerce site, as most do not require coding or technical know-how. The companies supplying the website templates also have technical support staff to help clients to maintain and run the site. The convenience of hosted ecommerce does come with a price. Creativity is somewhat limited by templates, and the company hosting the online store takes a percentage of sales or imposes a fee on the client.

Non-hosted software gives clients a toolbox so that they can build their own online store from the ground up. It's often based on free, open source software that can be tailored to the precise needs and design requirements of the user. These adaptable programs are very powerful, granting designers freedom on layout and functionality. However, non-hosted eCommerce sites require considerable coding skill technical understanding to set up, as well as a considerable period of time.

Given that Sustainable Nantucket has a limited budget and no dedicated personnel to design and run their own program, hosted ecommerce software would make the most sense. However, while it is conceivable that Sustainable Nantucket could create their own website that would allow them moderate creativity and control over their online market, eCommerce is not a viable option. Online platforms such as Farmer's Web, Local Food Marketplace, and WhatsGood were evaluated based on features they have or are actively developing. Applying the same standards to a self-made eCommerce program shows an option that has no features, no features in development, no timeline for building, and no staff. Additionally, because hosted eCommerce programs require upkeep fees, it could quite possibly become more expensive than participation in an existing online local food sale platform. It would also require extensive testing and could face the same problems and growing pains of other, new online platforms. Even if it worked perfectly throughout development, there is no guarantee that it would be ready and integrated before the start of the selling season in 2017.

Therefore, the eCommerce option was not further investigated, evaluated, or direct comparison to the other online platforms.

4.2: Platform Comparison

From the individual evaluations, we determined that we would only be comparing three of the above platforms. As stated in section 4.1.4, the development of eCommerce as a platform for selling local food was determined to be unrealistic for Sustainable Nantucket. That being said, we compared each of the three platforms WhatsGood, FarmersWeb, and Local Food Marketplace against one another to determine which was best suited to the needs and expectations of the Nantucket local food system. In the following list, we identified the features that we determined were the highest priority to Sustainable Nantucket in order to maintain a functioning local food system on Nantucket. Each area of comparison is explained further below.

Areas for Comparison:

- Status of Features
- Business model
- Ability to create closed Nantucket network
- Mobile capability
- Cost

Status of Features Comparison:

For our first level of comparison of the three online platforms, we created a feature status spreadsheet, shown in Table 6, which denoted the status of features on each platform. The features were either currently offered, in development, not offered, or not tested. All three platforms offered the majority of the desired features. From the comparison of feature statuses, we made the following findings:

- WhatsGood had the largest amount of features in development for release before the 2017 season.
- FarmersWeb does not address the major features that the Nantucket local food coordinator would need to oversee the system.
- Local Food Marketplace satisfied the most basic functions and features requested by Sustainable Nantucket, but also had many features which were not able to be tested due to the customized nature of the website and mobile app.

	WG	FW	LFM
Overall:			
Mobile App Capabilities			
Closed Network			
Administrative Capabilities			
Delivery Coordination			
Tutorial of the use of platform			
Quick customer service response			
Producer:			
Upload/Delete produce & Generate pick list			
Real time inventory quantity update			
Contact consumer on platformabout order changes			
Upload produce photo			
Hide items with zero inventory			
Marketing Tips			
Custom price list			
Review order histories			
Consumer:			
Look up products by produce type / producer			
Contact producer on platform about order changes			
See photo of produce & Review order histories			
Online payment			
Add/Delete item in shopping cart			
Push Notifications			
Email Notifications			

Currently exists
In development
Does not exist
Did not test

Table 6: Feature Status Spreadsheet

Business model comparison:

Sustainable Nantucket has taken a unique position in the local Nantucket food system as a facilitating organization rather than administration. As the facilitating organization, they are also providing the delivery service to producers and consumers. They wanted to have access to orders and the associated details to be able to run an efficient delivery service. They did not, however, want to be an organization that all food transaction must be administered through. Sustainable Nantucket wants to foster individual business transactions between producers and consumers. This business model is shown in Figure 10, highlighting the fact that SN is a facilitator of individual transactions between producers and consumers, not an administrator. Both WhatsGood and FarmersWeb are geared toward this business model, fostering individual producers and consumers.

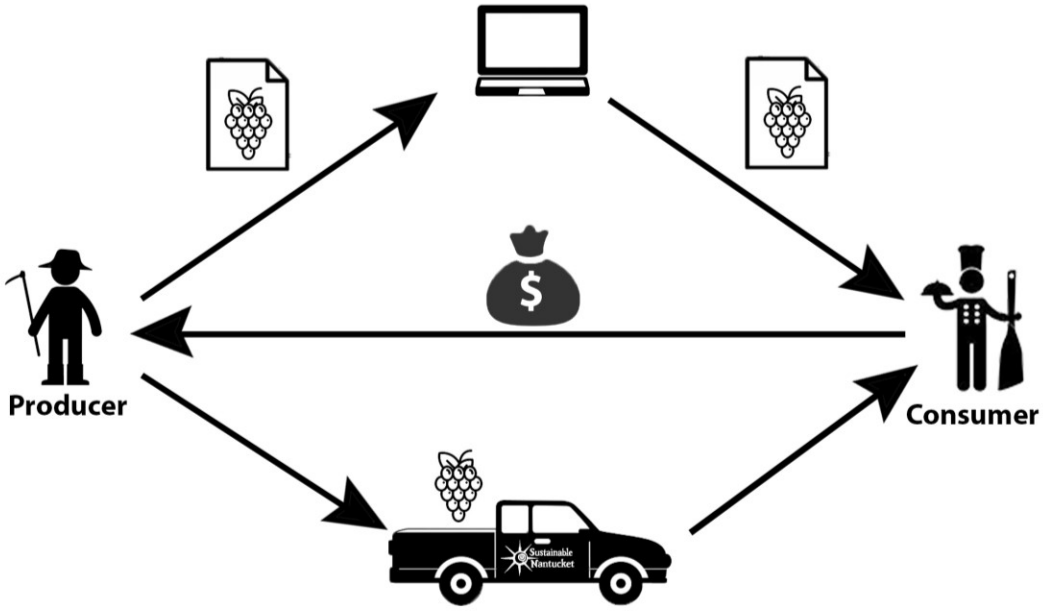

Figure 10: Sustainable Nantucket Business Model

On the other hand, Local Food Marketplace is built for food hubs and their participants. Local Food Marketplace grants the overseeing organization more administrative capabilities, eliminating some of the personal interaction that stakeholders currently appreciate in the Nantucket local food system. Figure 11 shows this model, highlighting that all business transactions must pass through the administrative food hub.

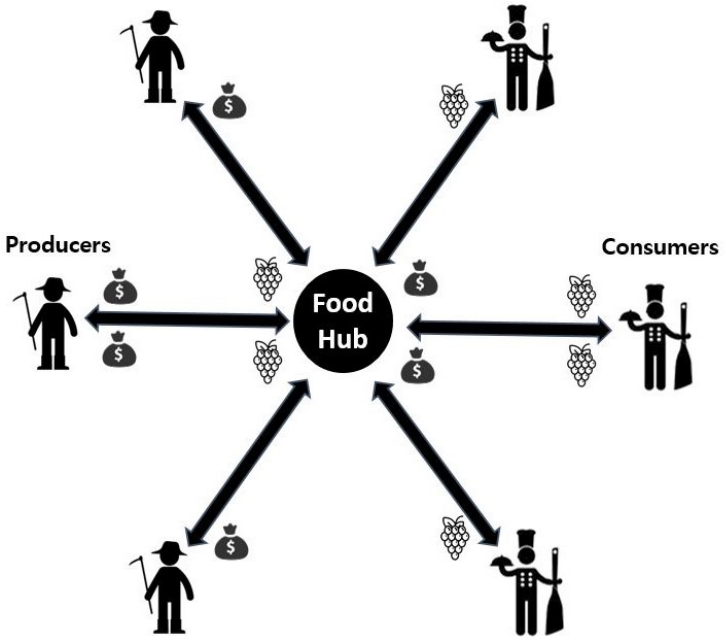

Figure 11: Food Hub Business Model

Overall, WhatsGood and FarmersWeb better suit the existing business model of the Nantucket local food system. In order for Sustainable Nantucket to adopt a food hub business model, they would need to significantly alter the way they have organized sales. A food hub system distances producers from transactions. Sustainable Nantucket is in a unique situation in which their delivery coordinator is also a farmer. Local Food Marketplace, in catering to food hubs, would expect administrative users to be fully invested in coordination, not also in making their own transactions as producers. This producer-administrator combination could lead to a conflict of interest with a farmer who is competing with other producers having control of their inventory and transactions. Thus, in order to make a transparent and comfortable system for everyone, Sustainable Nantucket would likely need to consider re-allocating administrative responsibility on their side of the platform.

Ability to create a closed Nantucket network:

One strong consideration is the ability to create a closed network to accommodate Nantucket Grown branding. WhatsGood can accomplish this goal with the requirement for consumers and producers to connect before making transactions. FarmersWeb attempts to create a closed network through applied filters to the list of available products to limit viewing to local (<150mi) of the consumer's area code. However, FarmersWeb does not have a formal connection feature between producers and consumers, meaning that consumers on Nantucket who are not part of the Nantucket Grown Brand could theoretically make an account on FarmersWeb and place orders with Nantucket producers. For Local Food Marketplace, LFM gives their customer authority to decide which account is allowed to be a producer or consumer of their local food marketplace.

Mobile Capability:

Another important feature is mobile capability. Although WhatsGood does not have mobile apps available for both iOS and Android for consumers and producers, WhatsGood does planning on releasing all mobile capability, including consumer Android and producer iOS and Android capabilities, before the season starts in 2017. In the testing we completed on the consumer iOS app for WhatsGood, we found the app to be easy to set up, user friendly, and fully functional. We believe the upcoming functionalities of the mobile apps from WhatsGood will be of the same quality. FarmersWeb does not have a mobile app for their platform, but their website is mobile friendly. However, from discussion with Nantucket stakeholders, we found that they want to have the convenience of a mobile app than a mobile-friendly website. During testing, the mobile FarmersWeb website performed all basic functions such as viewing listings and placing an order. However, some more advanced features are not as user friendly on a mobile phone. For example, when a producer wants to add a detailed product description to a listing, they must swipe sideways on the screen, which seems non-intuitive for the average user. In comparison, Local Food Marketplace can build a customized mobile app for producers and consumers on both iOS and Android. Overall, Local Food Marketplace has the best mobile capabilities of the three platforms. WhatsGood has the potential to create user-friendly mobile apps compare to all three platforms' mobile capabilities, Local Food Marketplace has the best mobile capability. However, if WhatsGood

accomplishes and releases all mobile functionality for consumers and producers, they will have the same caliber of mobile capability as Local Food Marketplace.

Cost comparison:

In order to compare platform cost, we created a cost-evaluation spreadsheet for the three platforms (Appendix D). To have all payments for the platforms in the same units, we produced costs for each producer and for the system overall, with gross annual sales of $2,000 and $10,000 per producer. The tables below demonstrate the two scenarios of $2,000 and $10,000 annual income for 10 producers.

	WhatsGood 1.5% of sales	**FarmersWeb** 3% *of* sales $40 or $75 flat rate	**Local Food Marketplace** Billed to SN
Fee 1:	$30/year	$60/year	Setup Fee $1,498 (first year)
Fee 2:	N/A	N/A	Account & Application $2,976/year
Fee 3:	N/A	N/A	Content & Member Management $1,176/year
Cost per farmer:	**$30/year**	**$60/year**	**$565/year**
Total Cost:	**$300/year**	**$600/year**	**$5,650/year**

Table 7: Cost Analysis @ $2,000 Gross Annual Sales

	WhatsGood 1.5% of sales	**FarmersWeb** 3% *of* sales $40 or $75 flat rate	**Local Food Marketplace** Billed to SN
Fee 1:	$150/year	$300/year	Setup Fee $1,498 (first year)
Fee 2:	N/A	N/A	Account & Application $2,976/year
Fee 3:	N/A	N/A	Content & Member Management $1,176/year
Cost per farmer:	**$150/year**	**$300/year**	**$565/year**
Total Cost:	**$1,500/year**	**$3,000/year**	**$5,650/year**

Table 8: Cost Analysis @ $10,000 Gross Annual Sales

Payment for WhatsGood is made by the individual producers through a sales-percentage based fee. WhatsGood charges a 1.5% fee on each producer's sales. However, they have not charged Sustainable Nantucket for the past season. FarmersWeb offers several account and payment options. These include online and offline sales, as well as an account which allows both. The online and

offline accounts charge $40/mo or a 3% of sales fee. The account which offers both costs $75/mo. For the cost analysis tables above, we only considered the sales-percentage based fee. If a user were to switch between the flat rate and percentage rate on an online or offline account, their account cost could be less expensive than that in the table. However, the complicated nature of these options contains too many variables to include in a single analysis. Our analysis focused more on the fact that FarmersWeb offers a percentage-based fee than the overall cost.

Local Food Marketplace, as a platform for a local food hub, would charge Sustainable Nantucket a monthly fee with an annual payment. With the standard package and setup fee, as well as add-on modules for mobile app capabilities, content, and membership management, the first year cost would be $5,650 and following years would be $4,152.

Even with 10 producers and individual profits of $10,000, WhatsGood was the least expensive option for the entire system ($1,500), followed by FarmersWeb ($3,000) and Local Food Marketplace ($5,650). As mentioned above, this scenario uses FarmersWeb's percentage based fee. This scenario demonstrates the largest scale the current system could realistically obtain. Overall, WhatsGood is the least expensive platform when taking into consideration the current size of the local food system on Nantucket as well as realistic expansion. FarmersWeb is twice as expensive as WhatsGood, and Local Food Marketplace has a much higher price point due to the setup of a customized website and app, as well as other value-added features.

4.3: General Observations about the Nantucket Local Food System

In addition to information on the online platform that we gained from our focus group and interview from the stakeholders, we have made some general observations about the local food system on Nantucket. These observations include participant experience in the system, farmer-chef relations, and public view of local food in the community.

4.3.1: Participant Experience in System

In addition to the expectations expressed by the individual stakeholder groups, we have heard feedback on their experience in the Nantucket local food system. The major benefit was the ability to function as separate businesses in the system. The Nantucket local food system is small, with only a few participants from each of the stakeholder groups. In this small system, farmers and chefs know each other, and enjoy building business relationships. These personal connections are unique to Nantucket and its individual participants. Sustainable Nantucket has understood these personal interactions and has constructed itself to foster these connections than hinder them.

4.3.2: Farmer-Chef Relations

Farmer-chef relations seem straightforward. Farmers want to sell their products; chefs want to have a high quality supply—it is mutually beneficial. Farmers want to know what chefs need for their menu so they can make their plan for growing season, but chefs want to know what farmers grow well so they can use these high quality product to create a better menu. However, both sides are busy and trying to maximize profits, with multiple options for buying and selling products. For example, farmers can sell produce in farmers markets for a higher price than what they receive from

restaurants. Restaurants are sacrificing convenience and bulk purchasing when they turn to small local farms.

Another pattern we saw when interviewing farmers and chefs was that entities usually have a select group of business partners. Chefs buy first from people they know well and trust, just as farms will sell their limited inventories to their best customers. While it may be difficult for a new farm to reach this level of partnership with consumers, cooperative planning and proper product marketing can turn the occasional sale into a solid business relationship. Farmers have limited space available, so it is important that they both grow products that they know customers will buy and promote the products they have. Experienced chefs know what works well and what does not—their business requires them to identify and sell foods that clients want.

4.3.3: Farmer Education

Farming is a difficult, nuanced line of work that can be particularly challenging for the inexperienced. In addition to the labor and challenge of producing food, farmers also have to navigate a complex market and make their stocks appealing to a variety of customers. When those customers happen to be busy chefs with demanding culinary needs, famers must also balance a delicate relationship and compete with wholesalers. Sustainable Nantucket could help farmers establish themselves as successful members of the island's business community by providing them with education on topics like effective communication, cooperative planning, and marketing techniques.

4.3.4: Farm-to-Restaurant Delivery Service

Sustainable Nantucket currently facilitates local food distribution at a level matching their logistical capabilities. Their staff and transportation can handle the deliveries completed through their current online platform. Going forward, Sustainable Nantucket could face expansion. The CFI has more arable land than is currently being cultivated and is in the process of teaching new farmers how to approach the market as independent businesses. Additionally, Sustainable Nantucket has expressed an interest in sharing the refrigerated truck used by the Nantucket food pantry. This change, in conjunction with a period of natural supply increase at the CFI and the adoption of a more effective online local food platform, could lead to a larger, more reliable, and more stable local food distribution system. Developing the local food distribution system forms a positive feedback loop—growth and increased stability attract more producers and consumers, further developing the system.

4.3.5: Nantucket Public View on Local Food

Our experience seeing the local food system of Nantucket demonstrated one thing above all else—this is a community system. Consumers are absolutely interested in obtaining fresh, safe, quality food. However, they want to buy that food from people they know and trust. Local food on Nantucket cannot compete with the cost effectiveness and convenience of ordering from off-island wholesalers, but it can offer a superior level of service and small town identity. For building healthy

food system relationships, there is no substitute for receiving produce cut and delivered by a member of the Nantucket community on the same day as an order.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSION

In this chapter, we state our recommendations for Sustainable Nantucket on: which online platform they should use for local food coordination in future seasons, establishing regular communication with the online platform provider, and other avenues for general improvement of the Nantucket local food system. We included a list of specific recommendations below that will be elaborated on in the following sections.

Recommendations:

1. Sustainable Nantucket should continue their partnership with WhatsGood.
2. Sustainable Nantucket should establish regular communication for the production season with WhatsGood.
3. WhatsGood should reach out to Nantucket local food system participants during offseason regarding platform problems and upgrades.
4. Nantucket local food system participants should primarily report platform bugs via the onsite chat.
5. Farmers and chefs should keep each party updated on their business status through production season.
6. Farmers and chefs should plan cooperatively before each production season.
7. Sustainable Nantucket should investigate new local food marketing strategies.
8. Sustainable Nantucket should investigate expansion of delivery service to include seafood providers and larger farms on island.

5.1: Platform Recommendations

Recommendation for Sustainable Nantucket on Online Platform Use:

We recommend that Sustainable Nantucket use WhatsGood as their online local food coordination platform for the food delivery service. WhatsGood is the best option for the following reasons:

- Ability to supply majority of requested features
- Manageable pricing plan
- Commitment to resolving Sustainable Nantucket's concerns through the evaluation process
- Collaboration opportunity as a developing platform provider

Recommendation on Future Collaboration:

Sustainable Nantucket's relationship with WhatsGood will be most beneficial—to both sides—when it functions on a collaborative rather than buyer-seller basis. If either organization allows their role in the relationship to become one-dimensional, they will miss significant opportunities. Sustainable Nantucket will get a platform most fitted to their needs if they communicate with WhatsGood what their needs are and what issues they encounter. WhatsGood will gain access to a significant island market beyond Nantucket Grown institutions and have an

informal test bed for their software if they work to meet Sustainable Nantucket's requirements. As long as WhatsGood, Sustainable Nantucket, and the direct users of the system maintain robust communication, cooperation between the parties could benefit everyone involved. Below are the recommendations related to regular communication as collaborators.

Offseason Communication:

During the off-season WhatsGood should be available for phone calls every month to keep Sustainable Nantucket updated on the progress of their platform. This will give Sustainable Nantucket time to familiarize themselves and their partners with any new features prior to the season and to demonstrate WhatsGood's dedication to having a fully working, mobile product before spring sales start. After the season is completed, WhatsGood and Sustainable Nantucket should have a debriefing session that could be used by WhatsGood to review the past season and receive feedback on the platform's performance. It could also be used to give Sustainable Nantucket advice on how they and their users could better utilize the platform and inform them of WhatsGood's longer-term goals and product updates.

Production Season Communication:

During the season communication should increase, or at least be given space to grow. With a larger, more active population during the spring and summer, the platform is more likely to encounter problems. During this period WhatsGood and Sustainable Nantucket should be prepared to have regular, weekly or biweekly phone calls to discuss performance, problems, and satisfaction. Furthermore, WhatsGood might consider some kind of newsletter or change-logs to keep users up to date on the development of the platform. Sustainable Nantucket, in turn, should also distribute information from WhatsGood to their users.

User Communication on the Platform:

While much of the communication to WhatsGood falls on Sustainable Nantucket, users on the island can reach out directly. If they have a question about a feature, how to use a certain function, or an issue with the platform's performance, they can use the online chat to contact WhatsGood staff. However, if users find that WhatsGood is unresponsive or that an issue--such as a glitch or bug--stays unresolved, then they should contact Sustainable Nantucket. In order to streamline the process, they should express their concerns to John Kuszpa, the delivery coordinator. Contact can be made with him either through phone, email, or in person at the deliveries. He can then raise the information during Sustainable Nantucket's regular communication with WhatsGood.

5.2: Recommendations for Future Development

Sustainable Nantucket plays a vital role in the growth and improvement of the local food system on Nantucket. However, they are primarily facilitators, and require cooperation throughout the community to make gains. Furthermore, farmer education and the expansion of the farm-to-restaurant delivery service are major undertakings. In the following years, Sustainable Nantucket may want to renew their partnership with Worcester Polytechnic Institute and utilize our student teams

to tackle these challenges. Below are the recommendations related to developments of the food system that Sustainable Nantucket might consider.

Regular communication between farmers and chefs:

Sustainable Nantucket should supply educational material providing farmers ideas for initiating contact with restaurants, connecting with restaurants via the platform, and maintaining relationships through regular communication.

During the spring and summer seasons, farmers have changing inventories and are dealing with a variety of sales. They should be keeping their culinary professional partners informed on what products are available, giving updates on items that are about to come to harvest, depleted, or back in stock. In addition to sending communications, farmers should also anticipate incoming orders, requests, and questions by frequently checking their email, texts, and calls. Consistent attention to incoming communication is particularly important in the use of an online platform—it only works if participants make a commitment and maintain their presence online. If chefs buying through an online platform are not getting their orders approved or fulfilled they may abandon the platform or stop buying from a particular purveyor. Farmers and chefs should come to a consensus on what mode of communication works best for them.

New farmer marketing:

Sustainable Nantucket could also help their farmers increase business through new marketing strategies. Through interviews with the stakeholders, the Community Farm Institute (CFI) was seen to have big consumer support. Sustainable Nantucket should promote the CFI as a special section of the Nantucket Grown Brand. While buying Nantucket Grown represents a community identity and support for local business, using CFI products takes this a step further and demonstrates investment in the growth and development of such as system. One method of advertising the CFI could be assembling value sample boxes. These packages would combine small amounts of a variety of a farm's best or newest products and present them at a lower-than-normal price. Sample boxes could introduce chefs to new ingredients, demonstrate the high quality of the farm's products, and make a gesture of goodwill that could lead to a business partnership. Sustainable Nantucket could also provide instructions on sample box assembly and presentation to farms outside the CFI.

Farmer-Chef cooperative planning:

Interviews with various stakeholders showed that close working relationships between producers and consumers could improve sales. Based on this, farmers should approach their restaurant partners during the off-season, when the chefs have time to sit down and talk. They can use this time to go over the past season; what products were most popular, what they were short on, what they did not use, and then, collectively plan the farmer's fields for the next season. This mutual plan will help ensure that farmers are growing in line with demand and make the chefs aware of what to expect in the upcoming season. Sustainable Nantucket again plays a role in this process. In addition to sharing this technique with their farmers and facilitating sit-downs, they could construct

a post-season survey. This survey would highlight similar topics as those discussed in the sit-down conversation between a farmer and chef. Results of such a survey could be made public, anonymous or released only to businesses of their choice. These insights would help farms that do not have established relationships with restaurants, or those unable to meet, to plan more according to the needs of consumers. Sustainable Nantucket could also construct a harvest calendar such as the one shown in Chapter 2 (Figure 5). Such a calendar would summarize the general availability of products in the system throughout the year for easy reference by customers, including chefs. The harvest calendar could also be used as an educational tool that farmers could adopt for displaying their individual product availability.

Expansion of the farm-to-restaurant delivery system:

Sustainable Nantucket already runs a farm-to-restaurant delivery service that has proven to be an essential institution integral to effective farm-restaurant relationships. However, Sustainable Nantucket should strive to build on this success and develop a more dependable, reputable, and widely used local food delivery service. We encountered many good ideas from stakeholders in the Nantucket local food system on how to expand and diversify their delivery system to service a greater portion of the Nantucket local food market. Our liaisons at Sustainable Nantucket proposed the idea to use the Nantucket food pantry's refrigerated truck to increase the amount of local food per delivery. In addition, Bruce Sacino voiced that Sustainable Nantucket might want to increas the frequency of deliveries to allow higher volume of local food being used in the restaurants. Once Sustainable Nantucket is confident in the service's abilities, they could consider looking beyond small farms for new suppliers. On the supply side, Sustainable Nantucket could reach out to seafood suppliers and larger farms on the island. Inclusion of these recommendations would allow those buyers already using the delivery system to increase their usage and could convince those not yet working with Sustainable Nantucket to join.

5.3: Conclusion

The community of Nantucket has a unique local food system. It has definite geographical borders and services a largely fluctuating, seasonal population. As a tourist town with a long history of independence and self-sufficiency, Nantucket places great importance on identity, which translates to its communal pride in eating local food. Local food systems are also more than just farmers' markets and roadside stands. They involve sales to individuals and food professionals, and a myriad of distribution methods. Using an online platform to sell and buy local food can enhance the effectiveness of the distribution, and picking the right platform for a community is critical. Furthermore, many of the values present as driving forces in Sustainable Nantucket's mission are common to local food organizations across the country: support for local farmers and businesses, sustainable agriculture, and community self-reliance. Communities searching for a local food online platform should be able to use our report to help them assess their own needs.

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Appendix A - WhatsGood Evaluation

***WhatsGood* Detailed Platform Evaluation Form**

Platform Name:	WhatsGood
Price	Currently $0 for users, expected to increase to 1.5% charge for each order on producers eventually
Evaluation Date:	17th Nov 2016

WG: the platform *WhatsGood*

Evaluation on Web based platform:

Availability of Web platform for producer: Currently Available

Features:	Availability:	Description:
Upload Produce	Currently available	Producers can upload inventories with picture of product, specific type of the product, description of the product, units of the product, price and the amount of inventory. The uploading procedure gives a real time upload to the inventories. Producer needs to contact WG if the product type is not in the drop-down list.
Delete Produce	Currently available	Producers can delete a product from their inventory list by contacting the WG to delete a product for them.
Update Produce	Currently available	Producers can do a real time update for the information of their product, including inventories and other product specifications.
Contact consumer	Currently available	Producers can make comments on each order, which the consumer will receive a web notification and email. Consumer can comment back to the producer on specific orders.
Generate pick sheet	Currently available	Producers can choose multiple orders and generate a pick sheet with products that need to be prepared and needs for the different orders. Currently the items on the pick sheet are grouped by order and not product type.
Connect/ Decline connection with consumers	Currently available	Producers can choose to accept or decline the connection request from the consumers.

View a consumer	Currently available	Producers can view a consumer's business information and order history with that specific consumer. Producers can only view the consumer that are currently connected or requested to connect with them.
Update user info	Currently available	Producers can update their user information. Includes user name, picture, contact number, email address.
Update business setting	Currently available	Producers can update their business settings. Includes business logo, physical address, social media information, and business description. Producers have to contact WG to add an extra admin user for their business.
Contact customer service	Currently available	Producers can contact WG for customer service online on the platform sidebar chat. General response is within a few minutes.
View orders	Currently available	Producers can view the orders, separated into tabs for pending, accepted, and canceled orders
Accept order	Currently available	Producers can accept the order from the pending orders. Before accepting the order, producers have to add a delivery date. An email will be sent to consumer after the order is accepted.
Cancel order	Currently available	Producers can cancel/decline an order and give a reason of the cancellation. An email will be sent to the consumer if the order is declined.
Modify Order	Currently available	Producers can change the order information for pending and accepted orders. An email will be sent to consumers if the order is changed

Availability of Web platform for consumer: Currently Available

Features:	Availability:	Description:
View products	Currently available	Consumers can view products that are available only from the producers that they are connected with. Out of stock products will be shown to the consumers. The amount of products left in the stock is not shown.
Connect with producers	Currently available	Consumers can only purchase product from the producers that they are connected with.
View products by categories	Currently available	Consumers can view products by different categories. Out of order products and products from unconnected producers are also shown to the consumers.

View producers	Currently available	Consumers can view all the producers on that are currently on WG.
View products	Currently available	Consumers can view product information, picture, and specification.
View products from certain producer	Currently available	Consumers can view products that are available from certain producer in the home page of selected producer.
Add order to the shopping cart	Currently available	Consumers can add orders into shopping cart before confirming the order.
Delete order from shopping cart	Currently available	Consumers can delete order to from the shopping cart.
Confirm order	Currently available	Consumers can confirm an order and send the order to the producer. Must navigate to the shopping cart to finalize/submit order
Contact customer service	Currently available	Consumers can contact WG for customer service online on the platform sidebar chat.

Evaluation on Mobile based platform:

	Producer	Consumer
iOS	Release date is January 2017	Currently available
Android	Released by the end of February 2017	Released by Dec 22nd 2016

Availability of Mobile platform for producer: Currently not available

Features:	Availability:	Description:
View Orders	Currently available	Producers can view pending, accepted, canceled, and delivered orders
Options on pending orders	Currently available	Producers can only cancel orders on the mobile app platform

Update account information	Currently available	Producers can update account information and business information

Availability of Mobile platform for consumer: Currently only available on iOS platform

Features:	Availability:	Description:
View products	Currently available	Consumers can view the products that available from the producers they connected with, and the products from all the producers on WG. Out of stock products will be shown. In addition, picture and amount of produce is shown directly on the screen.
Search producers	Currently available	Consumers can search producers' name that they want to view or connect with
Connect producers	Currently available	Consumers can ask to connect with producers
View producers	Currently available	Consumers can view all the producers that are currently on WG
Change profile information	Currently available	Consumers can directly change their account information and business information on the app
Add order to the shopping cart	Currently available	Consumers can add orders to the shopping cart
View orders	Currently available	Consumers can view all their orders, which are group by accepted, pending, canceled, and delivered orders
Contact customer service	Currently available	Consumers can contact WG for customer service online on the platform through "need help" feature in profile settings page.
Cancel order	Currently available	Consumers can cancel an order on the app
Send order	Currently available	Consumers can send orders in the shopping cart to the producers

Appendix B – FarmersWeb Evaluation

***FarmersWeb* Detailed Platform Evaluation Form**

Platform Name:	FarmersWeb
Price	$40/mo or 3% sales for online account; $75/mo unlimited account
Evaluation Date:	30th Nov 2016

FW: FarmersWeb

Evaluation on Web based platform:

Availability of Web platform for producer: Currently Available

Features:	Availability:	Description:
Upload Produce	Currently available	Producers can upload inventories with picture of product, specific type of the product broken down by primary and secondary categories, description of the product, units of the product, price and the amount of inventory. The uploading procedure gives a real time upload to the inventories. Producer can create their own produce type, but have specify primary and secondary categories.
Delete Produce	Currently available	Producers can delete a product from the editing product page
Update Produce	Currently available	Producers can do a real time update for the information of their product, including inventories and other product specifications and description. Also option to deactivate a product on the inventory list, which hides the product from consumer
Contact consumer	Currently available	Producers can refer a consumer to buy their products from FW, but cannot search consumers that currently use FW. Connection between producer and consumer occur when an order is placed.
Generate pick sheet	Currently available	Producers from the accepted orders can select certain orders and create a pick list in CSV format that breaks down quantity of product in orders and product type. List of orders also includes order type, delivery route, and packing requests.
Connect/ Decline connection with consumers	Currently available	Connection between producers and consumers occurs when order from consumer is accepted by the producer. After order is accepted, consumer is added to the producer's customer list with their business address, phone number, and email address.

View a consumer	Currently available	Producers can view consumers that they have had previous transactions within their customer list. Consumers that have not ordered from that producer are not visible to the producer
Update user info	Currently available	Producer can update their user information. Includes name, producer logo and image, and contact number. Account is directly linked to an email address which can be changed as long as it is not to an email address already associated with a FarmersWeb account.
Update business settings	Currently available	Producer can update business settings. Includes physical and billing address, business description, overview of products, and list of certifications and production methods
Contact customer service	Currently available	Producers can access the support webpage that contains FAQs for producers, as well as other account types, and submit a request option. Request requires email address, subject, and description, with the option to submit an attachment as well. In addition, through testing we have been in contact with a representative who responds within the workday.
View orders	Currently available	Producers can see orders pending approval and the description including products, prices, and any fees associated with packing, delivery, or credit card charges. In addition, producers can select orders on above tab and view order number, buyer name, fulfillment day, items, total, status of the order, and if the order has been packed. Orders can be sorted by status, order number, buyer, and fulfillment date.
Accept order	Currently available	Producers can accept orders from the orders pending approval
Cancel order	Currently available	Producers can decline orders from the orders pending approval
Update order	Currently available	Producers can access individual orders and change quantity of products, delivery method, and associated fees
Custom Price List	Currently Available	Producers can denote which consumers to give a discount and what price will be displayed specifically for them
Connect with Delivery Personnel	Currently available	Producer can search all available logistic providers that pickup/deliver in their area and request to be connect. Once connected, producer can use the logistic provider as a delivery option.

Availability of Web platform for consumer: Currently Available

Features:	Availability:	Description:
View available products	Currently available	Consumers can view available products from all producers on FW and can be filtered as needed. Current inventory of a certain product is not displayed until request for order
Connect with producers	Currently available	Consumer can connect with producers through ordering from them.
View products by categories	Currently available	Consumers can view all products in the local area (<150mi) then filter the results further by product type, producer, characteristics, and delivery date
View producers	Currently available	Consumers can filter all producers on the website to only local ones (<150mi) which would list Nantucket producers first and remaining farms after. Also displays the location of the producers under their titles and the producer's product overview
View specifics to products	Currently available	Consumers can view specifics on the product page. These specifics include available inventory, units of purchase, cost, and recommendation of other products from the same producer
View products from certain producer	Currently available	Consumers can filter available products on FW to certain producers. Consumers also can look up producers and view their available inventory on the producer's page.
Add order to the shopping cart	Currently available	Consumers can add products to their shopping cart denoting amount and delivery day. They have to click on the shopping cart to complete the order. If consumer request an amount of product greater than available inventory then they are prompted to reduce order.
Delete order from shopping cart	Currently available	Consumer can delete certain products from their shopping cart from the list provided on the shopping cart webpage.
Confirm order	Currently available	Consumer, once payment method is selected (online credit card payment or offline payment) can send order request to the producer
Contact customer service	Currently available	Consumers can access the support webpage that contains FAQs for consumers, as well as other account types, and submit a request option. Request requires email address, subject, and description, with the option to submit an attachment as well. In addition, through testing we have been in contact with a representative who responds within the workday.

Availability of Web platform for delivery personnel: Currently Available

Features:	Availability:	Description:
View orders	Currently available	Personnel can view all accepted, declined, and pending orders that the producer is utilizing them as the delivery method. Can filter and sort orders based on status, buyer, and delivery date.
Generate delivery slip	Currently available	Personnel from list of orders can select certain orders and generate a delivery slip that display delivery route and date, contact for both producer and consumer, and the specifics of the order including amount of each item, amount, and total price.
Generate delivery logistics	Currently available	Personnel can specify delivery zone, days for delivery, and associated fees
Connect with producers	Currently available	Personnel can view producers that want to use their services and accept/decline the request.

Evaluation on Mobile based platform:

App availability	**Producer**	**Consumer**
iOS	Not available	Not available
Android	Not available	Not available

Availability of website platform on mobile for producer:

Features:	Availability:	Description:
Upload Produce	Currently available	Producers can upload inventories with picture of product, specific type of the product broken down by primary and secondary categories, organic characteristics, description of the product, units of product measurement, price and the amount of inventory. The uploading procedure gives a real time upload to the inventories. Producer can create their own produce type, but have specify primary and secondary categories. Phone condensed table for specifications of available inventory, pricing, and units for sale.
Delete Produce	Currently available	Producers can delete product from the inventory list

Update Produce	Currently available	Producers can update the description, amount in inventory, cost per unit, and characteristics associated with the product. In addition, producer can change the activation of the product to be include/exclude from the inventory list the consumer can view
Contact consumer	Currently available	Producers can view the contact information of consumers on the customer list or in the specific order requests. Actual contact is through email or phone separate from the platform
Generate pick sheet	Not available	
Connect/ Decline connection with consumers	Currently available	Connections are through order requests and past orders. Producers can view the contact information of these consumers, but no formal connection. There is an option to refer a consumer to a specific producer page through the use of email
View a consumer	Currently available	Information that is available to the producer is the consumer's contact information and links to their personal website outside of FW
Update user info	Currently available	Producer can update their user information. Includes name, producer logo and image, and contact number. Account is directly linked to an email address so that cannot be changed
Update business settings	Currently available	Producer can update business settings. Includes physical and billing address, business description, overview of products, and list of certifications and production methods
Contact customer service	Currently available	Producer can access a mobile friendly support page through FW that has troubleshooting/FAQ broken down by account types. If those questions do not help, producer can submit a support request to FW.
View orders	Currently available	Producers can see orders and the description including products, prices, and any fees associated with packing, delivery, or credit card charges. In addition, producers can filter and sort orders by order number, buyer name, fulfillment day, items, total, status of the order, and if the order has been packed.
Accept order	Currently available	Producers can accept orders from pending orders
Cancel order	Currently available	Producers can decline orders from pending orders

Availability of website platform on mobile for consumer:

Features:	Availability:	Description:

View products	Currently available	Consumers can view all the products that are available in certain radius: Local (< 150 miles), Regional (< 350 miles), National. The name of product, producers name, price, next pickup date and next delivery date are shown.
Filters while viewing products	Currently available	While viewing products, consumers can choose different filters. Filters includes Categories, Characteristics, Delivery date and Producers.
View producers	Currently available	Consumers can view different producers that are serving in different radius around consumers' locations: Local (< 150 miles), Regional (< 350 miles), National. The name of producer, location of the producer, products overview, certifications & production methods will be shown. If the consumer is not in producer's' delivery location, the consumer cannot view the producer's' profile.
Set account information	Currently available	Consumers can set account information which includes Business Name, Phone Number and Delivery Address.
Add order to the shopping cart	Currently available	Consumers can add orders of product into shopping cart. Before adding the order, consumers have to select delivery date and the quantity of order in the
Check out the shopping cart	Currently available	Consumers can check out the items in the shopping cart. Payment can be made as offline method or online credit card payment.
Leave an order note	Currently available	Consumers can leave a note on the order while checking out the order.
View orders	Currently available	Consumers can view order histories, by status, or fulfillment date.

Appendix C – Local Food Marketplace Evaluation

Local Food Marketplace Detailed Platform Evaluation Form

Platform Name:	Local Food Marketplace
Price	First year: ($1498 setup fee, $149/mo subscription, $346/mo add-ons) **First Year Total: $5,650** Years after: ($149/mo subscription, $346/mo add ons) **Year Total: $4,152**
Evaluation Date:	29th Nov 2016

LFM: Local Food Marketplace

Evaluation on platform:

Availability of platform for producer: Currently Available

Features:	Availability:	Description:
Upload Produce	Currently available	Producer can upload products and specify its specifications.
Delete Produce	Currently available	Producer can delete a certain product from their inventory list.
Update Produce	Currently available	Producer can change amount, cost, and description of the product.
Contact consumer	Currently available	Producers can access the contact information of the consumers in the local food hub.
Generate pick sheet	Currently available	Producer can create pick list based on orders received.
Connect/ Decline connection with consumers	Currently available	Producers and consumers join LFM as part of a local food hub and are given connection to the consumers in the system. There is no option for producers to decline connection with consumers.
View a consumer	Currently available	Producer can access a list of consumers and contact information for consumers in the local food hub.
Update user info	Currently available	Producers can update their user informations. Includes user name, picture, contact number, email address.
Update business setting	Currently available	Producers can update their business settings. Includes business logo, physical address, and business description.

Contact customer service	Currently available	Producer can contact the LFM team via email for questions and troubleshooting.
View orders	Currently available	Producer can view pending, approved, and declined orders.
Accept order	Currently available	Producer can access specifications of an order and accept the order from list of pending orders.
Cancel order	Currently available	Producer can access specifications of an order and decline the order from list of pending orders.

Availability of platform for consumer: Currently Available

Features:	Availability:	Description:
View available products	Currently available	Consumer can view all products available for sale in the local food hub.
Connect with producers	Currently available	Consumers are already connected with the producers since they exist in same local food hub.
View products by categories	Currently available	Consumer can filter and sort the available products for sale by category of product (meat, vegetable, fruit, etc.)
View producers	Currently available	Consumers can access a list of producers that exist in the local food hub along with their contact information.
View specifcs to products	Currently available	Consumer can access specifics to products on the product page that includes amount, cost, and other specifications.
View products from certain producer	Currently available	Consumer can filter products to specific producers.
Add order to the shopping cart	Currently available	Consumer can add products they want to purchase to their shopping cart.
Delete order from shopping cart	Currently available	Consumer can delete products or whole order from their shopping cart.
Confirm order	Currently available	Once products are in the shopping cart, consumer can confirm the order which is sent to the producer.

Contact customer service	Currently available	Consumer can contact the LFM team for support or troubleshooting. LFM is more willing to talk specifically to administrative organization for fixes.

Availability of platform for delivery personnel: Currently Available

Features:	Availability:	Description:
View orders	Currently available	Administrative organization can view all orders of the local food hub.
Generate delivery slip	Currently available	Administrative organization can view specifics of orders and create a document displaying them.
Generate delivery logistics	Currently available	Platform is for a local food hub, so assumed that participants are located near one another. Logistics of delivery can be set up for day and timing for order cutoff.
Connect with producers and consumers	Currently available	All producers and consumers are part of the local food hub and are connected together through it.

Evaluation on Mobile based platform:
-Custom Mobile App is an add-on to the base platform
-Associated cost included in overall platform cost at top of form

	Producer	Consumer	Administrative
iOS	Currently available	Currently available	Not available
Android	Currently available	Currently available	Not available

Appendix D - Cost Evaluation of Platforms

	WhatsGood 1.5% of sales	FarmersWeb - PER FARMER 3% of sales	Local Food Marketplace - TOTAL COST
Annual income:			
$2,000	$30.00	$60.00	N/A
$5,000	$75.00	$150.00	N/A
$10,000	$150.00	$300.00	N/A
Credit Card payment:		**(+3.5% and $.3)**	
$2,000	N/A	$130.30	N/A
$5,000	N/A	$325.30	N/A
$10,000	N/A	$650.30	N/A
Fixed cost:	N/A	**PER FARMER**	**Setup Fee (Website+App)**
			$1,498.00
			Setup + App + Member Man. + Content Man. +
		($40/month - 12 month season)	**Standard Account - 12 mos (billed annually)**
		$480.00	$5,650.00
		($75/month - 12 month season)	5 users - $1,130/user/year
		$900.00	10 users - $565/user/year
			Setup + App + Member Man. + Content Man. +
		($40/month - 6 month season)	**Standard Account - 12 mos (billed monthly)**
		$240.00	$7,345.00
		($75/month - 6 month season)	5 users - $1,469/user/year
		$450.00	10 users - $734.50/user/year
			Setup + App + Member Man. + Content Man. +
			Standard Account - 6 mos (billed annually)
			$3,574.00
			5 users - $714.80/user/year
			10 users - $357.40/user/year
			Setup + App + Member Man. + Content Man. +
			Standard Account - 6 mos (billed monthly)
			$4,646.20
			5 users - $929.24/user/year
			10 users - $464.62/user/year
			PAST FIRST YEAR (NO SETUP)
			App + Member Man. + Content Man. +
			Standard Account - 12 mos (billed annually)
			$4,152.00
			5 users - $830.40/user/year
			10 users - $415.20/user/year
			App + Member Man. + Content Man. +
			Standard Account - 12 mos (billed monthly)
			$5,397.60
			5 users - $1,079.52/user/year
			10 users - $539.76/user/year
	*WhatsGood has not charged Nantucket producers for the 2016 season.	*FarmersWeb offers the option to switch between percentage fees and flat rates to make the platform less expensive based on when the users sales are distributed over the year.	**App + Member Man. + Content Man. +**
			Standard Account - 6 mos (billed annually)
			$2,076.00
			5 users - $415.20/user/year
			10 users - $207.6/user/year
			App + Member Man. + Content Man. +
			Standard Account - 6 mos (billed monthly)
			$2,698.80
			5 user - $539.76/user/year
			10 users - $269.88/user/year
			Standard Account $999 setup, $149/month
			App $499 setup, $99/month
			Member Management $49/month
			Content Management $49/month
			Monthly billing +30%