

ABSTRACT

Title of Document: IMPLEMENTATION OF CUSTOMER RELATIONSHIP MANAGEMENT AND INVENTORY CONTROL SOFTWARE: A MULTIPLE CASE STUDY OF SMALL RETAILERS

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This study examines the impact of customer relationship management and inventory control software on small retail stores. Our team began by conducting a literature review, retailer-needs surveys, and product design interviews. We determined that small retailers have a need for a simple reminder system to assist in tracking customers and inventory. We then designed software to address these needs and tested it in two case study stores. We also conducted a systematic review of other case studies of software implementation in small businesses and identified ten factors that influence small business adoption of software. The five factors that influenced the failure to implement the system in these stores were consistent with the framework identified by the systematic review. The identified factors are relative advantages of the system compared to competitor products, compatibility with existing applications, the user's computer self-efficacy, ease-of-use of the system, and store owners' attitude toward information technology.

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RETAILERS

By

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Thesis submitted in partial fulfillment of the requirements of the
Gemstone Program, University of Maryland, College Park
2011

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2011

Acknowledgments

We would like to thank our mentor, Dr. Tom Mierzwa, for his guidance and enduring support. We'd also like to thank these individuals outside the University of Maryland for their direction: Sid Viswanathan, Mango Media Company, Sam Coyne, David Salts, Donna Garcia, Holly Schwalm, and Brian Krebs. We greatly appreciate the expert feedback from our panel of discussants: Dr. James Green, Mr. Craig Dye, Mr. Kevin Cassidy Sr., Dr. Hugh Turner, Dr. Frank Alt, Dr. Rebecca Ratner, and Mr. David Ashley. We are grateful for the assistance from our librarian Mr. Jim Miller. We'd also like to thank Dr. James Wallace and Dr. Rebecca Thomas for constant encouragement. Most of all, we thank our family and friends for their love and support over the past four years.

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Chapter 1: Introduction

Statement of the Problem

Importance of small businesses in the United States

The entrepreneurial spirit of small businesses is the embodiment of the American Dream. Collectively, small businesses play a critical role in bolstering the United States economy. The majority of all firms in the United States are considered a small business. Small businesses are an integral part of America's past, present, and future, and they represent about 99% of all the firms in the U.S. According to the Office of Advocacy of the Small Business Administration (SBA), there were approximately 27.5 million small businesses in the U.S. in 2009, compared to only 18,311 large businesses in America in 2007 (SBA, 2009).

The SBA defines a small business as a business with 500 or fewer employees. For the purpose of this thesis, the following parameters are used: small retailers have fewer than 20 employees whose inventory consisted of non-perishable items. Additional parameters include that a business is "organized for profit; has a place of business in the U.S.; operates primarily within the U.S. or makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor; is independently owned and operated; and is not dominant in its field on a national basis" (SBA).

Small businesses not only account for a majority of the businesses in the United States but are also a major source of employment creating "65 percent of net new jobs over the past 17 years" (SBA, 2009). Furthermore, they provide about 50% of the jobs in the private sector. This translates to 59.9 million jobs from small

businesses. Small businesses also employ about 43% of the technology based workers, including scientists, engineers, and programmers (SBA, 2009).

Small businesses are a significant source of innovation in this country. A portion of this can be attributed to the fact that small businesses hire a large number of high tech workers, as mentioned above. They develop “13 times more patents per employee than large patenting firms” (SBA, 2009). This may also be the cause of an increased number of “actively innovating firms,” where an “actively innovating firm” is a company that has more than 15 patents in the past five years (Breitzman & Hicks, 2008). Between 2000 and 2002, 214 firms were added to the actively innovating firms list. A tier above actively innovating firms are highly innovating firms, among which small businesses accounted for 40% in 2002 (Breitzman & Hicks, 2008). Not only do small businesses account for a large portion of innovation, but the impact of these innovations is more significant than that of larger businesses.

Small firm patents outperform large firm patents on a number of impact metrics including growth, citation impact, patent originality, and patent generality. These metrics have been used for decades to measure the innovativeness of firms, labs, and agencies. The metrics have been validated and shown to correlate with increases in sales, profits, stock prices, inventor awards, and other positive outcomes. This suggests that the patents of small firms in general are likely to be more technologically important than those of large firms (Breitzman & Hicks, 2008). Small businesses in America are a vital part of the economy because of their pervasiveness, role in employment, and impact on innovation.

Challenges facing small business owners

A small business must tackle challenges from many angles. Aside from the day-to-day operations of running a store, exogenous forces have a significant impact on small businesses. In 2008, the global economy was devastated by a deep recession, resulting in struggles for all businesses, large and small. However, small businesses were further disadvantaged by the recession because of competition from larger corporations in the same market segment that offer the same products but at lower prices. This was further exacerbated by the expanding influence of globalization. These outside forces represent strong obstacles for small business survival.

Wal-Mart, a paradigm of mass-retailers, is renowned for its ability to offer cheap prices and an abundance of goods due to its extensive supply chain capabilities. Consequently, small businesses are unable to compete against mammoth retailers such as Wal-Mart. A 2005 New York Times article captured the feelings of Wal-Mart's opponents that "the Arkansas-based chain (Wal-Mart) embodies the worst kind of economic exploitation and will turn 'main streets into ghost towns by sucking business away from small retailers'" (Reich, 2005). However, this is not a universal opinion.

Russell Sobel wrote an article in 2008 about his study which concluded that there is "no evidence that Wal-Mart has had a significant impact (either negative or positive) on the overall size, growth, or profitability of the U.S. small business sector" (Sobel, 2008). Sobel argues that the small business sector as a whole is not adversely affected by the presence of Wal-Mart. Although some businesses may close due to the entrance of a Wal-Mart, other small businesses emerge in markets not in the scope

of large corporations. The sector as a whole remains stable because there are an equal number of small businesses entering and exiting the market.

For the purpose of this study, we examine the small business sector on an individual store level. Sobel admits that “there is no question that certain specific small businesses fail because of the entry of a Wal-Mart store.” Amidst a risky and cutthroat environment, small businesses are finding their chances for survival are increasingly shrinking.

Among the difficulties small business face are a small base of employees and financial constraints. According to a report by the National Small Business Association, the number of small businesses with capital issues increased from 24% in year-end 2009 to 29% in July 2010. “The availability of capital is a critical component to business growth and job creation for small businesses.... There has been a direct correlation between access to capital and job growth – when capital flows more freely, small businesses add new jobs” (Discover 2010).

Only 22% of small businesses surveyed projected increases in their number of employees within the next year. “This trend in net job cuts should be alarming. The decreases...in job growth projected indicate a strong need to support small-business growth and ensure impediments, such as an inability to finance growth, are removed.” Of the firms who lack access to capital, 20% stated they have been forced to reduce the number of employees (NSBA 2010).

Furthermore the recession forced a record number of small business owners to cut their own salaries. The number of owners who experienced this personal salary cut increased from 55% in February 2008 to 73% in July 2010. In order to combat the

impact of the recession, some owners had to adjust or increase their prices by 35% to 37% in one year. Consequently, they have passed on the burden of their increased costs to their customers (Discover 2010).

From the evidence provided, it is clear that small businesses have felt the adverse effects of the recession. They had issues with obtaining access to capital, were forced to downsize their workforce, and had to take cuts on their own salaries and pass on the burden of increased costs to their own customers. These issues, accompanied with the ever increasing number of large corporations, demonstrate the plethora of challenges faced by small businesses. This challenging environment makes it all the more important that small businesses operate efficiently.

In-store interviews

Introduction

To complement our secondary research on small businesses, we conducted interviews with local small businesses to gain a better understanding of the challenges they were facing. We conducted 15 in-store interviews with the managers and/or owners of the store, asking about their employees, products, operations, shipments, purchases/returns, security, and other financial questions. In order to target a large number of small retailers, four members of our team attended the Annual Toy Fair in New York City held from February 15-18, 2009, and learned about factors pertaining to small business survival in the difficult economy. While there, they also conducted interviews with several small business owners, which were critical in determining the direction of our project. These initial interviews were used as a lens to observe the difficulties faced by small businesses on a high-level and determine how we could

narrow the scope of our project. While the number of interviews was small, the quality of information gained from each interview was crucial for the advancement of our research.

Employees

During our initial interviews used for background research, the first aspect we asked about was the employees. These questions dealt with the number of employees the businesses had, the number of different shifts they worked, and the training required to teach the new employees.

Every business interviewed had fewer than five employees including owners. Some businesses were strictly family-run while other businesses also had part-time employees. These employees typically had flexible schedules tailored to their individual schedules and had some sort of background in the shops where they worked. One business gave a literature knowledge test before hiring. As far as training goes, most employees were trained on the job for up to six months. Few businesses had any problems with the employees they hired.

Orders and shipments

We felt it was essential to get a good grasp on the procedures for receiving and processing shipments and inventory methods.

For the businesses interviewed, the ordering process was simple. An order would be placed to the vendor for the new shipment via phone, email, or website. Some businesses ordered daily or weekly, depending on the product. These shipments were made based on a schedule and not based on current inventory. Others just eyeballed the inventory, ordering when the inventory appeared to be low.

After the shipments were received, all of the businesses processed the new products and placed them on their shelves and displays. While some said that the process only took a few minutes, other companies took multiple days just to process one shipment. There was a variation not only in time, but also in the tools and equipment used for this procedure. Some businesses used software programs such as QuickBooks or Counterpoint to control their inventory. Many businesses still had not upgraded to these programs and used a simple spreadsheet to record shipments.

Despite the introduction of programs like QuickBooks and other inventory control systems, there were still many problems with processing the new shipments. While some of the store owners were happy with more advanced inventory control tools, many of the businesses interviewed were either unhappy with the software or did not fully utilize the program, using only one or two functions. This may be attributed to the learning curve of the program. While some employees can utilize the program after a three-day training workshop, other employees can train for three months and still be uncomfortable with the program. Another complaint about QuickBooks was that it was overly accounting-based and unable to provide the holistic view of the business that the owner was hoping to gain.

Product offerings

Next, we asked about the stores' product offerings in order to gain insight into the range of products these small businesses had to handle, any issues dealing with the products, and the number of vendors.

The number of different products offered in the store ranged between 600 and 120,000. The large range in number of products can be attributed to the different

industries in which each of the businesses operated. In all the stores, the products are all sorted and tagged upon delivery. Every business had their own unique way of processing their products, depending on the type of item. Most lacked a technological solution which would make this process more efficient. Some businesses had as few as ten vendors while one company had about 100 vendors.

One observation from these interviews was that there was much variation among the responses from the businesses. Practices dealing with the products were as unique as the individual products themselves.

Purchases and returns

We focused on retailers, firms that only sell products rather than services. We asked questions geared towards learning about how a business recorded purchases, dealt with returns, and managed customer relationships.

We received a variety of responses when it came to the technology in place for purchases and returns. While some companies relied on QuickBooks to make transactions and returns, other companies simply had an old-fashioned cash register. Most of the businesses we spoke to had little or no problems when it came to returns and exchanges. These businesses would give the customers store credit or a refund for their returns.

Customer relationships are especially important in small businesses versus large businesses, because many customers return to a small store specifically for the personal interactions with the owner and employees. From our interviews, we realized that only a few of the businesses had any sort of customer relationship management (CRM) system in place. For businesses that had a system in place, the

system involved emailing customers coupons and promotions. Some businesses collected names automatically through credit card purchases, while others captured names manually.

Despite CRM systems' versatility, the interviewed companies were accustomed to using their existing systems. Some were also in the process of learning how to use a new system such as QuickBooks. In general, these businesses appeared to use CRM systems less often than inventory control systems.

Finance

Our last set of questions dealt with financials, looking at the revenues and expenses of the business. We asked about cost-cutting measures and ideas for expansion.

The prevailing response among the businesses interviewed was a concern for the high expenses related to inventory, rent or mortgage, insurance, and employee salaries. When asked about opportunities to cut costs, the business owners believed that there was no way for them to cut costs. One owner said, "Fixed costs [are] fixed costs" because the majority of those business costs are simply unavoidable. One business owner stated that he tries to run a "bare-bones operation" where no unnecessary expenses are incurred.

During the interviews, one business owner expressed the disheartening sentiment that, "We could improve our profits by going out of business." This idea is the foundation upon which we have built our study's purpose: to develop a way to help these small businesses.

Small business owners' need for technology

A 2010 National Small Business Association survey revealed that while 98% of the businesses surveyed thought it was important to keep up with new technology, they also explained that staying current with the rapid advancement of technology was a major challenge. "Making technology that is affordable and reliable... is critical to the ongoing success and growth of the small-business economy... technology can offer myriad opportunities for small businesses to achieve new growth and make their existing practices better" (NSBA 2010).

Purpose of Thesis

The purpose of this thesis is to determine whether a low-cost technology solution could be adopted to strengthen a firm's customer relationship management and inventory control capabilities. A comprehensive survey of literature reveals that customer retention plays a large role in the success of small business operations. While there are numerous top-notch CRM software tools available, they tend to be costly and unaffordable for small business owners. Based on our initial surveys, small businesses are often reluctant to invest more than \$200 in this type of software.

Scope of Research

This research project differs from previous studies conducted on this topic in several ways. First, this study focuses solely on small retail businesses, rather than taking into consideration the performance of medium and large businesses. Furthermore, the technological solution that was being tested in this study is web-based. Since it is a subscription-based web application, the technology is more affordable for small business owners. Finally, our technological solution is unique

because it is geared specifically to “mom and pop” retail stores. When designing the solution, we chose features that would be most applicable and helpful in a small business setting. A detailed explanation of the features can be found in Chapter 4.

Thesis Chapters

This thesis is structured as follows: Chapter 2 reviews the literature focusing on the challenges faced by the businesses, current retail strategies, existing technologies, QuickBooks, and customer relationship management. Chapter 3 presents a Conceptual Framework that maps the relationships explored in this study and identifies the hypothesis. Chapter 4 describes the research approach, including the overall study design and methods used in the product development process. Chapter 5 provides a detailed analysis of the results and findings from the research along with a systematic review of the literature analyzing studies that performed similar research. Chapter 6 concludes the thesis with comments about the project’s challenges and limitations as well as a discussion on future research possibilities.

Chapter 2: Literature Review

Challenges Faced by Small Businesses

Some of the challenges faced by small business owners can be explained by the impact of the economic recession, increased costs and competitive disadvantages in comparison to larger businesses, and owners' limited business management education. Technology in the United States saw significant advancement during the 1990s in the realm of manufacturers, boosting overall productivity and profitability. In the latter half of the 1990s, retailers also updated their technologies. Almost 100% of growth that occurred was due to closing old stores and opening new, more efficient, and updated ones. In some retail categories, small mom-and-pop stores were replaced by efficient retail chains, such as Sam's Club (Popper 2002).

The U.S. retail sector, however, is not made up of just a handful of large businesses, but thousands of small firms that meet specific customer demands and serve niche markets. The needs of small businesses are very different from those of large businesses. Therefore, the same tactics that work effectively for large businesses may not be suited for small businesses (Pegler 2008). Small firms require business solutions specifically tailored to their circumstances and needs.

Small businesses tend to be headed by management with less formal education in business practices. In a World Bank study, Mengistae (2006) found that the survival rate of a business increased with the number of years of schooling and business experience of the entrepreneur. In addition, most young firms also tend to be small firms. Furthermore, a study conducted in Mexico found that there is a significant technology gap between small mom-and-pop shops and relatively larger

businesses (Martin 2008). Mengistae (2006) concludes that businesses are less likely to survive when the price-to-cost ratio is smaller. This suggests that to overcome challenges, it is important that small businesses cut costs and increase their profit margin. Increasing their technological capabilities relative to large businesses is an effective way to achieve this. Although significant advances in inventory control are now available thanks to the Internet, technical proficiency is still lacking in many small businesses.

Proposition 1: Increasing technological capabilities is a favorable approach for cutting costs and increasing profits for small businesses.

Due to worsening economic conditions in the U.S., entrepreneurs have been preoccupied with costs that they cannot control, specifically health insurance, energy costs, and inflation (Brown 2008). A large majority of small businesses surveyed said the government was not doing enough to help them in the difficult economic times; 72% responded that federal policy was “bailing out” Wall Street while neglecting small businesses (PNC 2008). This survey data suggests that many small business owners believe that the success or failure of their business is, to a large degree, determined by forces beyond their control, and that they are dependent on external assistance in order to remain competitive.

Current Retail Strategies

Current small business literature details many approaches and strategies for retail management. Public researchers have conducted studies to gauge the effectiveness and efficiency of different processes in order to streamline small business operations. Analyzing how this research was conducted is useful not only in

contributing to our existing knowledge, but also as a model for conducting primary research.

One of the main areas of focus for our research is inventory control. An ideal system is inexpensive, flexible and efficient. It should automate some processes and thus require less employee involvement. Holding costs, which result from keeping too much inventory on hand or keeping it for too long, are minimized through effective inventory control. Thus, cash is available for investment in other aspects of operation. Efficient recordkeeping and inventory control also improve demand forecasting which results in fewer stockouts or extra inventory on hand (Mazhar, 2008). Internally, inventory data needs to be well organized and readily accessible to help employees with making educated decisions that would eliminate human error. Database software and management of the information will also prove crucial to improving operational efficiency.

The methods that help achieve these goals are an important focus of further research for our team. Quick response is a strategy of continuous replenishment to achieve right-sizing of inventory. It parallels just-in-time inventory management, which is a system of ordering items for a store as the need arises, rather than preparing heavily in advance of a need. Both processes are used by business owners to effectively manage their inventory and avoid wasted time and resources.

Many small and medium-sized enterprises (SMEs) are hesitant to adopt new strategies in their businesses since most are family owned and operated. Adopting new strategies can create conflict due to differences in attitudes between generations. However, certain sectors are more likely to adopt new technology. While businesses

that do not adopt new technology claim they do not want to lose their competitive edge, the benefits that other SMEs observe included improved customer services, communication, speed, and efficiency (Wagner, Fillis, and Johansson 2003).

Proposition 2: SMEs tend to resist implementation of new technologies.

Existing Technologies

A multitude of technologies have been incorporated in systems to improve businesses' retail management practices and operational efficiency. These systems, however, are designed for larger businesses that accrue the majority of the benefits (Levenburg 2005). Furthermore, the high cost of the systems makes affording them nearly impossible for small businesses (Sharkey 2008). Due to this combination of factors, there is little research on the subject of the application of these technologies and their impact on small businesses. In research referring to small businesses in general, technology often refers to point of sale (POS) systems.

A POS terminal is often the basic component of a business's retail system where the actual transaction occurs. POS systems can vary in size and design, from cash registers to handheld scanners. While a terminal can be the extent of POS systems at some stores, these systems can be much more extensive in their capabilities. Combined with a database, a POS system provides real-time data, and therefore more efficient inventory control, reduced restocking times, and clearer sales data (Matsubara, Mikami, and Belk 2005).

A wide variety of software solutions is available to help small business owners with retail management as well. Intuit's QuickBooks is a POS software package favored by many small businesses because of its low cost. It is therefore a

focus for much of our research. More robust inventory control systems are also available to small business owners, but at an extremely steep price increase. Most small businesses simply cannot afford an investment of this magnitude. Stodghill (2006) observes that while some of the capabilities offered in these software packages are quite useful for small businesses, many of the features still remain largely unused. Small businesses can also reach out to independent software companies for more tailored technology solutions, but these solutions are often quite expensive as well. There is a demonstrated need for a product that can close this gap – an affordable solution that offers the necessary inventory control capabilities while limiting the extra bells and whistles that provoke such dramatic price hikes.

By using inventory controls offered in a software package, owners can order products more efficiently, improve inventory turnover, and spot trends more quickly. While QuickBooks and other comparable solutions are not the most suitable fit for small retailers, they are far superior to some of the antiquated methods still practiced by many owners. Some still keep track of inventory and accounting data by hand, a time-consuming and inefficient process often plagued by errors. According to Stodghill (2006), some owners continue to use the same outdated methods even after adopting a technological solution. These owners either do not understand how to effectively use the software they have purchased, or they do not need to use some of the extra functions offered by the software. This demonstrates the importance of creating software that is user-friendly and functionally pertinent.

One of the most important requirements of a POS system is that it can be easily integrated with the accounting software. The same POS system is not always

right for every small business, unless it can be tweaked to meet the needs of the consumer. Therefore, making a system that is widely compatible is crucial to the widespread acceptance of any system.

Approximately 25% of small businesses still manage their finances using primarily spreadsheets (Fitzgerald 2007). There are many software packages available for business owners, but QuickBooks is easily the market leader. Other packages include Intacct Small Business, Adaptive Planning Corporate Edition, Team and Concepts' EditGrid, PayCycle Plus, and Sageworks's ProfitCents, each with its own focus. QuickBooks competently balances the core needs gathered from each of these systems and is customizable, user-friendly, and relatively inexpensive (approximately \$200). Three of the best alternatives to QuickBooks, Peachtree by Sage Complete Accounting, Microsoft Office Accounting Professional, and MYOB Premier Accounting, are discussed in the following paragraphs.

Peachtree by Sage Complete Accounting offers an excellent inventory control system as well as adequate accounting functionality, but it lacks the user-friendliness of a package like QuickBooks (Murray and Yakal 2009). QuickBooks stays ahead of the market with packages such as QuickBooks Accounting Pro Edition, for home or very small business type accounting, and QuickBooks Enterprise Solutions, for slightly larger business accounting needs.

Microsoft Office Accounting Professional offers a familiar interface to most users, is extremely compatible with other applications, and is priced similarly to QuickBooks. Noticeable weaknesses include inventory tracking and payroll. Users like the familiarity of the interface because of its similarity to Microsoft Office. Easy

setup is an important factor for many small business owners when adopting a new system. While Office Accounting does a satisfactory job in its setup, it lags behind its main competitors QuickBooks and Peachtree due to its lack of thoroughness and automation (Murray and Yakal 2009). Office Accounting uses a superior control panel that allows the user to see information needed on a daily basis, like reminders and financial summaries.

Proposition 3: Integrating a new technology to an existing business system is essential for its successful implementation.

Excellent customer service is understandably a vital concern for small owners when shopping for a retail management system. Because these businesses are the livelihoods of their owners, it is crucial that any problems encountered in the system be resolved promptly. Office Accounting provides clear and exhaustive help and how-to sections as well as providing numerous methods of online support.

Other significant features of Office Accounting are the use of reasonably flexible and yet comprehensive transaction forms and the ability to use online banking. The software allows owners to create and print paychecks, but it lacks the ability to process payroll. The inventory tracking capabilities are comparable to those of QuickBooks Pro and are enough for a business with limited products, but Peachtree is a better option for businesses with extensive inventory tracking needs.

As a Microsoft product, Office Accounting integrates seamlessly with other Microsoft programs such as Word and Excel, as do most of its competitors. However, what is unique about Office Accounting is its ability to be integrated extensively with Microsoft Outlook, which is useful mainly for service-based businesses. The only

other competitor that includes this feature is QuickBooks, through a series of synchronization tools.

An alternative package is MYOB Premier Accounting which, apart from lacking sufficient online services and extensive compatibility, is a fairly easy to use system very capable of inventory tracking and accounting. MYOB boasts an easily navigable “Command Center” and competitive setup tools. It also allows users to manually conduct or outsource the payroll process for an extra fee. This system is good, but it is beat out by QuickBooks, which offers online payroll in addition to its three levels of desktop payroll. MYOB's inventory tracking is extremely flexible, allowing users to thoroughly customize each item and even going so far as to provide a tool for creating bundled packages. Peachtree is the only competitor with superior inventory tools. MYOB Premier Accounting is a quality system that could potentially surpass QuickBooks if it overhauls its online support. For now, however, QuickBooks is the better overall package in this same price range.

Peachtree by Sage Complete Accounting is on par with the competition in terms of accounting power; where it really stands out is in its ability to handle inventory. The biggest drawback of the system is its poor interface and usability. The software does have an excellent setup, sending the user through a series of wizards to fully tailor the product to the owner's business. Peachtree boasts the most in-depth transaction forms of any of its competitors in the class. It also includes online banking features, a critical element for most small business owners, comparable to those of most of its competitors. Peachtree also offers multiple levels of payroll support, second to only QuickBooks in number of payroll solutions. As mentioned before,

Peachtree truly excels at inventory – its software allows for the most thorough customization of items, including ten price levels, different costing methods, purchase orders, product history, and more. This product is as “close as anyone to providing enterprise-level inventory tools” (Murray and Yakal 2009).

QuickBooks Accounting Pro Edition is the best middle ground package available, providing a well-balanced mix of accounting functionality and user-friendliness. Its strengths include payroll, management overviews, one of the best interfaces available, and even marketing tools. QuickBooks' setup is sufficient although not as in-depth as Peachtree or MYOB, but its biggest weakness is clearly inventory control. QuickBooks' easy to use interface features “clean, well-organized screens” that facilitate tasks by compartmentalizing related tabs and fields that are automatically populated to speed up the process of filling out forms. Because of its extensive options – multiple do-it-yourself options as well as multiple outside payroll services – QuickBooks easily leads the competition in terms of payroll. Although QuickBooks' inventory tracking provides adequate basic functionality, it lags behind its competition due to a lack of “sophisticated” features offered in packages like Peachtree or MYOB. These features include item location and attributes, and inventory reports. QuickBooks also makes great use of its online resources, including web-advertising and access to a myriad of add-on applications (Stodghill 2006). As evidenced from this review, the ideal POS systems for small businesses must incorporate many of the aspects mentioned above.

Proposition 4: Cost, complexity, and a lack of customized solutions impede small businesses from implementing these solutions effectively.

Customer Relationship Management

CRM is a system that collects, integrates, and analyzes all customer-related data from different operating systems in departments within an enterprise. The implementation of a CRM system enables the business to optimize profitability, revenue, and customer satisfaction through the reorganization of customer segments, promotion of customer-satisfying behaviors, and evolution to customer-centric rather than product-centric business models. The purpose of CRM is to fully understand the customer in order to design marketing activities more efficiently. Furthermore, understanding the customer allows increased efficacy of a business' supply chain. It is especially important for small businesses, which often create stronger connections with their customers in comparison to larger firms (Shuting and Qiu 2008).

Customer retention

CRM attempts to improve a business' understanding of customer behavior and focus on how improved marketing techniques can allow for long-term profits even if this foregoes short-term goals. Rather than customer acquisition, which is the practice of constantly attracting new customers, the focus of improved marketing techniques has turned to customer retention, ensuring that loyal customers return to the store. A study by Rigby, Reichheld and Dawson of Bain & Company, Inc. explored the correlation between customer retention and profits and found a link between small increases in customer retention allowing significant advancement in profit. More specifically, the consultants found that an approximate five percent increase in customer retention consistently produced a 25-100% increase in profit (Rigby, Reichheld, and Dawson 2003). This is because the acquisition cost of new customers

is greater than the retention cost of maintaining customers. For instance, the Boston Consulting Group estimated that it costs \$6.80 to market to existing customers through the Web versus \$34 to gain a new Web customer (Chen and Popovich 2003). Satisfying customer needs can increase customer retention and customer loyalty, thereby improving market share and overall business position.

A customer-oriented marketing strategy is essential, and involves making integral decisions regarding pricing, customer segments, product quality and design, and advertising and promotion. All of these components are required to gain a competitive advantage in the market.

Building valuable relationships takes time and is not contingent upon investing in the latest piece of technology but on the quality of the relationship. According to Rigby et al. CRM software can help increase customer loyalty and track customer defection, retention, and satisfaction levels.

Researchers from *Services Marketing Quarterly* indicate that retailing success is dependent on understanding customer value and the ability to leverage customer relationships to yield maximum return. Surprisingly, researchers explain that all customers should not be treated equally and the key to successful management is understanding each customer's potential in giving back value to the firm (Clow and Cole 2004).

Expanding on the concept that not all customers are equal, researchers introduced the concept of "VIP" customers, or the top 20% bucket that are brand loyal and see the firm's brand as having a "high level of equity" (Clow and Cole 2004). The second tier of customers is "Repeaters," who display repeat purchase

behavior but may not be completely brand loyal. The next 30% of customers are “Occasionals,” who make irregular purchases with the store and should therefore be a focus for increasing repeat purchase behavior. “Deal Seekers” are the bottom 20%, are not brand loyal, and tend to purchase from any store that has deals.

Marketing strategies towards each group will vary. For example, the VIPs should be “known by name” and should receive a personal phone call, email, or card notifying them of new merchandise arrival, and free gifts for birthdays. Small business owners should have this information on a database with customer’s background, clothing sizes, clothing preferences, and maybe even personal interests. The financial advantage of the VIP and Repeater brackets is essential for marketers to develop programs that will enhance a firm's brand equity and increase customer loyalty. If a small business were to focus on these two brackets, especially the VIP, a CRM system will yield the highest return on investment possible by generating a pipeline with a customer who will guarantee a high level of profits to the firm (Clow and Cole 2004).

Four elements of CRM

CRM can be split into four parts: customer identification, customer attraction, customer retention, and customer development. All four dimensions focus on gaining a deeper understanding of the customer as mentioned before and to maximize customer value for the long term rather than short term (Ngai, Xiu, and Chau 2009).

Customer identification involves targeting the population that will have the greatest probability to be interested in a company and who will bring most value. Furthermore, it entails an analysis of which customers are being lost to competition,

how to get them back, and how to ensure their retention. Customer identification can be further split into creating a target customer analysis and customer segmentation. Target customer analysis determines the most profitable segments of customers by comparing customer characteristics. Customer segmentation makes a large customer base into small subdivisions by grouping together customers with similar characteristics.

Customer attraction involves direct marketing, such as direct mail or coupon distribution, which encourages customers to provide business to a company. Customer retention is accomplished through one-to-one marketing, loyalty programs, and managing customer complaints. Examples of one-to-one marketing are customer profiling, recommendation systems, and replenishment systems (which notify a customer when a product is restocked).

Finally, customer development includes a customer lifetime value analysis, up/cross selling and market basket analysis. The customer lifetime value analysis is a “prediction of the total net income a company can expect from a customer.” Up/cross selling analysis aims to increase the number of different services or products that one customer repeatedly purchases in the company. A market-basket analysis, as mentioned before, desires to “maximize customer transaction intensity and value” by focusing on increasing repeated behaviors (Ngai, Xiu, and Chau 2009).

Value of CRM

Scholars constantly debate the value of customer relationship management in improving business operations. With correct implementation, CRM can be a

constructive investment with measurable payback. Small business owners need a system that suits their needs and is easy to transition to and learn.

Small business owners tend to work in the front of a store, constantly interacting with customers. The lack of a formal marketing department leads small businesses towards social media tools because they are easily accessible, free, and simple to use. According to the New York Times, small businesses acquire more than half of their customers by word of mouth (Miller 2009).

CRM applications connect front office operations (e.g. sales, marketing, and customer service) with back office operations (e.g. financials, logistics, and human resources) in order to reach the customer. These methods include electronic marketing, direct mail, telemarketing, call centers and other forms of advertising. For the customer, CRM can offer customized service, a simpler shopping experience, and convenience for completing transactions (Chen and Popovich 2003). Customers begin to feel that they are saving time and money with more access to information and special treatment from the small business. CRM also allows standardized and stable service, increasing efficiency and reliability for customers. The rapid adoption of CRM applications can be associated with increased business competition for valued customers, the recognized benefits of customer retention, and technological advancements.

Many cases of CRM implementation do not effectively prove the ultimate value of the system. A stand-alone CRM application may not show benefits to the store performance if it is not combined with an inventory control management and other variables such as strong manager support for the system and intensive employee

training programs. Ineffective implementation of the CRM application may actually result in negative consequences such as damaging existing customer relationships (Karpinski 2004). In a study of the perceived advantages and disadvantages of CRM technology, some customers seemed to believe that the technology depersonalizes the relationship between store owners and customers (Richard, Thirkell, and Huff 2007). *Proposition 5: The integration of a CRM tool with the store's existing technology and operations will play a significant role in whether the CRM technology is successful or not.*

CRM features for small businesses

Gathering customer information and recording it in a database are essential functions of any CRM system. Managing a group of contacts related to one customer and editing their records simultaneously is particularly useful when dealing with more valuable customers who have numerous contacts. In terms of reporting, a CRM system should produce standardized reports that provide information on customers and prospects as well as sales leaders listed by sales representatives. Ideally, the entire system should enable the customization of CRM reports.

Effective analytical tools allow a CRM user to distinguish highly profitable and loyal customers and link them to the sales representative with the best sales lead conversion rate. Furthermore, CRM analytics allow a business owner to determine whether or not pursuing smaller customers would be worthwhile and profitable. CRM analytics must be adaptable to the number of customers and distribution channels under management. For example, with an extensive contact list, the ability to profile customers based on buying patterns and distribution channels is extremely helpful for

contact management. Moreover, an effective CRM workflow system will allow staff members to effectively handle sales leads within the framework of a complex sales process (Morochove 1999).

As the systematic review will further explain, several factors inhibit the implementation of technological systems in small businesses in general. Therefore, the success of CRM systems in small businesses is even more difficult to prove.

Chapter 3: Conceptual Framework

Technology Relationships in Small Businesses

The purpose of this conceptual framework is to describe how software tools such as those described in Chapter 2 can impact the performance of small retailers.

Figure 1 is a map of the relationships explored in this study.

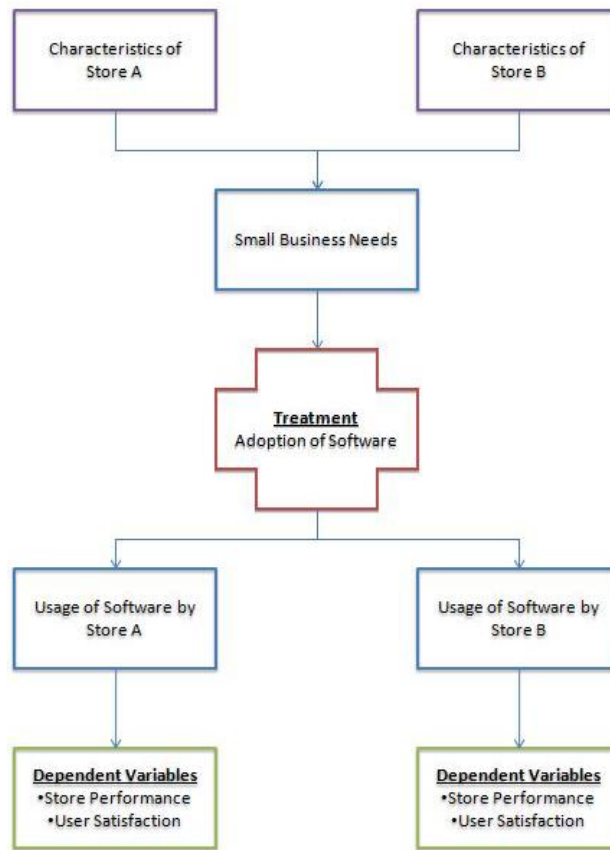


Figure 1: Technology Relationships in Small Businesses

Our two case study participants (who for confidentiality purposes will not be identified by specific names), the Smith Store and the Jewelry Store, have distinctive characteristics including industry, product offering, building location and size,

employee characteristics, store management attitudes, as well as business processes. In both the Smith Store and the Jewelry Store, neither was applying customer information in a useful way or effectively keeping track of inventory.

The literature review, as well as surveys and focus groups we conducted (described in Chapter 4), exposed CRM and inventory control as significant needs for small businesses. Therefore, software tailored to meet these needs could improve their performance. In order to test this, we designed a software application that specifically addressed the aforementioned small business needs. Each store was then administered the treatment: implementation of the software application.

Although the same software application will be adopted by both stores, it is unlikely that the stores would utilize the software in the same manner. Stores may differ in their data entry and security preferences.

Ideally, the adoption of the software application should have a beneficial impact on the dependent variable, store performance, in both quantitative and qualitative assessments. Store performance is the ability to meet a certain business goal, typically a financial one. For the treatment developed in this study, the level of sales is the most obvious performance metric. Since this software application assists in customer relationship and inventory control, performance can also be measured by customer retention, inventory turnover, and the number of stockouts.

Because it is difficult for small businesses to keep accurate metrics of quantitative variables, qualitative assessments will be used instead to gauge the software's impact on store performance. User satisfaction is determined by how comfortable employees felt using the software, how it compared to previous software

applications, and how much time it saved (or wasted). A software application that saves time or avoids frustration is still valuable, even if it does not immediately translate into quantitative results.

Discerning the impact of exogenous factors (e.g. state of the economy, seasonal trends, and consumer taste) on quantitative measures is very difficult. A qualitative analysis, on the other hand, can differentiate between exogenous factors and the effects of our treatment. Thus, a qualitative analysis that considers employees' impressions is expected to yield illustrative results.

Hypotheses

Our software application is designed for the user to improve customer relationship management and inventory control by way of a reminder system. Therefore, we expect to observe a positive correlation between adoption of a CRM and inventory control software tool and improved store performance. The results of a qualitative user survey are expected to reveal a positive employee and management perception of the application's effect on customer retention and inventory turnover. The users are also expected to report that the application improved the quality of their relationships with customers.

Chapter 4: Research Approach

Research Design

Our research employed a multiple case study approach. Two stores agreed to serve as case study participants. The Jewelry Store was located in Annapolis, MD. The Smith Store was a retail store selling university apparel and related items, located on-campus in College Park, MD. Each store met our criteria for a small retail store outlined in Chapter 1.

Each case study participant incorporated the use of a CRM and inventory control software system designed to meet specific small business needs. Store performance was analyzed before and after the introduction of the system. We gathered qualitative data on other factors of store performance. Store owners were asked how they used the software in the stores, which features they took advantage of, how their customers reacted, how easy the software was to use, and if the software saved any time or made processes more efficient.

The software employed in each case study business was developed using the product development process described by Dally (2000). This process involved a comprehensive review of the needs of small retail stores. We conducted a literature review and a survey of 62 small retail businesses to determine these needs. In-depth interviews narrowed down these needs into specific features intended to help small stores improve performance. We conducted a comparative analysis of existing software and found a gap in the market. We then selected the best platform for creating a product to fill this gap. Finally, we revised our requirements and worked with programmers to develop a prototype, which was tested in the case study stores.

In addition to the pre-test/post-test analysis, we also conducted a comparative case study analysis. We examined differences between the two stores and determined how these differences account for some of the variation in performance and in the way stores use the software. Figure 2 graphically gives an overview of the research process.

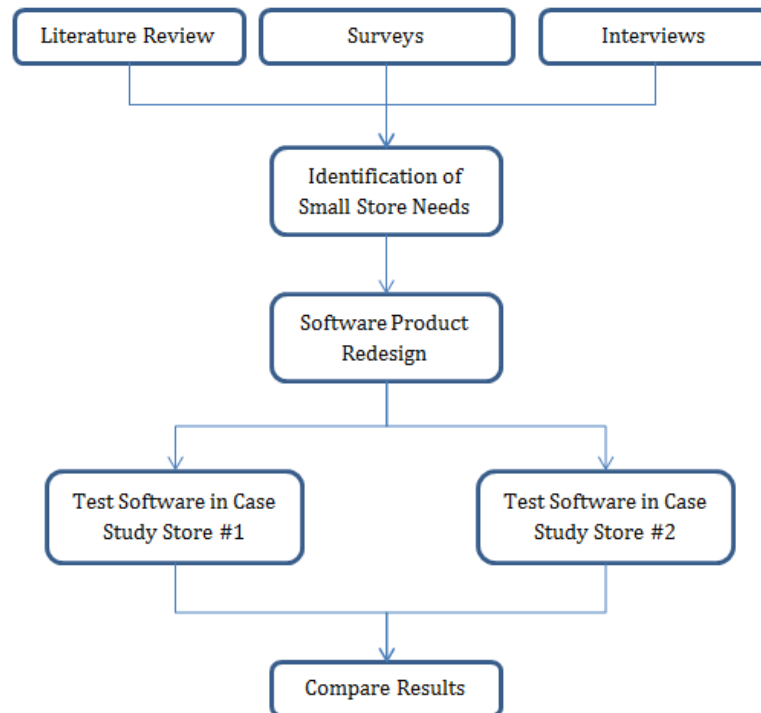


Figure 2: Methodology

Conducting in-depth case studies enabled us to explore unique dynamics within a store. The qualitative analysis of store performance allowed us to consider factors that metrics do not easily capture, such as the disposition of the store owners and employees acceptance of using new software.

The fact that there were only two case studies limited the extent to which this study could be generalized across all small retail stores. To mitigate this problem, we also conducted a systematic review of the small business literature that examined

similar studies on other businesses. We observed how our results compared to the findings of other researchers.

Developing the Test Application

Steps of the product development process

Dally's (2000) product development process consists of the following 9 steps

A description of how we followed each of these steps accompanies the list below:

1. *Identify the customer needs.* We surveyed 62 stores to identify pain points and areas of neglect.
2. *Establish the product specification.* We conducted in-depth interviews to pin down specific problems faced and solutions desired by a small store owner.
3. *Define alternative concepts for a design that meets the specification.* We surveyed the market for an existing product that met these specifications; not finding one, we considered modifying an existing design.
4. *Select the most suitable concept.* We selected an existing personal contact management system called Rolotrak and modified it for small business use.
5. *Design the subsystems and integrate them.* We revised each function we wanted the program to perform, reworking everything into a coherent application.
6. *Build and test a prototype and then improve it with modifications.* We worked with a programming team to reconstruct the application. The application was tested in two case study stores.
7. *Design and build the tooling for production.* This step involves commercializing the product, which was beyond the scope of our study.

8. *Produce and distribute the product.* Not applicable to our study.
9. *Track the product after release developing and awareness of its strengths and weaknesses.* Not applicable to our study.

Each step is described below in more detail.

Identify customer needs

Purpose of survey

We surveyed 62 small business owners to identify the areas they perceived as requiring the most improvement. The survey asked various questions about the types of systems that owners currently use to manage their business. These included questions about their systems' features, specifications, and cost. The survey also looked to capture store owners' preferences for improving their current system. The full survey is available in Appendix A.

Survey design

The survey consisted of mainly closed-ended questions, with a few open-ended ones. We asked questions structured as multiple choice, categorical, ordinal, and numerical responses.

Questions were written in two distinct formats, direct and inferential, to determine owners' perceived and actual needs, respectively. Direct questions asked participants explicitly about their opinions. For example, participants were asked to rate which features of the software needed the most improvement. Here, respondents were given an opportunity to state what areas they believed needed the most improvement in their store.

Inferential questions, on the other hand, asked the small business owners factual questions rather than opinions. For instance, participants were asked how they currently use their system. Here, rather than having the owners self-identify their needs, we utilized data on current practices to deduce the areas of the business needing improvement. This approach is useful in situations such as where a business owner still keeps track of inventory by hand and could be expected to state that upgrading inventory control was most important. However, if this same business owner also directly indicated that CRM needed the most improvement, then clearly a gap exists between user-perceived and researcher-inferred needs. If such a gap appeared in the results, this would indicate further research into store needs was required.

Store characteristics and performance

Questions in this section covered basic information, such as store name, type of store, the weekly number of customers, and the number of returning customers. They also covered the store owners' formal education in business.

We learned that a majority of our participants did not have an undergraduate degree in business and only took a few college classes. We expect that these business owners stand to significantly benefit from a product that would fill the gaps in their business knowledge in order to help their store run more efficiently.

Importance of system features

Participants were then asked to select whether their current retail management software is used for the checkout system, inventory control, customer relationship management, sales analysis, finance and accounting, or shipping methods. Our

literature review identified these six functions as distinct problem areas that could be improved with a software application.

This set of questions was intended to provide insight into which areas were most commonly used and which needed the most improvement. Participants ranked the features from one to six, with one needing the most improvement and six needing the least. The most common problem area was CRM followed by inventory control. We then asked questions that went into more detail about each of the six business areas.

Willingness to pay

Our final goal was to measure the participants' willingness to pay for a product that would exceed their expectations and requirements. A majority of owners (62%) noted that they would not be willing to pay anything for retail management software. The second highest response was that 18% of owners would be willing to pay \$100-500 for this software, which was about triple the response rate of all other options. The survey demonstrated that price plays a large role in small businesses' willingness to adopt technology.

Survey takeaways

As anticipated from the literature review, the responses to many of the survey questions identified CRM as an area where most retail management software may not adequately address users' needs. When asked which area of their business required the most improvement, a plurality of store owners chose CRM (Figure 3). This demonstrates a perceived need for development in CRM. In the question about the current use of their systems, only shipping methods and CRM were not widely

identified as features that owners use as part of their retail management software. Only 39% of respondents said they used their systems for CRM, compared to about 70% for sales analysis, inventory control, and checkout system. This demonstrates that CRM has potential for expansion in the market.

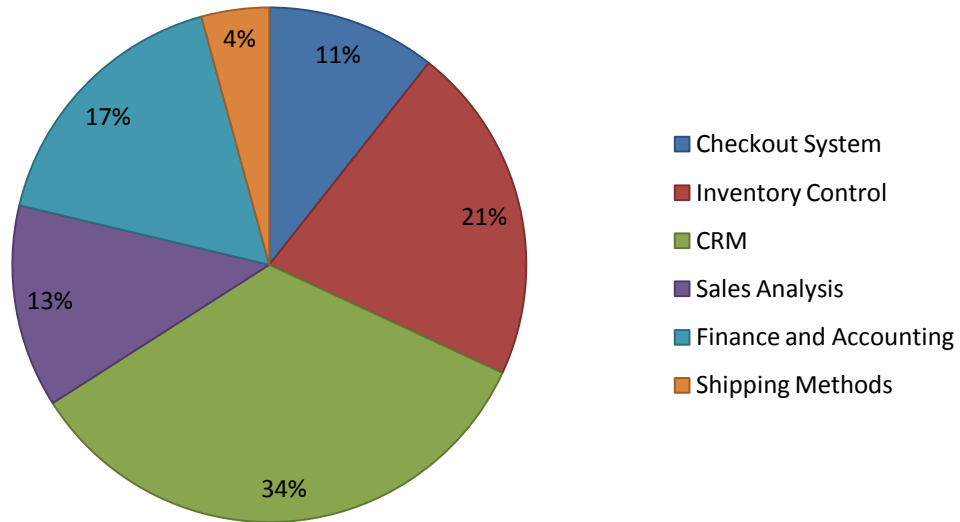


Figure 3: Business Areas in Need of Improvement

To follow up on the effectiveness of their current CRM systems, the survey asked about types of data the businesses recorded about their customers. Of the small businesses that did record information about their customers at the point of sale, most tended to record only name, email address, and street address. Only one in 20 small business owners used CRM software to stay in contact with their customers. About 20% of small businesses kept in touch with customers via mail, email, or phone calls. Thus, owners were interested in contacting their customers but were simply not using available technological resources to reach them.

The other area identified as a focus for further development was inventory control. Owners said that they would be most willing to pay for a system that addressed inventory control. This showed a verified desire for improvement to this area. A large majority of survey participants applied only a low level of technology in their stores. Results from the survey indicated that only 21% of owners used scanners to track inventory levels, while 89% still counted by hand. Owners also typically spent about 4 hours processing each incoming inventory shipment. This is a substantial amount of time with a lot of potential for improvement, especially considering the high number of small businesses that continue to count their inventory by hand.

Define product specifications

Several survey participants indicated that they were willing to be part of in-depth discussions about their use of software. We used these in-depth interviews to learn about specific software features that small retail store owners liked or disliked. While the surveys reached a much larger sample of small store owners, they focused on broader questions. We used the findings of the surveys to guide our discussions. From the surveys and the interviews, we were able to come up with specifications for a product that would fulfill the needs of small retail stores. We conducted two in-depth interview sessions: one in Rockville, MD, and the other in Annapolis, MD.

Interview #1

The first interview was conducted on April 12, 2010, in Rockville, Maryland. We spoke with three participating business owners. Participant A was a jewelry store owner, and Participant B was a bird supply store owner; both businesses were located

in Ellicott City, Maryland. Participant C was the manager of a foreign art and gift store based in Rockville, Maryland. He also had prior experience from owning a greeting card franchise for 18 years.

When asked whether they thought their needs as small retailers were neglected, Participant A expressed his dissatisfaction with how small businesses were defined by software vendors. In general, all businesses with fewer than 500 employees are lumped together under the definition of a small business. However, his retail business was at the bottom of this overly broad scale, and many software programs do not match his needs. Participant C concurred, saying that software targeted towards small businesses needed to better fit their budget and be more customizable.

We then began to discuss the technology each of them used in their stores. Each had a system currently in place, but Participant A was unique in that he had always used custom-built software. Both he and Participant C were satisfied with their current technology. Participant B felt that his technology was decent, but he desired something better. Additional features that he wanted were improved sales and trend analysis, enhanced inventory control capability, and different levels of program access for individual users. He emphasized his desire for enhanced inventory control capability, saying that he wanted to be alerted when a reorder point was reached for a given item. He also wanted to be able to set his own reorder point. Participant C added that he would like payroll management to be a part of his system. On the other hand, Participant A felt that his current system was inefficient at highlighting his best selling products, calculating return on investment (ROI) on individual products, and

forecasting and tracking a single promotion. Participant A also wanted his system to track interactions with customers.

In terms of CRM, Participant B collected email addresses from his customers and kept track of what they bought so that he could stay in touch and make suggestions for future purchases. Participant C also collected customer information, but he focused on direct mail advertisements. Participant A collected as much personal information as possible, including the customer's full name, email and mailing addresses, phone numbers, and their reason for buying. By analyzing this information, he could target specific clients with promotional mailings tailored to them, such as a birthday discount. Participants B and C did not currently use any CRM software, but Participant A revealed that he had a multi-tiered system that included Constant Contact, a web-based email marketing tool.

Not surprisingly, Participant B expressed that he would be reluctant to implement new technology in his business unless it was proven to effectively deliver on its promises and provide room for growth by providing the necessary CRM, inventory, and sales data. For Participant C, the new technology needed to give him a positive ROI in order to earn his trust. He was also unwilling to use unproven technology. Interestingly, Participant A revealed that he was much more willing to adopt new technology when he first began his business. The only reason he would switch from his current system now would be if his business outgrew the current system's capabilities.

Although all three store owners were well aware of the benefits of CRM, they suggested that perhaps other small businesses did not record customer information

due to a lack of need, education, and/or resources. Participant A added that small businesses in operation for many years had established practices and were probably unwilling to change them or incorporate new technology that could improve their business. In terms of their own businesses, they felt that CRM was a critical and beneficial component. However, as Participant A was quick to point out, the extent and quality of customer relationships largely depended on the size of the business and what the owner did with the customer information available to him.

When we presented some possible software features that might improve store performance, Participant B appreciated the fact that these would allow for custom personalization of emails without sacrificing the ability to simultaneously send mass emails. Participant A added that new software should record the method by which each customer prefers to be contacted (personal communication, April 12, 2010).

Interview #2

The second interview was conducted on April 29, 2010, in Annapolis, Maryland. Although we had scheduled three participants, only one attended.

Our interviewee was from Annapolis, Maryland, and started her small business over 17 years ago. Her two store locations specialized in silver jewelry and other items, such as paintings, pottery, and mirrors from foreign countries.

Our interview began with her views about small businesses in general. She felt that her needs were neglected as a small business owner. For example, she felt that she did not have “any importance within the company” that created and sold her its software program. This feeling of neglect was a recurring theme in our findings.

After this discussion, the conversation turned to the technology currently used in her store. Our interviewee was dissatisfied with her current technology and software. For the past 17 years, she had been using a system called Retail Pro for tracking sales, inventory, and customer data. Retail Pro maintains a basic customer profile that contains information including name, address, and phone number. Based on this information, the store would send out emails to customers using the Constant Contact marketing software.

Most of her dissatisfaction with technology stemmed from the Retail Pro system. Complaints with Retail Pro included numerous glitches and that it was not user-friendly. Often, she could not display the data that she wanted or see it in a format that was useful. For example, when trying to determine the top vendors by sales, she was only able to display the top seven vendors. She also seemed dissatisfied with Retail Pro's level of customer support. In addition, when she turned to outside help, many of the people that she contacted were unfamiliar with the system. Her goal had been to replace this system, but she was unable because of the economic downturn.

She also had issues with Constant Contact, which she used for CRM. She did not like its visuals and thought it limited creativity with the artistic design of the emails. Despite these limitations, she described it as a "good system" and felt that it added value to her business. Based on how she described her two software systems, it appeared that technology was a major pain point for her. She acknowledged her own limitations in taking advantage of the software, citing her age as an obstacle to using it effectively.

Overall, our interviewee felt that the emails she sent to customers were effective and helped increase her sales. However, she still strongly felt that she had a large number of “private customers that [didn’t] want to be bombarded with emails.” Furthermore, in her own experience “it [bothered her] every other day to open up [her email] and have somebody marketing [to her].” Based on her personal opinion and her customer base, she tried to only send one email per month unless there were special circumstances. In addition, one of her store locations tended to cater to tourists and people from out of town. Because this type of customer is less likely to return to the area and her store, it limited the effectiveness of sending emails to them.

Even though her email marketing seemed to be effective, our interviewee had a number of concerns about her store and how employees kept track of her customer data. She said, “I think it’s just so hard to keep track of. If you’re going to use your customer information, you have to be looking at it constantly. I have a lot of different customers. We have new customers every single day. It’s a lot of work!” Her store’s technology did not appear to ease this burden. Given how long it took to input customer information while entering a sale, her employees often had customers write down their information instead.

Another of our interviewee’s major problems was that some of her employees were not committed to following up with customers. She described a scenario where an employee sold \$500 worth of jewelry without asking for the customer’s email, and she had to step in and do it. She felt that only one or two of her salespeople made the effort to follow up with customers. This failure was a significant issue for her. She said she has tried many ways to stimulate employee attention and focus in this area,

although so far she has been unsuccessful. She was disappointed in the lack of attention that her employees had and felt that they were “dropping the ball.” Some employees mentioned reaching out to customers in their previous jobs but failed to do so once they begin working for this store. It was felt that this resistance to recording customer information represents a time constraint, as most of her employees would rather finish the sale and get back on the sales floor. She then mentioned the possibility of adding a system that would either prompt an employee to add customer information or give reminders to contact customers based on their past sales history.

When we mentioned that other interviewees had expressed similar desires and that we were considering developing a program to address them, she became very enthusiastic about it. She felt that the potential system would serve a real need, especially given the fact that she was already looking for new software. Furthermore, she stated she would be willing to pay at least \$500 for such a system. Without any hesitation, she volunteered to have her store serve as a case study for us, where we could implement and test any new software. (personal communication, April 29, 2010)

Interview takeaways and specific product features

The in-depth interviews confirmed the findings of our earlier surveys. The store owners we spoke to were especially concerned about CRM. There was a consensus that users must be able to efficiently enter a wide variety of information about customers, and the store owner must be able to recall and use this information easily. Multiple store owners requested a simple way to see who their leading customers were, and another participant wanted to be able to record a customer’s

preferred method of contact. The store owners all had different marketing strategies that required different kinds of information from their customers. From this, we concluded that entering customer information must not only be easy, but it also must be flexible.

The store owners wanted software that would keep track of how frequently and in what ways store employees were keeping in touch with customers. They believed this would facilitate a stronger customer relationship.

In addition to easily recording and displaying customer information, the store owners we interviewed also wanted a software system that would do a better job of displaying key inventory information. While most basic POS systems record items sold and sales in dollars, the store owners wanted a straightforward way to display which items were driving their sales.

We believed that a reminder system could address the store owners' needs for both enhanced CRM and inventory control. To better keep in touch with customers, store owners could use a simple software tool that would remind them when they need to get in touch with customers for various reasons. To address the issue of improving inventory control, a reminder system would track inventory levels and send owners messages to remind them about things like placing orders. The feature would also connect vendors to the inventory tracking for timely reordering.

The store owners agreed that while their software could often perform complex tasks and detailed analysis, what it lacked was a way to assist in the simple day-to-day activities that fill up a store owner's day. Small business owners play many different roles within their stores and are often very busy. For this reason, an

ideal software system would prompt the business owner to do basic tasks like reorder inventory before it sells out.

The problem for these store owners was not the absence of advanced software. The owners were all aware of the existence of advanced CRM and inventory control software systems, even if they were unfamiliar with unique features. However, the owners all shared a belief that these software systems either failed to address their specific needs or were too difficult to master. The interviewees' existing software did not do enough to help them perform basic tasks simply and efficiently.

Discussion of alternative concepts

Before we proceeded to develop a custom system, it was necessary to make sure that there was not an existing product that addressed the needs identified in the surveys and interviews. While there are extremely robust CRM and inventory control software systems, these are typically too expensive and involved for small retailers. The most prevalent small business software tool is Intuit's QuickBooks, discussed in Chapter 2. While QuickBooks provides some definite benefits, it does not address all of the needs our surveys and interviews revealed.

An examination of existing CRM software shows that, in spite of a large number of competing tools, there are still gaps in the services that these tools provide. We specifically examined CRM systems because our survey respondents cited this as their number one area of need. Many did not have specialized CRM software despite the vast array of different options available.

Appendix E lists the top 25 small business CRM software tools as rated by Business-Software.com. While not a comprehensive list, it does include the most

commonly used systems and provides a good summary of tools currently available. Surveying this list demonstrates the challenges a small business owner faces when selecting appropriate CRM software. The applications with the most features were understandably the most expensive. Many tools are simply too expensive for independent retailers to afford, but there were also several tools with relatively low prices. Zoho, for example, is free if the store has fewer than three different users. Even for four or more users, Zoho only costs \$12 per month, which is well within most stores' budgets. Clearly, price alone does not account for the fact that small stores have unmet CRM needs.

While all of the software systems considered were taken from a list of the best CRM software programs for small businesses, many targeted larger businesses instead. For instance, NetSuite and Microsoft Dynamic were geared more towards medium-sized enterprises. Even software vendors who claim to target small businesses assume their customers have sales and capabilities beyond those found in many independent retailers.

Few of the software systems examined had a dedicated inventory control feature. This is not particularly surprising, since the list examined only contains CRM software. Compared to the abundance of CRM tools, there are relatively few inventory control software applications designed for small retailers. Most POS systems, such as those discussed in Chapter 2, perform basic inventory control functions. Small retailers need to track both customers and inventory with one simple tool that is not complicated or loaded with unnecessary features.

No existing software had a simple and obvious customer and inventory reminder system. Many systems had certain aspects of a reminder feature. For example, Salesforce reminds users to send a thank you note to a customer after a sale, but these reminders are often difficult to view. Of the software examined, none focused on presenting both customer and inventory reminders. A simple CRM and inventory control reminder tool, which would assist small retailers in the day-to-day operations of their store, was a novel concept not present in existing software.

Some software tools were only issued online, while some were sold as a CD. In many cases, users had the option of either buying the CD or buying an online account. There are far more tools that are offered online, but some of the highest-rated tools, like Maximizer, are hardcopy.

While our interviews led us to believe that most small store owners are more comfortable with hardcopy software, the online versions had many advantages. Users can access them anywhere, and they can be constantly updated. This means that programmers can tweak features and fix bugs without having to re-issue CDs to all users. If the product is online, the developer does not incur any costs involved with manufacturing and distributing an actual CD. This makes production of the product faster and cheaper. The biggest advantage of hardcopy software is security. However, from the perspective of a developer, the benefits of online software far outweigh the potential risks.

Rolotrak analysis

Selecting the most suitable concept: Rolotrak

Based on the needs analysis and comparison of existing software solutions, we identified a gap in the market for simple CRM and inventory control software. We viewed this gap in the market as an opportunity to develop and introduce a new software tool. Since we lacked the resources to develop a practical small retail tool ourselves, we set out to find an existing product that could be modified.

We recognized that our technological system should be able to translate the personal relationships small retailers have with repeat customers to the online space. Therefore, we looked into personal contact management systems. We decided to modify an existing web-based application called Rolotrak, which was created by a personal contact of the team. The system helped individual users become better networkers by reminding them at a certain frequency to reach out to contacts with whom they were losing touch. We saw a parallel between this system and what we wanted to create for small retailers, and therefore received permission from the Rolotrak founders to modify the program.

The system allowed users to upload the names and email addresses of everyone in the user's "network." This "network" was made up of entries in email account contact lists or other online networking sites such as LinkedIn, which could be imported directly into Rolotrak. Users could sort their network into various groups.

Although designed for individuals instead of businesses, Rolotrak already contained many of the features we identified. It allowed users to easily enter information about a large number of individuals, after which users were reminded to

keep in touch with those individuals. In this way, Rolotrak worked as a very simple CRM system for an individual trying to manage friends and associates, as opposed to a business trying to manage customers.

Since it was designed for busy individuals with numerous professional contacts to keep track of, Rolotrak was built to be easy to understand and simple to use. This was one of Rolotrak's greatest strengths, and one of the key features that made Rolotrak a good fit to be adapted for use in a small retail store environment. Often, small business owners do not have the time to invest in learning how to operate more advanced software system; thus simplicity and user-friendliness are essential.

Existing features of Rolotrak

Users had the ability to specify how often they would like to be reminded to stay in touch with contacts. On Rolotrak's home page, the software displayed a list of people in the network that users should contact. This list was generated based on the contact frequency set by users, as well as how long it had been since the person was last contacted. From this list, users could click one link to email the contact immediately, or click on another link to ignore the contact.

Rolotrak also allowed users to enter notes or reminders for a given contact. Users could quickly add these through a "QuickAdd" feature, which allowed users to enter a contact's name and a message. That message was then linked with the customer's name. A calendar function displayed all upcoming reminders.

A messaging function allowed users to send email messages to multiple contacts. The messaging center had a template feature that allowed users to create

templates of commonly used messages. These templates could then be quickly customized, expediting sending personal emails to multiple recipients. This tool could be extremely useful for small retailers, who pride themselves on their personal connection to customers. Our surveys and interviews revealed that most small businesses use email to keep in touch with customers. The fact that Rolotrak's contact system is built around an email application made it ideal for use in small retail stores.

The final unique characteristic of Rolotrak is its "RoloTracker." The RoloTracker score told users how well they stayed in touch with their network. The results were displayed on a gauge and listed as a percentage. By displaying reminder messages and presenting results as a memorable metric, Rolotrak encouraged users to better keep in touch with people in their network. The same technological tools could also help small business owners keep track of their inventory levels.

Modifications to Rolotrak

To adapt Rolotrak for small businesses applications, we introduced several modifications. Several features had to be added and several existing features had to be altered. Each of these could be thought of as a subsystem of the product. Once each subsystem was designed, we fit them all together into a single coherent user interface. These modifications are described below.

Because Rolotrak was not originally designed as a business tool, several changes were needed to its alter the appearance and content to fit a business context. The "contact" list became the "customer" list. We also created a vendor database, which is separate from the list of customers but contains similar contact information. In both cases, specific data fields useful for small business owners were added. For

example, a field to record the customer's preferred method of contact was added. Instead of being displayed by name or email, as in the original version of Rolotrak, customers are listed by "Rank," where the rank is based on the amount of revenue brought in by that customer. By having the "Rank" feature, small business owners can be made aware of their most valuable customers. According to findings in the literature review, these customers should receive specialized attention. Users can sort the ranked list of customers in ascending or descending order by first name, last name, rank or revenue.

The vendor list organizes data on all of the small business' suppliers. Users can sort vendor information by the vendor name, point of contact, phone number, city, and state. It was also necessary to create a list of items held in the retail store's inventory. The inventory list organizes data on the item name, item number, vendor, unit price, quantity contained in the inventory, refill point, and store location.

Although the customer, vendor, and inventory lists all contain unique information, they are similar in appearance and navigation, which we believed would make the system easier for a small business owner to use. Each inventory item is associated with vendors contained in the vendor list. Whenever a customer makes a purchase, that customer is then linked with that item. Details about a specific customer's purchase history are contained in a separate list unique to that customer.

We created a page called "Communication History," structured similar to the "Purchase History" page. Whenever users call a customer, send an email, send a message through traditional mail, or give a customer a promotional item, they can record it on the "Communication History" page. This page displays an entry each

time the customer is contacted as well as the total number of times contacted. Users can also enter notes about each communication with the customer.

To record whenever a customer makes a purchase or a return, Rolotrak had to be modified to include a transaction feature. The transaction feature allows users to enter the date, time, store, customer, items, quantities of each item, and price of a purchase or exchange. While the price is calculated automatically, users can override this function and make exceptions to listed prices. When a transaction is recorded, that event is automatically added to the Purchase History for that customer. When a sale occurs, the inventory quantity is automatically decreased by the correct number for every item sold. When a return occurs, the inventory quantity is automatically increased by the number of each item returned.

The calendar function was retained so that users can enter events for specific customers using the “Reminder QuickAdd” function, just as in the original version of Rolotrak. The same function can be used to add events for inventory items and vendors as well. Notes can be added for customer, inventory items, and vendors using the “Notes QuickAdd” function.

Users can also add a transaction from the homepage without having to enter the “Transaction” page of the website. A “Transaction QuickAdd” allows users to enter the store, customer, items, and quantities of each item. The purchase history and inventory levels are then adjusted automatically. Users can add a customer through a “Customer QuickAdd” tool as well. This makes data entry and record keeping faster and easier for the store owner.

The reminder feature sets this software apart from other tools available to businesses. For every customer, users are prompted: “If a customer does not make a purchase for ___ weeks/months/years, remind me to contact them.” Users then enter a number and select the units (weeks, months, or years). If the customer makes a purchase on a certain date and the specified amount of time elapses without another purchase, a reminder will be generated and presented to the user. The system’s homepage contains a box of “Customer Reminders” that displays all of these reminders. The customer reminders are expected to help the store owner keep track of which customers are returning and which ones are not.

Likewise, for every inventory item, users are prompted to enter a “Refill Interval,” which is the length of time that the store owner expects the customer to take to consume the product. Thus, once the refill interval passes, the owner would expect the customer to have to come back to the store to purchase more of the item. Obviously, this interval will vary for different products. For some durable goods, the interval could extend to a decade. For consumables, however, customers can be expected to make purchases with some degree of regularity. Once a customer purchases the product, if the refill interval passes without the customer buying the same item again, a reminder appears under “Customer Reminders.” This is an alternate way to ensure that the store owner keeps in touch with customers and encourages them to return to the store for repeat sales.

The system’s homepage also has a section dedicated to “Inventory Reminders.” Whenever an item reaches its reorder point, the system generates a

reminder to prompt the users to order more of that item. If the item completely runs out, the reminder message indicates this as well.

When an item needs to be reordered, users can click on the item in the inventory and go to a page to record placed orders. Users can enter vendor information, the expected arrival date of the item, and any other unique notes about the order. When the expected arrival date occurs, a message is generated in the “Inventory Reminders” section of the homepage, telling users to expect a shipment. These inventory reminders prompt users when to take specific actions and help small business owners to better manage the store’s inventory.

For each customer and inventory reminder, a user has three options: delete the reminder with no action; “snooze” the reminder, which makes the message disappear and then reappear twenty-four hours later; or perform an action specific to the message generated. For a customer reminder, this third action allows users to contact the customer by taking them to the messaging page. For an inventory item, the third action takes users to the “Record Placed Orders” page, prompting users to get in touch with the vendor to order more of the item. When users follow the “Customer Reminder” prompt to contact a customer, users are taken to the messaging page. No material changes were made to the original Rolotrak messaging page.

Since small stores often collect very diverse data, it is important to create software that provides owners a lot of flexibility. The “My Settings” page allows users to add different fields to the customer, inventory, vendor, and transaction lists. This allows small business owners to collect different kinds of information unique to their store. Users can also add a new store location on the “My Settings” page.

Inventory and transactions are linked to a specific store, so small business owners with multiple locations can keep track of multiple stores using a single software account.

Interviews with store owners and findings in the literature provided mixed results regarding small business owners' willingness to use an online application to maintain information about their store records. In spite of this, trends suggest that the prominence of online software applications will only continue to grow in the future. In addition, programming an online solution was much more practical and feasible for our team for the reasons outlined in "Discussion of alternative concepts." In addition, Rolotrak was originally designed as an online platform, so it made sense to maintain this aspect as we modified the product.

Building and testing the prototype

Software development with Mango Media

We worked with Mango Media, Inc., the company that built the original Rolotrak, to program our modifications. Mango Media was an obvious choice because of its programmers' familiarity with Rolotrak source code. Mango Media specializes in rapid website design and software development.

Due to cost and time constraints, Mango Media was unable to program all of our requested modifications. The core components were completed, however. Screenshots of the modified application are included in Appendix G.

Since the reminder system forms the core of our application and sets it apart from others, it was the focus of the programming effort. It was also essential to create

the customer, inventory, and vendor lists as well as the transactions feature so users could enter data and keep their databases current.

Features that were not essential to the application's core components had to be left on the cutting room floor. Although we created specifications for many of these features, it was ultimately infeasible to incorporate them into the modified program. For reference, several of these features are described below.

We intended to update Rolotrak's search feature, allowing users to fine tune a search. Users would have been able to sort through the customer, inventory, vendor, or transaction list.

We intended to expand Rolotrak's "Group" function by creating an "AutoGroups" feature that would automatically place customers into groups. For example, customers that purchased similar items would have been automatically grouped together and the top ten percent of customers by revenue would have been placed in the "Top Customers" group.

We intended to retain the RoloTracker feature, although the wording and algorithm used to calculate the score both would have had to be altered. The new RoloTracker would have rated how well users kept in touch with each customer.

We intended to create an "Analyze" feature would give users a great deal of flexibility in displaying information about the store's performance. The default display would graphically present the store's sales for the current year up to the present day. Users could then refine this graphical display to show revenue or number of sales for any combination of customer and items over any time period.

We believe that adding these features would have made the application even more useful for small businesses. Mango Media did successfully program the core element of our modified Rolotrak, the reminder system.

Case Studies

We pilot tested the modified Rolotrak software in the Smith Store and the Jewelry Store.

Case study 1: Smith Store

The Smith Store, located in the Robert H. Smith School of Business at the University of Maryland, was the first case study store. It is a small retail store run by undergraduate students and overseen by a mentor company called On Sale Promos (OSP), which supervises operations and handles product orders. The store sells gifts and apparel branded with the Robert H. Smith School of Business logo. Prior to our case study, sales, inventory, and accounting data had only been tracked by hand and using Microsoft Excel. The store is open on weekdays for students, faculty, staff, and alumni to walk in and purchase items.

MBA students created the store in the early 2000s through the Dingman Center of Entrepreneurship. The store was passed down to a student organization known as the Maryland Undergraduate Society of Entrepreneurs. Each year, new members of this club are brought on to learn how to run a business. While the Smith Store has mainly been a learning experience for aspiring entrepreneurs rather than a revenue generator for the Dingman Center, it has still brought in considerable revenues, netting around \$85,000 annually. Initially, the store was tucked away in a wing on the third floor. Recently, the store was moved to a more prominent, visible

location on the first floor of the building. Because of its location, the undergraduate student community has become more aware of the store's existence, with 85% of undergraduate students in a recent survey reporting that they are aware of the store's existence (Sathyamoorthy, 2010). Although product selection is limited and the store is relatively small, it is the right size for the amount of inventory they offer.

The store has two divisions: the retail side and the bulk order side. On the retail side, products sold are chosen by the Smith Store team, and generally cater to the school's customer base. Student clubs and organizations are regular customers, as they often purchase gifts for speakers or visitors that come to the Smith school.

Retail inventory is classified into two categories: "Executive Gifts" and "Apparel." Executive Gifts include coffee mugs, water bottles, travel mugs, USB drives, business card holders, padfolios, and other business-related items. Apparel consists of polo shirts, baseball caps, t-shirts, and a large amount of Under Armour products, as Under Armour's founder and CEO is a Robert H. Smith School of Business alumnus. Smith Store employees call the vendor directly to order products. Employees order inventory through OSP in order to leverage the low prices OSP receives due to its size and vendor relationships. The Smith Store does not have an immediate need to maintain a direct relationship with the vendor, since OSP acts as a middleman. Once the Smith Store receives the product shipment, the store decides on a price and puts the item on sale in the store.

Bulk orders are mass customizable orders that allow customers to put any logo they want on the product. Many customers come from outside of the Business School. Greek Life organizations, for instance, are a big client for t-shirt orders. Faculty and

staff are more prone to ordering from the bulk side, rather than simply purchasing from the retail side, because they usually need a large quantity of one product. Customers prefer the student run business over an independent contractor because revenue is funneled back into the school.

The process for ordering bulk side inventory is similar to the retail side, except there is a greater emphasis on client relationships. The Smith Store will work with a client to work out all the details of an order, such as price, quantity, colors, logo, and cost of the order. The final stage in the process is to calculate a reasonable but profitable price to charge the client, typically with a 30-40% markup. Bulk sales are the biggest source of revenue for the Smith Store, but the retail side is more well-known among students and visitors.

Michael Holzheimer, who managed the store from July 2007 to May 2009, revealed several operational issues with the store. For instance, the students relied heavily on the business school's accounting department to take care of most accounting issues, and the only role the students played in the process was to deliver credit card receipts and cash to the accounting department. The students had no independence in dealing with the inflow or outflow of cash, so keeping track of the operation was difficult. (personal communication, April 5, 2010).

Another concern related to recordkeeping was the lack of technology used. Employees relied on handwritten records, which created a significant risk of human error. The Smith Store also relied on an Excel spreadsheet to keep track of costs and prices, as well as inventory. The spreadsheet was manually updated and was also a potential source of error. The most accurate records were online sales, since the store

has a MyShop-a-fly.com account, which keeps track of all online orders automatically as they are placed. The only manual entries the employees have to make are to click the “Complete” button when they send out the order to the customer.

Awareness of inventory stockouts and shrinkage has also been a major problem. Inventory was counted manually. If inventory was not counted on a regular basis, products were not reordered on time or certain items often ran out without employees noticing until a customer asked for it. This problem was somewhat alleviated when the store moved and gained a separate storage room, making restocking much easier. However, a regular count of inventory is necessary, or else employees would easily lose track of how many t-shirts or mugs remained. The Smith Store often encountered these problems when professors or student groups bought large quantities of items at once to give out to speakers, classes, or other events. These sales were never easy to anticipate, since they were typically sporadic and last minute. When these sales did occur, however, the store ran out of items and the employees needed to reorder, which took up to two or three weeks to restock. This lapse in time would cause a decline in sales, especially if the stocked-out item was a big seller.

Although CRM seemed to be satisfactory on the bulk order side of the store, this was not the case for the retail side. Maintaining relations with retail customers was a struggle, since employees had no way of keeping track of sales or keeping in touch with customers who came into the store and shopped once or twice. The Smith Store only recorded customer information from online sales. In an effort to maintain

customer loyalty, the store considered using Salesforce, an online CRM tool. The barriers of teaching employees how to use the new software and switching over records were considered too daunting and that initiative was abandoned.

Market analysis

The Smith Store can be considered a small specialty retailer. This industry is defined as operating in specialized lines of goods, such as collector's items, art supplies, religious merchandise, etc. (Shim, 2011). The industry classification excludes mass merchandisers, department stores, warehouse clubs, superstores, and other large retailers.

The IBISWorld Industry Report from February 2011 describes the fragmented nature of the small retail industry segment, as it is driven by changes in consumer behavior and income rather than product trends. Since the 2008 recession, consumers have cut back on purchases, and as a result, the specialized goods industry is declining (Shim, 2011). Yet the report states that competition from larger businesses increasingly hurts the small specialty store industry. The Smith Store is partially shielded from this competition because it has an exclusive license to use the Robert H. Smith School of Business brand and logo. Some competition still exists from other retailers using the "Terps" or University of Maryland brand name, which can be a substitute for the Robert H. Smith brand.

Case study 2: Jewelry Store

Store background

Our second case study was a Jewelry Store, whose owner was also the lone participant in the second in-depth interview that we conducted. Her business focuses

on silver jewelry products, both domestic and imported. Additionally, her store sells housewares, such as pottery, mirrors, and dining platters.

This business has two locations: one in downtown Annapolis on the waterfront, and a second location in a nearby shopping mall. The downtown location has a much longer history, having been open for over 17 years. By comparison, the mall location is part of a much more recent expansion, having opened about two years ago.

As mentioned earlier in our discussion of the interviews, these two stores serve very different types of clientele. The mall location has many more regular customers. The downtown waterfront location caters more to shoppers from out of town, tourists, and what the owner described as people who do not like to go to malls. This difference has influenced the way store employees conduct their business, such as CRM practices.

Market analysis

The retail jewelry industry had over 60,000 businesses in 2010 according to IBISWorld. The industry made \$28.5 billion in revenue, \$3.0 billion in profit. From 2005 to 2010, industry growth declined by 3% but is expected to grow 2.2% from 2010 to 2015. The Mid-Atlantic region, which includes our case study participant's market, covers 19% of all jewelry stores in the United States (Jane-Derby, 2010).

While the case study store is a unique business that sells housewares in addition to jewelry, the retail experience is very similar to that of the jewelry stores detailed in IBISWorld. These stores reach similar customers and sell many of the

same kind of products. Therefore, factors that affect the overall jewelry industry also impact the case study store (Jane-Derby, 2010).

Beginning in 2009, the recession caused an overall decline in retail discretionary spending. The industry is extremely sensitive to the economic climate particularly during holidays in which jewelry purchases are most common. For example, revenue for new jewelry sales declined 4.5% in 2009. The impact of the recession will cause households to purchase cheaper jewelry, causing a decrease in revenue for the industry (Jane-Derby, 2010). The credit crunch also hurt the jewelry market because shoppers were no longer able to use credit to make purchases.

Furthermore, increasing competition from department stores, “mega stores” like Wal-Mart, and the online vendors is causing price competitiveness and negatively impacting profitability of smaller jewelry retailers. The traditional jewelry store is finding it difficult to maintain its market share while consumers prefer less costly options during a recession.

Larger jewelry stores have been able to increase efficiency, however, by increasing the use of computerized inventory systems that assist retailers in tracking sales. Improved sales analysis and inventory control will greatly benefit for small retail jewelers, where inventory purchasing costs account for over 60% of a firm’s expenses. Although adopting a technological solution can be expensive, finding one that will appropriately suit the store owners’ needs may help maintain competitiveness against the big businesses capturing more market share. Furthermore, the growth of e-commerce in the jewelry market provides both a challenge and an

opportunity for small private jewelers. Online sales make up 17% of the total jewelry industry sales (Jane-Derby, 2010).

New store growth has been declining since 2007 and smaller stores have been acquired by larger retail competition. Although technological innovation is low, advances include the introduction of online sales and catalogs.

Case study implementation

Both the Smith Store and the Jewelry Store began using our Rolotrak software within a week of each other in October 2010. The case study continued uninterrupted through late November 2010.

At the start of the case study, we met with management at the two stores to explain the software and answer any remaining questions. A pre-test survey was administered to gauge what kind of software the stores used before adopting Rolotrak, how they used their current software, how satisfied they were with their current software, and what data they collected.

Both stores were provided a user guide, explaining the application's features more fully. We also made sure the store managers had team contact information, so they could contact us at any time. Employees were encouraged to use Rolotrak frequently and to contact us with any questions or comments.

At the Smith Store, the point of contact was the student manager. At the Jewelry Store, the point of contact was the manager of the downtown store, who had considerably more interaction with the store's POS system than the store owner. The owner of the Jewelry Store decided to use our software only in the downtown store, rather than in both store locations.

Once the case study was underway, we met with the point of contact or another designated employee once a week. We collected sales and inventory data for that week, assisted with entering data into Rolotrak when requested, and answered any questions. We intended to also collect customer data; however, neither store recorded sufficient customer information in a usable format. The different ways in which these stores collected and used customer and inventory data will be discussed in Chapter 5.

At the conclusion of the case study, store personnel filled out post-test surveys, which assessed software use after adopting Rolotrak. In-depth interviews were also conducted to gain deeper qualitative insights into the store managers' views towards software use in their stores. At the Jewelry Store, the store owner was also interviewed.

Chapter 5: Analysis of Findings

Pre-test/Post-test Analysis

The following section examines the stores' performance and their acceptance of the product before and after implementation.

Smith Store

Several important conclusions can be drawn from the Smith Store case study. The post-test responses differ greatly from those of the pre-test. Because the Smith Store did not previously have an inventory control system, it is impossible to compare Rolotrak to a previous system; however, the system was still rated on several performance characteristics. The results of the post-test were echoed in the exit interview and are discussed below.

We conducted an exit interview with the Smith Store case study participants to get a comprehensive view of how they utilized Rolotrak and the impact the product had on the store's operation. It served as a dialogue to discuss the strengths and weaknesses of the system, suggest potential improvements, and extrapolate the system's performance were it implemented on a long-term basis. In order to focus on the innovations made by our system, this section will center on the inventory control and CRM features, but will also include user-friendliness and general information on Rolotrak's impact on the store.

Using Rolotrak had no noticeable effect on the Smith Store's stockout rate, inventory turnover rate, or shipment processing time; however, much of this can be attributed to the fact that the system was simply not tested in the store for a sufficient duration. Although the system was not in place long enough to demonstrate any real

effect on inventory, the manager of the store predicted that it could have a long term impact on the store's approach to inventory control. Rolotrak created more accountability and a more specific awareness of the store's inventory. For example, the amount of item information recorded at the point of sale was increased. The store's old method required employees to record only a product description, quantity sold, and the sales method for each transaction, whereas the new method also required descriptors such as color and size in order to ensure that the count of each individual item was accurate. As the store continues to use the software, the manager expects to be able to use the reminder system in conjunction with the vendor database to more efficiently maintain inventory.

Compared to the process that the Smith Store had in place prior to the case study, Rolotrak was beneficial to the store, especially in terms of inventory control. The store had been using only Microsoft Excel and a hardcopy notebook to track sales, and the manager had very little knowledge of the inventory in the storage room. The Excel method was unreliable because it was highly dependent on the employee remembering to input information into the spreadsheet. With the implementation of Rolotrak, the store had a detailed account of its inventory that it could easily update, as well as a database of customer and vendor information. Furthermore, the adoption of Rolotrak forced employees to record more detailed item characteristics, as mentioned earlier. In fact, the store created a new transaction form in order to capture the information necessary to enter into Rolotrak.

The Smith Store primarily took advantage of the inventory control tools provided in our system because that was a more immediate need than CRM. The

CRM tools were used as well but to a lesser extent. Previously, the store did not record customer information, but with the implementation of Rolotrak, employees were asked to record information at each transaction. By recording the customers' names and email addresses, the store expected to be able to contact its customers to inform them about upcoming sales or advertise new products. Overall, the store has a low customer retention rate, but due to the nature of the business, recording customer information has been a challenge for the store. Many students decline to give their contact information, and those who do are not actually part of the store's target market, as they do not generally become repeat customers. The customer segment that the store wished to target with Rolotrak's CRM tools was a smaller percentage of its customer base: professors and leaders of student groups, such as fraternities or clubs, who are more likely to place bulk orders and become repeat customers. According to the store's manager, the store generates most of its revenue with these customers, so this tool will be useful in the future.

The Smith Store was happy with how user-friendly the system was. They felt it was intuitive, with a clean, sleek user interface that allows the user to easily navigate the system from the start. Another feature that the manager stressed as a benefit is that the system is a web application. This allowed him to access the site to check on inventory without having to come into the store – all he needed was internet access. Interestingly enough, this was simultaneously one of the large drawbacks that he saw in Rolotrak as well. If the server was down, which it was for a period of the case study, then the user could not access inventory or customer information saved in the system.

Another major factor that would have increased the Smith Store's use of Rolotrak is if it had included pricing software. Currently, the Smith Store requires that inventory information be entered into both Excel and Rolotrak. Ideally, the Smith Store would like to see an import function or the ability to integrate the system with other software like QuickBooks, so that once the information was entered in either of those systems, it would be automatically updated in Rolotrak.

The Smith Store did not utilize the user guide we provided. This implies that using the system was not important enough to justify the investment of time to fully understand the subtleties of the system. While the Smith Store was generally open to accepting new technology into the operation of their business, there are still barriers to overcome for small businesses to truly embrace the use of new technology.

In order to maintain accountability, the manager chose to be the only person in the store to have access to Rolotrak. Therefore, since the manager was not always present at the store, the system was not used at the point of sale. If Rolotrak had separate accounts for each employee as well as an administrator account for the manager, then the system could have been used on a daily basis at the point of sale. Instead, the employees were asked to record all information by hand as they had been doing prior to the implementation of Rolotrak. At the end of the week, the manager entered all sales data into the system. It was not possible to gauge the acceptance of the system for the rest of the staff because only the manager was allowed to actually access the system (Store manager, personal communication, January 20, 2011).

Jewelry Store

The Jewelry Store case study results revealed several important insights. The pre-test and post-test responses differed significantly. At the time of the pre-test, the store had been using QuickBooks for the previous four months to manage its point of sale and inventory functions and had been using Constant Contact as its CRM system. Overall, the store owner was satisfied with the capabilities of the QuickBooks software.

The store's main form of managing customer relations was by hand-recording customer information in a physical book. Every week, the store's Constant Contact consultant then transferred all of the hard copy information into Constant Contact. The owner felt that Constant Contact's template selection was very limited and not aesthetically pleasing. She felt that since the store emphasizes art in its products, the design of the email templates used for communication with customers should be equally creative. Additionally, while the owner was generally satisfied with both products, she preferred that the software products have the capabilities to interact with each other to aggregate all of the stored data. The current method of recording customer data was insufficient in that customers were not linked to their purchases. The owner's biggest complaint was that the technical support was unhelpful and unreliable. Despite being satisfied with the current technology systems in place, the store owner was interested in pilot-testing the Rolotrak system in order to help bridge the existing gaps in their technology systems.

In contrast, the owner's responses to the post-test were uninformative. In order to understand the factors that led to the post-test results, an exit interview with

the store owner was conducted. During the interview, the manager stated that, for a variety of reasons, the store employees rarely used the Rolotrak system during the case study period. The manager cited the timing of the case study as one of the major reasons for why the system was underutilized. Since the test was conducted around the holiday season, the employees were simply too busy to log onto Rolotrak and fully use its features. Employees were reluctant to record customer information electronically because they felt this step was cumbersome. During the busy shopping season, their main priority was to process customer transactions as quickly as possible.

Furthermore, the owner reported that many of the salespeople above the age of 40 were somewhat uncomfortable using technology in general. Thus, the software was not as user-friendly for these employees as it was for the younger employees. The owner was often not present at the stores, making it even more difficult to ensure that the already reluctant employees were using Rolotrak to its full potential. Since the store had a very limited experience with the software, few questions in the post-test survey were completed. As a result, no detailed conclusions could be drawn regarding the effectiveness of the system's inventory control and CRM features on inventory performance measures or customer retention rates. This store was unable to identify any glitches or technical issues with the software since it was rarely used. Moreover, the product had a negligible impact on the store's daily operations since the system was never fully integrated into the employees' daily processes.

Prior to examining some of the more indirect conclusions from the results of the study, it is important to identify whether Rolotrak software was a good fit for the

Jewelry Store's needs. As identified by the store owner, one of the main needs was a way to aggregate all of the store's information, including the inventory and customer information in real-time. While Rolotrak does have the capabilities to manage this information, it is unable to import the data directly from the QuickBooks POS system. This was one of the biggest drawbacks to our solution.

Because the store is mainly a specialty jewelry store, there are many unique stock-keeping units, with only approximately one to five units of any given item in stock. Since the item selection changed often, reordering was not a frequent need. Therefore, the reordering feature in Rolotrak was not useful and the reminders were more of a nuisance than an aid. Even when new orders were made, they were not done through the system. No standardized procedure for processing incoming shipments was in place. Due to the haphazard nature of the store's inventory control process and difficulty of manually entering every single new item electronically, the general inventory control functions of Rolotrak were deemed not very useful to the Jewelry Store.

The benefits of Rolotrak's CRM function depended on the store location. The mall store tended to have repeat customers, so the CRM module could have been helpful in identifying which customers drove revenues and reminding the store when to contact those customers. Returning customers tended to buy different kinds of products every time they came to the store, so the Refill Interval reminder would probably not have been useful. Because the store owner decided not to test Rolotrak in the mall store, it is impossible to determine how useful it would have been under such circumstances.

On the other hand, customers at the waterfront location tend to be tourists and not repeat customers. Therefore, the CRM function of Rolotrak was not very relevant to this location's needs. This study suggests that while small businesses may exhibit a need and even a desire for new technology, often they are not fully willing or committed to adopt and implement technological solutions into their operations (Store owner, personal communication, February 2, 2011).

Rolotrak was not tested long enough to assess any quantitative impact on the store's performance; however, we were able to obtain qualitative information. Even if it were tested longer, the store did not use the system to any meaningful degree, so changes in performance must be attributed to a cause other than Rolotrak. While the store participants were largely unfamiliar with the Rolotrak system, they were able to appreciate its ease of use and breadth of features. Unlike the store's original support, the technical support from Rolotrak was determined to be of high quality. The owner believed that, had the store continued to use Rolotrak, over time it would have been able to take advantage of the CRM features to learn much more about the customer base. The owner believes this would help to target future marketing efforts.

As mentioned earlier, we learned just how difficult it is to help small businesses adopt technology. In this case, the adverse factors included the limited time, training, and commitment to moving away from previous practices. We still were able to take away significant knowledge from this study despite the fact that it did not produce the results we had expected.

Comparative Analysis

Great care should be taken when drawing conclusions about small retailers' adoption of technology based on only two case study stores. However, if store characteristics actually influence software usage, which in turn influences performance, this study could still provide insight into software usage in small businesses. To reiterate, our research is intended to add to the body of knowledge surrounding software use in small businesses, not as a generalizable study. Thus, our systematic review compares the conclusions drawn from these case studies to other research studies. Because the two businesses used in our case study have limited comparability, the variance in their approaches to using Rolotrak was very revealing for our research. The manager of the Smith Store began using the inventory function of the software right away, while the employees at the Jewelry Store never significantly used any features of the software.

On the surface, these results may be surprising. With more employees, greater product offering, higher sales and multiple locations, the Jewelry Store is clearly a larger enterprise than the Smith Store. As such, it would be reasonable to expect that the Jewelry Store would be in a better position to take advantage of an additional software tool, especially one that addresses specific needs of the store.

For the Smith Store, however, Rolotrak represented far more than just one more software application. Unlike the Jewelry Store, the Smith Store had no specialized software in place. As previously mentioned, the most advanced tool used at the Smith Store was Excel. While Excel is a powerful program with many useful business applications, it is not meant to be an enterprise management software tool.

For the Smith Store, Rolotrak was a large improvement over their current system. Not only was Rolotrak specifically designed to handle customer and inventory information, but it was simple to use. This meant that the manager of the Smith Store did not have to invest a lot of time learning new software. It could make an immediate difference in the way he recorded information in his business.

The Jewelry Store used two software tools in addition to Rolotrak: QuickBooks and Constant Contact. The manager of the Jewelry Store did not see the usefulness of Rolotrak, since “QuickBooks does everything” (Jewelry Store Manager, personal communication, January 19, 2011). Of course, QuickBooks does not do everything. While it is a useful POS tool and has powerful tracking and analytic capabilities, it does not provide simple reminders to the user to assist in the daily operations of the store. The owner and manager of the Jewelry Store both acknowledged that they did not know exactly what QuickBooks could or could not do. They were not using their current system to its full potential, and did not want to adopt another tool that could potentially duplicate existing functionality.

In addition, Rolotrak could not import data directly from QuickBooks and thus data entry was doubled. Employees at the Jewelry Store, already busy with the store’s operations, understandably saw additional data entry as a burden to be avoided. The Smith Store also had to enter data into both Excel and Rolotrak. The Smith Store, however, had a much lower volume of sales and fewer different items to track.

The Smith Store’s manager was very excited about Rolotrak’s potential. He spearheaded the efforts to use the new software and was the only user. The owner of

the Jewelry Store was also very excited about using Rolotrak in her store. Unlike in the Smith Store, the owner of the Jewelry Store took a very hands-off approach to implementing the software. She let the store's manager spearhead the effort and did not look at the software herself. While the Smith Store manager took the lead in learning how Rolotrak could be useful to his business, the owner of the Jewelry Store never took the time to discover what the new software could do or how it could help improve store performance.

Even before deciding to adopt our software, the owner of the Jewelry Store wanted her employees to record more customer information. She repeatedly requested that employees record customers' names and emails at the POS, but she could not get her employees to follow through. It is not surprising that, when given software to facilitate tracking customer information, the owner again requested a change in employees' actions at the point of sale, but could not ensure that her request was carried out. This demonstrates desire on the part of the owner but not active involvement to act on that desire.

It is certainly conceivable that a small business can successfully adopt new software even without the owner actively using that software, so long as other employees are enthusiastic and take the lead in exploring and implementing the new tool. At the Jewelry Store, this was not the case. The manager of the Jewelry Store complained that she simply did not have the time to devote to learning the new software. In addition, she claimed that recording the additional customer information that the store would need to take advantage of Rolotrak's CRM features would take significantly more time at the point of sale. Both of these may be true, but the lack of

an attempt to figure out how to integrate Rolotrak into the company's processes indicates that adopting the new tool was not a high priority.

The manager of the Smith Store is a current student in the university's business school, as are all of the store's employees. New technology is integrated into the business school curriculum, which facilitated the manager's ability to quickly learn the program. The owner, manager, and employees of the Jewelry Store, on the other hand, had limited exposure to new technology. The owner of the Jewelry Store joked about only recently mastering the art of sending and receiving text messages, something most college students have been doing since they were in high school (Jewelry Store Owner, personal communication, February 2, 2011). While both the owner and the manager reported that Rolotrak was user-friendly, the system still represented a new and different way of using technology to analyze business processes. The owner, manager, and most of the employees of the Jewelry Store were simply not as comfortable learning a new technology as was the manager of the Smith Store.

The owner of the Jewelry Store also pointed out that the best salespeople are not necessarily the best with computers and technology (Jewelry Store Owner, personal communication, February 2, 2011). Employees more interested in sales than working with software may see inputting customer information as impersonal and a waste of time, without understanding how it can help to drive sales in the future. This problem is compounded by the lack of involvement from the owner, who is responsible for knowing what is best for the entire organization and communicating that vision to the employees. This problem was avoided in the Smith Store, since the

person in charge of managing the entire operation was the same individual who used the software.

The Smith Store identified an immediate benefit from the inventory control features of Rolotrak. While the Jewelry Store did not use any of the features, when asked to speculate about how they would use Rolotrak in the future, the owner of the Jewelry Store said that the CRM features would be more valuable. While the capabilities of existing software explain some of the reasons for why the two stores would focus on different aspects of Rolotrak, they do not tell the full story.

Since the Smith Store deals primarily with students who rarely make repeat purchases, CRM is less important than inventory control. This is not to say that the Smith Store does not have several future opportunities to leverage CRM tools. Since the store's repeat customers tend to be faculty and student groups, the Smith Store could do a better job of communicating with these groups. The Smith Store may also be able to use CRM software to convert one-time student customers into repeat customers. But these potential uses of Rolotrak pale in comparison to the immediate problem of learning what goes in and out of the store and how to keep the shelves well-stocked.

In many respects, the Jewelry Store had the opposite problem. The Jewelry Store often had only one or two of a particular product. It usually did not have inventory that it would order repeatedly. The store prides itself on finding new and unique items. When an item sells out, the store does not replace it with an identical product; instead the inventory is constantly being updated. While the store needs to track inventory, the inventory reminder system was not very applicable. While the

Jewelry Store did not find the inventory component of Rolotrak to be helpful, the owner did want to improve the way the store recorded and used customer information. Had the store successfully recorded customer information and loaded it into Rolotrak, the owner and manager could have gained new insights into who exactly their customers were and what they were buying.

The owner and manager both claim that most of the customers of their downtown store are tourists; this is based on the fact that they do not recognize many repeat customers and duplicate customer names and emails do not usually appear in their customer book. By recording customer information with every sale and entering this information into Rolotrak, the store owner and manager could verify that most of their customers were tourists, as they currently speculate. Their impressions would be supported or contradicted by the data. The software could be expected to prove even more useful in the mall store, where many customers are frequent shoppers. A CRM system such as Rolotrak may be even more useful in other jewelry stores that do not have such an eclectic collection of inventory and where customers may make more regular purchases, such as for anniversaries and birthdays.

Systematic Review of the Literature

The purpose of the systematic review of the literature was to increase our understanding of technology adoption in small businesses. The systematic review allowed us to investigate which factors found through past investigations were conducive to technological success in a small business. We were unable to determine if our own system had a quantitative impact on the stores' operations, so we decided to uncover the qualitative measures that may have resulted in each store owner's

hesitancy to fully utilize all features of Rolotrak. We decided that adding a systematic review to supplement our findings could help identify which variables were absent in our two case studies that would have guaranteed a more comprehensive adoption of the technology by the small business owners and employees.

Summary of our research process

The systematic review of literature and research studies related to technology adoption in small businesses used examples from the United States and foreign countries that characterized small businesses as less than 100 individuals. Although our study was focused exclusively on retail firms, the systematic review included all types of small businesses in order gain a more generalized idea of how the implementation of information and communication technologies can be successful. The selected studies highlighted variables found to be significant determinants for technology adoption in small businesses. This research step assisted us in determining areas requiring further improvement for our system if implemented in the future.

Selection of research question and keywords

We began our search with “technology,” but expanded our list of search terms to include Internet, innovation, information and communication technology, web-based solutions, information systems, and information technology. Although technology adoption is a broad subject, implementation in small businesses has not been thoroughly researched. Therefore, we narrowed our search and did not include technology adoption by large corporations and large businesses.

Our searches included the following keywords “+ small business”:

- Computer technology

- Technology adoption
- Internet adoption
- Internet technology
- Information technology adoption
- Information systems adoption
- Innovation adoption
- Technology acceptance model
- Information and communication technologies
- Website

Initial search of the literature

Our approach to this portion of our study was to find literature on studies or surveys of small businesses that discussed which variables serve as obstacles or advantages when implementing a new technology in a small business. Our search was limited to documents in English but not limited geographically. We reviewed literature from the United States, Canada, United Kingdom, Australia, Hong Kong, the Netherlands, China, India, and New Zealand. All articles found were written within the past 15-20 years, beginning with the technology boom in the early 1990s and progressing through the last two decades.

Our data sources consisted of:

- Studies found through the multiple keyword searches in the academic databases EBSCO and Google Scholar (see “Selection of research and keywords” above for keywords). The most frequently used databases within EBSCO were Academic Search Premier, Business Source Complete, Business

Source Premier, Communication & Mass Media Complete, and Computers & Applied Science Complete.

- Relevant studies found in the works cited of previous searches
- When we first began our systematic review we used the keyword search “technology adoption AND small business”, which consisted of about five to eight relevant articles. As we progressed, the keyword “technology adoption” became too broad a search term and brought up more international case studies than domestic ones, so we shifted focus. Our next search was “Internet adoption and innovation adoption,” which found several relevant sources. We then searched “information technology and information systems,” which provided the bulk of the remainder of our systematic review.
- We used the following criteria to determine inclusion or exclusion in the systematic review:
 - Is the study in English?
 - Does the study take place in the United States? If not, does the study have results that are generalizable to small businesses and not only in the context of the country in which it took place?
 - Does the study survey small businesses of 100 employees or less?
 - Does the study identify factors that allowed or prevented the success of technology in small businesses?

Final screening

Search: Term + “small business”	Source	Initial Search	Retained
Computer Technology	EBSCO	387	2
Internet adoption	EBSCO	29	4
Internet technology	EBSCO	213	2
Information technology adoption	EBSCO	19	4
Information systems adoption	EBSCO	5	3
Innovation adoption	EBSCO	100	2
Information and communication technologies	EBSCO	434	5
Technology adoption	EBSCO	69	6
Technology Acceptance Model	EBSCO	11	1
Website	EBSCO	831	2

Table 1: Search Terms

Results

The following key factors enabled success of technological solutions in small businesses.

Relative advantage

Relative advantage, as defined by Jungwoo (2004), is the degree to which an innovation is perceived as being better than the idea it replaces or supersedes. As a result, relative advantage can be a major driver of technology adoption. Premkumar and Roberts (1999) discovered that relative advantage was the only variable that significantly influenced the adoption of all the communications technologies examined for rural small businesses. Knowledge of the benefits of communications and information technologies (e.g., increased efficiency of business operations, fewer

errors, and increased availability and accessibility of data) was an important factor affecting adoption, but some non-adapters simply did not see the need for implementation of such technologies in their firms.

Furthermore, organizations are more likely to adopt innovations when experts within the firm claim the innovation is desirable and support its implementation. Owners or upper-level management must support the idea that the innovation will be beneficial to the firm. In a study by Mehtens, Cragg, and Mills (2001), the first four small and medium sized enterprises (SMEs) in the investigation were in the IT industry and had upper level management support for the adoption of the Internet. Of the three non-IT SMEs, two of the three had upper level management who promoted the benefits of the IT implementation. Therefore, in six of the seven case studies, upper level management promoted the use of technology in the small business. Thong (1999) found that a small business run by a CEO with more knowledge of technological innovation is more likely to pursue a strategy of adoption. Bruque and Moyano (2007) echoed the findings of the importance of store manager support with Walczuch and Van Braven (2000), adding that a store manager's opinion is extremely valuable in decision-making since he/she may be the only employee in the firm, especially at the beginning stages of a firm's existence. Furthermore, Sung Park et al. (2006) made the generalization that the hierarchical position of the person in the firm will impact the acceptance of the technology.

Primarily, the perceived benefits that implementation of technology provide would require support from experts and upper-level management. In our Jewelry Store case, we received approval from upper-level management months prior to the

implementation of our case study because the store owner participated in our Annapolis interview. The Jewelry Store owner's needs also played a significant role in our product design and supported our project because of her prior affiliation with the University of Maryland. Our problem was that the store owner was rarely present at the location in which we implemented our case study; as a result, her presence (or lack thereof) did not encourage employees to take advantage of the technology. We worked closely with the manager of the Jewelry Store's Annapolis location, and although she was very positive about the implementation of our software and understood its benefits, she did not use it and did not relay the potential benefits of the system to her employees. In the Smith Store case study, while the store manager did promote the software, he did not allow other employees to use the program because of privacy concerns. This was a considerable barrier to the success of our technology because the store owner had to carry the burden of using the program and becoming familiar with all of its features. Therefore, although both of the upper-level management in the case studies had an idea of the relative advantage, they did not communicate these benefits to their employees who are also key players in the adoption of technology.

Compatibility

As explained by Jungwoo (2004), compatibility is the idea that the innovation must agree with a firm's existing values and current state of business. Compatibility with a firm allows the technology to be compatible with its employees, who are the most frequent users of a new technology. Pierre-Andre Julien and Louis Raymond (1994) explain how various industry characteristics are not as compatible with

technology adoption. For example, computer-based technology was most prevalent in the food sector, then hardware, and least in clothing stores. Furthermore, firms with largely administrative personnel were less likely to adopt technology. Meral Binbasioglu and Elain Winston (2004) define socialization as a process through which newcomers learn how to act in an organizational setting and what appropriate work behavior is. The implementation of information technology will affect socialization by changing the dynamics of the work environment as well as the policies and procedures that workers are accustomed to. The study explains how employees used IT-related issues to serve as a way to interact with other employees, which led to a decreased level of productivity when the firm was handling IT problems. Through IT implementation, therefore, it is possible to also make employees feel alienated from the broader business goals because they are focusing on more individual tasks and mainly communicating with a computer.

Sebastian Bruque and Jose Moyano (2007) explain that the success of technological implementation is also dependent on the socialization of employees. Having an optimistic perspective towards the new technology is important for socialization. Socialization will occur easily when employees are compatible with the firm. In terms of compatibility in a family-owned business, Hazbo Skoko, Arnela Ceric, and Chun-yan Huang (2008) explain that those small businesses that retain a household structure have difficulty with advancing as quickly as their competitors because of their reluctance to take a modernized approach to business management.

As we found in our post-test interviews, our program was not very compatible with the Jewelry Store because of the thousands of pieces of inventory that required

tracking. Our program reminds the user when a piece of inventory is “Low” and when it is down to “Zero.” The Jewelry Store keeps track of items that do not require restocking for weeks or even months. For example, if the store has zero silver hoop earrings, this might be okay for several months if the store owner does not need that specific type of earring. However, our program will continually set reminders to repurchase this item. Therefore, our system is probably more compatible with retail stores with larger or fewer pieces of inventory. On the other hand, we believe that the program was compatible with the Smith Store; since there was no existing system (other than an Excel spreadsheet), there was potential for our inventory tracking and reminder system to be useful for their store operations.

Computer self-efficacy

Computer self-efficacy is defined as the ability to use a computer. Jungwoo (2004) explains that if the decision-makers lack confidence in the technology to enhance business performance, it is less likely to be adopted. Therefore, effective training and knowledge by management and employees is a key factor in successful technology implementation. Van Akkeren and Cavaye (1999) conducted their study on three different cases of various levels of technology adoption. Case C, a full adopter, had internal expertise which helped to maintain their website. Case B, which was a partial adopter of technology, did not trust IT professionals, and the lack of training by the employees limited the scope of technology use. Mehrtens, Cragg, and Mills (2001) performed their study on four SMEs in the IT industry who all had existing personnel to install email in their firms so they did not need to outsource this work. This was more cost-efficient and allowed the employees to familiarize

themselves with the technology. The two cases that were in the retail and entertainment industries lacked internal IT expertise, but did attain assistance from external web developers, which helped to advance the implementation of the technology. Palvia and Palvia (1999) conducted 108 surveys with the median size of businesses being four people. The highest area of dissatisfaction found was training and education because training firms and consultants find it more worthwhile to spend time in training with larger firms. According to Lee and McGuiggan (2009), store owners with a bachelor's degree use the Internet to formulate business strategy and management while those with postgraduate degrees use the Internet for benchmarking and forecasting sales. Increased levels of education allow for the increased usage and efficiency of technology.

Wielicki and Arendt (2010) explain that the largest barrier for small businesses in the United States is the lack of an information systems plan for proper implementation while the largest barrier in Europe is the lack of financial resources to implement new technological solutions. This makes sense since the United States has the highest Information and Communications Technology (ICT) index, and with a higher ICT index comes more concern over funding education and training and less concern over access to technology and funding. The researchers concluded that a more knowledge-driven economy would allow managers and owners to shift concern away from short-term barriers, such as financial constraints, and towards more long-term barriers, such as lack of expertise. The research performed by Harindranath, Dyerson, and Barnes (2008) revealed that most owners and managers were not trained or skilled beforehand on how to implement or use ICT and were therefore

dependent on external expertise to help them get started. This dependence on third parties to implement and maintain a technology causes store owners and managers to lose confidence in their investment decisions. Similar results were obtained in previous research done by Cragg and Zinatelli (1995) that showed small firms in New Zealand commonly used software packages to satisfactorily address their needs because most of the end users were not programmers and were only familiar with navigating packaged software with menu options. The authors also discovered that managers tended to not take advantage of personal decision support software and that training was viewed to be largely unnecessary due to the self-explanatory nature of most of the software. Montazemi (2006) agrees with the general consensus that a greater base of formally educated business owners makes IT adoption more effective.

Both our case studies exhibited computer self-efficacy to a certain degree. Although the Jewelry Store used two other software programs besides ours, most of the employees were not entirely comfortable with the systems they had in place. The Jewelry Store relied on outsiders to manage several features of QuickBooks and Constant Contact. The Jewelry Store's owner expressed doubts about her proficiency with new technology. The Smith Store manager is a college student and has grown up using the Internet for years, so he is much more comfortable with new technology. We believe that Rolotrak was so user-friendly, however, that employees of both case studies had sufficient technical knowledge to make use of the system. Furthermore, we provided both case study participants with the Rolotrak User Guide, which provided step-by-step instructions on how to use all the features of the system. We

also visited both stores on a weekly basis and made sure to provide the contact information of several team members in case of any technical problems.

Financial slack

Financial slack is defined by Jungwoo (2004) as the funds necessary for technological adoption. Van Akkeren and Cavaye (1999) performed three case studies and found that Case A, which decided not to adopt technology, believed that the cost of IT adoption along with the lack of security when using online services were major issues. Thong (1999) explains that the financial resources required to maintain technology are often insufficient in small businesses, which is an enormous limitation when committing to a technological adoption. Palvia and Palvia (1999) also found that financial and capital resources were an impediment for technological success in a small business. Ch-wai and Tang (1999) explain that the costs of implementation are high and small businesses do not see immediate returns on investments, which causes reluctance among investors to support IS adoption in small businesses. In addition, the study done by Walczuch and Van Braven (2000) noted that both IBM and Andersen Consulting have surveyed small businesses on reasons for non-adoption and found that high telecommunication costs and computer equipment costs are a significant barrier to Internet adoption and e-commerce. Because our system was free to use, neither case study had any financial constraints for implementation.

Existing labor and capital resources

Along with the financial constraints of technological adoption, there may also be restrictions on the human labor available to assist in implementation as well as

attaining capital. In Mehrrens, Cragg, and Mills' study (2001), the four cases that successfully adopted technology had existing personnel with the expertise to install email in their firms and therefore did not need to outsource this work to any other company, which was a significant advantage for the firm to promote IT adoption.

In terms of gender roles in labor, the survey by Palvia and Palvia (1999) found that female employees were more satisfied with the IT infrastructure than male employees. The encouragement of female employees could be a greater facilitating factor in implementing technology. Walczuch and Van Braven (2000) conclude that smaller firms may gain more benefits from the Internet than larger businesses and found that the greatest benefits include ease of information gathering and availability of expertise. Small businesses, as explained by Skoko, Ceric, and Chun-yan (2008), are limited in manpower, and introducing a new technology requires human resource power for effective implementation. This may necessitate additional hiring, labor hours spent on training, and increased salaries, which could lead to more financial constraints. Furthermore, through IT implementation, employees can spend labor hours on different aspects of the business process, which may require more attention. IT can also increase the number of tasks employees are responsible for and were not previously part of their daily duties. Managers increase dependence on their employees (and employees on one another) with the adoption of technology, leading to changes in the work hierarchy (Binbasioglu and Winston, 2004). Interestingly, medium-sized businesses with formal structures and systems are actually more likely to resist change (i.e., implementation of new technology) than smaller businesses (Love et al., 2005).

Capital and labor resources were not a limitation in both our case studies, except that the Smith Store owner did not want other employees to get trained to use the system; therefore, they were limited in the number of users. Furthermore, the Jewelry Store had numerous employees and two locations, which made teaching employees how to use the system and conveying its value to them more difficult.

Ease of use

Ease of use is a factor that depends on an individual's technological background; however, the perception of how easy implementation and adoption will be can affect employees' willingness to use new technology. Thong (1999) adds that the new system must be easy to use, understand, and must prove to be favorable to the business's needs. The Technology Acceptance Model explains that perceived usefulness and perceived ease of use are the driving factors behind computer acceptance. Ghobakhloo et al. (2010) explain that employee satisfaction is dependent on the user-friendliness of the system. In addition, Chau (1995) conducted a study that revealed managers and owners both considered user-friendliness of the software to be important.

Our system was created to target mom-and-pop small businesses whose owners often lacked the technical background required to use a complex inventory control and customer relationship management system. Therefore, we designed Rolotrak to be as user-friendly and adaptable as possible. We avoided clutter on our interface by concentrating on the two main areas of small business management needing improvement according to our preliminary research – CRM and inventory control. In contrast with QuickBooks, which has numerous features that many small

business owners do not want or know how to use, our system was simple to understand and navigate. Both case study participants agreed that our system was easy to use.

Innovativeness

The innovativeness of the firm's culture and the risks it is willing to take to enhance its performance through the adoption of new technologies can be major factors affecting whether the technology is a success. As mentioned by Thong (1999), a store owner who has a more creative mindset for transforming the business with technology tools will pursue a more aggressive adoption policy as opposed to a store owner whose primary goal is to limit shifting to new areas of operation. Park et al. (2006) go further to note that personal creativity is a more significant factor determining whether a user accepts computer technology than demographic traits such as age, gender, and level of education. Innovativeness was not a variable impacting adoption of our technology in the two case studies. Although we did narrow down the scope of the functions of our software, we did so because we identified these as areas that need the most improvement, not because we necessarily considered them to be unique or innovative ideas.

Image

Store owners may adopt technology in order to make a firm seem more prestigious and modern to its customers. Only in two of the seven case studies done by Mehrtens, Cragg, and Mills (2001) did the owners believe that embracing technology would make their firms appear on the cutting edge. In Bharati and Chaudhury's study, survey respondents identified only top management and

customers as having a significant impact on adoption decisions (2006). Therefore, the image that the company provides to the customer and how the customer responds both play a role in how successful technologies may be implemented. A study performed by Lee and McGuiggan (2009) found that managers who used the Internet for more than 20 hours a week believed that the Internet could provide significant advantages to the store's image as well as several other factors. Furthermore, Hart, Doherty, and Ellis-Chadwick (2000) emphasize that consumer demand for Internet is a key factor that will encourage Internet adoption by retailers. The consumer must also have access to, and view benefits from, Internet shopping.

Both case studies implemented our system to improve their inventory control and customer relationship management, not to appear innovative or improve their image. Neither case study placed a priority on appearing more modern or cutting-edge with the implementation of our technology.

Competitive pressure

Small businesses feel a competitive pressure from larger firms or even their surrounding businesses to adopt technology and keep up with the rapidly advancing age of technology. Bharati and Chaudhury's study found that competitors and personal and professional networks seem to have some impact on their adoption decisions (2006). In fact, Premkumar and Roberts (1999) discovered that such competition can extend even into rural areas, where small firms feel the pressure to adopt new communications and information technology. The factors influencing adoption seem to have varying impact according to the size of the business. Many small businesses are serious about watching out for their survival; therefore, keeping

up with the competition could be a motivating factor for successful adoption.

Although Fink (1998) found that the external environment is a variable that affects IT implementation, the small business is much more focused on internal variables, and outside forces are more of an afterthought.

Since the Smith Store is the only student-run store on Maryland campus and the only one that sells Robert H. Smith School gear, it did not face significant competitive pressure. The Annapolis Jewelry Store, on the other hand, may have felt competitive pressure from the surrounding stores. Located in a tourist area of downtown Annapolis across from the harbor, the boutiques and other shops around the Jewelry Store are likely to use technological systems in handling their store operations. Furthermore, the Jewelry Store had another location in the Annapolis Mall, which has a constant flow of people and is located amidst several other larger competitors. Adoption of technology would combat the adverse effects of maintaining a small business feel in larger retail areas.

Positive attitude towards technology

Thong (1999) concluded from his research that small businesses that have a positive attitude toward IS are more likely to adopt it. Bruque and Moyano (2007) had identical findings that optimism towards the new technology is important for the socialization of employees. Through socialization, employees become more comfortable with and agreeable towards technology adoption. Overall, Fink (1998) found that organizational culture is a significant variable in increasing IT adoption. The organizational culture must promote an optimistic perspective towards the implementation of technology.

All the participants of our case study had a positive attitude towards the technology. They were optimistic towards its implementation and looked forward to seeing the outcome.

Variable Identified as Impacting Success of Technology in Small Business	Total Number of Times Highlighted in Literature Review
<i>Relative Advantage</i>	11
<i>Compatibility</i>	10
<i>Computer Self-Efficacy</i>	17
<i>Financial Slack</i>	11
<i>Existing Labor & Capital</i>	10
<i>Ease of Use</i>	6
<i>Innovativeness</i>	4
<i>Image</i>	6
<i>Competitive Pressure</i>	4
<i>Positive Attitude</i>	3

Table 2: Frequency of Factors Impacting Success of Technology in Small Business

Conclusions

From the factors identified above as variables enabling success of technology in small businesses, we can determine how our case studies could have been enhanced. As is apparent from our systematic review, not all the factors required for the success of our technology were present in our case studies. If our system were to be further tested in future case studies, an increased focus on relative advantage, compatibility, and computer self-efficacy could enhance our case study participants’

experience with our system and motivate the participants to enjoy all the features that the system employs.

Chapter 6: Conclusions

Challenges and Limitations

As with many projects, funding limited our progress. We did not have the advanced technical skills to code the program we created, so we had to hire outside programmers. Computer programming is expensive in the United States, so we looked internationally as it would be more financially feasible. We hired programmers in India, and therefore had to deal with a ten hour time difference, as well as a bit of a language barrier during the coding period. As a result, some programming errors were not caught early enough, requiring us to sacrifice including certain functions in our application in order to fix those errors. We conducted a second round of programming after acquiring additional funding in order to enhance our application; however, this delayed the system's implementation in our case study participants' stores.

We were not able to program the import function for sales and inventory data. Consequently, we had to input all of the data manually for both case study stores, which was a major inconvenience for the case study participants. We believe that this was a significant factor in limiting the success of our project. If the data had been updated automatically, the system would have been perceived with higher utility to case study participants, encouraging them to use it more. The manual data entry was time-consuming, could not be done in real-time, and created potential for human error.

Our CRM system is only as useful as the amount of data input and how often it is accessed. Its limited usage by case study participants therefore reduced its value.

There were several reasons for this. Primarily, we chose an inopportune time to implement the system in the Jewelry Store. By virtue of its inventory of popular gifts, the store was very busy leading into the holiday season, which coincided with the duration of our case study. This contributed to the system's implementation delay mentioned earlier. Consequently, it was difficult to encourage the employees of the store to adopt our system when they already had an increased workload due to higher store traffic.

The key innovation of our system is its reminder function. Therefore, it is most useful for companies that have repeat customers buying similar products. Since the Jewelry Store had hundreds of unique items, there was a mismatch in the primary benefit that our system offered and the needs of our customer. This was a significant contributor to the limited usage of the system by the Jewelry Store.

Contributions to the Field

Our survey research illustrates that two areas of concern for small retailers are customer relationship management and inventory control.

Since we only had two case study participants, the results of our case study are not generalizable. However, the knowledge gained from our study still adds to the current body of data about the use of technology in small businesses, as revealed by our Systematic Review of the Literature.

Our study suggests that generational differences can be a factor when considering the use of technology in small businesses. We also learned that training is of extreme importance with small retailers, especially with employees for whom technology may not be a comfort area.

Future Directions for Research and Development

During the course of our research, we identified several areas for future research and development.

The implementation of mobile technology by small retailers suggests that a mobile application could be useful to help them manage their business. Because many store owners such as the Jewelry Store owner travel often, being able to manage their business via a mobile application could be of use to them. In conjunction with the fact that our system is online, this feature would differentiate Rolotrak from systems that can only be accessed from one location.

We believe there is still much room for improvement in the Rolotrak system. The first change we would suggest is adding an import function. This feature satisfies two requirements. The import function will allow Rolotrak to integrate with any system the owners are currently using. As mentioned earlier, the more real-time the data in the system is, the higher its value to the small retailer. It is extremely inconvenient to manually enter data into the system. Small retailers often do not have the resources in terms of time or money to put towards data entry. For the same reason, the system's ability to communicate with existing POS systems would be extremely useful in compiling the necessary data to keep the system current.

A fast and convenient way to capture customer contact information would also make our system more useful. During our exit interview with the Jewelry Store owner, she communicated her staff's hesitancy to ask for customer contact information. While this could easily be done with credit card transactions, it is much more difficult with cash transactions.

Small businesses have demonstrated their tenacity by overcoming numerous obstacles as explained in our thesis. While small business owners must open up to the idea adopting new technologies, researchers and entrepreneurs must continue to innovate and create suitable technologies that will help these small businesses remain a fundamental part of our economy and culture.

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Appendices

Appendix A: Survey Questionnaire

Why is this research being done?

This is a research project being conducted by a Gemstone research team at the University of Maryland, College Park under the advisement of the Principal Investigator, Dr. Jeff Miller. We are inviting you to participate in this research because you are a member of our target audience, small business owners. The purpose of this research project is to determine how small businesses use sales data to optimize their operations, in order to help us create a program that would assist owners in this process.

What will I be asked to do?

The procedures involve being asked to complete this survey about your business practices, including questions on your current retail management system, store layout, and product placement. You will also be asked if they would be willing to participate in a focus group that would occur in the future. The research will take place in your place of proprietorship, and the total time of participation will be 10 to 20 minutes.

What about confidentiality?

We will do our best to keep your personal information confidential. To help protect your confidentiality your name will not be included on the surveys or other collected data. After completion of the survey (1) the survey will be kept in a sealed manila envelope; (2) they will be kept in a secured and locked location only accessible to team members; and (3) the data will be maintained on a password protected computer. If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.

What are the risks of this research?

There are some risks from participating in this research study. As a result of participating in this survey, your business strategies may be exposed to the public by inclusion in our research paper. This knowledge may lead to increased or heightened competition among small businesses, posing some financial risk.

What are the benefits of this research?

This survey is not designed to help you personally, but indirect benefits may result from participating. By completing the survey, you could be made aware of business strategies that they do not currently use. We hope that, in the future, other people might benefit from this research by helping us develop a system that owners could use to improve their small businesses.

Do I have to be in this research? Can I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Jeff Miller at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Jeff Miller at: The University of Maryland, 3426 Van Munching Hall, (301) 405-7163 or jmiller@umd.edu. If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; (e-mail) irb@deans.umd.edu; (telephone) 301-405-0678

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Statement of Age of Subject and Consent

Your signature indicates that:

you are at least 18 years of age; the research has been explained to you;

your questions have been answered;

and you freely and voluntarily choose to participate in this research project.

* Required

Signature *

Date (mm/dd/yy) *

1. Store Name *

2. Type of Store

3. Number of Employees

4. Of the following areas, rank in order of which you feel need the most improvement. (1=most, 6=least)

a. Checkout System

b. Inventory Control

c. Customer Relationships

d. Sales Analysis

e. Finance & Accounting

f. Shipping Methods

5. Would you be willing to pay for a software solution to improve the following areas?

Check all that apply.

- Checkout System
- Inventory Control
- Customer Relationships
- Sales Analysis
- Finance & Accounting
- Shipping Methods

6. What retail management software (if any) do you currently use?

7. If you do not already have a retail management software, how much would be willing to pay for one?

- \$0
- Less than \$100
- \$100 - \$500
- \$500 - \$1,000
- More than \$1,000

8. I am familiar with the features that my current system offers.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A

9. My current system is user-friendly.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A

10. I am satisfied with the features my current system offers.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A

11. I use my current retail management software for:

Check all that apply.

- Checkout System
- Inventory Control
- Customer Relationships
- Sales Analysis
- Finance & Accounting
- Shipping Methods

12. What type of checkout system do you use?

- Stand-alone cash register
- Portable barcode scanner
- Computer-based register
- Other:

13. How do you keep track of your inventory levels?

- Physically count
- Scanner
- Other:

14. On average, how much time does it take to process an incoming inventory shipment?

15. How do you manage your finances?

- By hand
- Spreadsheet software (e.g. Microsoft Excel)
- Using my existing software
- Third party analyzes my data
- Other:

16. What method do you use to analyze your sales trends? *

- I don't
- By hand
- Spreadsheet software (e.g. Microsoft Excel)
- Using my existing software
- Third party analyzes my data
- Other:

17. In what ways do you analyze your sales data?

Check all that apply.

- N/A
- Sales by time of day
- Seasonal performance
- Product performance
- Sales by product placement in the store
- Other:

18. How often do you analyze your sales data?

Check all that apply.

- Daily
- Weekly
- Monthly
- Quarterly
- Yearly
- Other:

19. How do you keep track of customer data?

- I don't
- By hand
- Spreadsheet software (e.g. Microsoft Excel)
- Using my existing software system
- Other:

20. How do you keep in touch with your customers?

Check all that apply.

- Mail
- E-mail newsletters

- E-mail
- Phone calls
- Customer relationship software
- Other:

21. When you make a sale, what customer information do you record?

- Customer Name
- E-mail Address
- Street Address
- Phone Number
- Birth Date
- None; I just record the transaction
- Other:

22. What methods do you use to bring back customers?

Check all that apply.

- Loyalty program
- Coupons
- Sales
- Advertising
- Other:

23. On average, how many customers do you have every week? *

24. Of these, how many are returning customers? *

25. Any formal education in business?

- Yes
- No

26. If yes, please check all that apply:

- High School Business Classes
- College Business Class (but did not major)
- Bachelor's Degree in Business-Related Major
- Master's Degree in Business Administration

Ph.D. in Business

27. Would you be willing to participate in a focus group at a later date that would help us conduct further research for our project? *

Yes

No

28. Would you be willing to provide us with your sales data from the past year?

Yes

No

29. If yes to either, my e-mail address is:

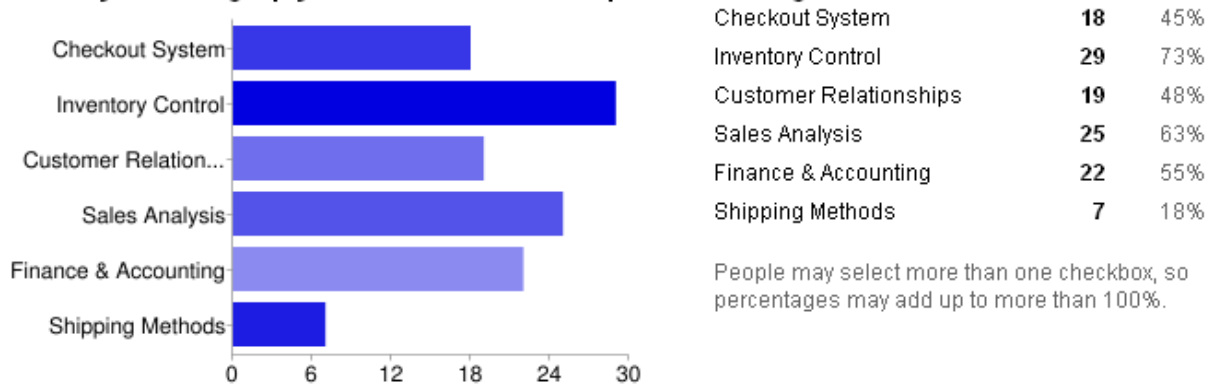
30. Any other comments?

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Appendix B: Survey Results

5. Would you be willing to pay for a software solution to improve the following areas?



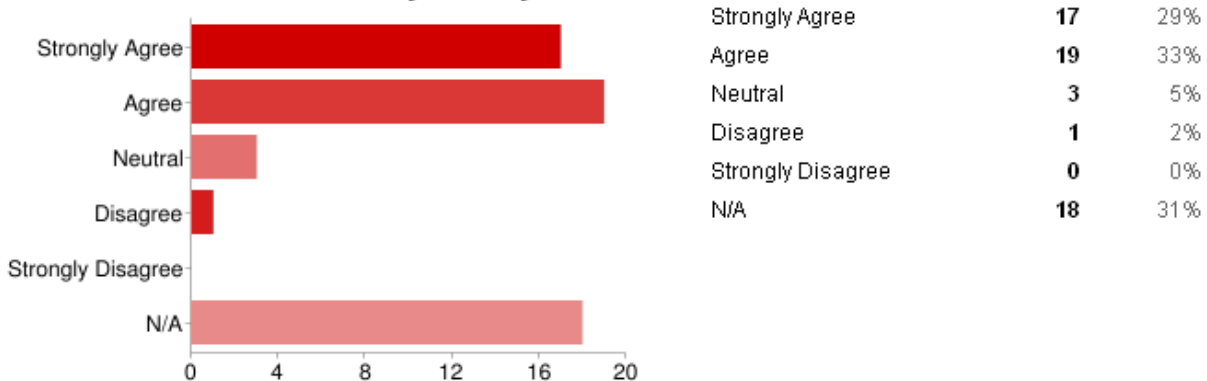
6. What retail management software (if any) do you currently use?

none Abbot Systems "The Edge" none none Mall Ease Falcon 32 Quick Books none Quick Books Microsoft Office none POS Fbrist N/A Activmat Quick Books none QuickBooks Store Quickbooks POS None Quick Books Infotouch Store ...

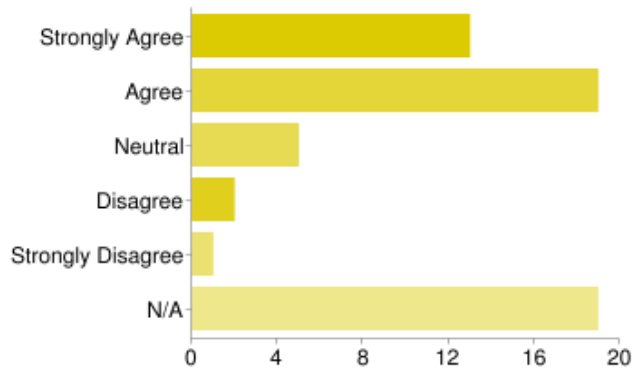
7. If you do not already have a retail management software, how much would be willing to pay for one?



8. I am familiar with the features that my current system offers.

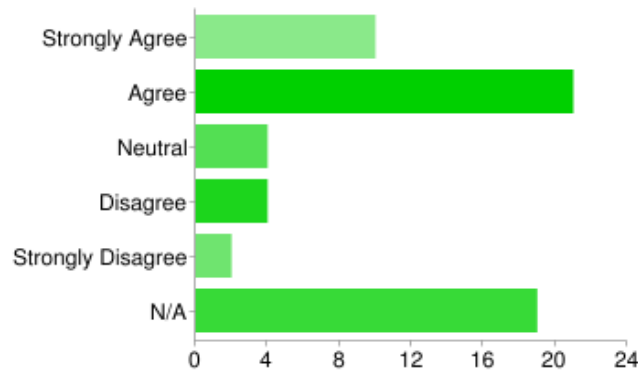


9. My current system is user-friendly.



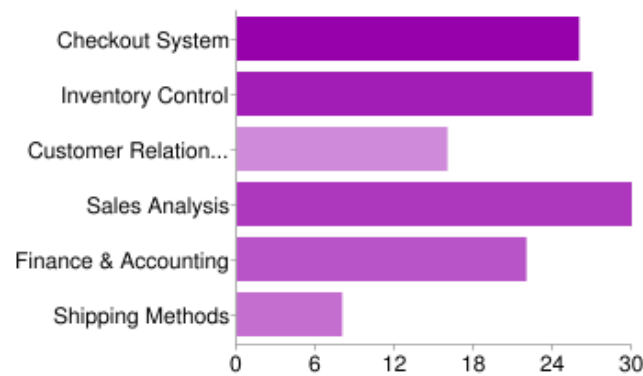
Strongly Agree	13	22%
Agree	19	32%
Neutral	5	8%
Disagree	2	3%
Strongly Disagree	1	2%
N/A	19	32%

10. I am satisfied with the features my current system offers.



Strongly Agree	10	17%
Agree	21	35%
Neutral	4	7%
Disagree	4	7%
Strongly Disagree	2	3%
N/A	19	32%

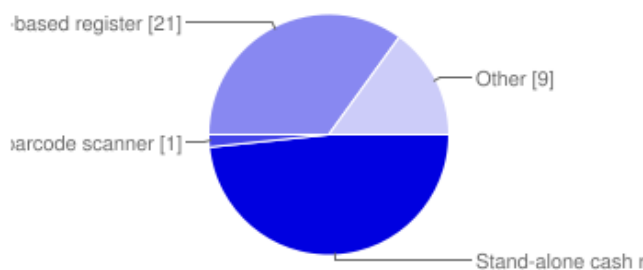
11. I use my current retail management software for:



Checkout System	26	67%
Inventory Control	27	69%
Customer Relationships	16	41%
Sales Analysis	30	77%
Finance & Accounting	22	56%
Shipping Methods	8	21%

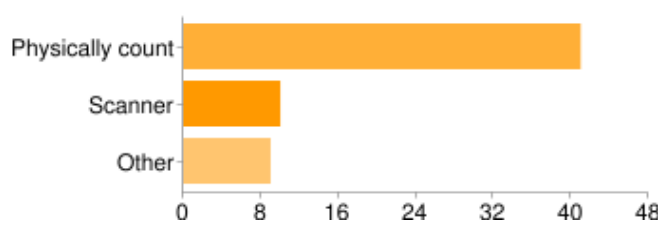
People may select more than one checkbox, so percentages may add up to more than 100%.

12. What type of checkout system do you use?



Stand-alone cash register	29	48%
Portable barcode scanner	1	2%
Computer-based register	21	35%
Other	9	15%

13. How do you keep track of your inventory levels?



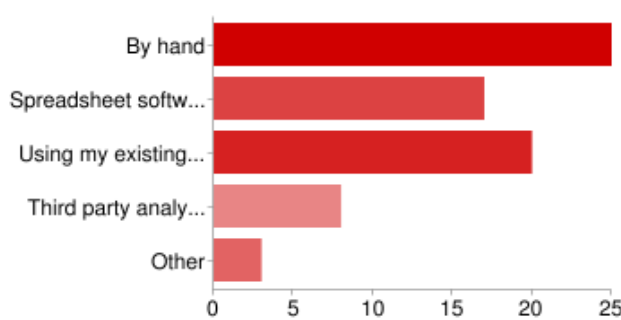
Physically count	41	75%
Scanner	10	18%
Other	9	16%

People may select more than one checkbox, so percentages may add up to more than 100%.

14. On average, how much time does it take to process an incoming inventory shipment?

5 min-2hrs <20 min few hours 30 minutes 1 hour Varies on size 5 n/a 2 hours 2-3 hours 30 min 1 hour or less 1 hour couple hours 10 minutes n/a 2 hours 10-15 minutes 1 minute 20 minutes 45 minutes, depending on the size ...

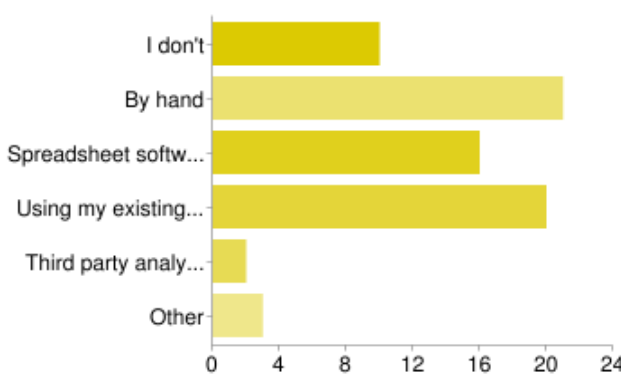
15. How do you manage your finances?



By hand	25	42%
Spreadsheet software (e.g. Microsoft Excel)	17	29%
Using my existing software	20	34%
Third party analyzes my data	8	14%
Other	3	5%

People may select more than one checkbox, so percentages may add up to more than 100%.

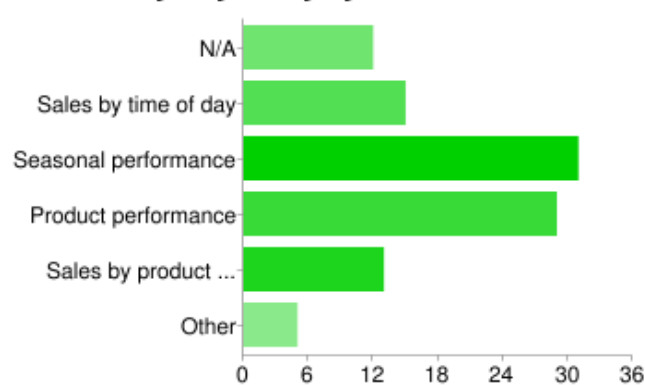
16. What method do you use to analyze your sales trends?



I don't	10	16%
By hand	21	34%
Spreadsheet software (e.g. Microsoft Excel)	16	26%
Using my existing software	20	32%
Third party analyzes my data	2	3%
Other	3	5%

People may select more than one checkbox, so percentages may add up to more than 100%.

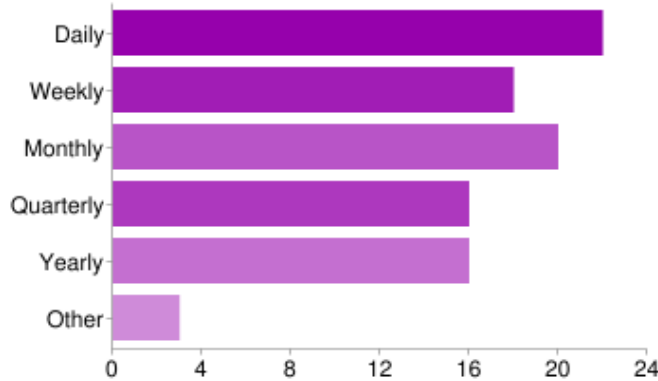
17. In what ways do you analyze your sales data?



N/A	12	20%
Sales by time of day	15	25%
Seasonal performance	31	52%
Product performance	29	48%
Sales by product placement in the store	13	22%
Other	5	8%

People may select more than one checkbox, so percentages may add up to more than 100%.

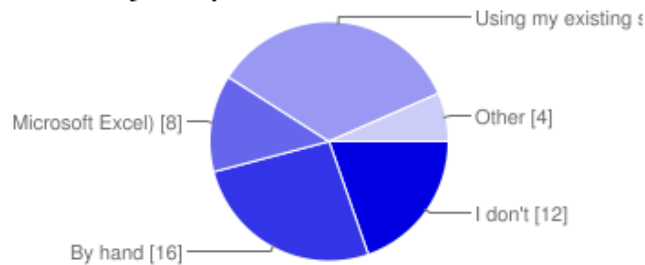
18. How often do you analyze your sales data?



Frequency	Count	Percentage
Daily	22	39%
Weekly	18	32%
Monthly	20	35%
Quarterly	16	28%
Yearly	16	28%
Other	3	5%

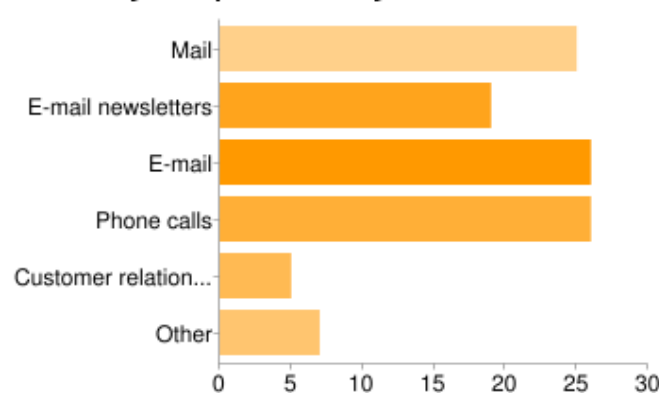
People may select more than one checkbox, so percentages may add up to more than 100%.

19. How do you keep track of customer data?



Method	Count	Percentage
I don't	12	20%
By hand	16	26%
Spreadsheet software (e.g. Microsoft Excel)	8	13%
Using my existing software system	21	34%
Other	4	7%

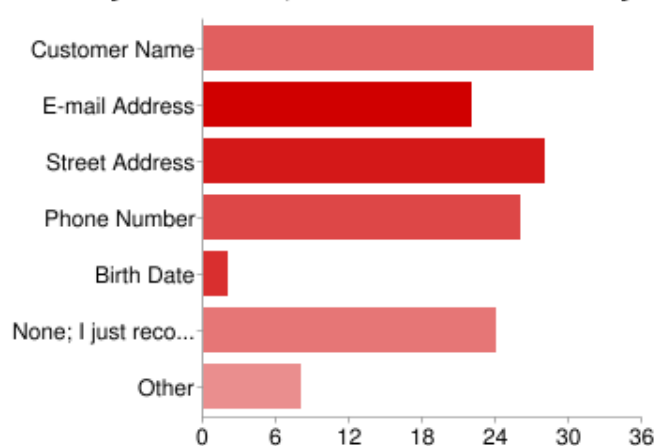
20. How do you keep in touch with your customers?



Method	Count	Percentage
Mail	25	48%
E-mail newsletters	19	37%
E-mail	26	50%
Phone calls	26	50%
Customer relationship software	5	10%
Other	7	13%

People may select more than one checkbox, so percentages may add up to more than 100%.

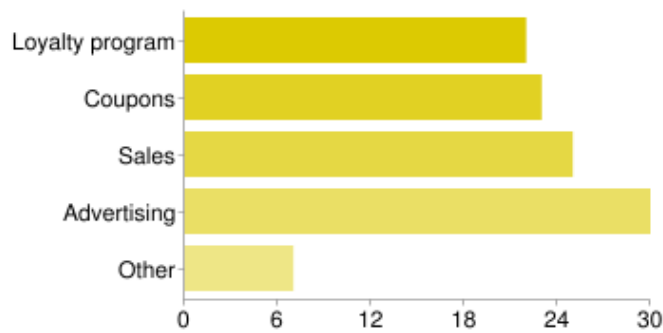
21. When you make a sale, what customer information do you record?



Information	Count	Percentage
Customer Name	32	53%
E-mail Address	22	37%
Street Address	28	47%
Phone Number	26	43%
Birth Date	2	3%
None; I just record the transaction	24	40%
Other	8	13%

People may select more than one checkbox, so percentages may add up to more than 100%.

22. What methods do you use to bring back customers?



Method	Count	Percentage
Loyalty program	22	43%
Coupons	23	45%
Sales	25	49%
Advertising	30	59%
Other	7	14%

People may select more than one checkbox, so percentages may add up to more than 100%.

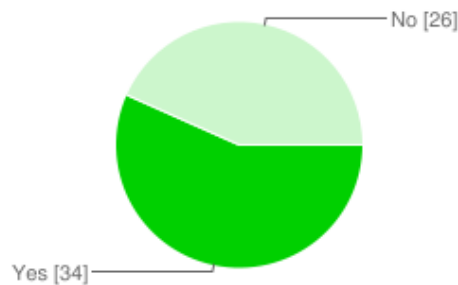
23. On average, how many customers do you have every week?

100-200 300 40 100 100 200 20-100 80-100 100-150 200 100 120-200 100 800 60-70 100 30 150-200 100 150 150 I exhibit at craft shows infrequently It varies - per show, 100-1000 100+ about 50 20 ? 20 200-300 1000 120 200 50 50-250 chan ...

24. Of these, how many are returning customers?

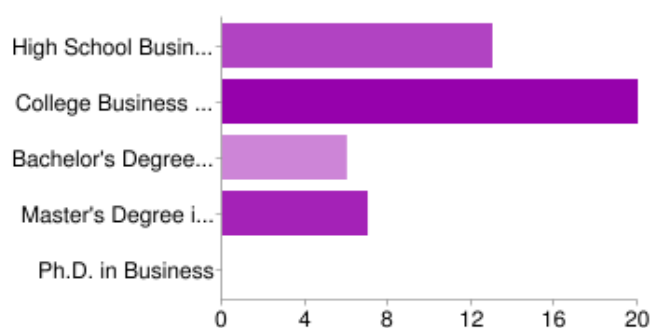
just about all of them 250 locals, 50%, many are tourists and if they return to Ellicott City they come back 60% 50% 75 75 don't know 95 50 10/20/2009 25-50% 75% 30% 30% 60 10 half 70 75 75 any where from 2-10 25%-30% 50 a ...

25. Any formal education in business?



Response	Count	Percentage
Yes	34	57%
No	26	43%

26. If yes, please check all that apply:



Education Level	Count	Percentage
High School Business Classes	13	38%
College Business Class (but did not major)	20	59%
Bachelor's Degree in Business-Related Major	6	18%
Master's Degree in Business Administration	7	21%
Ph.D. in Business	0	0%

People may select more than one checkbox, so percentages may add up to more than 100%.

Appendix C: Market Research

April 12, 2010 Rockville Town Square Interview Transcript

Team SBS Attendees:

Max Koehler

Jade Lee

Vidya Sathyamoorthy

Focus Group Participants:

Please introduce yourself and give us a brief description of your business.

Participant C: My wife and I own the Hallmark store for 18 years now here in Rockville.

Participant A: My name is [Participant A] and I currently own a retail jewelry store in Old Town Ellicott City, MD.

As a small business owner, do you feel that the needs of small businesses are met or do you feel neglected?

Participant A: Slightly neglected [laughs].

Could you elaborate upon that?

Participant A: Relevant to this discussion, I think that most programs, databases and other businesses that actively pursue small business, their definition of small business is different than the level of business I conduct. And in there is the crux. Small business to most people is under 500 employees. So that's nowhere close to where I am, and that's really what is, the definition that keeps us apart.

Participant C: Right, I think a lot of times when they talk about small business solutions it's just a stamped-out frozen patty that fits every business, and not every business fits into that stamped out frozen patty. We need something more customized. In addition, I think that a lot of small businesses can't afford the technological solutions or advantages that some of the bigger businesses have. And need to have, absolutely have to have, to be competitive.

How do you keep track of sales, inventory data, as well as customer information?

Participant C: Well, in my role at [national greeting card franchise] I was very fortunate in that I was a partner with the [national greeting card franchise] corporation and therefore they were able to consolidate all [national greeting card franchise] owners into one solid group and were able to negotiate technology so we all had the same technology that kept track of the minutia of sales and other data that we used.

Participant A: We started by building our own technology. I'm old enough to know what a computer is, and not too old that I don't know how to use it. So, I hired a few people to develop a program specific to my needs specifically, but I very quickly outgrew it and needed to rebuild another, until we eventually purchased the computer program we use now, which fortunately is also a small business and is also successful. So I have the services behind me and a group of other professionals I can call on with similar problems.

If you don't mind us asking, what is the name of that system?

Participant A: The program that I used is called Edge, and it's by Abbott-Shapiro LLC out of Connecticut.

For both of you, are you satisfied with your current system that you're using?

Participant C: I have to say yes.

[Participant B enters, meets other focus group participants]

Participant A: So yes, I am, very happy with the system that we're using.

Participant C: I would say the same

[Speaking to Participant B]: So we just got started, we just introduced ourselves, gave a brief description of our business, and talked about needs of small business owners and whether they feel their needs are met or neglected in the community. So, same question, how do you keep track of your sales and inventory data, as well as customer information?

Participant B: We have a point of sales system called Possum. It's by Ensign Systems...I bought the company about a year ago, so it's [the software that]they had. So, I decided, well I'm going to stay with what they've got, and then we'll start looking at making changes later, but I at least have to understand what they have. Basic inventory control, module point of sale, integrated with the cash register. Customer database, it's okay, it's not great. I've got a background in materials management and inventory control. I mean I've worked with systems 20 years ago that I know had far more firepower than what I have now. I look at it and say, this is good stuff, but I need more. I'm going to need to start looking at different capabilities.

Going off of that, what would you add if you could add features?

Participant B: Well, this has the ability to put in stock levels' min and max. It considers what you have on , but there's no capability of putting in a seasonality, or trending analysis, or the ability to put in a hot factor that would say let me know when this gets down, kind of like a top 10 list where I can say if I'm this close to being able to place an order, but because my supplier has say a \$2000 minimum, when I run my shortage reports and I'm getting \$1500, I have to go back and say, let me look at everything and then start to figure out where I need to get that other \$500 worth. So that's a major limiting factor right now.

Participant C? If you could add any features to your system is there something you would suggest?

Participant C: Payroll management.

Participant A?

Participant A: Beyond sending a limousine home to bring people to my store?
[Laughs] That would be great, integrate with other businesses that provide similar services. I used to have a boss and he called that the "Furby Factor", the seasonality of product. If you find a hot seller, you have to push for it. And that's one thing that I would probably also think of as a weak point in my program. They have a very sophisticated open buy system, a lows and highs minimum, average turnover, I have individual SKUs in my company so I don't do first in last out or the opposite. So I know the actual cost on that particular item. Doesn't allow me to average my return on investment, because it's all SKU specific. So return on investment is difficult to calibrate, I have to do that manually, which for my business it's a lot of work. But if I

have a particularly hot seller, especially with my business, I'm in a very competitive business, and my opportunity for growth is being ahead of the curve, and there's no predictive part of the program where I can track my experiments. So if I launch, like right now I'm launching a big diamond campaign. If I launch that campaign I can't set it up as an experiment, and see how well my money is doing in that whole division. So there's some limiting factors with that for sure.

How comfortable would you say you are with using technology in your business and do you feel like your system is user-friendly?

Participant B: I would say that our system is very user-friendly. I've got my sons and brothers who, you know, computer illiterate by all means, but they can just come in and pick it up, and it's pretty simple. What I would like to be able to do would be to have more like a separation if you will, where I could have password protection for control capabilities where I can show that anybody can take a look at sales volumes or let them look at selling prices, but I don't want them to see costs. That would allow me to be more interactive with the customers because the screens I have now, if I'm looking at selling prices I'm also looking at costs, and I don't care to share that with them. *[Laughs]* So doing some sort of security level controls that you could then kind of pick and choose, and create custom screens and allow you to say for the customers, put this information out there and allow them to say look here's all the information. And again, it's more of a control factor to keep back information. If I have managers running the store, I want them to see something different information than a clerk that's coming in and running the store.

Participant C: Yes it's user-friendly, and yes I'm comfortable with it.

Participant A: My system is actually really great with what you just mentioned with the security. Each person is assigned a passcode and they get to see only what I let them see based on that passcode. I can look at everything and change anything at anytime if I feel uncomfortable sharing more information. I think the program that I use now and in the past when I worked for much larger companies this prevalent issue always crept in and it's been a problem in my career for 25 years for me. I can run a list and get the names of my best clients like POP it's there - I know where they live, I know how much they spend, I know the products that they're buying, I know their comfortable price points, I know their anniversaries, their birthdays, their kids' names, their dogs' names, where they travel. I know so much information with that. If I send them a bouquet of flowers for their 25th wedding anniversary, and I buy them a \$100 gift card to have dinner at their favorite restaurant, NO system I know of will track that for me so that I can look back 20 years from now and say you know I was good to these people. And as your business grows, you can't remember all these things. I have a savant as a business partner, he *does* remember those things, *[laughs]* he knows all that kind of stuff. But when he's not around I need to know that I just bought a thousand necklaces while I was in Italy and I'm disbursing them amongst good customers, well if I just gave three of them to this person, I might pass this time and give it to someone new. I can't get that with this, there's no tracking.

How do you gather customer information, and what do you use it for?

Participant B: I sell wild birdseed. I've got customers coming in and they're generally a happy bunch coming in because they're feeding their passion, and they

love to see the birds coming in. So, I do that to see if they're part of a local bird association I can track that information and they're usually more than happy to give me that information. I've got email distribution blasts that I'll send out once a month or so. It's trying to get that balance between reminding them about me while not being a burden and cluttering their email inboxes to the point where they take me off their list because they're not interested anymore since they're getting too much junk. So I'll capture their email addresses, and again, they're feeding their passions so it's easy to get that information. Post-cards, we'll send out some post-cards, but again to maintain cost we've found it's more effective to get to the customers with email. We also use the information because we track what they're purchasing so that we can go back and see, did this work for you last time, oh you don't like this brand, right that didn't work for you last time, try this. Because the customer will come back and give you feedback, I liked this, I didn't like that, and then we can have a record because they're not going to remember as they're trying different things but we can look it up and they can give us the feedback because they knew what the results were, they just don't know what they used necessarily to get those results, and we can provide them information about it.

Participant C: Well, at the [national greeting card franchise] store, they have a customer reward program. It's by amount, "x" amount you get rewards. It was used very effectively to state events. I knew exactly what each customer was purchasing, and when ornaments would come in at Christmas time, I would know how many ornaments such and such spent each year and send them a special email about ornaments, and for those who would buy albums I would send them a special email

about albums. In my current role as manager of Ten Thousand Villages, we also capture, and I just today met with the Marketing Department, and the direct mail return on investment was 10, 12 times more than any kind of advertising we used. And we do the same there, events, special product sales, etc.

Participant B (asking Participant C): And with your direct mail, were you finding a separate piece such as Val-Pak or was it separate?

Participant C: It was separate.

Participant A?

Participant A: Well I'm a little bit more problematic. *[laughs]* I collect everything, as a matter of fact, I set the protocols with the computer that we have two choices if the customer has never been to the store before: we can run it through as a cash quick-sale, which I found a lot of people were abusing, so I turned that feature off, and now if they've never bought and they don't want to provide information, I have to override it or a manager has to override it. It's really how you ask the client whether you get a positive or a negative. But, if they've never shopped with us, we capture their full name, mailing address, cell phone, work phone, any contact information. If in the conversation they mention that they're buying for a special occasion, without them knowing we also enter that information. Spouses names if they mention it, we collect as much information as possible, so that we can really get to know them as people. For instance, if they say "I really like that song on the CD, who is it?" we can put that in the computer and they can get that as a gift if they spend some money.

But then I use all that information against them. *[Laughs]* After we collect certain tiers of clients, the first thousand, two thousand, three thousand, however many customers I choose, I then hire an analytics company and they do a reverse analysis of that subset, whoever they happen to be. If I had 3800 people buy diamonds from me, I would pull those clients only, I'll do a reverse analytics with the corporation so I can find out what the top 10 percentile of those people what they have in common and then I buy a mailing list with that particular criteria back to supplement a mailer. So last holiday, I put a 30 page catalog together and went out to 30,000 houses, and it accounted for 8% of sales volume in a six week period. It didn't pay for itself but it generated a huge number of new customers. And in my business, the average, my company's only 10 years old, my average customer to date spends a considerable amount of money my average in the 10 year period spends about \$22,000 per client. It's worth knowing that.

Participant B (to Participant A): So it may not have paid for itself, in that particular measurement, but you have them coming back, and you have 8% of customers coming back –

Participant A: - it'll pay for itself by this time next year, right. And the tangible nature of that catalog, I still have people come to me and say you know I got this 2 weeks before Christmas I had already decided on my wife's gift, but I noticed that she left this page open a few times, and her birthday is tomorrow so I'll take that set, thanks. So the residual sales off of that top mailer is strong, but, that requires some serious investment. I do my homework first. But I do it by subsets of customers always.

To manage that customer interaction, do you use any official customer relationship management software or is it part of your current system?

Participant B: No, we're picking and pulling and not really using anything.

Participant C: I don't but I do know a group that uses Constant Contact.

Participant A: For customer relations we have a multi-tiered system I put into place about 8 years ago. Constant Contact is part of that. We have a birthday club so every year they get their birthday + 1 to grow on in dollars, no restrictions, so if they're 70 years old they get \$71, they buy a pair of earrings and go home. Sounds like it would be a profit loser, but it is not, it's one of my best mailers. I also do a "tag you're it" so if they drop from my active zone, which for me is a 12 month cycle, so if I have not seen them in a 12 month cycle, they are put into a separate subset and they get what I call a "tag you're it" which specifically says "tag you're it", we haven't seen you in a while here's an incentive to come back and get 10% off your next purchase, no restrictions. I do lose money on that postcard. There's no expiration on that postcard, which I'm still in a debate with my attorney about, whether that's legal, an open liability against a company, but I haven't discontinued it yet because they haven't really substantiated anything for me. But, because it doesn't expire, I encourage people to keep it for a more expensive, more meaningful gift, because if you buy a \$10 gift, it's worth a \$1, but if you buy a \$10,000 item, it's worth a grand. So they keep it for big tickets, but they come back which is the point. That's the third thing.

Then we do individual emails. I get a pop-up list from my tech guy every morning of important dates occurring that week, and I personally send them an email, not really

personally, but I review the list and kind of give him a gist of what to say. We have an online forum, a blog, we do not use Facebook or Twitter or any of that stuff. Our database, we send at least 4 mailers a year, direct mail. But our big customer response, motivator, customer interactive module is our special events. We will host in store events with jewelry that most customers would never be exposed to in their lifetime from far off places in the world and they love that. They all come with a story and we'll do that for a day or two. I'll get anniversary cards, and if they're in my top end report (the top end report is my top 180 customers, they account for 85% of my business, it used to account for 80% of my business, but now they account for 85%, which means I have more heavy hitters. This means I need to do less up here marketing *[gestures high]* and more down here *[gestures low]*, because if I lose them, I'm screwed. *[laughs]* So, with the top end report, they get other advantages, CDs, movie tickets, stuff for their kids to do so they can have a date night, stuff like that.

What would you say would prevent you from using new technology in your business, so something different from what you already have?

Participant B: I would say that it would have to be proven, without a shadow of a doubt. If I'm going to put my reputation out there and I want my business to be successful with that, it has to be right. I can't find out 30 days later, wow, we forgot this. Because then I'm out of business. It's all about service, and I'm sure you're both *[gesturing to others]* seeing that. I mean, I love Wal-Mart because they get their customers so P.O.ed *[laughs]* they come in to me. You greet your customers by name, you treat them with respect, you carry the products out for them. I mean, I'm selling 50 pound bags of birdseed, and you go into a Wal-Mart, and you're expecting Junior

to pull that out for you, it's never going to happen. They may have a stronger buying power, but I can beat them where it matters to my customers, and I can't risk giving up that component, because somebody is always going to be selling it cheaper somewhere else so I let everybody else have that part of the market, I have to beat them on service. Service means they're coming into the store, they know they're going to get what they want, or I can get it for them, and I can send it where they want.

Participant A (to Participant B): Does your computer do special-order tracking?

Participant B: It does not.

Participant A: Ours does, finally, they figured out the kinks with that and it works well. When you were talking about some of the deficiencies with your system I wanted to ask you that, sorry!

Participant B: It's just important that, at the end of the day, the customer is king. And if we're going to put a new software package in place it has to be able to, you don't have to have a pretty high confidence, it's just got to do it because I don't have time to go back and say, well did it do what it said it was going to do, because I'm going to keep pushing it to do more, to get the Birthday Club going I've already written that down, that's a great one.

And what would you say your metric would be for measuring whether a system is proven?

Participant B: I would have to one put my trust in the system, it's the classic garbage in garbage out. The more and better information I can put into it and proving it when it comes out, that I'm not running out of inventory, that it's alerting me before it hits rock bottom, and looking for things. I mean I typically look at say inventory, with the 85% rule, you got this, and what you're doing you have to pick off the bottom ones, because if these guys are taking care of themselves right now how you're going to grow your business, you can get them, but you can also get something from these guys, and how are you going to do that. It's what the data can tell you, the data is also there, it's how you can manage it, and looking for different ways to pull the data out. Specifically, how I could tell you that I would deem it a success, sales climbing, giving me more opportunities to contact my customers, I mean I'm not going to be at the same class of you know, the customers, and tracking all the birthdays and all the information, but getting all the information and being able to say hey this is relevant, my seniors are a potent force out there, I have to be able to get them, they have the most disposable income, or maybe they have the least. How are they spending, and can I capture my data and do more profiling for my data, and see what's missing. What do I need to know to run my business? It's never enough. Whatever I know today, I need to know more tomorrow, cause I can't risk someone coming in and cleaning my clock.

Participant C, Participant A, what about you?

Participant C: Return on investment. Is the new technology going to enhance my business enough to give me a return on investment? I don't believe in being the pioneer of new technology, I would rather someone else try it out. *[Everyone laughs]*

Participant A: *[laughs]* Yes, I've had a few of those.

Participant C: Learned the hard way too, try it out on somebody else first. Other metrics would of course be number one testimonials and number two, documentation, and demonstration that what you say you're gonna do is what it's gonna do, and here's what it's done for this person. I think those are the critical factors.

Participant A: For me that answer will continually evolve. Early on when I was just launching, I would have been easy, someone could have just over lunch just told me they were developing a website for Hallmark and I would be like hey! Could you do that for jewelry? Come talk to me! It would be that fast and that easy. My dollars would have already been invested, but I needed to set up that system, so I bought really early with the expectation of growth. But at my 10 year, every business plateaus, and you focus different areas in different places. Technology has always been critical to my company, because I come from that background of big business, where the more information you have the better your business will be and you will most likely be lead dog. Now, for me to switch to a new company, it would have to take a mountain. The program I use now has become invaluable to me. They are as old as my business, so they've proven they're going to stick around for a bit, they have about 800 or 900 other companies that use their program so they have a forum where we can go in and bitch about what this program just got corrupted I need this

by today rather than calling their customer service and talk to a techie who doesn't speak English, I have a real live person who thinks like a businessperson who says you know if you do that and that you can bypass that field and get right to it, so okay great. So it would be tough for me to move now, but if my 5 and 10 year forecast come true, I will very quickly outgrow this system, and my needs will shift again, because the needs and ROI for a single location is NOT the same for multiple locations. I've developed those plans for stores in my past when they were having expansions and I've seen computer programs where they say we're not going to spend the money on the technology right now because we're buying a new location and have to furnish it and buy all new stock for that second tier have managers and salespeople. Well, it doesn't make sense to do it only for one store because if you're going to do one store, the cost of that extra entity, even if you were to make a hell of a lot of money off of that one, it wouldn't pay. Opening 2 or 3 simultaneously, that makes financial better sense in some cases. Sticking with the same technology base for that, no no no. I couldn't have a unique SKU system. Right now if that diamond gets put in, it has a unique SKU, I track it until it goes to a client. With multiple locations I would need a bulk SKU, like birdseed, 30,000 in, 30000 out *[Laughs]*

Participant B: You can track the individual items by a serial number. And probably with the multiple locations, which is also something that's probably in our future growth, my system would not be able to handle it today. And certainly as you start to look at inventory and excess inventory, you can either ship back from Store A back to Store B or you can buy it from Supplier 1. And I'm selfish, I'd rather keep the money for myself, so I need tools that can tell me I'm overstocked here versus there and

gives me trends at the same time and tells me if it is selling at Store A, what is it, is it the personnel? Because certainly the personal interaction like you've got I'm sure (gesturing to Participant A) is making or breaking the sale, from the time you're asking for the customer's information to the time when you're adding on the sale, what is it that they're doing over there and how can I pick up again through the data, what kind of trend would I need to take that and do something meaningful with it other than a popularity ranking like oh here's my top five at this store and my top five at this store. Let me know what's selling, and what's kind of relational, and at the same time how can I move my inventory around. There's a cost for moving product from A to B but it's a whole lot cheaper than buying it and spending a whole lot out from somebody when you've got excess here.

40% of our respondents said that they didn't record any customer information when they made a sale. Why do you think this is so?

Participant B: I guess what kind of stores or what kind of businesses do they have. If it's a hot dog vendor on the corner they probably know their customers so there's no real need. But if you're selling diamonds it's a whole lot more important for customer relationship management.

Participant C: I suspect it's a lack of education about the benefits of doing it, and perhaps the resources.

Resources as in, time?

Participant C: Money.

Participant A: I've worked for those people. *[Laughs]* Honestly, I think it's fear. I worked for a gentleman who had a mug on his desk that said "Budgets are for wimps." I loved that mug because every time I went in there with some harebrained idea, when I was new to his business he's be like ugh, go, leave. But then he began to feed me small bits of money and eventually he started calling me the Golden Boy because if he gave me money on a project, that department would make money, so he'd give me another department and so on and so on. But I would bore, I would develop it, it would run, now pay someone to keep going with it I'm done. I need to fix this other problem now! But for him, he owned a company since 1908 that his grandfather started, he was third generation, the only son of an only son. At that time he had six locations, all under the same advertising umbrella. He had a freaking cash cow. He ruled that town. We did an analysis that 2 out of every 3 pieces of jewelry bought in 100 square miles came from him. He was HUGE. I grew in the company to be the buyer in one of his largest departments, which was the estate and antique division. That department, which accounted for about 80 to 85% of his entire profit, is paper. He gave me \$5 million open to buy and a \$400,000 - \$500,000 advertising umbrella to use, and it was paper. And it was all fear. He had to hold it, he needed the document, and now okay he's in his 80s now, but at that type of business when you were born into it, you did things like your dad did. I think that for a business solution and technology that type of customer is the hardest to get, but will be probably be the most rewarding in the end because they're already making money, they have proven success, and if they're making money on paper technology they're going to make a hell of a lot more with the other as long as it's user-friendly. So when we converted

that whole division into computer technology, I researched different companies, went with this company in Boston, I think it was called ASC. No unique SKUs, average cost of goods, ROI reports, really basic. But I had 15000 items in inventory to put into this system, so this was a huge undertaking. Six locations, transfers of stock that was happening while we were doing data entry, so what used to be at Store 6 is now at Store 1. It was a bloody nightmare, because he didn't have the information like that *[snaps]*. If I hadn't been working for him as long as I had, and he wasn't as confident in me at the time, I would have lost my job probably. But only because I had tenure and proven success did he ease off it. But he was riddled with fear. That's a big one I think.

Customer Relationship Management was rated as the number 1 area in need of improvement more than any other area by our survey respondents. Do you feel that result reflects your business?

Participant B: I would say that we're getting by with what we have right now. Could we do so much more with it? Yes. Right now I'm pulling things through and forcing things through. By no means am I exploiting my customers or sharing with them what I can in the best way that I can. The more that I can relay information to my customers, even if it's trying to use some sort of technology that's not even out there yet. Personal websites for the customer saying hey here's what you bought, here's what our general customers are doing, saying we think you're special here's why we think you're special but then going the extra step and help you. We're not gonna have tremendous success but if we keep pushing people forward hopefully the way we treat our customers they're going to share that information with others when they're

out in public and that's the best kind of advertising you can get, like hey Participant B sent me down here to this, that's where it's all going to come in. When they love to talk about your business, that's where they payoff really comes in. If we can get some sort of software to help manage the data, keep the customer informed with what we're doing, and also keep us informed with what the customer is doing.

Participant C: I think it's a difficult question. When I put myself in the shoes of a small business person, when I walk into a store and all I see is a cash register and a computer my heart stops. Customer relationship is important, but for god sakes they've got to have cash flow management, inventory management and open to buy also. I'm not sure customer service relationship is the number one priority in my boat.

What would you feel would be the proxy?

Participant C: Technology open to buy inventory management. You've got to have lean inventory management. You can't carry a lot of excess inventory, it'll kill you. Obviously the big boys play a much better game with customer service relationship than the little guys and they could certainly use the help with that, although he does an outstanding job *[motions at Participant A]*. [Everyone laughs]

Participant A: Yet I think I'm only halfway there. *[laughs]* It's industry specific.

Participant C: See, there's a good entrepreneur for you, never good enough.

[Laughs] But certainly it's important, certainly it's critical to go up against the big guys, but I think that for a lot of small businesses that's step number two. Step number one is fine tuning other aspects of your business.

Participant A: I mean, managing any relationship, business or otherwise, customer or non-customer, it's healthy and wholesome and it's human. I very much like to enjoy the benefits of ANY relationship. I find that if I can collect a lot of information from my customers, then the next time they come in, I can call them in by name and say last time you came in you bought this for your kid how'd that work out and they respond they broke their arm and you say oh sorry. But to me that's what it's all about. If I'm going to a grocery store in Howard County and 3 people come up to me that they're all smiling and give me a hug because I'm very affected by people *[everyone laughs]*. You know, I don't sleep at night if someone's unhappy with me. The odd part of the computerized aspect of that managing a relationship isn't so much what you put into the computer, that everyone would agree is vital and the information you need is as much as you could possibly collect. Period. Now, if the scale of the business is much larger, are they going to call you by your first name? Absolutely not. I know the scale of the business when I go and I buy something and they ask what's your zip code. They're doing analytics on the big end, they're doing nationwide ad campaigns, I've done it. It's just based on zip code. But they'll do a research module on that zip code, and to them that's managing a relationship. It's hey, that's what we have. I don't think it's so much about what the computer will allow you to put into it, I think it has more to do with the computer making it easier for the user to take that information and do something tangible with it. I can run lists, I can pigeon-hole myself and I start running lists, inventory, ROI, stock, my oldies, newies, my hotties, all these different things I start looking at. And in the end, I have 4 people in my store and I have my back to them because I'm looking at all this crap.

We are considering creating a software that small businesses could use to maintain their relationships with customers. The product enables owners to keep track of customers' interests based on past sales and self-reporting. The system could then remind owners to contact those customers when there are relevant events such as sales, holidays, customer birthdays, etc. What are your thoughts on our proposed system and would this system be helpful to your business?

Participant C: Yes, I think that's the important part of customer relationship management is staying in contact when you have your special events or something of interest to them, instead of sending them something over and over again which becomes a drone. Is this something I would be interested in? Again, because my business has that, I would not, but if I were to put myself in the shoes of a small business person who doesn't have it, I would think it's something that they should consider very seriously.

Participant B: I think that I could certainly use that – the ability to pull specialized information and create the non-cookie cutter. You can't necessarily get down to handwriting a personal greeting to every customer, as much as I would like to do that, again going back to the standpoint that the manager and owners' time is ultra-valuable trying to get something to kind of shortcut, to at least recognize for the customer, that we have a means of identifying you and we respect and appreciate your business, and we're not going to send you just a cookie cutter, but trying to do something that comes in between, so almost getting into, if you're sending them a personal mailer, try to utilize some of the benefits of high volume work but at the same time trying to personalize it. Something better than "Dear Participant B" with

the bold and the black and the different coloring, and it's like, *[sarcastically]* "Wow, you guys put a lot of time into this..." The capabilities of that, and to your point earlier about trying to glean the information sooner and easier. The information you put in there, how do you get it out to work with it and identify the information.

Participant A: I think for me it would be, I mean it is helpful, the program I use and have used for a number of years now, does all those things. I think it's really lacking, and if you're considering writing a program, one of the things you should probably focus on is how your client wants to absorb information. I have different groups of people that are like "Oh, no, no email. Call me on my cell." I have people who only want to be paged. I have people who never take a home call, absolutely never at dinner, but I can call him three times at his office. So having a program that is very sensitive to your customers' wishes. Like, I prefer a handwritten note, thank you. I *hate* phone calls personally. So if a business solicits me via phone, it's a sure kill *[Laughs]*. People when they start writing these programs, lose sight of the big aspect. If you're in a relationship and your spouse is really pissed, and you know them well, sometimes it's good to just let them be for a bit. Same goes for a customer. You can't hit them too often, you can't hit them too frequently, and when you do hit them it has to be in a way that they are willing to absorb. So, the media type, really prompt the user to ask a question very politely and professionally without them being able to go by that screen, have it locked in, like "Oh, I see that you're new to us. Do you mind if I capture some information? First and foremost, how do you like to receive information? Would you like me to write you notes, do you want me to call you, if so

what number? Are you okay with email?" Customers will answer that if you ask them, but that's not in my program. I really wish it was.

Thank you so much, we really appreciate your time. We've got some great information from this. If you have any questions, we have given you our business card in your thank you cards; please don't hesitate to contact us.

[END]

Appendix D: Market Research

Second Interview Transcript

If you could please introduce yourself and give us a brief description of your business.

Participant: I am [Participant name] and I have two silver jewelry stores that import directly from Mexico, gifts like pottery and mirrors, and paintings...and a lot of silver jewelry and then I buy other German silver jewelry made in the United States and other countries.

As a small business owner, do you feel that the needs of small businesses are met or neglected?

Participant: I think that they are neglected.

So how do you keep track of your sales and inventory data as well as customer information?

Participant: On the computer and it's at the register.

And using this Retail Pro system that you explained earlier?

Participant: Yes.

Are you satisfied with this method?

Participant: No, I am not. It's not really user-friendly and it has a lot of glitches and for example, there's one part in the computer that analyzes what you're selling...which vendors are selling most so you can see a lot of barcodes, but then

when you get it into anything you can understand, they only give you the top seven. So you really can't see the rest of what's going on in the rest of the barcodes and it's not real...it's not very perfect, let's put it that way. Either I don't know how to use it properly or it's not user-friendly.

So within a vendor, you'd only be able to get the top ten products that are selling?

Participant: You only get to see the actual sales of the top, I think it's seven vendors, but you're seeing all the rest of them down here.

That's inefficient.

Participant: That's just an example.

Are there any other areas that you...I guess...about the system that you feel are not user-friendly?

Participant: Um...well, we were having trouble with doing the email through the system so we finally got Constant Contact. I don't really like it because that is also very limited. I don't like the visuals, but it is a good system, but you're really restricted creatively with the physical email artistically.

Within the system itself, for either Constant Contact or Retail Pro, are there parts that you do like, that you do enjoy using, or...?

Participant: I don't really do all of this myself. I have other people doing all this for me.

How comfortable do you feel using technology in your business?

Participant: I feel like I was born a little too late for the technology. And it's very, very difficult for me. I'm 56 years old. They didn't even have any calculators in high school when I was...you know what I'm saying? And I have not been as good with it as I would like to be, but I noticed that the younger my employees, the better they are. So I have a couple people that just graduated from college. One already left me to work for a big position at PNC. She got a good job. I'm not expecting them to stay forever. Another girl went to ECU and studied communications. She is real good at it. Ones that are just coming out of school are usually better at technology.

Unfortunately, a lot of the people that are really good at the sales are not just coming out of school. So they have a lot of trouble with technology, but they are better sales people and they have to be doing both. So I've limited the inventory to the younger ones because they don't make any mistakes and they're better at using the computer.

So this is like processing merchandise or doing something online.

Participant: Yeah. Some of us older people, you can tell us a hundred times how to use a store credit, but you still have to call the younger people to find out how to do it. It's just not sinking in.

So initially, when you chose Retail Pro, why did you choose it?

Participant: It was a long time ago. One of the other stores in Annapolis, the guy recommended it.

So was that your first retail management system?

Participant: Yes. Before that, we did a hand thing. I actually drew pictures of the jewelry and gave them a number like a B for the vendor and a 1-1, and I did it all by hand. Because I started this business a long time ago, actually as a wholesale business. So I did that for years before I reopened the first store so it's evolved since they started it like probably when I was 32.

And do you currently use customer relationship management software other than Constant Contact or...?

Participant: No. I mean we have...now we're taking everybody's email and we always have a customer profile in the system, Retail Pro. Then we use the name, address, phone number, and then we used postage. Mailing became so expansive that we realized that we had to go on the email because of the green factor and also because it's so inexpensive. Believe it or not, I just started doing the email instead of the mailings 2 years ago at the latest. I mean, that's the longest. Year and a half...couple years is all.

To get the emails and the contact information...how do you gather that?

Participant: We have people fill it out themselves at the register because it takes so long for some people to put it in. I don't know. Some of the people that worked for me were putting it in the system and some of them were having them write it down.

Okay, and is it like a card or something...?

Participant: In one store, we have little cards. In the other store, we have a book. It's kind of, you know, a personal business, we're not real by the book.

Since you started emailing your customers, did you notice any positive changes in your customer's behavior, such as increased spending or store visits?

Participant: I think that the email is helping. More so at the mall store than at the downtown store. For my downtown store, people that don't like to go to malls and tourists. So you don't get as much response from that type of person. The person at the mall is a shopper. They're more responsive to that.

What would prevent you from using new technology in your business?

Participant: Nothing really. Just maybe having difficulty finding it. For example, I wanted to replace the Retail Pro, I've asked a lot of people what should I do and nobody knows anything about any of the systems that I know. None of the people I've had contact with. I'm not a real... I don't have a lot of retail pros.

Is there any source that you would go to for information, like a source you would trust?

Participant: I found a really great computer guy in Annapolis and I was thinking of asking him. I'd asked another guy who is in the computer business and he looked into it. He emailed me all the information for a system. I'm pretty sure it's through Microsoft. Would that be typical...?

Does QuickBooks sound familiar to you?

Participant: Yeah, something like that. My question is am I going to get every penny? One reason we chose Retail Pro is they had the possibility of having very small text because visual is really important to me...with the jewelry.

So the tags come out from the...

Participant: It's a separate machine. They talked us into it because they have these little small tags.

So in an upgrade, what specific features would you look for if you were gonna upgrade your system at all?

Participant: Okay, I have to upgrade it. I need to...I want both stores to be connected...to be able to do the inventory at one store instead of doing it in two different stores and then connect it totally online so that somebody comes in to one store, they can return it and it's on them whether they bought it at whatever store and all of that. Because right now they're all separate. I don't have them integrated, but I have to spend money. So instead of that, I opened the second store, then the economy died. So I still don't have the money to redo my computer system. It will be soon though. So maybe you guys can tell me which one to use.

Definitely. So do you think your customers would find it intrusive if your software could recommend other items they would like based on past items they've bought?

Participant: I feel like I have a lot of very private customers that don't wanna be bombarded with emails. It's more of a gallery/jewelry store...The [customers] artsy. And the people...I don't think most of my customers want to be...I don't know. I'm sure we have a percentage of customers that are like that. Like I've signed up for...I'm on the email of a boutique. I'm not saying where it is. And I'm gonna erase it; unsubscribe. The reason I did it was just to see what they were doing. It really bothers me to every other day open up and have somebody marketing me. I don't

want to have to do that to my customers too much. I don't want to over-market. So I try. I only have one sale, one big sale in each store per year. And then I only have one...then anything that's done by the merchants downtown I go along with that. And then I think what I going to try to do is just to limit it to one email a month unless there's some really good reason to do two. That's just my personal opinion. A lot of my customers are like 35 to 65. I don't think they're sitting on the computer all day waiting for me to email them, you know what I saying?

Yes. So this is going off of that...would you say that you have a lot of customer retention, like a lot of peak customers?

Participant: I do. I think I have a good retention.

40% of our respondents said they didn't record any customer information when they made a sale. Just in your opinion, why do you think this would be?

Participant: I think it's just so hard to keep track of. If you're going to use your customer information, you have to be looking at it constantly. I have a lot of different customers. It's not a business where you have...I mean, we have new customers every single day. It's a lot of work!

Definitely. So as I mentioned before, we have surveyed about 60 businesses so far and from that, we noticed that customer relationship management was the number one area that respondents said were in need of improvement. Do you feel that this result describes your business?

Participant: Yes, it does, and I'll tell you what? I have tried time and time again. Every single person I hired to help me run my business tries to do it. They get a book for them. They say that when you sell a lot to a certain person to put them in a special list or do something. The only people that do it, there's like maybe one salesperson every year, you know, that really knows who all the customers are and might start calling people about stuff, but it's a real hard thing to do. It's very hard to get the staff to handle the customer, you know, remember, and use the list and really...some of the people say, "When I was working in such and such, we did that...we called our customers," and then for some reason, they dropped the ball with me because I'm very disappointed in the lack of attention to that that my employees have. And I've tried and tried and tried to find different ways of stimulating them to do that, but they're not doing it.

Do you think that there's a good reason why this happens?

Participant: I think it's because they really don't know how to get a grasp on how to do that. So maybe it is a software thing where you have to say, "Okay, this person buys this vendor," so every time you get new things in from that vendor, that software program says who to call or who to email, you know, I guess there is that.

Actually that was the best segue. We're considering creating a software that small businesses can use to maintain their relationship with customers. The product enables owners to keep track of customer's interests, exactly as you said, based on past sales...

Participant: I think it's a good idea.

So the system could then remind owners to contact those customers when there are relevant events such as sales, holidays, customer birthdays, etc.

Participant: We do contact...we do send a birthday thing out to every customer, you know.

What do you think of the system and would it be helpful to your business?

Participant: I think it will be great. I think that there is a real need for it. I think it's impossible to do any other way. It's got to be computerized because I've tried and tried. And I tell people, "Oh, man, if somebody..." I'll even have to be standing there and say, "Do we have your email?" when one of my employees have just sold somebody \$500 or \$600 and they continue to not tell them their email even. So I've seen there are some systems where you cannot sell something to somebody until you put their name in the computer. And now I get it because it seems like there's a lot of resistance to that as far as when people are ringing up. They want to get them out of there, so they can get back on the floor. It's a problem.

So if you were reminded to send an email with an idea tailored to a specific customer, a template to use, and contact information, do you think you (or your employees as the case may be) would follow through and send the email?

Participant: Yes.

Would you pay \$500 for such a system? And if not, how much?

Participant: Yeah, I would pay \$500.

Would you prefer that this system be added to your existing system, or a separate one that works independently?

Participant: Added to or integrated.

If it was a system that worked on its own and was able to pull information from, I guess in that case, it would be an add-on to...

Participant: I mean it would have to be something that you put into your regular system, I think. Although I think the Constant Contact they are doing it separately.

There is a break in the tape here where the recorder was turned off for awhile because this is where the official interview technically ended. We described the pilot test that we were planning for our research, and the Participant expressed interest.

We are developing the system right now. Do you think that this would be a system you might be interested in?

Participant: I would love to be your guinea pig.

Really?

Participant: I would. I have to get a new system anyway, but I can't afford to get that new system like within the next month or two, so when would you need me to have my Microsoft stuff all done.

August or September would be the earliest.

Participant: Well, I might not be able to do it because I have a terrible system right now and a lot of glitches, but if you can make it work with my system, I can show

you my system, I can give you the handbook...you can even call the company, it's called Retail Pro.

That would be incredible.

For the first couple months, for the pilot test period, we're afraid we won't have something that would actively integrate with your system. It's just a programming challenge for a pilot. So we would have to come in and manually...we'd even come in and transfer it for you if you wanted. But would you still be willing to...

Participant: Yes, as long as you don't mess anything up.

We'll do our best.

Participant: I mean if somebody really professional is messing around with the computer or my computer guy is there with you or something like that. Because since I said, it's touchy; it's not working that well right now. So that's the only thing that worries me.

What we would make sure to do is have the same one or two people who are coming up maybe every week or however is good for you to manually transfer the data.

Participant: And what would you see? You would see if those emails are actually bringing customers in? That would be cool!

We're going to be monitoring everything, so we'd be able to give you the results at the end of it.

Participant: Why not? Yeah.

Fantastic. Thank you so much.

[END]

Appendix E: CRM Software Comparison

Software	Price	Online or On-Site?	Website	Comments
NetSuite	\$129/month/user	Online	http://www.netsuite.com/portal/home.shtml	Targeted towards mid-sized businesses
Maximizer	\$199 and up	On-Site	http://www.maximizer.com/crm/	Software works with mobile devices such as PDAs and mobile phones
Microsoft Dynamics	\$440-499/user, \$528-599/server	On-Site or Online	http://crm.dynamics.com/en-us/	Familiar Microsoft software environment, including Microsoft Outlook
Sales Force	\$65/month/user	Online	http://www.salesforce.com/	Tiered pricing system; the quoted price is for the Professional edition; pioneered the "Software as a Service" concept
Sage	\$199.99 for one to ten users; \$359.99 for unlimited users	On-Site or Online	http://www.sagecrmsolutions.com/	Offers additional connected services, including the ability to work with mobile devices such as PDAs and mobile phones
AdaptCRM	Not Listed	On-Site	http://adaptcrm.com	Focused on adaptability; requires extensive time and expertise to fully customize the system to store needs; designed to interact with ERP systems
AppShore	\$11/month for a 1-year contract, \$14/month for month-to-month subscription	Online	http://www.appshore.com/	Targeted to small businesses and maintains a low price point; bills itself as a simpler alternative to Salesforce
Avidian Technologies	Online: \$9.95/month for individual, \$49.95/month for enterprise; On-Site: \$149.95/user and up	On-Site or Online	http://www.avidian.com/default.aspx	Provide several difference products with different pricing options; works with Microsoft Outlook
ClaritySoft	\$26/month/user	On-Site or Online	http://claritysoft.com/	Took commonly-used features found in more advanced CRM packages, but did not include high-tech/low-value features that many businesses do not use
coAction	\$25/month/user	Online	http://coaction.com/	Designed for businesses with multiple functional areas; software aims to enhance collaboration between departments
eSalesTrack	\$40/month/user	Online	http://esalestrack.com/	Includes features such as audio and video conferencing that do not typically appear in basic CRM systems
FrontRange	\$695/user and up	On-Site	http://www.frontrange.com/index.aspx	Works with Microsoft Outlook; has an optional call center upgrade
Infusion	\$199/month/user	Online	http://www.infusionsoft.com/	Different configurations available for specific industries
InsideSales.com	Not Listed	Online	http://www.insidesales.com/	Bills itself as Lead Management software; includes optional dialing and voice messaging tools
Oracle	\$75/month/user and up	On-Site or Online	http://crmondemand.oracle.com/en/index.html	Focuses on in-depth analytics
ProspectSoft	Not Listed	On-Site or Online	http://prospectsoft.com/	Software works with mobile devices such as PDAs and mobile phones
Sales Elites	Not Listed	Online	http://saleselites.com/	Designed to interact with social media tools
Salesnet	Not Listed	Online	http://salesnet.com/	Features "Intelligent Pipeline Management", which shows in real time how leads and opportunities are changing
SalesNexus	\$35/month or \$299 annually	Online	http://www.salesnexus.com/	Automatically archives emails; can be synced with mobile devices such as PDAs and mobile phones
Soffront	Not Listed	On-Site or Online	http://soffront.com/	Targeted towards mid-sized businesses
SugarCRM	\$499/year for up to 5 users; \$799/year for up to 10 users	On-Site or Online	http://www.sugarcrm.com/crm/	The quoted price is for the Express edition; the Professional and Enterprise editions charge \$30 and \$50 per month per user respectively; designed for companies with technical resources to customize the product
Surado CRM	\$55/month/user or \$500 per license	On-Site or Online	http://surado.com/	Designed for businesses with less than ten employees
Tracker-RMS	£500/year	Online	http://www.tracker-rms.com/	British software; designed to stand alone rather than integrate with other software systems, although it can work with other softwares such as Microsoft Outlook
Workbooks.com	£30/month and up	Online	http://workbooks.com/	British software; host a forum where users can comment on the features they like the best
Zoho	Free for first three users; \$12/month/user and up after third user	Online	http://www.zoho.com/crm/	User can use the CRM account to access other Zoho applications; users can login from existing Google or Yahoo accounts; also has an inventory management component

Appendix F: Software Requirements Document

1.0 Home Page

1.1 The left-hand navigation shall display links in the following order:

- Home
- Customers
- Inventory
- Suppliers
- Transactions
- Calendar
- Analyze
- Rolotracker
- My Settings
- Groups
- Messages

1.2 QuickAdd Feature

1.2.1 A box shall appear at the top of the screen. Underneath the box will be icons to QuickAdd the following features:

- Transaction QuickAdd
- Communication QuickAdd
- Customer QuickAdd
- Note QuickAdd
- Reminder QuickAdd

1.2.1.1 The box shall be set to the Transaction QuickAdd by default.

1.2.1.2 Clicking on an icon will display the appropriate instruction text underneath the box. Whatever the user enters will now be saved in the correct category

Clicking on the transaction icon will allow the user to add a transaction

Clicking on the communication icon will allow the user to add an entry to the Contact History page

Clicking on the notes icon will allow the user to enter a note, which will show up under the customer's personal information

Clicking on the reminder icon will allow the user to enter a reminder, which shows up on the calendar.

1.2.2 Clicking on the transaction icon displays "Store; Customer Name; Email; Item (Item Quantity) + Item (Item Quantity) + ..."

1.2.2.1 The user enters the above information, with each value separated by a semicolon.

1.2.2.2 The item and item quantity are required. If the user does not enter a value for one of these, display the following message: "You must enter the item and the quantity"

1.2.2.2.1 An item name or an item number are acceptable for the "Item".

1.2.2.2.2 If the item is not in the inventory, a box appears with the following message: "Item not recognized. Did you mean ". The box will then display the three closest item names to the one entered. Below that message, in the same box, will be three links that say "Try Again", "Add New Item".

1.2.2.2.2.1 Clicking "Try Again"" clears the fields and allows the user to enter the QuickAdd Transaction information again.

1.2.2.2.2.2 Clicking "Add New Item" takes the user to the "Add Item" page. The user follows the steps to create the item. After the "Add to Stock" page, the number of items in the transaction are subtracted from the inventory.

1.2.2.2.3 If an item name is entered, there must also be a quantity entered in parenthesis for that item. Otherwise, the message in 1.2.2.2.2 is displayed

1.2.2.3 If all of the information entered is acceptable and the user clicks on the "Add" button, the "Item Quantity" is subtracted from the stock level of that item in the selected store. Also, the transaction is added to the Purchase History for the customer entered, using the date and time that the QuickAdd Transaction was created for the date and time of the sale.

1.2.2.4 If the customer name is NOT left blank, but the information entered does not match any customer in the Customer database, a box appears with the following message: "Customer not recognized. Did you mean ". The box will then display the three closest names to the one entered. Below that

message, in the same box, will be three links that say "Try Again", "Add New Customer", "Proceed with Transaction".

1.2.2.4.1 Clicking on one of the three customer names presented will enter the selected customer's name for the Customer for the Transaction. The transaction will be added to the selected customer's Purchase History.

1.2.2.4.2 Clicking "Try Again" clears the fields and allows the user to enter the QuickAdd Transaction information again.

1.2.2.4.3 Clicking "Add New Customer" will subtract the items from the inventory and then go to the "Add Customer" page, with the name and the email address (if entered) already filled in. The user can then enter additional fields of information for the customer. When the user clicks save, the transaction is added to the customer's Purchase History.

1.2.2.4.4 Clicking "Proceed with Transaction" will subtract the items from the inventory. A new customer will be created with just the name entered and the email address (if entered). All other fields remain blank. The user is not taken to the Add Customer page; the customer is created automatically. The transaction is added to the customer's Purchase History.

1.2.2.5 If the store number entered does not equal any of the existing store numbers, a box appears with the following message: "Store not recognized. Did you mean ". The box will then display all store numbers entered. Below that message, in the same box, will be a link that says "Try Again".

1.2.2.5.1 Clicking on one of the store numbers will enter the selected store number for the Store for the Transaction.

1.2.2.5.2 Clicking "Try Again" clears the fields and allows the user to enter the QuickAdd Transaction information again.

1.2.2.6 If the Item Quantity entered for an item will make the quantity for that item in that store less than zero, a box appears with the following message: "Stock level for an item cannot be

less than zero." Below that message, in the same box, will be a link that says "Try Again".

1.2.2.6.1 Clicking "Try Again" clears the fields and allows the user to enter the QuickAdd Transaction information again.

1.2.3 Clicking on the Communication icon displays "Customer Name; Type of Communication; Date; Notes"

1.2.3.1 The user enters the above information, with each value separated by a semicolon.

1.2.3.2 The Customer Name is required. If the user does not enter a value for the Customer Name, display the following message: "You must enter a customer"

1.2.3.3 If the customer name is NOT left blank, but the information entered does not match any customer in the Customer database, a box appears with the following message: "Customer not recognized. Did you mean ". The box will then display the three closest names to the one entered. Below that message, in the same box, will be three links that say "Try Again", "Add New Customer", "Proceed with Communication".

1.2.3.3.1 Clicking on one of the three customer names presented will enter the selected customer's name for the Customer for the Communication. The communication will be added to the selected customer's Contact History.

1.2.3.3.2 Clicking "Try Again"" clears the fields and allows the user to enter the QuickAdd Communication information again.

1.2.3.3.3 Clicking "Add New Customer" will go to the "Add Customer" page, with the name already filled in. The user can then enter additional fields of information for the customer. When the user clicks save, the communication is added to the customer's Contact History.

1.2.3.3.4 Clicking "Proceed with Communication" will create a new customer with just the name entered. All other fields remain blank. The user is not taken to the

Add Customer page; the customer is created automatically. The communication is added to the customer's Contact History.

1.2.3.4 If no date is entered, the Contact History date is set at the date the Communication QuickAdd is created.

1.2.4 Clicking on the Customer icon displays "Customer Name; Email; Cell Phone; Home Phone"

1.2.4.1 The user enters the above information, with each value separated by a semicolon.

1.2.4.2 The Customer Name is required. If the user does not enter a value for the Customer Name, display the following message: "You must enter a customer."

1.2.4.3 If the customer name is NOT left blank, but the information is the same as a Customer Name already in the Customer database, a box appears with the following message: "A customer with this name is already in your database. Did you mean [CUSTOMER NAME] [EMAIL] [CELL PHONE] [HOME PHONE]." The message will display the same information for any other customers with the same name as the name entered. Below that message, in the same box, will be a link that says "Try Again", "Add New Customer".

1.2.4.3.1 Clicking on one of the names takes the user to that customer's View Customer Details page.

1.2.4.3.2 Clicking "Try Again" clears the fields and allows the user to enter the QuickAdd Communication information again.

1.2.4.3.3 Clicking "Add New Customer" will go to the "Add Customer" page, with the name already filled in. The user can then enter additional fields of information for the customer.

1.2.5 Notes QuickAdd operates the same as it does in the existing Rolotrak.

1.2.6 Reminder QuickAdd operates the same as it does in the existing Rolotrak.

1.3 An "Inventory Reminders" box shall be displayed in the center of the page, which shall list important inventory information as follows:

1.3.1 The "Inventory Reminders" displays the following two reminders:

1.3.1.1 When item is at Reorder Point: "You are running low on [ITEM NAME]."

1.3.1.2 When item has 0 left in inventory: "You are out of [ITEM NAME]."

1.3.2 Each reminder has 3 options. The user can click on

Reorder Now
Remind Me Later
Delete

1.3.2.1 Each reminder also has a time stamp, indicating when the reminder appears. Items will be listed with the newest reminders at the top.

1.3.3 Clicking on the item name will take the user to the View Item Details page for that item.

1.3.4 Clicking "Reorder Now":

1.3.4.1 Takes the user to the "Reorder" page found in the Items section (the user can also access this page by going into the Inventory database, clicking on "View Item Details" for an item, scrolling down to the "Vendor Details" part of the page, and clicking on "Reorder Now".)

1.3.4.2 On this page, the user can enter an order number, the quantity ordered, and an expected arrival date.

1.3.4.3 At the bottom of the "Reorder" page is a link that says "Order Placed." The user clicks the link to indicate an order has been placed with the vendor. The user can click on "Order Placed" even if no other fields are filled out. This indicates a shipment of unspecified quantity should be coming in at an unspecified date.

1.3.5 Clicking "Remind Me Later"

1.3.5.1 Removes the reminder from the dashboard

1.3.5.2 The reminder will reappear 24 hours later

1.3.5.3 The time stamp will display the new time that the reminder shows up

1.3.6 Clicking "Delete"

1.3.6.1 Deletes the reminder

1.3.6.2 It will not reappear

1.3.7 Four ways to remove an inventory reminder:

The user checks "Order Placed"

The number in inventory is increased above the reorder point

Item is selected to be "Discontinued" (this can be done on the Edit Item Details page)

The reminder is deleted

1.3.7.1 If the user click on the "Order Placed" box in the "Reorder" page, the reminder is deleted.

1.3.7.2 If the user goes to the "Add to Stock" page for an item that is below the reorder point and enters a number into the "Add to Stock" box, if that number plus the number already in inventory are greater than the reorder point number, then the reminder is deleted (this number is the same as the "New Inventory Level").

1.3.7.3 If the user goes to the "Edit Item Information" page and checks the "Discontinued" box, the reminder is deleted. In addition, no new reminders will appear when that box is checked.

1.3.7.4 The "X" next to the reminder will delete the reminder.

1.4 A "Customer Reminders" box shall appear underneath the inventory reminders box

1.4.1. Instances in which a user can be reminded to contact a customer

Remind user to contact customer after x days/weeks/months since the customer last made a purchase: "It has been [x] [TIME UNIT] since [CUSTOMER NAME] made a purchase."

Remind user to contact customer if customer has bought an item and item is expected to be running out soon: "[CUSTOMER NAME] bought [ITEM NAME] [TIME] ago. Maybe they want to buy more."

1.4.2 Each reminder has 3 options. The user can click on

Contact Now
Remind Me Later
Delete

1.4.2.1 Each reminder also has a time stamp, indicating when the reminder appears. Items will be listed with the newest reminders at the top.

1.4.3 Clicking on the customer's name will take the user to the View Customer Details page for that customer.

1.4.4 Clicking "Contact Now"

Takes the user to the appropriate email template inside the Messages section

The user's email address is already entered into the address bar

If "Email" is not the customer's preferred method of contact, a red message will appear above the email template that says "[CUSTOMER NAME] prefers to be contacted by [METHOD OF CONTACT]." The appropriate contact info is then listed, also in red.

1.4.5 Clicking "Remind Me Later"

Removes the reminder from the dashboard
The reminder will reappear 24 hours later
When the item reappears, the new time stamp will display the new time that the reminder shows up

1.4.6 Clicking "Delete"

Deletes the reminder
It will not reappear

1.4.7 Remove Reminders

Reminder is removed when the user emails the customer or the customer makes a purchase

Reminder is removed when the user emails the customer or the customer buys the item that the reminder is for

1.4.7.1 Both types of reminders are removed when the user clicks the "Send" button and the user's name/email address is in an address bar of the message. Reminder 1) is also removed when a user makes a purchase of any product. Reminder 2) is only removed if the customer is messaged or if the user makes a purchase of the item mentioned in the reminder.

2.0 The “Address Book” tab shall be renamed “Customers”

2.1 The word “Contacts” shall be replaced by “Customers”. Changes shall made in the following instances:

- Import Contacts
- Add Contacts
- My Contacts
- Showing x out of x Contacts
- View Contact Details

2.2 The default display shall be revised as follows:

2.2.1 The default display of names shall be a numbered list, sorted by the amount each customer spent in the last year, in descending order.

2.2.1.1 Each customer’s number will serve as his/her “rank” (i.e. Customer 1 would be the store’s top buyer)

2.2.2 Each customer shall be displayed by three identifiers: “Last Name, First Name, Revenue”. Each identifier will be a sortable column (A to Z, Z to A) **NOTE: “Revenue” means the total amount the customer spent in the past fiscal year.**

An example of the display shall be as follows:

Rank	Last Name	First Name	Revenue
1	Ahn	Elizabeth	500

2	Andrews	Mike	480
3	Deckard	Nick	450

2.3 The letters on the top of the screen shall allow the user to identify his/her customers by last name.

2.3.1 When the user clicks a letter, a list of the customers with last names starting with that letter will be listed alphabetically.

2.3.2 If two customers have the same last name, the next order of organization will be by first name.

2.3.3 If two customers have the same last and first names, the next order of organization will be by email address.

2.4 The “Add Customers” page shall display only the following fields (Note: All fields shall be optional):

- First Name
- Last Name
- City
- State
- Mailing Address
- Country
- Zip Code
- Email Address
- Cell Phone Number
- Home Phone Number
- Work Phone Number
- Birth Date
- Age
- Gender
- Preferred Method of Contact
- Remind me to contact customer after
 - Note: This field shall only be an option if some form of contact information has been specified. Field shall display a text box, where the user can enter a number, and a drop-down bar, **specifying “Days”, “Weeks”, or “Months”.**
- Other

2.4.1 User shall be able to switch between fields by using the "TAB" button.

2.5 Changes to “Customer Profile” (this becomes the View Customer Details page)

2.5.1 The Customer’s first and last name shall replace the email address displayed at the top.

2.5.2 An image of a gauge (similar to the “RoloTracker”), titled “Relationship Health” shall be displayed to the right of the customer’s name.

2.5.2.1 The gauge shall evaluate the user’s actual contact frequency compared to the target contact frequency (see section 2.5). The gauge’s arrow position shall be determined by the following:

- If the user has contacted the customer every time the user received a reminder for the customer, the arrow shall point to the right.
- If the user has never contacted the customer, the arrow shall point to the left
- The exact formula shall be determined at a later date

2.5.3 A link titled “Purchase History” shall be displayed below the customer name.

2.5.3.1 The Purchase History page shall display the following information unique to each customer:

- Total Number of Purchases Made
- Total Amount of Revenue Generated by Customer
- Average Purchase Frequency (average time in between a customer's purchases. This is 0 for customers with only one purchase.)

2.5.3.2 Beneath that, a list of all purchases a customer has made. The following information is displayed in a row:

- Date
- Store
- Total Price of Purchase

2.5.3.3 The user can click on any purchase to expand it to display the following information:

- Item
- Quantity
- Time
- Date
- Store
- Total Price of Purchase
- Notes

2.5.3.4 The “Date”, “Store” and “Total Price of Purchase” identifiers shall be sortable (A to Z, Z to A)

2.5.3.5 Clicking on the customer's name at the top of the screen shall return the user to the "View Customer Details" page for that customer.

2.5.4 A link titled “Communication History” shall be displayed below the customer as well, next to the link for “Purchase History”

2.5.4.1 The Communication History page shall display the following information unique to each customer:

- Total Number of Times Contacted
- Number of Times Contacted by [method of communication]

2.5.4.1.1 The [method of communication] shall be a dropdown bar. The user can select from

- Email
- Mail
- Phone
- Promotional Item

2.5.4.1.1.1 If email selected, displays

- "Messages Sent". This is the number of Communications where the Method of Communication is Email.
- "Messages Opened". This is the number

of
Messages sent to the customer through the
Messages feature that have been recorded
as
"Opened".

- "Coupons Sent" <--Not in Mango Media version
- "Coupons Used" <-- Not in Mango Media version

2.5.4.1.1.2 If mail selected, displays "[number] mailers sent". Number is the number of Communications where the Method of Communication is Mail.

2.5.4.1.1.3 If phone selected, displays "[number] phone calls". [Number] is the number of Communications where the Method of Communication is Phone.

2.5.4.1.1.4 If promotional item selected, displays "[number] promotion items sent". [Number] is the number of Communications where the Method of Communication is Promotional Item.

2.5.4.2 Beneath that, a list of all the times the user has contacted the customer. The following information is displayed in a row:

- Date
- Method of Contact
- Notes

2.5.4.2.1 The first row in the list shall be blank, and the fields shall be editable. There shall be an "Add" button to the right. Clicking on this makes the row non-editable. A new blank row is created at the top of the page.

2.5.4.2.2 The rows are sorted by Date, from most recent to oldest.

2.5.4.2.3 A link at the top of this section says "Edit Information". Clicking on this link shall make all fields editable.

2.5.5 Beneath the Purchase History and Customer History links, all of the customer information shall be displayed.

2.5.5.1 The information shall be displayed in the same format as the "Add Customer" page, except the fields will not be editable.

2.5.5.2 On the top right of the page, there shall be a link called "Edit Customer Details". This will take the user to the Edit Customer Details page.

2.5.6 At the bottom of the View Customer Details page, there is a "Delete Customer" button.

2.5.6.1 If the user clicks on the button, a box appears that reads "Are you sure you want to delete the customer?" The user can then click a button for yes and a button for no.

2.5.6.1.1 Clicking "Yes" deletes the customer from the customer database. The user is taken to the customer main page.

2.5.6.1.2 Clicking "No" closes the box and returns the user to the View Customer Details page.

2.6 "Contact Profile Edit" will become the "Edit Customer Details" page.

2.6.1 It shall follow the format of the "Add Customer" page.

3.0 Create an "Inventory" Tab

3.1 User shall be able to click on an "Add Items" sublink, similar to the "Add Customers" sublink under "Customers".

3.1.1 In the "Add Items" page, user shall specify the following item characteristics (Note: All fields shall be optional):

- Item Name
- Item Number
- Supplier (drop-down menu; one of the options shall be "new

supplier", which shall redirect the user to the "Add Vendor" page)

- Unit Price
- Unit Cost
- Refill Interval
Note: this is the time period after which the user will be prompted to remind the customer to buy more of the item (see Customer Reminders)
- Store Number
Note: if there is only one store, the default store number shall be "1"
- Description (optional)
- Picture (optional)
Note: User shall have the option to upload a picture of the item they are adding to the inventory system

3.1.1.1 Upon confirmation, user shall be redirected to the "Add to Stock" page.

3.1.1.2 The Refill Interval is the time after which a customer purchases the item that a reminder is created reminding the user that the customer might want to buy more of the item.

3.1.1.2.1 Reminders will only be generated for items with a refill reminder greater than 0. When this field is left blank, no reminders will be created.

3.1.1.2.2 Once a customer purchases an item, if the refill interval passes and the same customer has not bought the same item again, a reminder will be created on the dashboard.

3.1.2 The "Add to Stock" page shall display the following fields in the same format as the main items page, for all items listed by item number from lowest to highest:

- Item Number
- Item Name
- Vendor
- Current Quantity
- Reorder Point (shall be the user-specified quantity at which more orders will need to be placed)
- Quantity Added

3.1.2.1 The default reorder point for all items shall be 15% of the initial inventory quantity, but the user can override this quantity.

3.1.2.2 “Quantity Added” shall be an editable field for every item on the list. The user may enter a value in the Quantity Added field for any item by clicking in the field.

3.1.2.2.1 The user can move between "Quantity Added" fields by pressing the TAB button.

3.1.2.3 After user presses the "Save Changes" button, the total inventory quantity for that item shall be updated with the additional quantity received. The Quantity Added shall be added to the Current Quantity to create the new inventory stock level for the item.

3.1.2.4 If the item was below its reorder point and the Add to Stock feature increases the inventory quantity above the reorder point, the Inventory Reminder on the dashboard is deleted.

3.1.2.4.1 On the Inventory Main Screen, if the "Low?" column for the item said yes and the new inventory stock level is greater than the reorder point, then the "Low?" column shall change to say "No."

3.1.2.5 Once the user presses "Save Changes", if there is an order for this item that is marked as "In Progress", then the Quantity Added shall be subtracted from the amount due in that order. If the Quantity Added equals or exceeds the Order Quantity, the item is checked off as filled for that order. If that item is the only item listed in the order or if all other items have been checked off in the order, then this will mark the entire order as "Completed".

3.2 The main “Inventory” screen shall display all the items in the store’s inventory. Each item shall be identified by the following sortable (A to Z, Z-->A) identifiers:

- Item Number (default display, increasing)
- Item Name
- Vendor
- Unit Price
- Quantity

· Low?

3.2.1 "Low?" will say "Yes" if the item's quantity is less than its Reorder Point. Otherwise, it will say "No".

3.3 User shall be redirected to a "View Item Details" page if he/she clicks "Item Number", "Item Name", "Vendor", "Unit Price", "Quantity", or "Low?".

3.3.1 A blue header shall be located at the top of the "View Item Details" page containing the following information (see screenshot):

- Item picture, if one has been uploaded by the user. Otherwise, screen shall display a silhouette of a box with a question mark.
- Item name
- Link to "Purchase History". If clicked, user shall be redirected to a page displaying which customers bought the item and when.
- Stock Gauge, which shall be designed like the gauge in the "View Customer Details" page. It shall display how closer the quantity in stock is to its reorder point. When it is pointing fully to the green, inventory is full. When it is pointing fully red, there are 0 items in stock. When it is just pointing red, the quantity has reached the reorder point.

3.3.2 Beneath the header, a section titled "Item Information" shall be displayed with the following information:

- Item Number
- Vendor
- Price
- Profit Margin
- Inventory Quantity
- Reorder Point
- Customer Refill Interval
- Store

3.3.3 Beneath "Item Information", a section titled "Vendor Details" shall be displayed with the following information:

- Order Method
- Website
- Contact Name
- Email
- Cell Phone

- Work Phone
- Mailing Address
- City
- State
- Zip
- Country

3.3.4 Beneath "Vendor Details", a section titled "Ordering Information" shall be displayed with the following information:

- Vendor ordering details
- Item ordering details

3.3.5 A button to "Record Order" shall be located at the bottom of the page. This link shall redirect the user to the "Record Placed Order" page.

3.3.6 At the bottom of the page, there is a "Delete Item" button.

3.3.6.1 If the user clicks on the button, a box appears that reads "Are you sure you want to delete the item from the inventory?" The user can then click a button for yes and a button for no.

3.3.6.1.1 Clicking "Yes" deletes the item from the inventory. The user is taken to the inventory main page.

3.3.6.1.2 Clicking "No" closes the box and returns the user to the View Item Details page.

3.4 A link to "Edit Item Details" shall also be located at the top right corner of the "View Item Details" page. The user shall be able to edit any of the item's characteristics except for all fields in the "Vendor Details" section (see section 3.1.1).

3.4.1 The "Edit Item Details" page shall also display a checkbox with the option to "Discontinue" the item.

3.4.1.1 If the user selects "Discontinue", the word "Discontinued" shall be displayed next to the item number when the item is listed on the main "Inventory" page.

3.5 A link to "Edit Vendor Details" shall be located in the "Vendor Details" section of the "View Item Details" page.

3.5.1 The user shall be able to edit any of the item's characteristics in the "Vendor Details" section as well as "Vendor Ordering Details".

3.6 At the bottom of the "View Item Details" page, there is a "Record Order" button. The button is a link that takes the user to the "Record Placed Order" page.

3.6.1 The user can enter the following information:

- Store (dropdown bar)
- Vendor (dropdown bar)
- Order Number
- Total Order Cost
- Expected Arrival Date (the user can type in a date or click on the calendar and click on the date)

3.6.2 The user enters the following item information for each item in the order:

- Item Name
- Item Number
- Order Quantity
- Item Unit Cost
- Item Order Cost
- Item Notes

3.6.2.1 If the user enters the "Record Placed Order" page through the View Item Detail page, the Item Name and Item Number for the first item is filled in automatically. If the user enters the "Record Placed Order" through the Inventory Main page, then no information is filled in.

3.6.2.2 Underneath the item fields, there is a button called "Add Additional Item". Clicking on it will bring up the fields for another item, so the user can enter more than one item into the same order.

3.6.3 If an item in the order was below its reorder point, and the quantity entered in the order will increase the stock for that item above the reorder point, then saving changes will remove an Inventory Reminder for that item.

3.7 The user can click on the Record Received Order link from the Inventory Main page. This takes the user to the Record Received Order page.

4.0 **Create a "Suppliers" Tab**

4.1 The “Suppliers” page shall be like the “Customers” page with just the following information.

4.1.1 Instead of “Personal Information” and “Customer Details”, the page shall display “Supplier Information” and “Items Supplied”.

4.1.2 The following information shall be displayed under “Supplier Information”:

- Company
- Contact Name
- Mailing Address, City, State, Country, Zip Code
- Phone Number, Fax Number
- Contact Email

4.1.3 “Items Supplied” shall list the names of all the items that are supplied by that supplier. Items will be listed by three sortable identifiers: *Item Name, Price, Reorder Point*.

4.1.3.1 Each item will also have a field called “Ordering Instructions”. Here, the user can enter the suppliers website, additional contact information, or any other notes specific to ordering the particular item.

4.2 User shall be able to click on an “Add Suppliers” link, similar to the “Add Customers” link under “Customers”.

4.2.1 In the “Add Suppliers” page, user shall specify the following item characteristics (Note: All fields shall be optional):

- Company
- Contact Name
- Mailing Address
- City
- State
- Zip Code
- Phone Number
- Fax Number
- Contact Email

5.0 **Create a “Transactions” tab**

5.1 Upon clicking, screen shall prompt “Sale or Exchange”

5.2 If user clicks “Sale”:

5.2.1 The user shall be taken to a new page that has drop-down menus to specify “Date”, “Time”, “Item”, “Quantity”, “Price”, “Customer”, “Store”, “Coupon Used?”. (Note: Only the "Item" and "Quantity" fields shall be required. All other fields shall be optional).

5.2.2. After user completes the fields, the program shall compute the price automatically, but user shall still have the ability to override the price and enter a new one.

5.2.3 After confirmation, the transaction will be stored in customer’s “Purchase History”. If no customer information is entered, nothing will be added to anyone's purchase history.

5.2.3.1 If customer is not in customer database, the user shall be directed to the “Add Customer” page.

5.2.3.2 If customer has made a purchase in the past, the user shall be prompted to ask “Were you satisfied with your previous purchase?” and display a comment box below it.

5.2.3.2.1 User shall be able to type in customer’s comments. These comments shall be stored as “notes” linked to that previous purchase and be available to view in “Purchase History”

5.2.3.3 If “Yes” is selected for “Coupon Used?”, then the number of coupons used by the customer shall be increased by 1. This number is recorded in the customer’s contact history.

5.2.4 After confirmation, the transaction shall deduct the “x” amount of the item that was purchased from the store’s inventory list.

5.2.5 The program shall alert the user if there are fewer than the “Reorder Point” quantity of that item in the inventory by displaying “Stock is low”.

5.3 If user clicks “Exchange”:

5.3.1 The user shall be prompted to specify "Date", "Time", "Item", "Quantity", "Customer" (Note: Only the "Item" and "Quantity" fields shall be required. All other fields shall be optional).

5.3.2 After confirmation, the transaction shall add the “x” amount of the item that was returned back to the store’s inventory list.

6.0 Changes made to “Calendar” tab

6.1 The following buttons should be added directly below the calendar:

- Print (shall enable the user to print the calendar)
- Export Calendar (shall enable the user to export all events and event information to iCal or Microsoft Outlook)
- Schedule Event

6.1.1 The user shall be able to schedule events on the calendar without requiring reminders

6.1.1.1 The user shall be prompted to enter to following information for each event:

- Event Name
- Date
- Time
- Type of event

6.1.1.2 The user shall be able to color code events for different types of events (NOTE: colors and event types shall be customizable by the user)

6.1.1.3 The user shall be able to edit the event name, date, time, and type of event by double clicking on the text in the calendar

6.2 The calendar shall keep track of the expiration dates of all coupons

6.3 The calendar shall show all customer’s birthdays

6.3.1 Rolotrak shall remind the user the day of a customer’s birthday with a message saying, “It is (customer’s name)’s birthday today!”

7.0 Create an “Analyze” tab

7.1 The main page shall display a line graph titled “This Year”, which will display total sales per month for the current year.

7.1.1 The x-axis shall be labeled “Month”.

7.1.2 The y-axis shall be labeled “Revenue”.

7.2 The user shall be able to customize the line graph with the following options:

7.2.1 The y-axis label shall be a drop-down bar containing the following unit options:

- Revenue: displays the total amount of sales revenue generated per x-axis unit.
- Number of items sold: option shall display the total number of items sold per x-axis unit.

7.2.2 The x-axis label shall be a drop-down bar containing the following unit options:

- Current Year: the range shall be months in the current year, beginning from January.
- Past 12 Months: the range shall be the months in the past twelve months (i.e. if this month is June 2010, the month shall range from June 2009 – June 2010)
- Last Calendar Year: the range shall be the months from the last calendar year (i.e. if this year is 2010, months shall range from January 2009 – December 2009).
- Current Quarter: the range shall be the weeks for the current quarter (Q1 = January – March, Q2 = April – June, Q3 = July – September, Q4 = October – December)
- Last Quarter: the range shall be the weeks for the previous full quarter.
- Current Month: the range shall be the days for the current month.
- Last Month: the range shall be the days for the previous full month (i.e. if this month is June 2010, the days shall range from May 1 – May 31, 2010)
- Current Week: the range shall be the days for the current week, from the most recent Sunday to the current day.
- Last Week: the range shall be the days of the previous full week, from Sunday to Saturday.
- Today: the range shall be the hours of the current day, from 12:00am to the current hour.

- Yesterday: the range shall be the hours of the previous full day (i.e. if today was Monday, the hours shall be for 12:00am Sunday through 11:59pm Sunday).
- Average Day: the range shall be the hours of a day (12:00am – 11:59pm). The y-values shall be calculated as: [Total Revenue or Number of Items Sold per hour for each hour of the past 12 months] / [365 days]
- Company History: the range shall be the years that the store has been in existence.

7.3 The dimensions of the graph shall remain constant regardless of whatever unit combination the user chooses.

7.3.1 The space between the x and y-axis units shall be automatically adjusted to fill the available space.

7.4 The user shall be able to see the same kind of graph for any combination of customer and item.

7.4.1 A search box titled “Customer” shall be displayed to the right of the graph. The user shall be able to enter the name of any customer in the customer database.

7.4.2 A search box titled “Item” shall be displayed below the “Customer” search box. The user shall be able to enter the name of any item in the inventory database.

7.4.3 For any customer and/or item entered, the graph will display results for just those customers/items.

For example, if a user enters “Customer A”, then the graph will display all year to date revenue generated by Customer A. If a user enters “Customer A” and “Item A”, then the graph will display all year to date revenue generated by Customer A purchasing Item A.

8.0 Changes to “Rolotracker” tab

8.1 The phrase “Passive Networker” shall be replaced by “Weak Customer Relationships”.

8.2 The phrase “Active Networker” shall be replaced by “Strong Customer Relationships”.

8.3 The phrase “Number of Contacts in Your Address Book” shall be replaced by “Number of Customers”.

8.4 The phrase “Contacts you Stay in Touch with Regularly” to “Customers you Stay in Touch with Regularly”.

9.0 Changes to “My Groups” tab

9.1 The program shall automatically populate and update the groups.

9.2 The “Business” and “Personal” groups shall be removed.

9.3 The following groups shall be created:

- All Customers: every customer in the customer database
- Repeat Customers: all customers with more than one purchase listed in purchase history
- Customers That Need to Be Contacted: all customers who have not made a purchase in the user-specified reminder time (see section 2.4)
- Top 10 Customers: the ten customers who have spent the most amount of money in the past year.

Note: Program shall automatically place customers in appropriate groups. Customers can be added to more than one group as appropriate.

10.0 The “My Feeds” feature and tab shall remain intact.

11.0 Changes to “Messages” tab

11.1 A “Coupons” email template shall be added under the “My Templates” folder.

11.1.1 User shall select from a drop-down bar the kind of coupon they want to feature:

- \$ X off
- \$ X off Every \$ Y Spent
- X% off your purchase of \$ Y
- Buy X, Get Y Free

11.1.2 User shall select from a drop-down bar the item that is to be featured.

11.1.2.1 An “Add Item” link shall be listed under the drop-down bar to allow user to select more than one item for the coupon.

11.1.3 User shall specify the start and end dates for the coupon.

11.2 A “Sale” email template shall be added

11.2.1 User shall select from a drop-down bar the item that is to be featured, or may choose to include all items in the store.

11.2.1.1 An “Add Item” link shall be listed under the drop-down bar to allow user to select more than one item to be on sale.

11.2.2 User shall specify the start and end dates for the sale.

11.3 The program shall keep a message history for every customer (which customer received which emails)

11.4 Every email sent shall request a “read receipt” from the customer. When a customer confirms, the instance shall be recorded in the customer’s contact history

11.4.1 Instances in which a user is reminded to contact a customer

Remind user to contact customer after x days/weeks/months since the customer last made a purchase: "It has been [x] [TIME UNIT] since [CUSTOMER NAME] made a purchase."

Remind user to contact customer if customer has bought an item and item is expected to be running out soon: "[CUSTOMER NAME] bought [ITEM NAME] [TIME] ago. Maybe they want to buy more."

Rolotrak User Guide

Team Small Business Solutions

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Basic Information

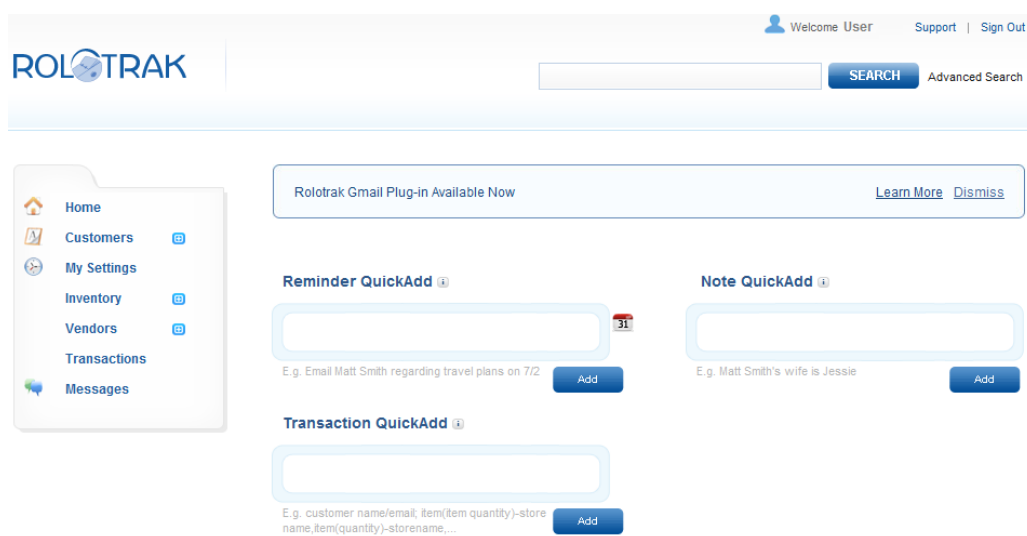
Website Address: <http://www.theprojectdemo.com/rolotrak>

Your Login Information:

- User Name:
- Password:

Home

The Rolotrak homepage consists of three QuickAdd boxes and two reminder sections. Each of the QuickAdd boxes allows you to quickly set alarms for events related to your customer (through the Reminder QuickAdd box), notes about your customers (Note QuickAdd), as well as sales and returns (Transaction QuickAdd). Below the QuickAdd boxes are two reminder dashboards that display your inventory reminders and customer reminders.



Screenshot 1 - Homepage QuickAdds

Reminder QuickAdd

The Reminder QuickAdd is a simple way to set up an alarm for a customer-related event, such as "Larry's anniversary is on 12/4". Let's go through the steps of adding this Reminder:

1. Type in the reminder that you would like into the Reminder QuickAdd. The only two elements that you need are (1) At least the first OR last name of your customer; and (2) a date to associate the reminder with. If you need a calendar to reference, simply click on the Calendar icon to the right of the box and click on your date of choice. If you do not specify a year, the date will automatically be associated with the present year. In our example, the reminder about Larry's anniversary will be set for 12/4/2010.
2. You will be prompted to confirm the contact you are referring to. Let's pretend you have two customers named Larry – Larry David and Larry Bird. Rolotrak will recognize this and prompt you about which Larry you would like to add the reminder for – Larry David, or Larry Bird. Simply check the box of the correct customer.

3. Click “Add”
4. A prompt will come up asking you to confirm the reminder “You have added a custom reminder on Dec 04, 2010 for Larry David. Do you want to add this reminder?”. Click “Yes” to continue adding the reminder, and click “No” to edit your entry if need be.
5. If you successfully added the reminder, a confirmation will appear at the top of the page saying “Custom Reminder Successfully Added”. If you would like to view the reminder, click on “See Reminder” in that box, which will take you to the customer’s page. Scroll to the bottom of the page under “Customer Settings – Custom Reminder” to view the reminder.

Note QuickAdd

Use the Note QuickAdd function to quickly enter information about your customer without having to find your customer’s page. The difference between a Note QuickAdd and a Reminder QuickAdd is that the Note QuickAdd is not associated with a date, and will not set a reminder.

For instance, if we want to add to Larry David’s profile that he is the creator of Seinfeld, we would use the following steps:

1. Type in the reminder that you would like into the Note QuickAdd. The only element that you need is at least the first OR last name of your customer. For this example, we could simply type “Larry is the creator of Seinfeld”
2. You will be prompted to confirm the contact you are referring to. Let’s pretend you have two customers named Larry – Larry David and Larry Bird. Rolotrak will recognize this and prompt you about which Larry you would like to add the reminder for – Larry David, or Larry Bird. Simply check the box of the correct customer.
3. Click “Add”. If you successfully added the reminder, a confirmation will appear at the top of the page saying “Note QuickAdd Successfully Added”. If you would like to view the reminder, click on “See Note” in that box, which will take you to the customer’s page. The note should appear under “Personal Information” in the “Notes” field.

Transaction QuickAdd

The Transaction QuickAdd box allows you to efficiently add transactions without having to go to the Transactions page. Let’s suppose we are trying to record the sale of 2 pairs of mittens from your Annapolis store, purchased by Larry Bird. To do so, use the following steps:

1. The format for adding a transaction is as follows (in case you forget, it is also written underneath the box in grey):

Customer name or email; item(item quantity) – store name; item (quantity) - store name; item (quantity) – store name







In plain English, this formatting means:

- a. First type in **either** the customer name or their email, followed by a **semi-colon**.
 - b. Next, type in the item name. When you begin typing the item name, Rolotrak will give you suggestions from your inventory, with the total amount of items available in that category populated in the parentheses, and the store name. Simply click on the correct item from the list, and change the number in the parentheses to the amount sold or returned.
 - i. **Note:** If it is a return, be sure to include a negative (“-”) sign in front of the number.
2. To add another transaction from the same customer, simply include a semi-colon, and repeat step 1b.
 3. Click “Add”.
 4. You will be prompted to confirm the contact you are referring to. Let’s pretend you have two customers named Bob – Larry David and Larry Bird. Rolotrak will recognize this and prompt you about which Larry you would like to add the reminder for – Larry David, or Larry Bird. Simply check the box of the correct customer.
 5. If you typed in the customer name wrong, click “Try Again” to revise your entry.
 6. If you successfully added the transaction, a confirmation will appear at the top of the page saying “Transaction QuickAdd Successfully Added”. If you would like to view the transaction, click on “See Transaction” in that box, which will take you to the main Transactions page, where it will be displayed. Click on the arrow next to the transaction to display the details of the transaction.

Inventory Reminders

Reminders to restock your inventory, and reminders of upcoming shipments will display in this section. You have three options to manage your inventory reminders: (1) Order now; (2) Remind later; and (3) Delete.

Inventory Reminders

			Remind Later	Delete
You are running low on Item A	Order Now	10/22/10 00:00 AM		
You are running low on Item B	Order Now	10/22/10 00:00 AM		
You are running low on Item C	Order Now	10/22/10 00:00 AM		

Screenshot 2 - Homepage: Inventory Reminders

If you click Order Now

1. You will be taken to the “Record Placed Order” screen, where you can fill in the details of the order you made with a vendor after seeing the Rolotrak reminder. Recording the order will dismiss the reminder, and also make it easier for you to process your inventory when the shipment arrives.
2. There is a field entitled “Expected Arrival Date” which will set an inventory reminder for your shipment date. As mentioned earlier, this reminder will display under “Inventory Reminders” on your homepage.
3. All your orders can be viewed in the Inventory section of Rolotrak if you click on “View Orders” in the top right of the screen.

If you click “Remind Later”

1. This is equivalent to the “Snooze” button on your alarm clock. Rolotrak will dismiss the reminder temporarily and remove it from the Inventory Reminders dashboard, but it will again show up the next day.

If you click “Delete”

1. Rolotrak will remove the reminder completely and it will not show up on a later date.

Customer Reminders

Reminders about customers will display in this section. You have three options to manage your inventory reminders: (1) Email now; (2) Remind later; and (3) Delete.

Customer Reminders

- ◆ It has been 3 months since **Customer A** made a purchase. [Email Now](#) 5/26/10 2:31 PM 🗄️
- ◆ It has been 1 year since **Customer B** made a purchase. [Email Now](#) 5/26/10 1:47 PM 🗄️

Screenshot 3 - Homepage: Customer Reminders

If you click Email Now

1. You will be taken to the “Communication” screen, where you can view how you contacted your customer in the past, and where you can fill in the details of you contacted the customer after seeing the Rolotrak reminder. Recording the communication will dismiss the reminder, and also make it easier for you to keep track of your communication history with your customers. See “Communication History” under Customers of this user guide for further directions on Communication History.

If you click “Remind Later”

1. This is equivalent to the “Snooze” button on your alarm clock. Rolotrak will dismiss the reminder temporarily and remove it from the Inventory Reminders dashboard, but it will again show up the next day.

If you click “Delete”

1. Rolotrak will remove the reminder completely and it will not show up on a later date.

My Settings

You can use this screen to change account and password information and to add new stores.

▼ Rolotrak Account Information

Name

Email

[Change Password](#)

[Save Changes](#)

▼ Store Settings

[Add Store](#)

[Edit Store](#)

Store Number	Store Name	Address	Phone Number
1	Location A	Van Munching Hall College Park, MD 20740	(555) 555 - 5555
2	Location B	Tydings Hall College Park, MD 20742	(555) 555 - 5555

[Click to delete all customers](#)

Screenshot 4 - My Settings

To add a new store:

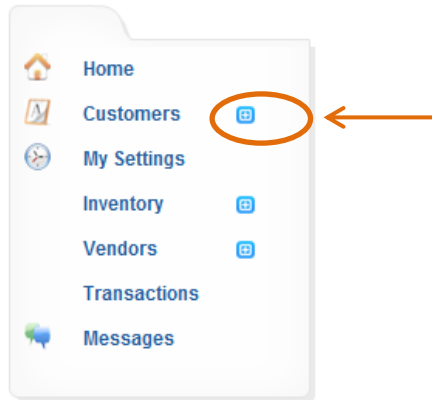
Click on “Add Store” above “Store Settings”.

You will be prompted to enter Store Name, Store Number (the number will be automatically populated with the next store number chronologically. If another store number makes more sense to you, feel free to change the number), Address, and Phone Number. Enter this information, and then click “Done”.

If your store was added to the system successfully, you will be returned to the “My Settings” screen with the following confirmation message at the top: “New store details added successfully”.

Customers

This section is used to manage your customers, their contact information, and the frequency with which you are reminded to contact them. Click on the blue “+” sign next to “Customers” in the side navigation bar to display the two options of “Import Customers” and “Add Customers”

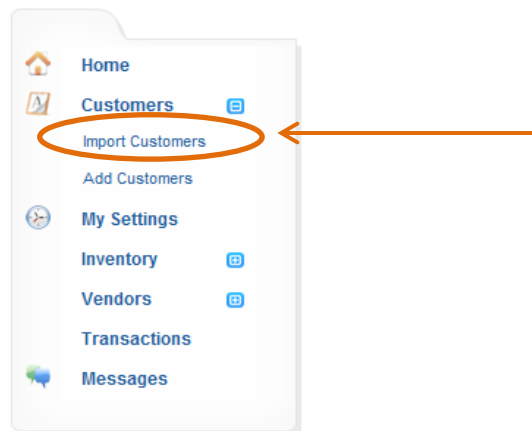


Screenshot 5 - Side Navigation: Customers Expansion

Import Customers

This function is used to add customers directly from a source such as an email client

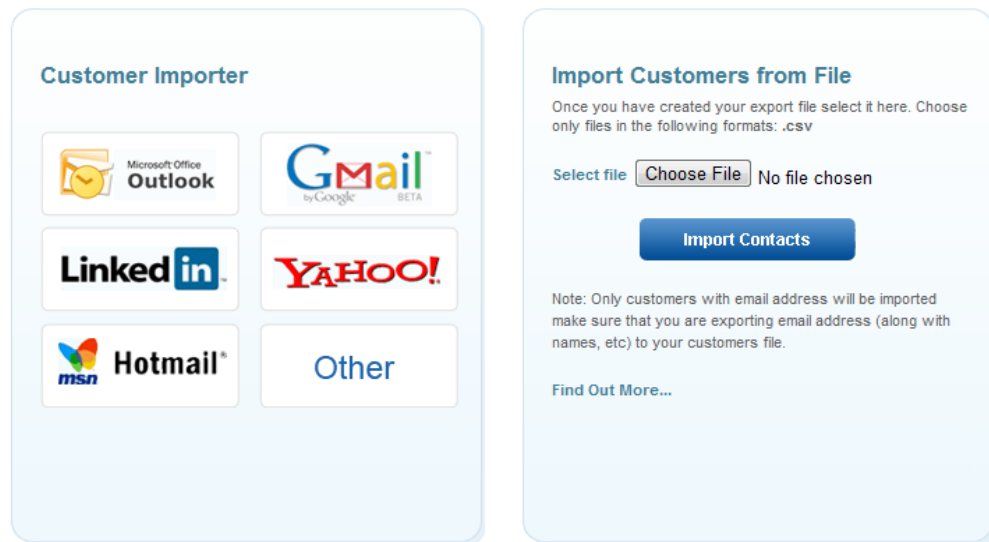
1. Click on “Import Customers” under the side navigation.



Screenshot 6 - Side Navigation - Import Customers

2. Choose the source for your contacts

Step 2 of 3 Import Customers



Screenshot 7 - Customers: Importing Customers

A. Microsoft Outlook

- i. Click on the Microsoft Outlook logo and a widget from www.plaxo.com will appear. The widget will guide you through adding your contacts from Microsoft Outlook.

B. Gmail/Yahoo/LinkedIn/Hotmail/Other

- i. Click on the logo of your choice.
- ii. Type in your Username and Password for your account and then click "Done"
- iii. Wait about a minute for the server to process all your contacts
- iv. A screen entitled "Add Contacts" will load, with all your contacts from your Gmail account automatically selected.
 1. To upload all your contacts, simply click "Add Contacts".
 2. To only upload a few contacts, click "Unselect All" from the top and then choose the contacts that you would like to upload. Then click "Add Contacts"
- v. Next, you will have the option to set a Global Reminder Setting for your contact. A Global Reminder Setting is an option to remind you

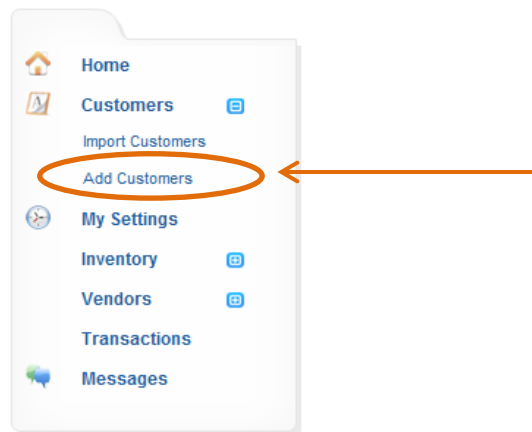
to contact your customers at a certain frequency regardless of other factors. (For example, if you want quarterly reminders for your customers select a value of “4”, if you want annual reminders for your network, select a value of “1”, for monthly reminders select a value of “12”, etc.) If you do not want a Global Reminder Setting for your contact, enter “0”. Click “Continue”.

- vi. You will be redirected to the homepage. If contacts were added successfully, there will be a message at the top of the screen saying “# contacts were added successfully.”

Add Customers

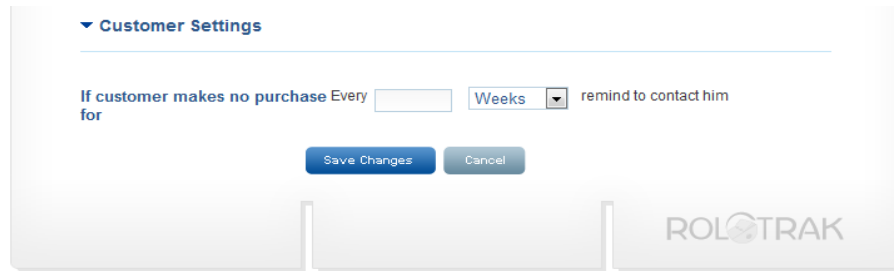
This function is used to add customers individually, rather than to import them en masse from a source

1. Click on “Add Customers” under side navigation.



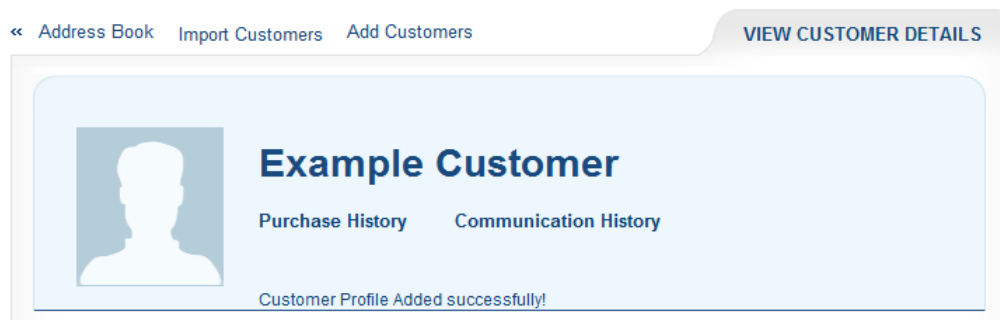
Screenshot 8 – Side Navigation - Add Customers

2. Enter customer’s information into fields (as much as is available – not all fields are required).
 - **Note:** The setting under “Customer Settings” allows you to change the interval between when a customer last makes a purchase, and when you are reminded to get in touch with him/her



Screenshot 9 - Customers: Setting the Reminder Interval

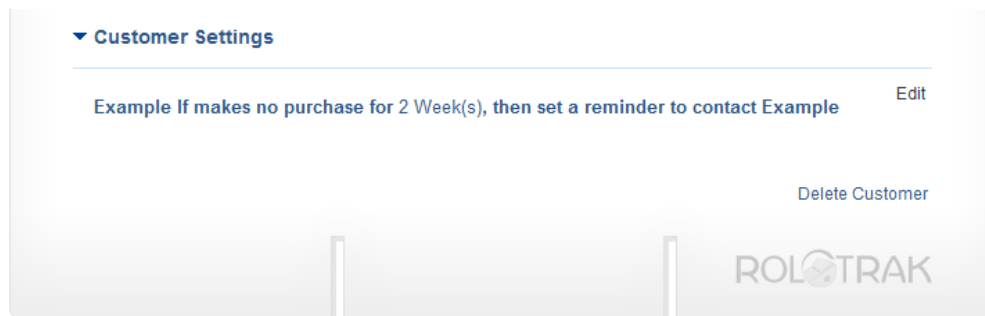
3. If your customer was added successfully, you will see a message that reads “Customer Profile Added Successfully”



Screenshot 10 - Customers: Add Customer - Customer Settings

Delete Customers

1. Click on “Customers” in the side navigation.
2. Click on either the first name or the last name of the customer you wish to delete.
3. You will be taken to the customer’s profile (entitled “View Customer Details”). Scroll to the end of the screen, and click on the link located on the bottom right called “Delete Customer”.



Screenshot 11 - Customers: Setting the Reminder Interval

4. You will be prompted with a Delete Confirmation screen. Click “Yes” to delete the customer.
5. If your customer was deleted successfully, you will be returned to the main customers screen, and a confirmation will be displayed at the top saying “Customer Deleted Successfully.”

Purchase History

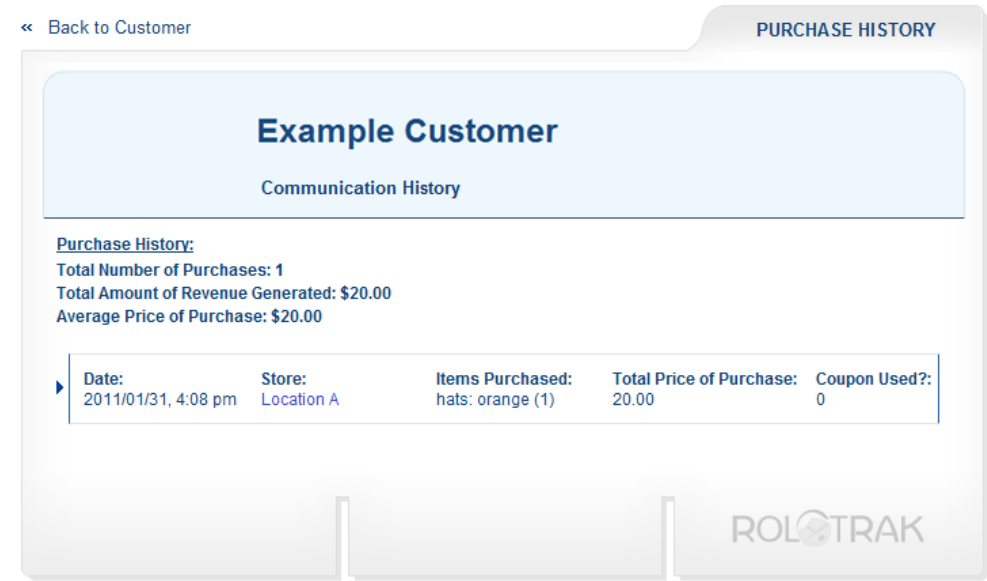
Purchase History is a section within a customer’s profile which automatically records all transactions made by a customer. To view a customer’s Purchase History, simply complete the following steps:

1. Click on “Customers” in the side navigation screen.
2. Click on either the first name or the last name of the customer you wish to view/add/change communication history for.
3. You will be taken to the customer’s profile (entitled “View Customer Details”).
4. Click on the first link under the customer’s name entitled “Purchase History”



Screenshot 12 - Customers: Purchase History

5. You will be taken to the “Purchase History” screen, where you can view all transactions made by that customer.

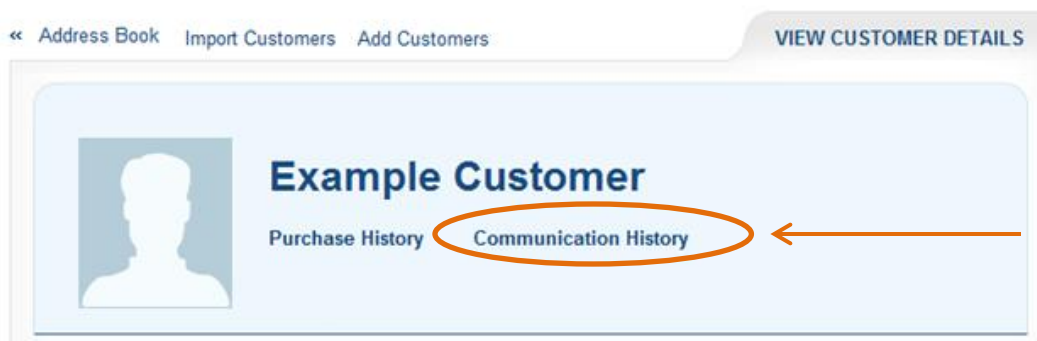


Screenshot 13 - Customers: Purchase History

Communication History

Communication History is a section within a customer’s profile which allows you to record all contact you have with your customers. It is a useful tool to be able to track your communication with your customers.

0. Click on “Customers” in the side navigation screen.
1. Click on either the first name or the last name of the customer you wish to view/add/change communication history for.
2. You will be taken to the customer’s profile (entitled “View Customer Details”).
3. Click on the second link under the customer’s name entitled “Communication History”



Screenshot 14 - Customers: Link to Communication History

4. You will be taken to the “Communication” screen, where you can view how you contacted your customer in the past, and where you can fill in the details of you contacted the customer after seeing the Rolotrak reminder. Recording the communication will dismiss the reminder, and also make it easier for you to keep track of your communication history with your customers.

<< Back to Customer

COMMUNICATION

Customer A

Purchase History Communication History

Total Number of Times Contacted: 1 Edit Information
Preferred Method of Contact: Home Phone
Number of times contacted by: Select Method

Date	Method of Contact	Notes
<input type="text"/> / <input type="text"/> / <input type="text"/>	Email	<input type="text"/>
12-15-2010	Email	Emailed customer to remind them to get their Christmas presents at our store!

ROLOTRAK

Screenshot 15 - Customers: Communication History

To Add a Communication Record:

1. Fill in the Date field with when you contacted the customer.
2. Use the drop down menu for Method of Contact to specify whether you contacted your customer via Email, Mail, Phone, or if you sent them a Promotional Item.
3. Use the Notes field to record content of the communication.
4. Click “Add”. If added successfully, you will be able to view a line with your new communication record.

To Edit a Communication Record:

1. Click “Edit Information”.
2. Make the necessary change(s) using the fields.

« Back to Customer

COMMUNICATION

Example Customer

Purchase History Communication History

Total Number of Times Contacted: 1 Edit Information
Preferred Method of Contact: Home Phone
Number of times contacted by: Select Method

Date	Method of Contact	Notes
/ /	Select Method	
12 / 15 / 2010	Email	Emailed customer to remind them to c

Save Changes

ROLOTRAK

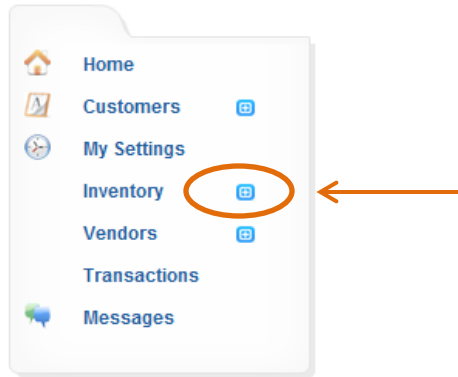
Screenshot 16 - Customers: Edit Communication History

3. Click “Save Changes” at the bottom of the screen.
4. If your edits were successful, you will receive a confirmation message at the top of the screen that reads “The communication history details updated successfully!”

Inventory

This section allows you to manage your items and the frequency with which you are reminded to reorder them. Click on the blue “+” sign next to “Inventory” in the side navigation bar to display the two options of “Add New Item” and “Update Stock”

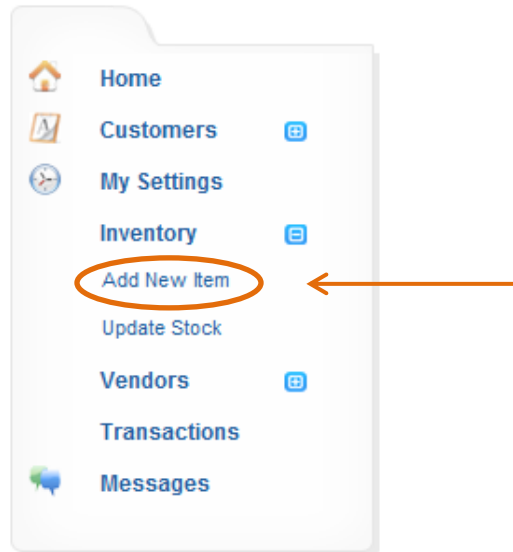
Note: there is currently a placeholder item in your inventory called “Blank”. This item will not affect your operations in any way – it is simply a placeholder necessary for the system to operate properly in this pilot test.



Screenshot 17 - Side Navigation: Expanding Inventory Section

Add New Item

1. Click on “Add New Item” under side navigation.



Screenshot 18 - Side Navigation: Add New Item

2. Enter as much information as is available for the item into the respective fields.

<< Back to Inventory Update Stock ADD ITEM

▶ Item Information

Item Name:

Item Number:

Vendor:

Price: \$

Refill Interval: Every Weeks

Item Picture: No file chosen

Screenshot 19 - Inventory: Add Item - Item Information Section

3. **Item Name:** Using a standard format for your items will help keep your inventory organized. We suggest the following – “Item Name: Item Color (Item Size)”
4. **Item Number:** Will automatically populate with the next chronological item number. If another item number makes more sense to you, feel free to change the number
5. **Vendor:**
 1. *To choose an existing vendor, simply click on the vendor in the list.*
 2. *To add a new vendor, click on “Add Vendor” and enter a vendor name and email address. Click “Done”.*

<< Back to Inventory Update Stock ADD ITEM

▶ Item Information

Item Name:

Item Number:

Vendor:

Price:

Refill Interval:

Item Picture: No file chosen

Add Vendor

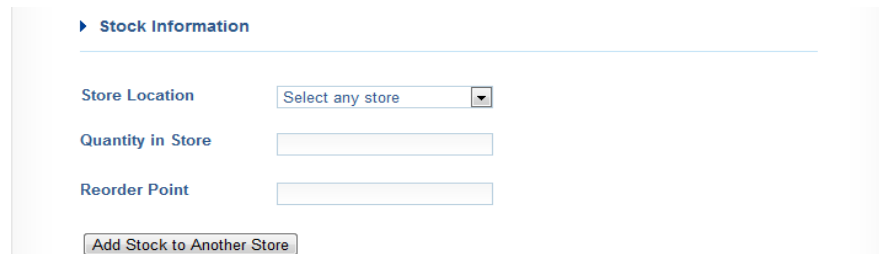
Name:

Email:

Screenshot 20 - Inventory: Add Vendor

6. **Price:** The retail price of the item, not the wholesale.

7. **Refill interval:** Certain items are bought regularly by customers at a certain interval. The refill interval allows you to set a reminder time for these items, so that you can remind your customers to refill their stock of the item at a relevant point in time. (For instance, if milk is typically bought every two weeks, you can set its refill interval as such, and Rolotrak will remind you to remind your customer to buy milk two weeks after their last purchase of it.)
8. **Item Picture:** Not required, but helpful to distinguish your items. The picture you upload here will be used in the heading of your item page.
9. **Stock Information – Quantity in Store:** Here you can add how many units of an item were added to a store. If you are processing inventory for multiple stores, you can click on the button “Add Items to Another Store” to specify another store to add stock to.



► Stock Information

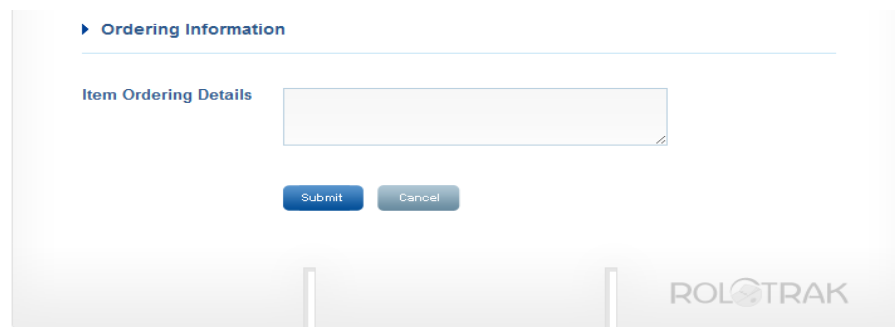
Store Location

Quantity in Store

Reorder Point

Screenshot 21 - Inventory: Add Item, Stock Information Section

10. **Reorder Point:** This is where you can set the point at which Rolotrak will remind you to reorder your stock.
11. **Ordering Information – Item Ordering Details:** A space for you to enter reordering instructions.



► Ordering Information

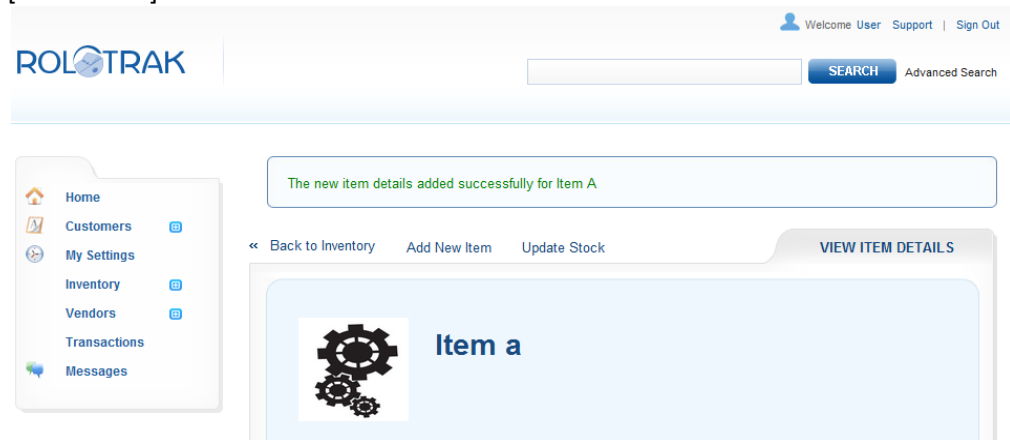
Item Ordering Details

ROLOTRAK

Screenshot 22 - Inventory: Add Item, Ordering Information Section

6. Click “Submit”. If added successfully, you will be taken to a “View Item Details” screen, where you can view the newly created item page for your item. At top will be the confirmation message “The new item details added successfully for

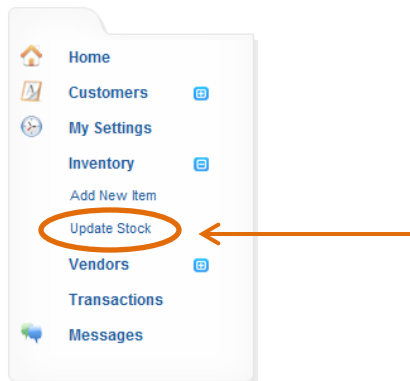
[Item Name]”



Screenshot 23 - Inventory: Successful Item Addition Message

Update Stock

1. Click on "Update Stock" in the side navigation bar.



Screenshot 24 - Side Navigation: Update Stock Link

2. You can specify the amount of stock to add or subtract to each item in the fields under the column “Quantity Added/Subtracted”

+ Add New Item

Update Stock

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Showing 5 of 11 items

Item Name	Store Name	Vendor	Current Quantity	Quantity Added/Subtracted	Reorder Point
Item A	Location A		0	<input type="text" value="5"/>	<input type="text" value="2"/>
Item B	Location A		0	<input type="text" value="-2"/>	<input type="text" value="4"/>
Item C	Location A		20	<input type="text" value="4"/>	<input type="text" value="3"/>
Item D	Location A		0	<input type="text"/>	<input type="text"/>
Item E	Location A		0	<input type="text"/>	<input type="text"/>

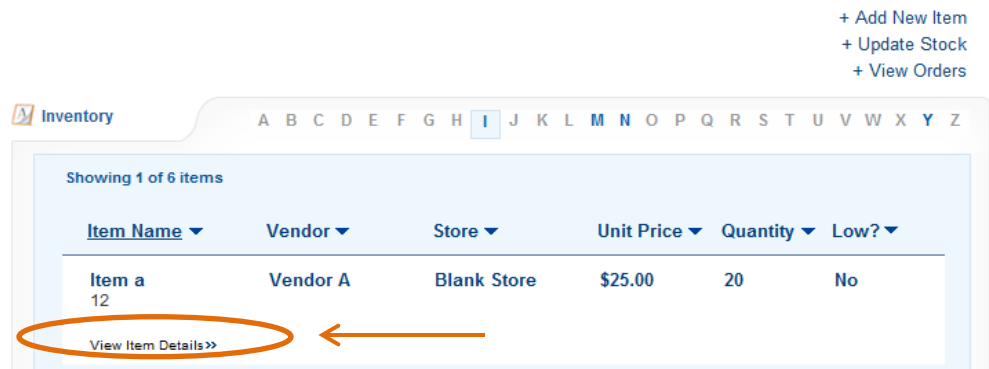
Screenshot 25 - Inventory: Update Stock

- a. *To add quantity* – type in the number you wish to add to your current quantity. For instance, if you have 2 more of Item A, type in “2” in the field next to that item.
 - b. *To subtract quantity* – type in the number you wish to subtract to your current quantity under the column with a minus sign. For instance, if you would like to reduce Item B by 2, type in “-2” in the field next to that item.
3. You can specify a new reorder point in the field under the column “Reorder Point” if you wish.
 4. Click “Save Changes” at the bottom of the screen after you are finished completing your stock modifications.

View Item Details

1. Click on “Inventory” in the side navigation bar.

2. Click on “View Item Details” for the item you wish to see.



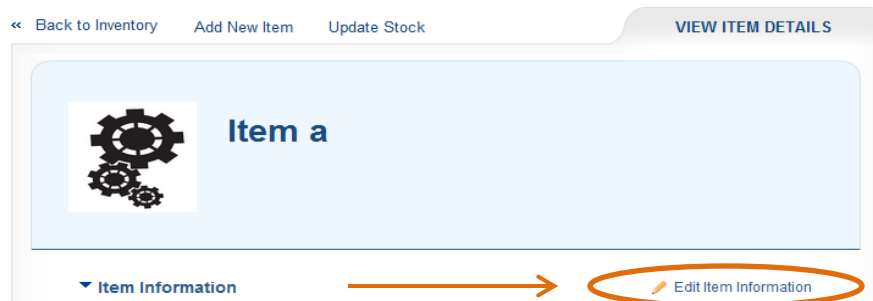
Screenshot 26 - Inventory: View Item Details

a. **Delete an item**

- i. Click on “Delete Item” at the bottom of the “View Item Details” page.
- ii. Click “Yes” when prompted “Are you sure you want to delete this item from your inventory?”

b. **Edit an item**

c. Click on “Edit Item Information” at the top of the “View Item Details” page



Screenshot 27 - View Item Details - Edit Information Link

i. Modify any fields you wish.

« Back to Item Add New Item Update Stock **EDIT ITEM DETAILS**

▶ **Item Information**

Item Name

Item Number

Vendor

Unit Price \$


Inventory Quantity

Reorder Point

Refill Interval Every

Store

Item Picture No file chosen



Screenshot 28 - Inventory: Edit Item Details

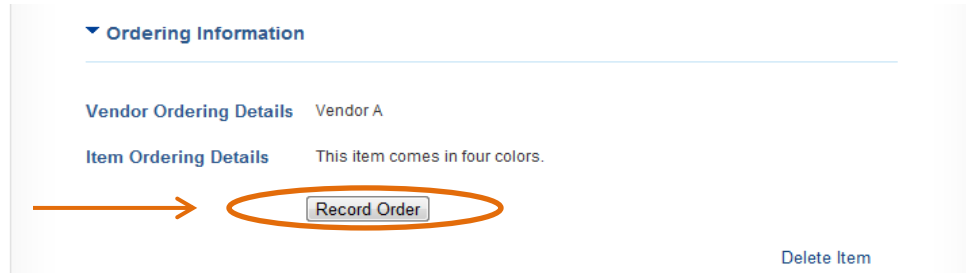
ii. Click “Submit”.

Record Placed Order

“Record Placed Order” is a section to record the details of orders you make from vendors. Recording the order will dismiss restock reminders, and also make it easier for you to process your inventory when the shipment arrives.

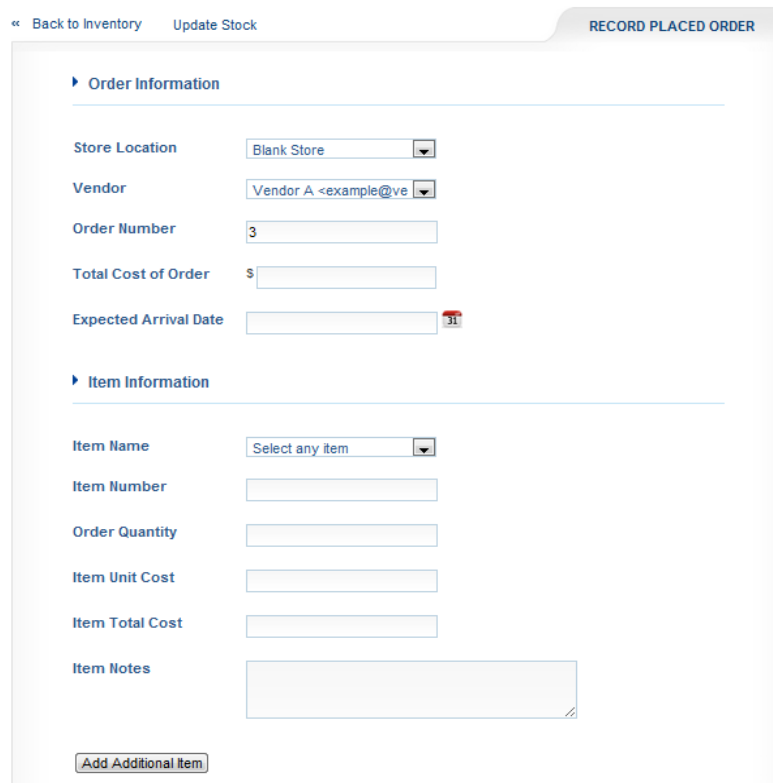
1. Click on “Inventory” in the side navigation bar.
2. Click on “View Item Details” for the item you wish to record an order for.

3. Scroll to the bottom of the screen and click on “Record Order” under Ordering Information.



Screenshot 29 - Inventory: Link to Record Placed Order

4. You will be taken to a screen entitled “Record Placed Order.”

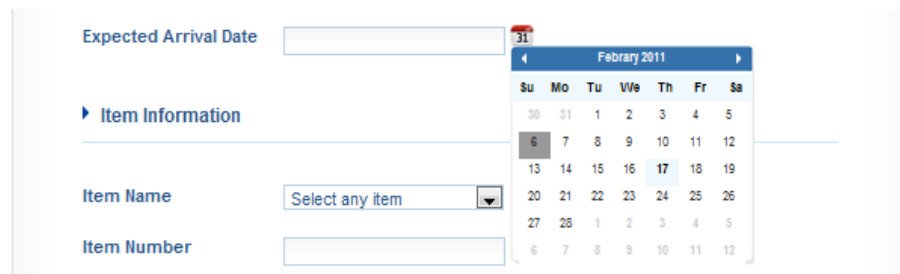


Screenshot 30 - Inventory: Record Placed Order

5. Enter as much information as is available for the item into the respective fields. **For the best results, enter the information in the following order:**
 - a. **Vendor** – The vendor associated with the item you chose should automatically display in the drop down menu. However, if you are using a

different vendor to place the order, you can select it from the drop-down menu using the following instructions. To add a new vendor, click on “Add Vendor”, enter a vendor name and email address, and click “Done”.

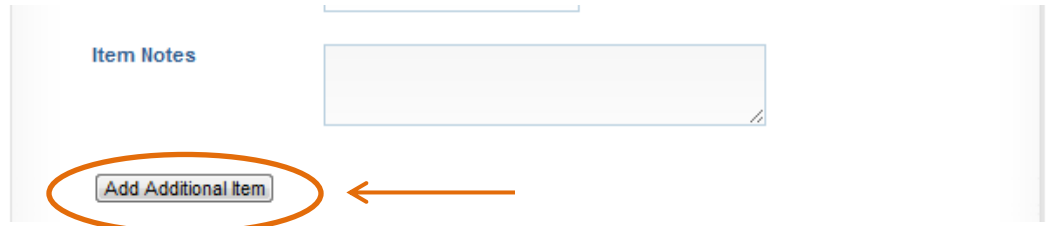
- b. **Order Number** - Will automatically populate with the next chronological item number. If another order number makes more sense to you, feel free to change the number
- c. **Skip Total Cost of Order for Now** – *When you select item name from the drop-down menu and enter unit costs and order quantities (all under “Item Information”), the total cost of order will automatically recalculate, so it’s best to skip this field at this moment.*
- d. **Expected Arrival Date** - This will set an inventory reminder for your shipment date. As the shipment date gets closer, Rolotrak will display a reminder on your homepage under Inventory Reminders.



Screenshot 31 - Inventory: Record Placed Order - Expected Arrival Date Pop-Up Calendar

- e. **Item Name** – Select the item name from the drop-down menu.
- f. **Item Number** – Automatically populates with the number associated with the item name you chose. If you want to assign a new item number, feel free to change the number.
- g. **Order Quantity** – Enter the quantity ordered.
- h. **Item Unit Cost** – Automatically populates with the item’s retail price (which is taken from the “Unit Price” field in the previous screen entitled “View Item Details”) to give you an idea of how much the item is currently selling for. Please change this amount to how much each unit that you ordered cost you.
- i. **Item Total Cost** – Based on the order quantity and item unit cost that you entered in steps g and h, this field will automatically populate. If this number is different, for instance due to coupons, discounts, or taxes, feel free to change this number.

- j. **Item Notes** – If you would like to include any notes about the item you ordered, please list them here.
- k. If you **do** have additional items that you ordered, please click on “Add Additional Item”, and follow steps a through j to list the item ordered.



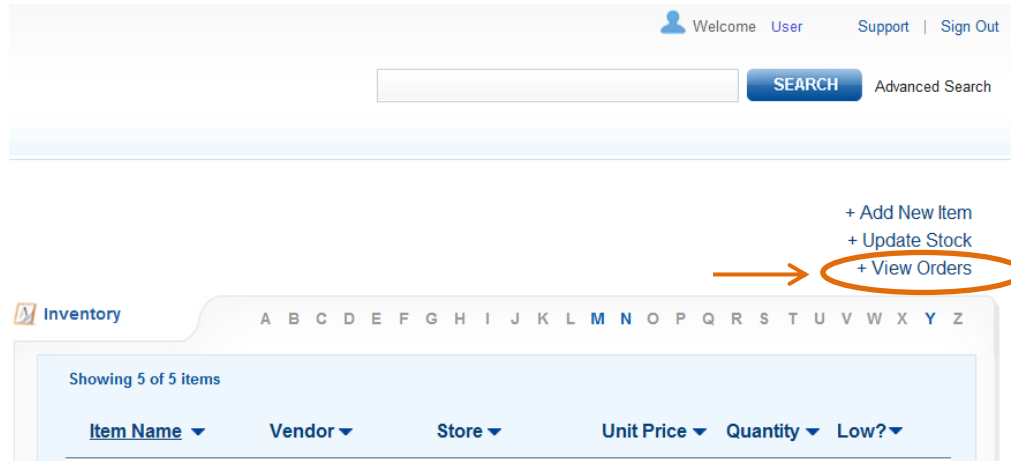
Screenshot 32 - Inventory: Record Placed Order - Add Additional Item Button

- i. At this point, please review the **Total Cost of Order** field under “Order Information” to ensure that the total cost of the order is correct. This field is based off of the sum of the Item Total Costs that you listed.
6. Click “Submit”. If you recorded the placed order successfully, you will be taken back to the main inventory page and receive a confirmation message at the top of the screen that reads “New order details added successfully.”

View Orders

View Orders is a page that allows you to see all the orders that you have recorded having placed.

1. Click on “Inventory” in the side navigation bar. You will be taken to the main Inventory page.
2. Click on “View Orders” in the top right of the screen. You will be taken to the View Orders page.



Screenshot 33 - Inventory: Link to View Orders

3. The page lists each order by its Order Number, Vendor, Arrival Date, and Order Status.



Screenshot 34 - Inventory: View Orders Main Page

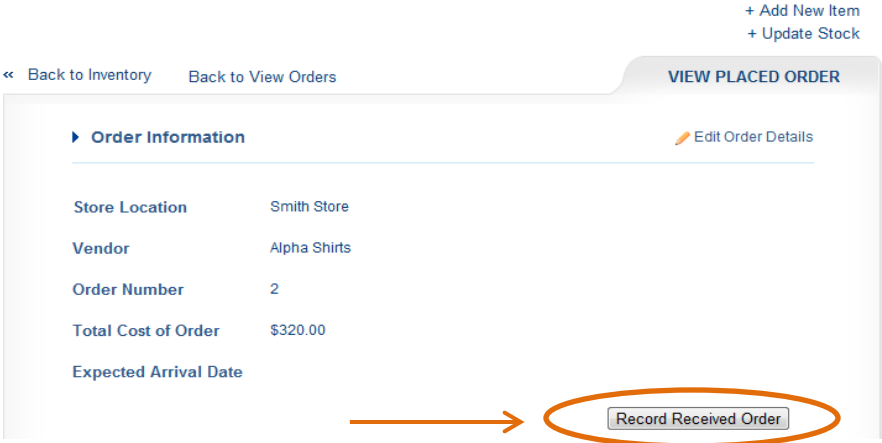
4. If you click on the heading "Order Number", it will sort your orders by the Order Number.
5. If you click on any element of an order (it's Order Number, Vendor, Arrival Date or Order Status) it will take you the "View Order Details" page. This page outlines the details of the order.

Record Received Order

Orders can be recorded as received via the View Order Details page (see previous section entitled "View Orders" to learn how to navigate to this page). When you record that an order has been received, it will then dismiss the Expected Order

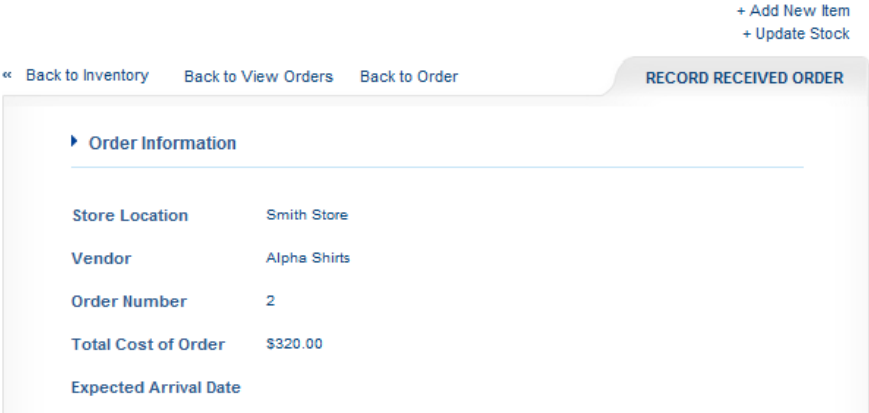
Arrival reminder on the homepage, as well as change the Order Status from “In Progress” to “Completed” on the main View Orders page.

1. From the main View Orders page, click on the order you wish to record as received.
2. From the View Order Details page, click on the button “Record Received Order” from the View Order Details page.



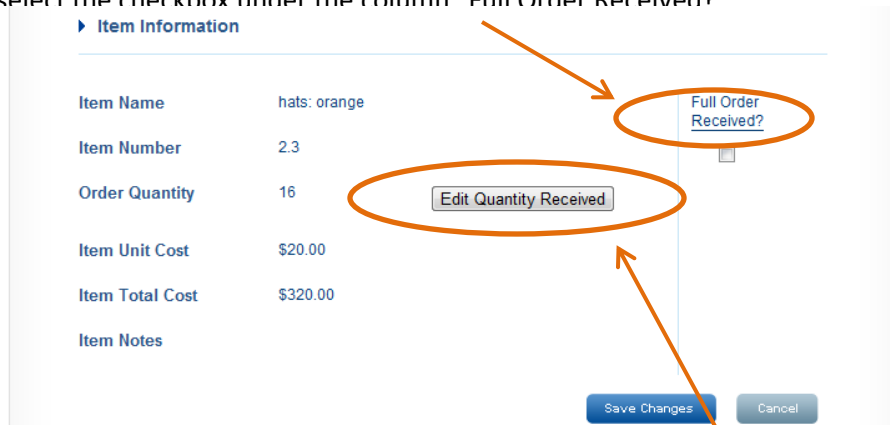
Screenshot 35 - Inventory: View Placed Order - Record Received Order Button

3. You will be taken to the Record Received Order page which lists all the details you recorded when you placed the order.



Screenshot 36 - Inventory: Record Received Order

- For each item, if the amount received matches up with the amount ordered, select the checkbox under the column "Full Order Received?"

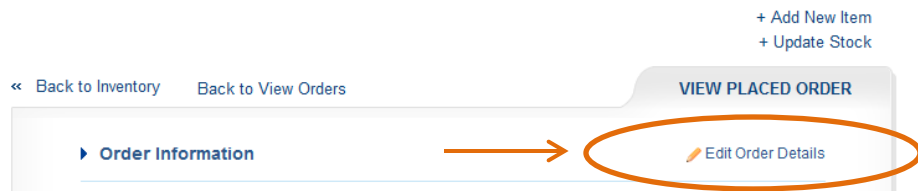


Screenshot 37 - Inventory: Record Received Order - Item Information

- If the amount received differed from the amount ordered, click the button "Edit Quantity Received" and specify the amount received. If this option is chosen, the order will remain "In Progress" in the main View Orders list.
- When finished recording the received order, click "Save Changes". If done correctly, you will be taken back to the main View Orders page and will receive a confirmation message at the top that reads "Item stock value updated successfully."
- When the order is fully received, the Order Status will automatically change to "Completed" in the main view orders page

Edit an Order:

- From the main View Orders page, click on the order you wish to modify.
- Click "Edit Order Details".

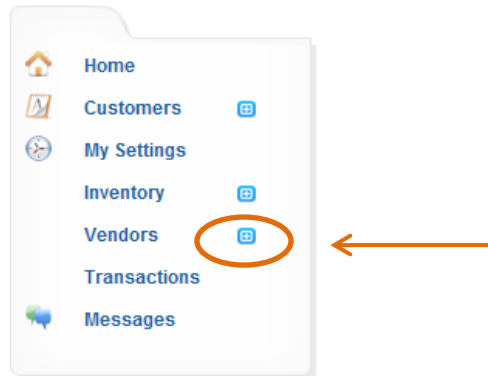


Screenshot 38 - Inventory: View Orders - Edit Order Details

- Make the necessary change(s) using the fields.
- Click "Submit" at the bottom of the screen. If your edits were successful, you be taken back to the main View Orders page and will receive a confirmation message at the top of the screen that reads "The new order details updated successfully."

Vendors

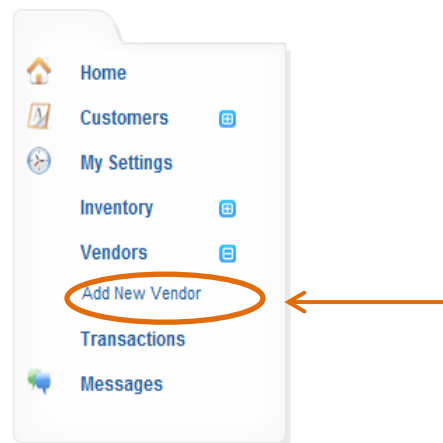
1. The Vendors section allows you to keep track of the suppliers of your inventory. Click on the blue “+” sign next to “Vendors” in the side navigation bar to display the option of “Add New Vendor”.



Screenshot 39 - Side Navigation: Vendors List Expansion

Add New Vendor

2. Click on the “+” sign next to “Vendors” in the side navigation. Below “Vendors”, a link entitled “Add New Vendor” will appear. Click on this link.



Screenshot 40 - Side Navigation: Add New Vendor Link

3. You will be taken to a page entitled “Add Vendor”. Fill out as much information as available for the vendor.

The screenshot shows a web form titled 'ADD VENDOR' with a 'Back to Vendors' link. The 'Vendor Information' section includes the following fields:

Vendor Name	<input type="text"/>
Order Method	<input type="text" value="Email"/>
Website	<input type="text"/>
Contact Name	<input type="text"/>
Email	<input type="text"/>
Work Phone	<input type="text"/>
Cell Phone	<input type="text"/>
Fax Number	<input type="text"/>

Screenshot 41 - Vendors: Add Vendor

4. Use the drop down “Order Method” to specify the channel through which you place your orders through this vendor – email, mail, phone or a hard copy form.
5. At the bottom of the page under “Vendor Ordering Details”, you can include specific directions for ordering from this vendor.

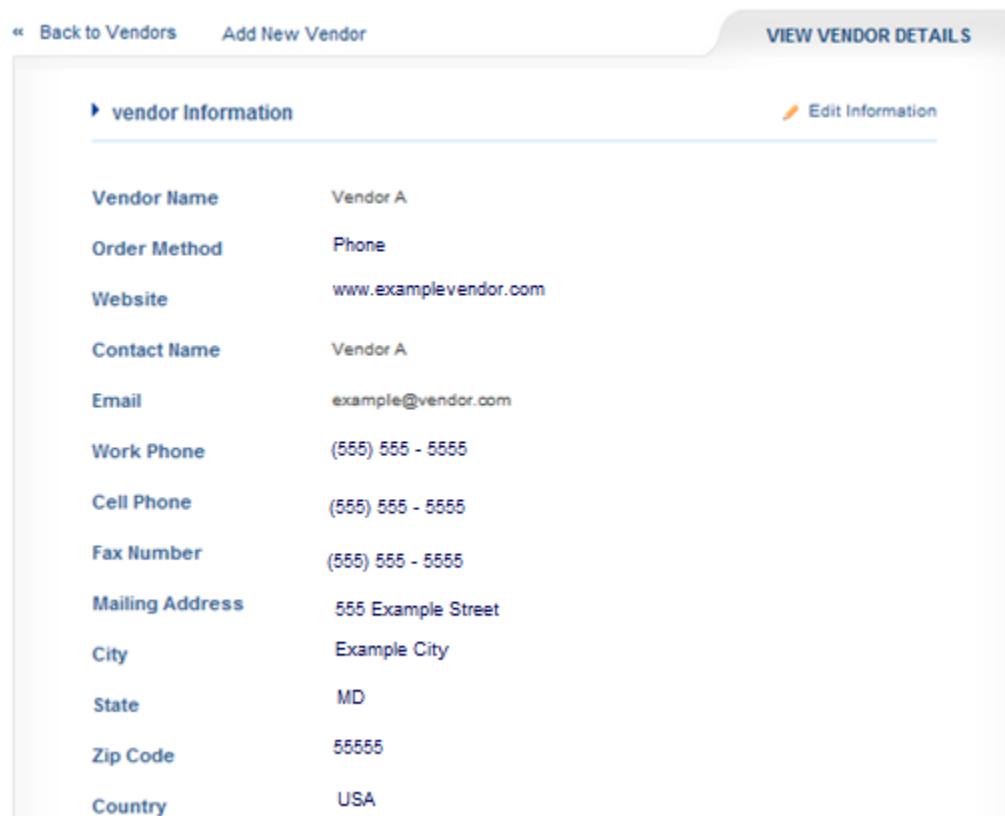
The screenshot shows the 'Ordering Information' section of the form. It features a text area for 'Vendor Ordering Details' containing the text: "This vendor usually takes 1 week longer than their stated delivery estimate". Below the text area are 'Submit' and 'Cancel' buttons.

Screenshot 42 - Vendors: Add Vendor - Ordering Information

6. Click “Submit” when you are finished. If added successfully, you will be taken back to the main Vendors page and receive a confirmation at the top that reads “The vendor details added successfully.”

View Vendors

1. Click on “Vendors” in the side navigation bar.
2. Click on the vendor name for the vendor you wish to view. You will be taken to the “View Vendor Details” page where you can see the contact information and ordering details for that vendor.



The screenshot displays the 'VIEW VENDOR DETAILS' page. At the top left, there are navigation links: '« Back to Vendors' and 'Add New Vendor'. The page title 'VIEW VENDOR DETAILS' is in the top right corner. Below the title, there is a section header '▶ vendor Information' and an 'Edit Information' link with a pencil icon. The main content is a list of vendor details:

Vendor Name	Vendor A
Order Method	Phone
Website	www.examplevendor.com
Contact Name	Vendor A
Email	example@vendor.com
Work Phone	(555) 555 - 5555
Cell Phone	(555) 555 - 5555
Fax Number	(555) 555 - 5555
Mailing Address	555 Example Street
City	Example City
State	MD
Zip Code	55555
Country	USA

Screenshot 43 - Vendors: View Vendor Details Page

Edit Vendor

1. Click on “Edit Information” at the top of the “View Vendor Details” page
2. Modify any fields you wish.

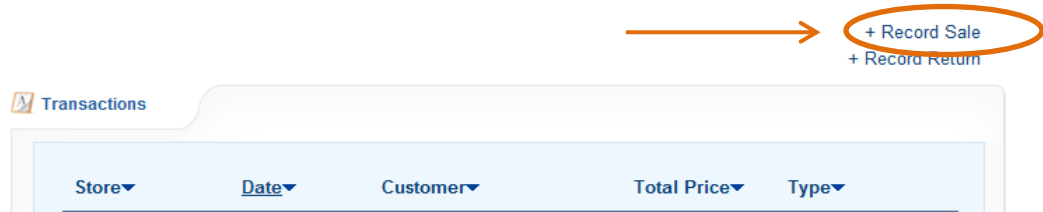
3. Click "Submit". If added successfully, you will be taken back to the main Vendors page and receive a confirmation at the top that reads "The vendor details updated successfully."

Transactions

On this page, you can manage sales and returns.

Record Sale

1. Click on "Transactions" in the side navigation bar.
2. Click on "+ Record Sale" at the top of the page.



Screenshot 44 - Transactions: Record Sale Button

3. Enter the information about the sale.

The screenshot shows a web form titled "RECORD SALE". It is divided into two main sections: "Transactions Information" and "Item Information".

Transactions Information:

- Store Location:** A dropdown menu with the text "Select any store".
- Date:** Three input fields for month (02), day (17), and year (2011).
- Time:** Two input fields for hours and minutes, followed by a dropdown menu for AM/PM (am).
- Customer:** A dropdown menu with the text "Select One".

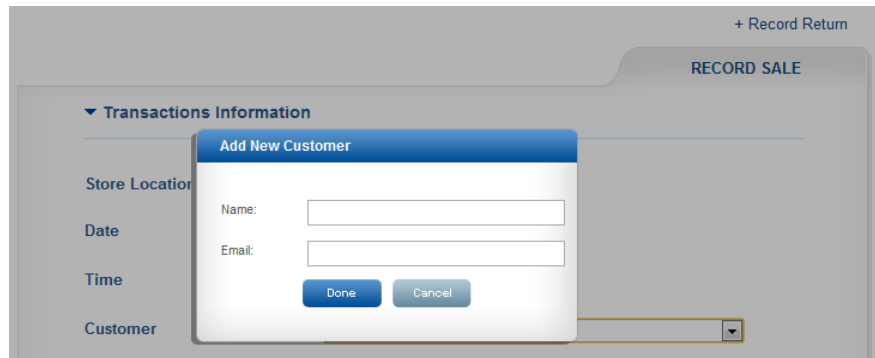
Item Information:

Item	Quantity	Unit Price	Total Price	Coupon Used?
Select any item	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Below the table is an "Add" button. At the bottom right of the form, there is a "Total Purchase Price" field with a dollar sign, and two buttons: "Save Changes" and "Cancel".

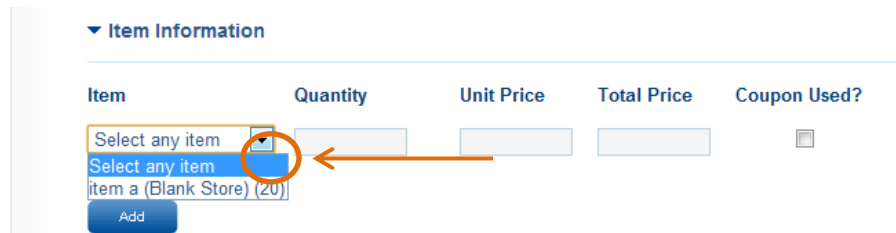
Screenshot 45 - Transactions: Record Sale Page

- a. **Transactions Information – Date:** Automatically populates with the current date. If you are recording a transaction from a previous date, you can change it to that date manually.
- b. **Transactions Information - Time** – Enter the time the transaction was made.
- c. **Transactions Information - Customer** – Choose the customer who purchased the item.
 - i. *To choose an existing customer, simply click on the customer in the drop-down menu.*
 - ii. *To add a new customer, click on “Add Customer” and enter a customer name and email address. Click “Done”.*



Screenshot 46 - Transactions: Record Sale - Add New Customer

- d. **Item Information – Item Name:** Choose the item that was sold from the drop-down menu. The number in parentheses next to the item name is the current quantity in stock of that item.

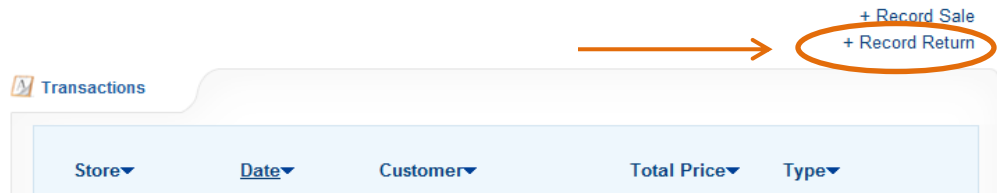


Screenshot 47 - Transactions: Record Sale - Item Information Current Quantity

- e. **Item Information – Quantity:** Type in the quantity sold of the item.
- f. **Item Information – Unit Price:** When you type in a quantity in “e” above, the Unit Price and Total Price will automatically populate based on the Unit Price specified when you first processed your inventory shipment. You can change the Unit Price manually here though.
- g. **Item Information – Total Price:** Will automatically populate based on the Quantity and Unit Price specified. If for some reason (due to coupon, sale, volume discount, etc.) the total price of the transaction is less, you can change the total price manually.
- h. **Item Information – Coupon:** Please check this box if the customer used a coupon. This is to help you track coupon usage.
- i. **Total Purchase Price:** Will automatically populate based on the total prices of the items you listed. If because of taxes, coupon, etc. the total purchase price is less, you can change that manually.
4. If your transaction was added successfully, you will see a confirmation message at the top of the page that reads “Transaction Successfully Processed.”

Record Return

1. Click on “Transactions” in the side navigation bar.
2. Click on “+ Record Return” at the top of the page.



Screenshot 48 - Transactions: Record Return Button

3. Enter the information about the sale.

A screenshot of a "RECORD RETURN" form. At the top right, there is a "+ Record Sale" button. The form is divided into two main sections: "Transactions Information" and "Item Information".
Transactions Information:
- Store Location: Select any store (dropdown)
- Date: 02 / 17 / 2011
- Time: : am (dropdown)
- Customer: Select One (dropdown)
Item Information:
- A table with columns: Item, Quantity, Unit Price, Total Price, Coupon Used?
- Row 1: Select any item (dropdown), [input], [input], [input], [checkbox]
- An "Add" button is below the table.
- Total Amount Returned \$ [input]
- "Save Changes" and "Cancel" buttons are at the bottom right.

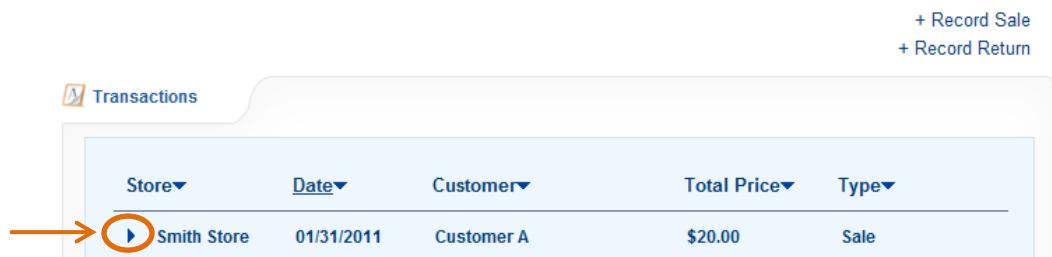
Screenshot 49 - Transactions: Record Return

- a. **Transactions Information – Date:** Automatically populates with the current date. If you are recording a transaction from a previous date, you can change it to that date manually.

- b. **Transactions Information - Time** – Enter the time the transaction was made.
 - c. **Transactions Information - Customer** – Choose the customer who returned the item by selecting them in the drop-down menu.
 - d. **Item Information – Item Name:** Choose the item that was returned from the drop-down menu. The number in parentheses next to the item name is the current quantity in stock of that item.
 - e. **Item Information – Quantity:** Type in the quantity returned of the item.
 - f. **Item Information – Unit Price:** When you type in a quantity in “e” above, the Unit Price and Total Price will automatically populate based on the Unit Price specified when you first processed your inventory shipment. You can change the Unit Price manually here though.
 - g. **Item Information – Total Price:** Will automatically populate based on the Quantity and Unit Price specified. If for some reason (due to coupon, sale, volume discount, etc.) the total price of the transaction is less, you can change the total price manually.
 - h. **Item Information – Coupon:** Please check this box if the customer used a coupon. This is to help you track coupon usage.
 - i. **Total Amount Returned:** Will automatically populate based on the total prices of the items you listed. If because of taxes, coupon, etc. the total purchase price is less, you can change that manually.
4. If your transaction was added successfully, you will see a confirmation message at the top of the page that reads “Transaction Successfully Processed.”

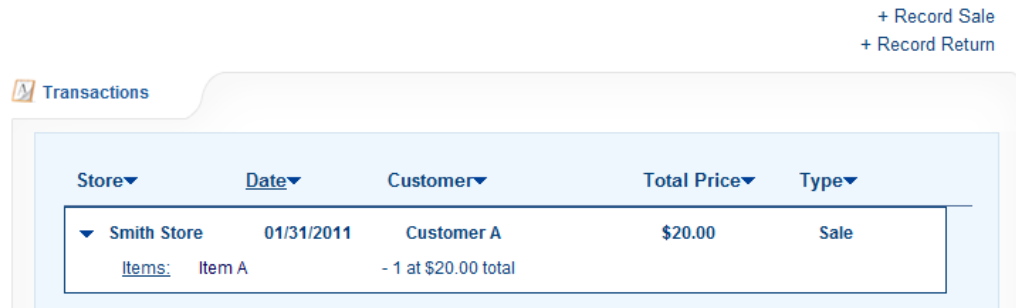
View Details of a Transaction

1. Click on “Transactions” in the side navigation bar.
2. Click on the arrow next to the transaction of your choice.



Screenshot 50 - Transaction Home Page: Link to Expand Transaction Details

- The arrow will drop down to reveal the items purchased or returned during that transaction.



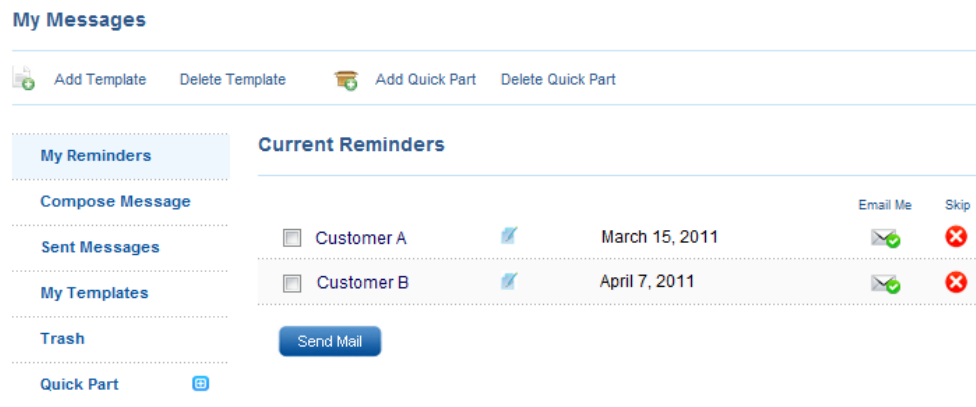
Screenshot 51 – Transactions: Expanded Details

Messages

You can send messages from your email client of choice directly within Rolotrak!

My Reminders

- Click on “Messages” in the side navigation bar.
- You will be brought to the main “My Messages” screen, where you can see your current reminders, and manage them by clicking “Email me” to message your customer, or “Skip” to ignore the reminder.



Screenshot 52 - My Messages: Homepage

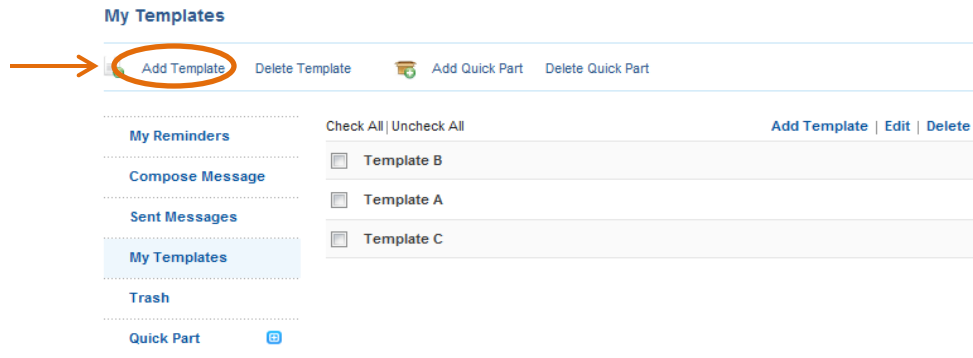
2. When you click on the envelope icon with a green check in the column “Email me”, you will be taken to the “Compose Message” screen. See “Compose Message” section below for further instructions on how to compose a message.

My Templates

My Templates allows you to create a template that you can then easily reuse when composing a message. A template is useful for standard messages that you send often.

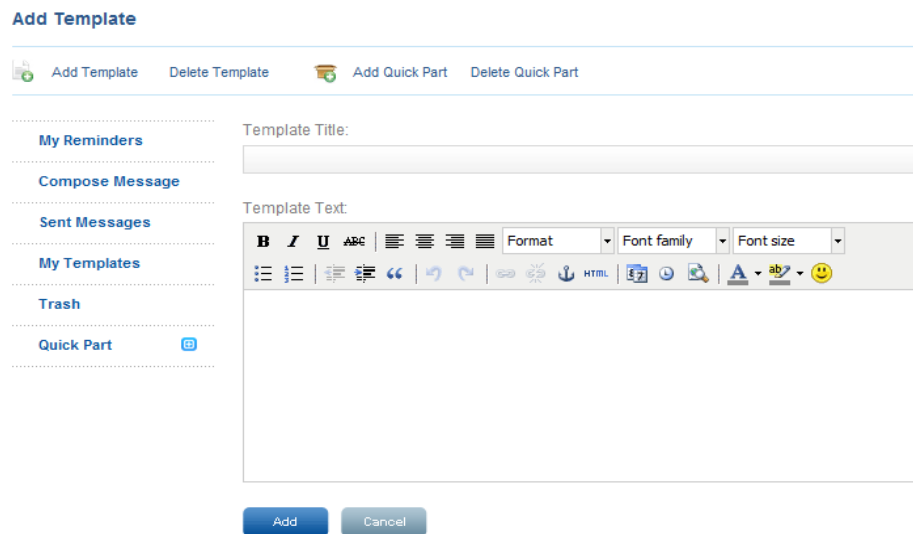
Add Template

1. Click on “Add Template” in the top navigation of the main Messages page.



Screenshot 53 – My Messages: My Templates - Add Template Button on Templates Main Page

2. Type in a meaningful title in the “Template Title” field that will help you to identify the template later when you compose a message.



Screenshot 54 – My Messages: My Templates - Adding a Template

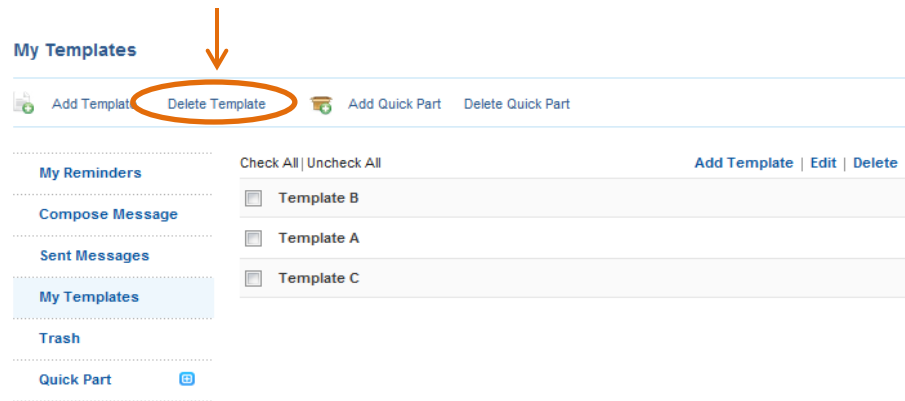
3. Use the field under “Template Title” to create the body of your template. Just like email, you are provided with tools to customize your message (e.g. font style, size, color).

Once you have completed your template, click on “Add”. If you have created the template successfully, you will be taken to the main My Templates page, and you will receive a confirmation message at the top of the screen that reads “Template Added Successfully”.

[Note: Adding a template is not currently compatible with Internet Explorer. Please use another web browser such as Mozilla Firefox or Google Chrome for this function]

Delete Template

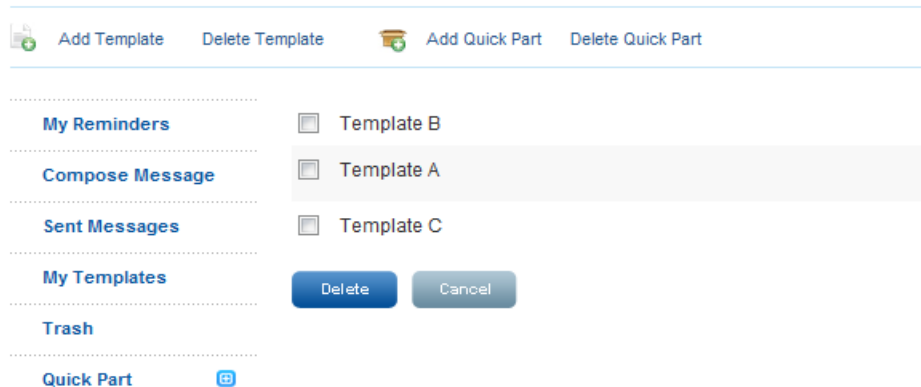
1. Click on “Delete Template” in the top navigation of the main Messages page.



Screenshot 55 – My Messages: My Templates - Delete Template Button on Main Page

2. Select the checkbox of the Template you wish to delete. Click “Delete”.

Delete Template



Screenshot 56 – My Messages: My Templates - Delete Template

3. You will receive a prompt asking you to confirm whether you want to delete the template. Click “Yes”. If deleted successfully, you will be taken back to

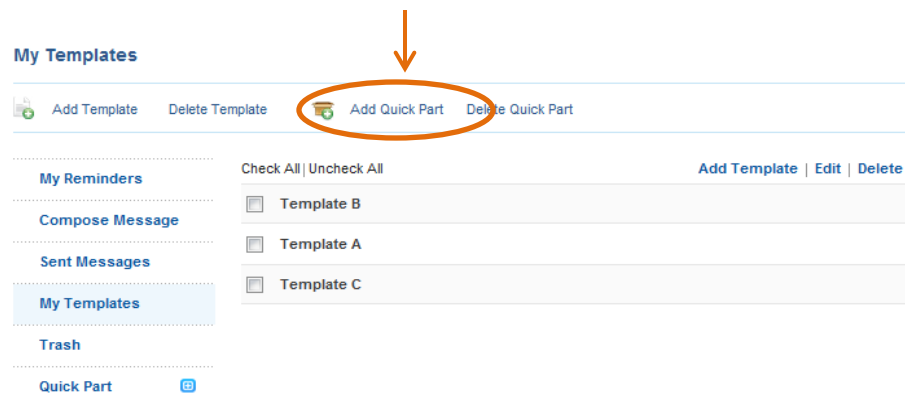
the Delete Template page, with a confirmation message at the top that reads “Template Deleted Successfully.”

QuickPart

A QuickPart is a smaller template that you can use while composing a message. For instance, a QuickPart could be helpful for storing an email signature, or your contact information.

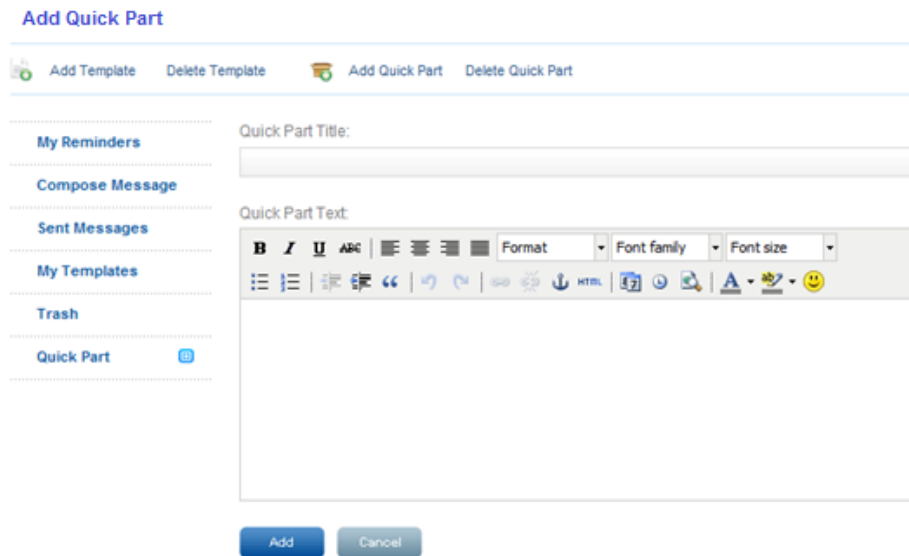
Add QuickPart

1. Click on “Add QuickPart” in the top navigation of the main Messages page.



Screenshot 57 – My Messages: My Templates - Add QuickPart Button on Main Template Page

2. Type in a meaningful title in the “QuickPart Title” field that will help you to identify the QuickPart later when you compose a message.



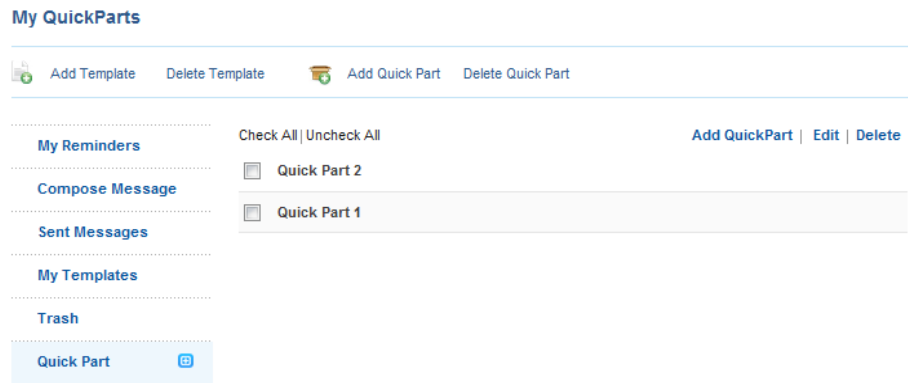
Screenshot 58 – My Messages: My Templates - Add Quick Part

3. Use the field under “QuickPart Title” to create the body of your QuickPart. Just like email, you are provided with tools to customize your message (e.g. font style, size, color).
4. Once you have completed your QuickPart, click on “Add”. If you have created the QuickPart successfully, you will be taken back to the main My QuickParts page, with a confirmation message at the top that reads “QuickPart Added Successfully.”

[Note: Adding a QuickPart is not currently compatible with Internet Explorer. Please use another web browser such as Mozilla Firefox or Google Chrome for this function]

Delete QuickPart

1. Click on “Delete QuickPart” in the top navigation of the main Messages page.



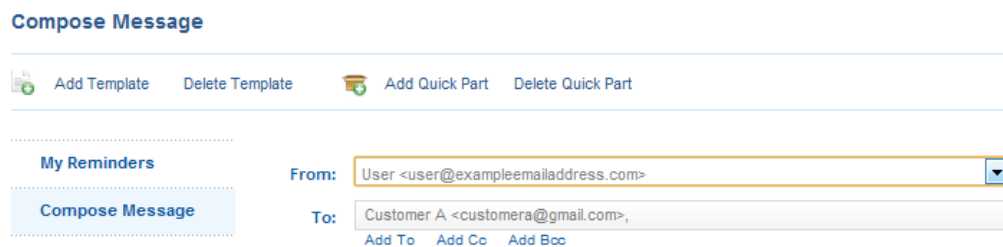
Screenshot 59 – My Messages: QuickParts - Delete Quick Part

2. Select the checkbox of the Template you wish to delete. Click “Delete”. You will receive a prompt asking you to confirm whether you want to delete the template. Click “Yes”. If deleted successfully, you will be taken back to the Delete Template page, with a confirmation message at the top that reads “Template Deleted Successfully.”

Compose a Message

Rolotrak’s messaging client mimics most email programs.

1. Using the “From” drop-down bar, choose the email address that you would like your message to originate from.



Screenshot 60 - My Messages: Compose Message - Choose Email Address

2. Begin typing an email address in the “To” field, and Rolotrak will recognize the customer’s email and give you suggestions from your contact list. Simply click on the correct contact from the list, and Rolotrak will populate the field for you.

By default, Rolotrak will add the email address you signed up with. However, you can also have your messages to your customers originate from another email address of your choice, so that when they hit “reply” it goes to your email address of choice. In fact, you can add multiple email addresses, and choose which address the email originates from each time. Here’s how: Click on “Add New Mail” in the “From” drop-down menu.

Compose Message

The screenshot shows the 'Compose Message' window. At the top, there are buttons for 'Add Template', 'Delete Template', 'Add Quick Part', and 'Delete Quick Part'. On the left, there is a sidebar with 'My Reminders', 'Compose Message' (highlighted), and 'Sent Messages'. The main area has 'From:' set to 'User <user@exampleemailaddress.com>', 'To:' with a dropdown menu open showing 'User 2 <user2@exampleemailaddress.com>', 'User 3 <user3@exampleemailaddress.com>', 'User 4 <user4@exampleemailaddress.com>', and 'Add new mail' (highlighted in blue). The 'Subject:' field is empty.

Screenshot 61 - My Messages - Add New Email Address

- a. You will receive a prompt called “Email Verification”. Enter the name of the person’s email address and the email address and click “Done”.

The screenshot shows the 'Compose Message' window with an 'Email Verification' dialog box overlaid. The dialog box has a title bar 'Email Verification' and two input fields: 'Name:' and 'Email:'. Below the fields are two buttons: 'Done' and 'Cancel'. The background shows the 'Compose Message' window with the 'From:' field set to 'Add new mail'.

Screenshot 62 - My Messages: Add New Email Address - Email Verification Prompt

- b. An email confirmation will be sent to the email you specified. Check your email and look for an email from admin@rolotrak.com with the subject heading “Please verify your account.” Click on the verification link in the email.
 - c. You will be taken back to the Rolotrak messaging client, and if completed successfully, there will be a confirmation message at the top of the screen that reads “Your new email address has been added.”
3. If you want to add a CC or a BCC, click on the “Add CC” and “Add BCC” links, respectively, under the “To” field, and the corresponding field will appear under the “To” field.

Compose Message

[Add Template](#) [Delete Template](#) [Add Quick Part](#) [Delete Quick Part](#)

My Reminders

Compose Message

From: User <user@exampleemailaddress.com>

To: Customer A <customera@gmail.com>
[Add To](#) [Add Cc](#) [Add Bcc](#)

Screenshot 63 - My Messages: Compose Message - Add "To", "CC", and "BCC" Fields

4. If you would like to use a template in your message, select one from the drop-down menu "Templates". The message box will automatically populate with the content of that template.

Compose Message

[Add Template](#) [Delete Template](#) [Add Quick Part](#) [Delete Quick Part](#)

My Reminders

Compose Message

Sent Messages

My Templates

Trash

Quick Part

From: User <user@exampleemailaddress.com>

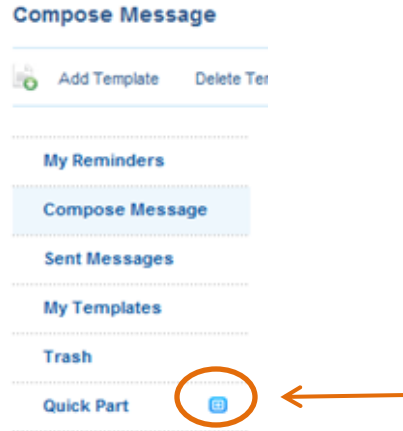
To: Customer A <customera@gmail.com>
[Add To](#) [Add Cc](#) [Add Bcc](#)

Subject: Example Email

Template: Select Template
Select Template
Template A

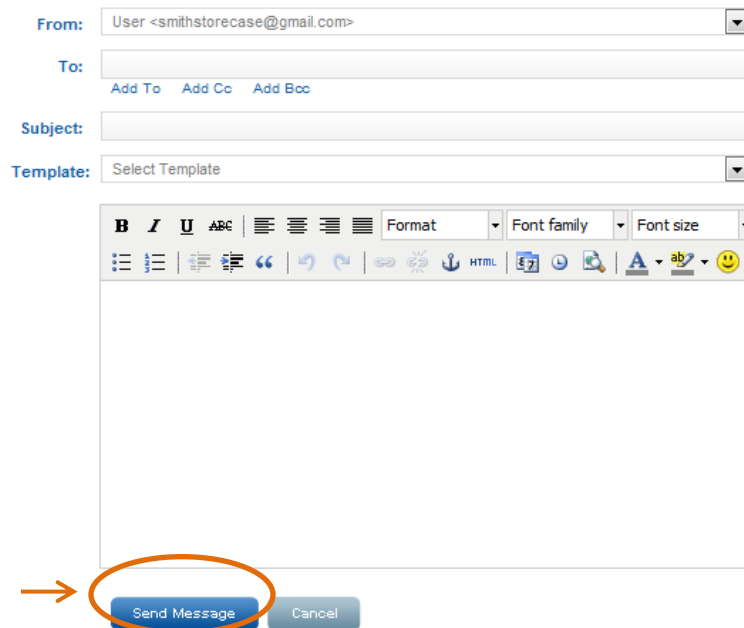
Screenshot 64 - My Messages: Compose Message - Choosing a Template

5. If you would like to use a QuickPart in your message, click on the “+” sign next to the QuickPart in the My Messages side navigation bar. Your QuickParts will appear underneath. Simply drag and drop the desired QuickPart into your message box, and it will populate with the content of the QuickPart.



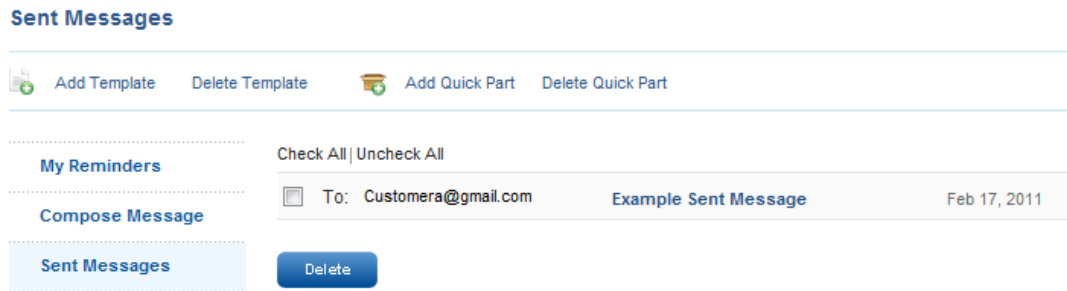
Screenshot 65 - Message Side Navigation - Quick Park Expansion Button

6. Compose your message in the box just as you would in any other email client, and click “Send Message” when finished. If sent successfully, you will receive a confirmation message at the top of the screen that reads “Your message has been sent.”



Sent Messages

You can use this section to view your sent messages. Click on “Sent Messages” in the side messages navigation to access this section.



To delete a sent message:

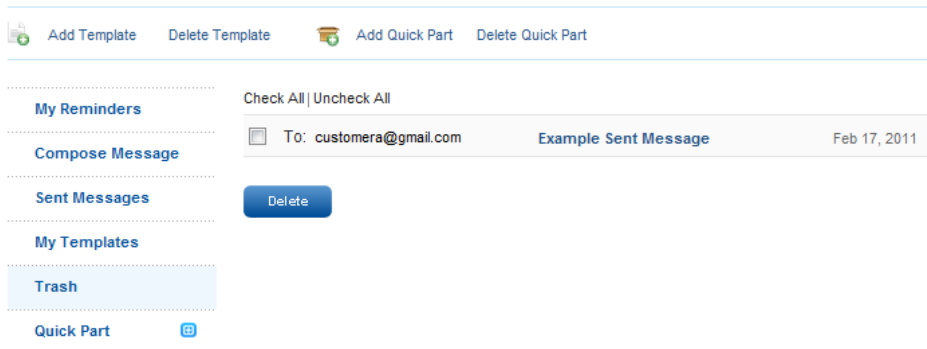
1. Click on the check-box of the message you would like to delete and click “Delete”.
2. Rolotrak will prompt you to confirm whether you would like to delete the message. Click “Yes”.
3. If deleted successfully, you will be taken back to the Sent Messages screen, with a confirmation at the top that reads “# messages deleted successfully.”

Trash

This section allows you to view your deleted messages. You can use access this section from the Messages side navigation Delete messages permanently from your sent messages by using the following steps:

1. Click on the check-box of the message you would like to delete and click “Delete”.

Trash Messages



Screenshot 66 - Trash

2. Rolotrak will prompt you to confirm whether you would like to permanently delete the message. Click “Yes”.
3. If deleted successfully, you will be taken back to the Sent Messages screen, with a confirmation at the top that reads “# messages deleted successfully.”

Pre-Pilot Test Questionnaire

1. Store Name:

2. Number of Employees:

3. Do you sell products online?

Yes

No

4. Do you have internet access in your store, and if so, what do you use it for?

5. In your estimation, what percentage of your customers are repeat ones?

Inventory

6. Do you currently have a software system to track inventory?

Yes

No

7. If yes, what is it called?

8. How long have you utilized this software?

9. How much did you pay/are you currently paying for it?

10. Did you pay a one time fee or a subscription?

11. Who can access the inventory software?

Please check all that apply.

Owner

Managers

Employees

Other:

12. Does it update inventory levels as soon as a sale occurs?

Yes

No

13. Does your system notify you when your inventory level is almost empty?

Yes

No

14. Does your system let you keep information on your suppliers/vendors?

Yes

No

15. What are the advantages of your inventory software?

16. What are the disadvantages of your inventory software?

17. If you do not have a software system, how do you keep track of inventory?

For questions 18-23, rate your level of satisfaction with your inventory system in the following areas (1 - Very Unsatisfied, 5 - Very Satisfied), and then please explain your answers

18. Simplicity/Ease of Use

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

19. User Interface/Design

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

20. Ability to Upgrade Software

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

21. Technical Support

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

22. Entering/Tracking Inventory Levels

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

23. Managing Orders from Vendors

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

24. Overall, would you describe yourself as satisfied with your current inventory system?

- Yes
- No
- Not Sure

Explain:

25. Do you feel your inventory system has been worth the price you paid for it?

- Yes
- No
- Not Sure

Explain:

26. Has your inventory system met your pre-purchase expectations?

- Yes
- No
- Not Sure

Explain:

Customer Relationship Management

27. Do you currently have a CRM software system?

- Yes
- No

28. If yes, what is it called?

29. How long have you utilized this software?

30. How much did you pay/are you currently paying for it?

31. Did you pay a one time fee or a subscription?

32. Who can access the CRM software?

Please check all that apply.

Owner

Managers

Employees

Other:

33. What are the advantages of your CRM software?

34. What are the disadvantage of your CRM software?

35. you do not use a CRM software, do you track customer data another way (i.e. by hand)?

36. If you answered "Yes" to the previous question, how?

37. What types of customer data do you record?

38. Do you tie customer data to their purchase history?

Yes

No

39. Through what means of communication do you contact your customers?

40. When you contact customers, what do you send them (i.e. newsletters, sales, coupons)?

41. Could you describe the entire CRM process that you undertake (from recording customer data to contacting customers)?

42. How consistent are your employees at recording customer information?

For questions 43-49, rate your level of satisfaction with your CRM system in the following areas (1 - Very Unsatisfied, 5 - Very Satisfied), and then please explain your answers

43. Simplicity/Ease of Use

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

44. User Interface/Design

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

45. Ability to Upgrade Software

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

46. Technical Support

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

47. Entering/Updating Customer Data

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

48. Effectiveness at Reaching Out to Customers

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

49. Effectiveness at Generating Increased Sales

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

50. Overall, would you describe yourself as satisfied with your current CRM system?

- Yes
- No
- Not Sure

Explain:

51. Do you feel that your current CRM system is worth the price you paid?

- Yes
- No
- Not Sure

Explain:

52. Has your CRM system met your pre-purchase expectations?

- Yes
- No
- Not Sure

Explain:

53. Has your CRM system improved the performance of your business (i.e. increased profit, increased sales, higher percentage of returning customers)?

- Yes
- No
- Not Sure

Explain:

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Post-Pilot Test Questionnaire

Inventory

For the following questions, rate your level of satisfaction with our inventory system in the following areas (1 - Very Unsatisfied, 5 - Very Satisfied), and then please explain your answers

1. Simplicity/Ease of Use

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

2. User Interface/Design

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

3. Ability to Upgrade Software

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

4. Technical Support

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

5. Entering/Tracking Inventory Levels

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

6. Managing Orders from Vendors

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

7. Overall, would you describe yourself as satisfied with our inventory system?

- Yes
- No
- Not Sure

Explain:

8. Has our inventory system met your expectations?

- Yes
- No
- Not Sure

What were its advantages?

What were its disadvantages?

Customer Relationship Management

For the following questions, rate your level of satisfaction with our CRM system in the following areas (1 - Very Unsatisfied, 5 - Very Satisfied), and then please explain your answers

9. Simplicity/Ease of Use

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

10. User Interface/Design

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

11. Ability to Upgrade Software

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

12. Technical Support

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

13. Entering/Updating Customer Data

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

14. Effectiveness at Reaching Out to Customers

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

15. Effectiveness at Generating Increased Sales

1 2 3 4 5

Very Unsatisfied Very Satisfied

Explain:

16. Overall, would you describe yourself as satisfied with our CRM system?

- Yes
- No
- Not Sure

Explain:

17. Has our CRM system met your expectations?

- Yes
- No
- Not Sure

What were its advantages?

What were its disadvantages?

18Has our CRM system improved the performance of your business (i.e. increased profit, increased sales, higher percentage of returning customers)?

- Yes
- No
- Not Sure

Explain:

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Appendix J: Smith Store Manager Interview

First off what is your role with the Smith Store?

Manager: I am the director of the Smith Store. So basically I am in charge. There's not much oversight in terms of faculty or staff or anybody else. Pretty much totally student run.

In the Smith Store do you guys have any previous experience using CRM or inventory software?

Manager: No the only software we had was an Excel database that wasn't properly linked and didn't really work out well. It was pretty pain-in-the-butt to use.

And you guys have been using that since the beginning of the Smith Store?

Manager: Since my time as far as I know we've been using it. We still use it even with your software. That's basically because the one down side of your software is that it doesn't have pricing or profits and that kind of stuff, so we don't really know - I mean that's the big thing is knowing how much money we're making. I can go into more of that right now or you can just ask your questions...

Go ahead.

Manager: That was the biggest problem I saw was that it was great to have inventory because we've never had an actual real count of inventory so that adds a lot of accountability and reliability to our - you know since we're student run it's hard to keep track when there's only one person working so it's really good to have the inventory up to date which I thought was great with the site, but the problem was that I had to put it in an Excel database and also put it in your database because I needed to know how much money we're making and I also needed to know inventory. So if there's any way in the future that those two could be combined, you know, it would be perfect. And I'd also say what I liked really about yours

was that you could access it anywhere so I didn't have to be in here if I needed to change something or look at something.

How did you record the sale at the point of sale? What did you use? Excel first?

Manager: Everything's written down in here actually so that we know price, product, size, color, quantity.

Was it more like writing it in there and then you go back and put it all in Excel and then on the website?

Manager: Right. So like once a week I would fill out Excel and then do that on the website.

I guess, going back to using Excel, can you just talk about things that it maybe doesn't have that you would look for in an inventory system?

Manager: It's very easy to make mistakes. Just because if you type in one number wrong or one formula's wrong, if you accidentally put something in a different cell then you intended to then your whole thing could be screwed up. It's really hard to go back and see you many t-shirts you bought. You have to go through every single record and so once it's messed up, it's messed up for the whole year. So that was the big thing. It wasn't like there was a way to put in on this date... put in this many things were sold. It would be like a giant tally basically.

Okay, we're going to move on to I guess how you used the Rolotrak software, which you kind of touched on, but... did you actually use it every week, or how much?

Manager: No I didn't use it as much. Esther would help me out and put stuff in. But it was definitely down for a lot of it so I guess that was the big thing. You know, if it's going to be down then it's kind of like I can't rely on it, I can't... what's the point of it? So that was the big thing.

So do you see that as a big problem that if this was a software that was web-based? Our problem was that we had trouble getting it from the programmers who were originally hosting it, so once we tried to get it from them and put it on the school's servers it wasn't working. So I guess that kind of gives you a feel for what it would be like if it was actually like a web-based application, and if you don't have internet access then obviously it's not going to work. So do you see that as something that is like a huge problem?

Manager: No, I think especially here on campus, having internet access is essential and I like everything being on the internet. I like being able to access it from anywhere. I think that's important so I don't have to go to one computer and always look up. But going back to [the system] being down, I could withstand it being down for a day or two, but you can't have it down for weeks and weeks.

Okay so was there any change in your daily routine in ringing up orders or anything from using the software?

Manager: Yeah, there was actually. We had a new sheet so we would try to keep better track of color of shirts, sizes, that kind of thing.

So just like more specific inventory.

Manager: Yeah, actually here's our old sheet. And it just said product description, quantity, sales method, and then our new sheets have an actual space for size, color, quantity.

And they have customer information also, right?

Manager: Yeah. We would ask customers for their information, but it was kind of hard for some customers because they don't want to give you their information.

That's actually one of the things we wanted to ask you about. What was the willingness of people to kind of give out their own information?

Manager: It depends on the person. Some people we wouldn't even ask that were just coming in here. You could tell that they might just be a one-time customer. But faculty that would come in and out that would buy a lot of stuff, and other people that you've seen around a lot - we try to get their information. Basically we ask them, you know a lot of people don't want to get a lot of spam email, which we actually haven't sent out anything yet, but in the future we would definitely like to send stuff out when we are having a sale or we have a big event coming up or something. So in the future it would definitely be helpful.

So were there any demographics that you found willing to give you email addresses? Was it mainly faculty that were already returning customer?

Manager: Faculty I would say, mainly. Some students just don't care, others are just like "what's the point." They're like "I just want to buy this and get out of here," not record my information or that kind of thing. So that was big thing I'd say.

Okay, so talking about how you're using Rolotrak, kind of like once a week, after you put everything in Excel... could you go into why you use it that way as opposed to at the point of sale?

Manager: Just because I didn't want to give the other employees access to it. And I'm only here so much so there's got to be a way of... well there's no other way to do it because if I gave everyone access then there's really no accountability because then they could just theoretically put in whatever they wanted.

So you would need like an admin for you and then maybe multiple accounts for other people for it to be used on a daily basis?

Manager: Right. I guess it would be nice if you could see when each time would be put in so you could basically when it's done you could see okay this person bought this at this time

on this day.

And you could see who's ringing it up by who's signed in Rolotrak?

Manager: Right. That'd be pretty high-tech actually. That'd be pretty cool.

It's a good consideration actually.

Manager: Yeah, I'd say that's actually real big.

Okay and that's something that would help you take the step towards using it on a more frequent basis?

Manager: Right. And it would really be good with keeping track of stuff so that they can physically put it in the computer themselves, and every time they buy something, in case they don't write down something, they're responsible for putting it in the computer so all the information has to be there.

Okay. When you got on Rolotrak did you like look at... what exactly did you look at? How did you use it? Just walk us through what you did.

Manager: I haven't used it in a while.

Were the reminders helpful at all?

Manager: Of ordering stuff? It would be more helpful in the future when it's more of a regular basis because that definitely was problem with products in here is that you don't - you know products run out really quick...and then you don't have them and then they take two more weeks to get in. But it definitely would be helpful in the future. I didn't really use it but in the future that's definitely a big thing knowing like "hey you're out of this." And that also goes to our website too because I have to update inventory on the website and being able to, you know if it said on there "oh you're out of this size of this shirt" or "you need to order

this” then I know that I have to go on the website and make sure that it doesn’t show that quantities exist of a certain size when they actually don’t.

How or what direction would the software take the store if you had used it more, because clearly there just wasn’t enough time for you to use it on a regular basis.

Manager: I think in the future it definitely can really help us be more organized in terms of products and also just being able to from semester to semester have some accountability of what’s in the store, how much is in the store. Because you know in previous semesters there were times when we had no idea how much we had of what. Someone could have easily just walked in here and taken half the stuff and we might have noticed it but there’s no real way to keep track, so in the future it’s definitely going to help with just making sure there’s some accountability and making sure that from semester to semester we get new employees you know they should be able to easily fit in hopefully to that system once we get one system.

Did you find the system easy to use? Like there wouldn’t be much training for employees if they had access or anything like that?

Manager: I think the one problem was if we didn’t have customer information we just had to put in...like a dummy name which kind of was not a glitch but something to consider.

Any other glitches or problems that you noticed while using it?

Manager: Not off the top of my head I don’t think. I’d have to... once I use it this semester it should be... more...

Okay. Do you see it being used as more of an inventory control instead of kind like CRM, like a customer relationship system?

Manager: Well I mean it could be used as both, but definitely more with inventory. Because you are recording all their names and stuff so it could be used for that as well.

Well I guess just for the Smith Store you would use it more as an inventory control.

Manager: Yeah the Smith Store, I'd rather have it more for inventory, more for keeping track of sales and that kind of stuff because you're really not having that much customer service.

Yeah there's not that much customer retention or anything?

Manager: Yeah. When you think about every couple years, you know it's not like a Macy's where you're always going to have totally different products. We're only selling Smith products. Either people want them or they don't. So it's good to use just to remind people but we're not going to use it to be running weekly specials or anything. So definitely more for inventory I'd say.

Now in the short time that you used it did you notice any difference about how you were able to keep track of inventory? Did it help at all even in the month or so to help prevent stockouts and stuff?

Manager: Yeah it did. Definitely you realize when you see a physical number of this how many is left it registers in your head more than just looking and saying "oh we got you know this many." You're like "Wow, I actually need to order this because there's only 10 left or there's only one in this size." So it was definitely helpful in being organized and trying to be on top of the products that we have.

Can you think of any specific features or something that you would change to the software or something that you would add to it?

Manager: Yeah definitely the pricing. Being able to put it this is how much we bought it for, this is how much we sold it for, and just being able to make that customizable. Because one thing with the Excel is that you always have one price for how much it cost and one price for

how much it sells and you just put in the total quantity over the semester. So it would be nice to know everything we buy costs this much and then maybe we gave them a discount so it's 8 dollars instead of 10 dollars. So it would be nice to every time we do that be able to put in 8 dollars so we can actually keep track of it properly, because on Excel you know it's never going to be exactly right. If you're running a sale and you gave 10 percent off to someone or if you give a free bumper sticker or a free gift bag. So I guess that would be the best feature, is to really put pricing in there. That'd be awesome.

Did you look at the user guide? Did you find that useful at all?

Manager: I didn't look at it.

That's fine. We need honesty on that so that's fine. Would you find the software helpful as a mobile app because I know you were saying you like kind of being able to access it anywhere?

Manager: I mean that would be nice but that wouldn't be my top priority. The other things that I mentioned like pricing definitely come first before that. Since I'm always here on campus it's not like other small businesses where you constantly want to see everything. We don't have that much inventory turnover to make it essential that I know what the inventory is every hour. Most stuff stays around here for a year or so before we have to reorder anything.

So would you say that overall it was effective, or more effective, less effective than just using Excel or maybe using them together?

Manager: Yeah, it's just like a different effective...It's definitely a good start of where we'd like to go. You know I'd like to never have to use Excel again, and I'd like to have a system like that where it properly works. And even maybe in the future, way future, have barcodes for everything where basically we just have a book and we could just scan everything and it

would automatically go into the system and say you just sold this. So that'd be the way future. Probably be past my time but that'd be pretty cool.

If you were going to continue to use the software in the future for any extended period of time, how do you see any change in how you would use it? Like do you think you would use it more often?

Manager: I definitely like if we could get access like an admin and then have other users. I could see using it every day if that was possible so the other employees could literally just go in.

Other than frequency do you think that you would use more features on it? Like would you actually end up using the reminders more?

Manager: Yeah. When you're doing it every day you're definitely seeing those reminders. But when you're doing things every week you don't really register it like you would if you were looking at your calendar. You look at your calendar everyday so you could look at this everyday kind of thing.

Other than anything we've already mentioned, anything about general performance of the store that it would affect?

Manager: It'd probably definitely in the future help with seeing which products are making us money and which ones are not so that you could actually see like is this product worth it to us to buy and sell. Are we actually making any money, or are we making nothing and so? Maybe it would also help with seeing how fast something sells so you could see "wow this took a year to sell. I don't want to buy it again. Let me buy something new." Or "we sold out of these in a month. Let's keep buying them." That kind of thing.

Thinking back to when you agreed to try the software for us, what made you say yes?

Manager: Just because I knew the Excel system that we have now, the way it's linked really doesn't have any inventory tracking and it's very non-user-friendly. It's a pain in the butt.

Basically we were open to anything to help us out. And we don't have a budget so we couldn't really go out and buy some expensive system.

Appendix K: Jewelry Store Manager Interview

The interview occurred on January 19 with the manager of the Jewelry Store. Occasionally, an employee would interject with additional comments. She was interviewed further at the conclusion of the manager's interview.

As you know, we started using our software in your store with [Store Owner] back in October, so we just have some questions about how you used it (or didn't use it), or what you thought of it.

Manager: Well we haven't used it...at all, honestly. It was Christmas, so we were so busy that there wasn't... there's just not time for that. But I went online and looked at it yesterday and it froze up on me a couple times. So I couldn't really get anywhere with it. But the one thing I did notice was it has a list of everything we're out of stock on that we need to reorder, which doesn't really work for us because we have so many one of a kind pieces that we don't reorder. Most of our stock is like that. So, uh, that's one thing I noticed.

What is your role with the company?

Manager: I'm the manager.

At this store or both stores?

Manager: At this store.

Did you have any other previous experience with other customer relationship management or inventory control software before our system?

Manager: Just what we have, I guess, in our system with the RetailPro and QuickBooks.

How long have you had those?

Manager: We've had QuickBooks since July. And RetailPro we've had for years and years and years.

How long did it take you to get used to our software? Or did you get used to it?

Manager: I never [used it]. I just looked at it yesterday, honestly.

How long did it take you to get used to the other software?

Manager: It took me a while to get used to RetailPro, because it's not really user friendly. It's not intuitive at all. But QuickBooks is really easy. Like, I caught on to that really quickly.

You have Constant Contact too, right? How long have you been using that?

Manager: Probably...six, eight months. Something like that.

Is there anything you're unhappy about with RetailPro or QuickBooks? And Constant Contact? Any of those?

Manager: Well, RetailPro is bad. It's just, it's not intuitive at all. And it breaks all the time.

What exactly do you use that for?

Manager: Right now the only thing we use it for is old inventory that we have to look up. Or like old, like any of our old numbers before we had QuickBooks. And QuickBooks I really like. I think we're pretty happy with that. It's pretty simple.

What about Constant Contact?

Manager: I don't personally deal with Constant Contact. We have somebody else who does our mailings and stuff with that. But I know that they have problems. Sometimes it's hard to

set up the thing you want to send easily. Like, it's not completely user friendly to set up what your email and your mass email is going to be.

So, we have a few questions here: How often or how many times a week did you use our Rolotrak software?

Manager: None...I think it was just a bad time of year for that. And because our QuickBooks did everything for us, you know. So we didn't need it. And I know QuickBooks can be set up to tell you what you need to order and that kind of stuff. But we're not really fully using QuickBooks to its potential yet...I think we're supposed to connect it to our financial, so we'll be able to track our orders better than we do, but we haven't done it yet. But I think we're planning on it, as far as I know.

So how do you deal with your financials?

Manager: We have an accountant. And all of our invoices go to her. And she handles everything.

Did you guys, not software-wise, but in terms of interacting with customers or doing anything else in the store, did you change any of those processes once you got our software even if you weren't actively using the software?

Manager: When we first got it, we were asking more people for their names. But then when Christmas came we just got too busy. That just kind of fell away.

Did you only ask for names or any other contact info?

Manager: Just their names. We have a signup sheet for them to put their names and email and birthday—or, birth month. That's what we use for Constant Contact. But if it's just their name for the system we just need their name, to attach their sale to them.

After the names are placed, do you just send them to the person who deals with email?

Manager: Yes.

Are you familiar with what our software was supposed to do, even though you didn't really use it?

Manager: A little, yeah. Donna didn't really tell me much about it. She was just like, "these guys are doing a project." And I said, "Okay." (laughs)

Did she ever tell you why she decided to adopt it in the first place?

Manager: *[Shakes head no]*

Is there anything about our software that, just right off the bat that you didn't like and you'd like to improve?

Manager: That it froze up. *[/laughs]* That was bad.

Yeah, that is pretty bad. Are there any additional features that we didn't have that you'd like to have, that you know QuickBooks doesn't even have?

Manager: Not that I know of. Not that I can think of.

Did you look at the user guide at all?

Manager: No. I just don't have time. I was the only person here doing all of the inventory for Christmas and doing...everything. So I just didn't have time.

Now, when you asked your customers for their name, were they usually pretty open to giving it to you?

Manager: Yeah.

Employee: Every once in a while you'd get somebody who'd ask what it was for. And you'd explain it to them. But other than that...not a lot.

Manager: Yeah, but for the most part, if you tell them you're just attaching their name to their sales for history, they're fine with it.

What about recording email and information in the book? [the Jewelry Store has a hardcopy journal on the cash wrap where customers can enter their contact information]

Manager: Oh, they do that all the time. People see a list and they're like, "Ooh! Let me sign up!"

Employee: Exactly. Especially when you tell them you'll give them a discount.

Could there have been any way we could have changed the implementation of our technology so that you would have been more open to using it? Like at a different time of year when you were less active?

Manager: Yeah. I think my only thing with it is that I didn't see a reason to have it, because QuickBooks does everything. So it just seemed like kind of a duplicate, just superfluous. Do you know what I mean?

Is there anything that QuickBooks doesn't do that you think you could use to improve your business?

Manager: Not that I know of...I can't remember a time when I've needed it to do something that it hasn't done. So, it could probably organize its reports better. Sometimes it's hard if you're looking up one person's sale for this time period at what store, sometimes you have to play with it for a while to figure out what you're doing.

Let's say hypothetically it was a better time of year and you were to use our software for a longer period of time. How do you think your store's performance would change? Or do you think it would change?

Manager: I think it would do better to, with the customers. With our relationship with the customers. It seemed like that was a pretty strong point with that system.

Is that something QuickBooks doesn't do well?

Manager: It just tracks the customers. It just attaches their sale to the customer. It keeps track of like their store credits, but that's all it does.

Did you notice a change after you installed QuickBooks in your sales? Or in general?

Manager: You mean, did we have more sales because of QuickBooks?

Yes, or did you think processing time of handling a sale improved?

Manager: Processing time is a lot shorter. A lot shorter. And it makes, the way it works if you're doing returns, exchanges, anything like that, is so much more intuitive. It makes so much more sense than RetailPro did. You know, it's a much easier process.

Do you think there's anything specifically about running this kind of store that causes you to use technology—any system—in a particular way?

Manager: What do you mean?

Some stores might have different reasons to use different software interact with customers or record their inventory. Broadly speaking, do you think there's anything about the business you're in that causes you to do things a certain way?

Manager: Well, I think because of retail, we have to keep track of customers with their returns and their store credits and... So that's really important to have that on file. Because it's on their receipt but they lose that. You have to keep track of a lot of inventory to know what's coming and going. And the inventory has to be accurate with what's on the tag and what's on the system.

I know you have a lot of unique inventory. How does that affect things?

Manager: I don't know that it really affects things any differently than anything else. I mean, as long as it's all entered into the computer and there's a record of it.

Does the fact that you have a lot of unique items, do you feel that it clutters your inventory at all? Just that, once someone purchases it, it still remains in your inventory?

Manager: No. No, because you can go that item number and look at the history and you can see it's been sold. So it comes out of the system. It still keeps a memory of it so if I get that item again I can put in a style number and it will bring it up. But, no, it keeps track of what's here and what's not here. Which is really helpful because I can go in there, somebody's looking for something here and we don't have it, I can look in the computer and see if they have it at the mall store. As long as that's all accurate, you know.

What about, if there's not a specific item, can you recommend a similar item, because a lot are very similar, but minor differences?

Manager: What do you mean? Like if somebody was looking for something?

Mike: Yes.

Manager: Yeah. I mean, if they tell us kind of along the lines of what they're looking for, we can usually find something.

Okay. And you can do that through QuickBooks?

Manager: No, usually it's like hunting and looking.

I guess you guys know your inventory pretty well, so...

Manager: Yeah. *[Laughs]* QuickBooks wouldn't really help with that at all.

Do you think the frequency of returning customers has increased since you implemented the Constant Contact?

Manager: No. I don't think it had an impact on it. They don't know what we're using. You know. They don't, cause RetailPro also kept track of the customers. We probably have more returning customers because of Constant Contact than QuickBooks.

What do you think about the fact that our software was web-based? Was there ever a time when you wanted to check up on something at the store when you weren't there?

Manager: Yeah! Actually, I think that's a really good idea. Because I know if I'm at home, I can't do any work on the computer for here, which is kind of limiting. It would be GREAT if I could be at home entering inventory, something like that.

Like if it was a mobile app for a smart phone, would that be good too?

Manager: Yeah. I don't, I mean, I can't think of a time when I would have to go in and look for a necklace, just on my phone. But I have had a couple of times when I wanted to get into the computer and find something when I was at home, so that was good.

Employee, do you have anything else you would like to add? Any opinions? Did you know we were using this software in your store?

Employee: Yeah.

Manager: Oh, wait! One more thing, sorry. What would really be helpful, what I have a problem with QuickBooks with sometimes, when I'm looking for inventory and we don't have a style number, I just have to kind of describe what it is and hope the right words come up, it's too specific. Like if it could just pick out "tear drop post earring something" and just give me everything with those words in it, instead of having to put them in all the right order or something like that. Like, that would be very helpful.

Employee: Yeah, that would be very helpful. Yeah, I agree with her with what you're saying there. But, again, we were just, because I'm a salesperson so what I'm doing is I'm just talking to the customer and asking for the information and getting it that way. So I wasn't really in any way in depth with what you were doing. I just knew that you were doing that.

Employee: Oh, one more thing. If your writing is going to take the form of a manual, a lot of times we don't read manuals very well. So that might be something to consider. Just making sure the manual is a lot more operative friendly.

Manager: Yeah, manuals should be step by step. So when somebody's in here and they don't know how to do something on the computer, they can find it easily in the manual, and go step by step by step by step, like as wordless as possible. As few words and as clear as possible.

Employee: Yeah. And it's hard, I would think because it's all technical stuff, but really most of us don't grasp that. But we do have people here who like, that want to see it in writing, how it's done. That learn better that way.

Employee: Yeah. But that's just something to think about when you're writing the manual.

[END]

Appendix L: Jewelry Store Owner Interview

This interview occurred on Feb 2, 2011 with the owner of the Jewelry Store.

Owner: [*It would be good to*] know anything you found out. What are we selling the most of or, I don't know what this whole thing is, but...

Absolutely. Can you tell us your role within the company?

Owner: I'm the owner.

Do you have any previous experience with any other sorts of CRM or inventory software.

Owner: Yes. RetailPro and QuickBooks.

You just got QuickBooks, correct?

Owner: Yes.

How was your sentiment towards QuickBooks so far?

Owner: You know to be honest I haven't had a chance to really learn the system yet because when I got the system I was moving, and then I've been buying and it's like I never have that much time to use it yet, but whenever I've needed to figure it out it's been pretty simple.

Did it come with any sorts of training program or anything?

Owner: Yes. There was a trainer and she wasn't real great.

What would you have desired more in the training?

Owner: I just don't think she was a really good teacher and, uh, she seemed to think everybody was really really slow and not good at learning.

I'm just curious because this would be something that would be helpful if we were to actually create this program for commercial use, but, was the trainer used to working with all sorts of sizes with businesses or was she specialized?

Owner: I think she was used to working with all sizes. Yeah.

Do you think maybe that if she was someone who was used to working with a certain industry or a certain size of business that maybe he or she would be a better trainer?

Owner: Maybe. Maybe, yeah.

Okay, that's good to know. How long did it take you to get used to the program? I know you mentioned you didn't have much of a chance to use it.

Owner: That program or your program?

Both

Owner: We don't even have access to your program, did we?

You do.

Owner: But, they never really used it, did they?

What about QuickBooks? How long did it take you to get used to it?

Owner: Oh, it's real fast.

How about RetailPro?

Owner: RetailPro I thought was harder.

You use Constant Contact too, right? How about that?

Owner: Everybody's had a lot of complaints about being able to do visually appealing things with Constant Contact. Other than that, I think it's a really great product. But, you now, you can't...you're restricted to certain things that make it look kind of funky.

Like templates?

Owner: Yeah, they're templates. Exactly. So what I did last time was I had my sign company take a photograph of a sign that I had done, and then she put that on the Constant Contact. So it was actually something I created outside of Constant Contact. *(has to stop to talk to a local vendor)*

So, how long have you had RetailPro for? And QuickBooks?

Owner: I had RetailPro for years. I don't know how many years. I've been here 17 years and I just this system. So, a couple years I did it all by hand. *[Laughs]* Well, I drew every piece. I did every inventory with a drawing.

Wow. That's impressive. Is there anything you would say you're unhappy with your current system, with QuickBooks?

Owner: What are we unhappy with QuickBooks? Anything? *(asks Manager, who is sitting at the cash register)*

Manager: No, I think it's good. Easy to learn.

Now, with QuickBooks, can you have pictures of all of your inventory?

Owner: I don't have any idea.

Or with RetailPro?

Owner: I have not really done much. I have, as I said, this is the first year of my life that I have (*been busy with personal issues and purchasing and have not spent much time working on the computers in the store*)

After this, the memory on the recorder is full. The rest of the interview is based off of notes.

Were you aware that the store's owners/management were using Rolotrak?

- Aware that it was installed
- Tried to get her employees to record customers' email addresses but a lot of them don't do it and are resistant to it (takes too long, "pain in the neck")

What would get her employees to record customer info?

- Not being able to ring them up unless they get their info
- Do record email addresses in name book: every few weeks someone takes customer info and puts it in Constant Contact
- Constant Contact has poor templates, bad for artistic type store

Rolotrak might not have fit her store that well because:

- Not as many repeat customers at her stores
- Christmas was a bad time to implement a new technology that takes longer with customers -> just want to get them rung up as fast as possible
- Most of her repeat customers don't buy the same type of product all the time -> can't recommend similar goods
- Don't put orders on computer, don't even check in shipments sometimes
- Don't resupply same goods (different than most businesses)

Would have gotten more out of it if not for timing:

- Not Christmas
- New computer program
- No manager at store

- Had to move
- Constantly out of area/country buying jewelry
- Could have made sure people asked/input customer info

How important is it that the system is user friendly?

- Very important
- Best salespeople are not always the best with computers and technology
- A lot of her salespeople are older, not always that familiar/adept with technology
- Lets some of her younger employees handle the technology (QuickBooks, inventory)

We notice you use a BlackBerry. What would you think if our software was online/mobile app?

- Nice to track to inventory when overseas buying jewelry/not at store, but she's not familiar with technology ("not her generation")
- Jokes about becoming wedded to her BlackBerry
- Recently mastered the art of "texting"; would much rather communicate face-to-face or over the phone

What if data was exportable?

- Would improve performance

What drove you to adopt our technology?

- That we were students, "nice kids from UMD"
- Wanted to help us

Differences between waterfront/mall stores

- Mall has more repeat customers
- When she has a sale no one comes to waterfront store, but do go to mall location
- Waterfront store does better in nice weather

- Mall performs 8% better than waterfront store (has majority of sales, used to be 50/50)
- Waterfront area/store underperforming due to mall location, less variety of shops and restaurants on the pier

Issues with her business

- Price of silver has gone up, now she has minimum markup on some items
- Six years ago made twice as much