Kate's Treasures, a retail store in the Fredericton area, is interested in going online. The company has been operating for over 10 years and has a well known reputation in the Fredericton area; Kate's Treasures is owner operated, with one other full time staff member and 2 part time staff. It is a small retail operator. The company is seeking advice regarding their decision to go online. In particular, the company is seeking advice regarding any technological and business issues that will arise due to going online. The technological and business issues that the company must consider will be discussed in the remainder of this paper.

Kate's Treasures is concerned primarily with business to consumer electronic commerce; however the company may also want to consider business to business and business processes that support buying and selling activities. The latter includes obtaining information to identify and evaluate customers and suppliers. With regards to business to business, the company may want to consider dealing with its suppliers through EDI. This will help the company reduce errors, avoid printing and mailing costs and eliminate the need to reenter the data. The company could use direct connection EDI or indirect connection EDI, but the use of leased lines and dial-up connection required to support both direct and VAN-aided EDI is very expensive.

Using the Internet as a replacement for the leased lines and dial-up connection is a possibility. However, security is still an issue; the lack of third-party verification is an issue because the Internet has no built-in facility for it and nonrepudiation is a significant issue. However, due to the small size of the retailer, the fact that no vendors currently require the company to use it and the lack of technical expertise within the staff at Kate's Treasure, the costs of using EDI at present, more than outweigh the benefits. However, in the future, if the retail operations were to expand significantly and major suppliers required the company to use EDI, then the company may want to consider this option. Therefore, this paper will be focused on the business to consumer aspects of pursing the e-business option.

The first thing that needs to be done is planning for electronic commerce initiatives. Success of an e-commerce initiative will depend mainly on Kate's Treasures' staff's ability to plan, design and implement cohesive electronic commerce strategies. The company needs to identify what its specific objectives are and link those to its business strategies. Objectives include the strategic role of the project, its intended scope and the resources available for executing it. Committing the appropriate amount of resources be it monetary resources or people, is crucial for the success of any initiatives. Therefore, it is better to follow a more focused, smaller scope strategy and have sufficient resources to carry it out then to set a large scope strategy and not have sufficient resources to commit to it. As Kate's Treasures is a small company with limited financial means, cost is an issue that must be considered. The company must also set deadlines as to when different activities should be completed and should identify what the benefits of going on line are and how to measure these benefits. ROI is a good capital project evaluation method.

One of the major strategies for developing an e-commerce web site for Kate's Treasures includes considering internal development versus outsourcing. Within outsourcing there are three types, early, late and partial outsourcing to consider. Many companies think that by outsourcing the entire project that they can avoid electronic commerce site development problems. However, this is not the case as the success of the project depends on how well it is integrated into and supports the activities in which the business is already engaged. Most companies, for example Kate's Treasures, are not big enough nor do they have sufficient in-house expertise to launch an electronic commerce site by themselves. Thus, outsourcing is needed, but to what extent is the issue that needs to be considered.

An internal team, headed by the owner, as she knows the most about the business and is responsible for setting the overall direction of the company, should be created. In addition to the owner, employees who are creative and are interested in the ecommerce initiative should be part of the team. The internal team has the ultimate responsibility for setting objectives, for implementation and for operation of the site. Kate's Treasures major objectives for developing the ecommerce site are increasing sales in existing markets and opening new markets. The next thing that needs to be considered is how is the site going to be developed and by whom.

Early outsourcing is when the company out sources the site design and development and then the outsourcing firm trains the company's employees on the new technology and then passes the operation of the site over to the company. A major advantage of this method is that the site can be launched quickly. Late out sourcing is when the company's information system professionals do the initial design and development work, implement the system and operate the system until it is a stable part of the business operation. Maintenance of the system is then outsourced so that the technology department can focus on developing new technologies. The last type of outsourcing is partial outsourcing. Partial outsourcing differs from the other two types as the company identifies specific portions of the project that can be completely designed, developed, implemented and operated by an outsourcing company.

For Kate's Treasures, as there is no technologically savvy staff, I would recommend early outsourcing as the company's most viable measure. This will allow the company to move on-line quickly and reap the benefits of operating on-line. One of the key things that needs to occur after the system is operating, is training. The company's employees and owner must be competent in using the Web, the new technology, and understanding how their e-commerce business works. As indicated previously, the current employees are not technologically savvy. Therefore I would recommend that all staff attend a training course provided by the outsourcing team.

One of the major things the firm needs to consider is web site costs. Based on surveys done by International Data Corporation and Gartner, Inc, the costs for a large company to build and implement an entry level e-commerce site is approximately \$1 million. Creating a site that is differentiated from its competitors can cost a firm up to

\$15 million. For small companies, a Web site can be created for approximately \$5000, but the total cost of ownership for an e-commerce implementation with full transaction and payment processing capabilities is approximately \$10,000 per year. However, industry analysts have estimated that the minimum dollar amount to open a complete e-commerce Web site is \$150,000. Due to the rapid pace of technology development, to keep up to date and remain competitive, annual maintenance costs for a web site will be between 50 and 200% of initial cost. Kate's Treasures can control their costs through a combination of third-party hosting services and packaged electronic commerce software and through signing on with mall-style service providers. These areas will be discussed in detail below.

The factors that need to be considered when determining the type of software include projected traffic and sales. As Kate's Treasures is a relatively small organization, the traffic and sales volume is not expected to be very high and therefore they should be able to use a relatively simple packaged electronic commerce software. I would suggest that Kate's Treasures Follow a web catalog revenue model. Essentially the company would place information about its product and services on its Web Site. This provides an additional sales outlet for the company without having to build additional stores, and provides access to customers throughout the world. Customers can place orders through the website or by telephone; this flexibility is important as many consumers are still weary of buying on the Web.

The company can display its catalog using either a static catalog or a dynamic catalog. For a static catalog, it is a simple list, written in HTML, that appears on the website. To add, delete or change an item requires changes to the HTML code. However, as company staff will be trained by the outsourcing company, making these maintenance changes should not be difficult for the company. Thus upkeep of the site will be congruent with management's skill set. With a dynamic catalog, information about the items is stored on a database on a separate computer that is accessible to the server that is running the Web Site. This type of catalog can display multiple photos of an item, detailed descriptions and search features. Another software package that could be considered for the company's web site is virtual model software from My Virtual Model. Land's End, another clothing retailer has found that the dollar amount of orders placed by customers who use the virtual model is about 10 percent larger than other orders. By using this model, the company will be following a customer-centric approach to Web site design. However, as the company is a very small retailer and thus requires limited features to sell its merchandise, a static catalog is sufficient to meet their needs.

Transaction processing is also a necessary feature in electronic commerce software. Transaction processing results in the software performing any necessary calculations such as sales tax and shipping costs. It is necessary to ensure that tax rates and shipping rates are calculated correctly and applicable rates are kept up to date. As discussed below, by using Mall-style Commerce Service providers, these hosts provide the necessary software to design and run a Web Page.

One of the early decisions a company must make is whether they should use an external host or whether they should host the e-commerce site in-house. As the company does not have an in-house technology department or have staff that possess the necessary skills required to set up and maintain an electronic commerce site, hosting in-house is not a viable option. Thus, the company should use a third party service provider. By using a third party service provider's hosting services, instead of using in-house or co-location services, means that the staffing burden moves from the company to the Web Host.

Due to the low cost nature, free or low cost service providers such as Geocity, Tripod, Fortunecity, doteasy, 50mgs and hostdeal are very attractive options for the company. However, when considering free or low cost third party host service providers, the company must consider the limitations of these providers to accommodate certain marketing and business tasks. For example, some of the limitations of these free or low cost service providers include, file size limits, requirements to carry banner advertising, some sites don't offer email service, band with limits, slower connections to the Internet, no backup systems, less flexibility and room for growth as the company grows and inadequate support features. The company must consider what features and services it feels are essential to its operations before choosing a third party hosting service.

Basic Commerce Service Providers have the same advantages as Internet Service Providers hosting services. The most important advantage is low cost, as the host provider has already purchased the server and has configured it. CSP's offer free or lowcost electronic commerce software for building e-commerce sites that are on the CSP's server. It can cost a company roughly \$20/month for services; services are designed for small online businesses selling no more than 50 items and having low transaction volumes. For Kate's Treasures, I would recommend using the Mall-Style Commerce Service Provider. Mall-style service providers provide small businesses with Web Site creation tools, no banner advertising and an Internet connection. A monthly fee is charged that is higher than that of lower-end providers, but the benefit is that a company does not have to display any Web banners. Web Banners can be very distracting and annoying to visitors of a particular web site and can deter them from staying on the site or from purchasing a product. Therefore, the extra cost that Kate's Treasures would be required to pay is worth it for not having to display banner ads. In addition, a one time set up fee may be charged as well. Other benefits of this type of site is that these Web hosts provide high quality tools, a storefront template, easy-to-use interface and quick Web page generation capabilities and page maintenance. Furthermore, these hosts provide shopping cart software and provide customer payment processing so that customers can use debit and credit cards (credit cards are the preferred form of payment on the Web). The advantage of having shopping cart software is that the shopping cart keeps track of the items the customer has selected and allows customers to view the contents of their carts and make changes to their cart. All the details about the item are stored automatically in the cart. Therefore the customer does not have to worry about writing down product information.

As indicated previously, early outsourcing was recommended. Therefore Kate's Treasures will be outsourcing their site design and development. As the company is planning on using a static catalog and all tools necessary to develop the Web Page are provided by the mall-style CSP, Kate's Treasures should consider working with a student to develop the Web Page. As it is a relatively simple task, a computer science student from the University would possess the necessary skills to design the site and train the staff. By using a student, this will be a major cost savings for the company.

The internal team should work closely with the student when he/she is doing the site design and development to ensure that the site content is developed according to the team's goals and the site has an effective web presence. An effective site is one that meets the objectives of the business which include, attracting visitors to the site, making the site interesting enough that visitors stay and explore, convincing visitors to follow the site's links to obtain information, creating an impression consistent with the organization's desired image, building a trusting relationship with visitors, reinforcing positive images that the visitor might already have about the organization and encouraging visitors to return to the site. The web site must convey the image that the company wants to project and be consistent with other elements of the company's marketing strategy. The company must also ensure that their site is easy to use and that they provide interactive contact opportunities for site visitors. Therefore the internal team must be explicit when communicating with the outsourcer as to what they want on their site and how they want it presented.

One factor that the company may want to consider is that, as it has an existing sales outlet, a concern may be that the Web site may cannibalize the outlet's sales. However, as the company has been in business for 10 years, and has a loyal customer base, the owner feels that outlet sales will not decrease as people within the Fredericton area will still prefer to come in to the store and try on the merchandise versus buying online. The owner is assuming that it will primarily be people outside of the Fredericton area that order from the Web site, however the Web site will still target new customers within the Fredericton region through its enhanced exposure.

Kate's Treasures must consider the following annual operating costs for its Web site for budgeting purposes: initial site set-up fee,(this will be in year one only), monthly charges, domain name registration (again this will be in year one only), scanner for photo conversion or digital camera (i.e. to take pictures of clothes and put on the Web Site), photo editing software, occasional HTML and site design help (the assumption is that with training, the staff of Kate's Treasures will be able to do most of the work themselves), merchant credit card setup fee, and payment processing fees. Payment processing fees only occur when a sale is made; a reasonable guideline for estimating payment processing fees for a merchant on the Web is approximately 3% of gross sales. For a small business like Kate's Treasures, a reasonable estimate of total annual operating costs is \$2500 - \$5000 a year.

Payment Systems for Electronic Commerce are still evolving. Four basic ways to pay for purchases dominate electronic business to consumer commerce which include with cash, checks, credit cards and debit cards. Credit cards are by far the most popular form of consumer electronic payments online. There are numerous payment technologies that exist that include payment cards, electronic cash, software wallets, and smart cards. However as discussed above, the mall-style CSP essentially uses payment cards as their payment technology, therefore I will be discussing this payment technology only. Payment cards refer to all types of plastic cards such as credit cards, charge cards and debit cards. The advantages of using this type of system are that payment cards are accepted world wide, when using a payment card online the consumer does not need any special hardware or software to compete the transaction and for merchants, payment cards provide fraud protection. Another advantage is that payment cards provide more security for merchants because merchants have a higher assurance that they will be paid through the companies that issue payment cards. The disadvantage for merchants is that compared to cash, payment card service companies charge merchants per transaction fees and monthly processing fees.

A major problem facing on-line businesses is that the level of fraud in on-line transactions is significantly higher than either in person or telephone transactions. Online transactions account for 50% of the total dollar amount of credit card fraud, even though online transactions are less than 5% of all credit card transactions. A study done by Celent Communications estimated that by 2007 online credit card fraud will be over \$2 billion and will amount to 62% of all credit card fraud.

Security issues must also be considered for Kate's Treasure as it is moving online. Electronic commerce is vulnerable to a number of security threats that can result in the disclosure or manipulation of proprietary information. The three general assets that companies engaging in electronic commerce want to protect are client computers, computer communication channels and Web servers. Different types of threats include viruses, client-side applets, cookies, physical threats to servers etc. As the Internet is a vast network, and no control exists over the nodes in which Internet traffic passes, information traveling through the Internet is especially vulnerable to unauthorized disclosure, alteration of critical business documents and theft or loss of important business messages. This is critical with regards to credit card information given on the company's web site for payment. Encryption, firewalls, backup and certification authorities are all methods used to combat security threats. As the 3rd party service provider host is responsible for software and hardware, the company must ensure that it is using adequate preventive security measures.

From a business perspective, the company should consider where it fits within the retail industry and should perform an analysis of its value chain and compare it to other firms operating in the retail industry. For example, a breakdown of Kate's Treasures value chain may include primary activities such as collecting market information on its customers, purchasing clothes from wholesalers, marketing and selling clothes, and support activities would include finance and administration and human

resources. By analyzing its current operations and comparing it to competitors, opportunities for cost reduction, product improvement or channel reconfiguration can be realized. Kate's Treasures deals with two major suppliers when purchasing its clothing. The owner should be cognizant of the importance of these relationships to the success of her business and work to establish long term relationships with these suppliers. The company should perform a SWOT analysis for identifying opportunities and threats with regards to moving on-line. Depending on the results of this analysis, the company should adopt either a low cost, focus or differentiation strategy that results in the most favorable positioning in its market place. The use of this strategy will hopefully result in a sustainable competitive advantage for the company.

Kate's Treasures is a well-established brand name in the retail industry within Fredericton. Obtaining an identifiable name to use on the Web that is consistent with the company's image in the physical world is an important part of establishing a Web presence. Therefore, I would recommend using Kate's Treasures as the URL for the company's Web Site, if possible. Furthermore, the company must also register its domain name. Another thing the company must consider is return policies. It must clearly state on its website what its return policy is so that there will be no confusion; most online retailers offer a generous return policy. To attract customers and to minimize on-line customer's risk I would recommend the company offer a generous return policy.

The company also needs to consider marketing on the Web, in particular who it is selling to. The company can segment its market based on demographic, geographic and psychographic factors. In this instance, I would recommend the company look at geographic and demographic factors. Kate's Treasures is a retail store that is targeted at middle income, middle-age women. Therefore its on-line business should be consistent with this and target this market as well. In addition, for the first year or so, I would recommend that the company only sell within Canada. Using click stream data gathered throughout the year, the company can further refine its marketing strategy, and extend its geographic offerings if it so requires. The Internet connects computers all over the world so that any business that engages in electronic commerce instantly becomes an international business. Going international leads to a number of issues including trust, culture, language, infrastructure, tax and legal issues. There are cultural differences within different regions of Canada, but for the most part operating within Canada is less risky than going outside Canada. Furthermore, by staying within the country, clothing tastes and trends are similar across the country therefore cultural differences are not as big an issue. The one thing that I would recommend is that the Website be in both French and English to address the predominant French population in Canada. More than half of all businesses on the Web turn away international orders because they do not have the processes in place to handle such orders. Depending on the foreign culture that the company is targeting, the company needs to understand the legal, tax etc laws that are applicable to those countries and develop the appropriate processes to serve that market. By focusing on Canada only, the company avoids dealing with most of these issues. One of the major drawbacks by focusing only on Canada is that the company is limiting its sales potential exponentially. However, as Kate's Treasures is a small operation with

only a few staff, it is not concerned at present with selling and shipping internationally. At present the company does not have the infrastructure in place to go international.

After the planning stage of the e-commerce strategy is complete, the company must then consider implementation issues and evaluating its strategy. The best way to manage an electronic commerce implementation is to use formal management techniques with would include project management. Project management inlcudes techniques for planning and controlling the activities undertaken to achieve a specific goal. This involves developing a project plan which includes criteria for cost, schedule and performance. This will help the internal team make intelligent trade-off decisions regarding costs, schedules and performance. Deadlines and costs to date should be continually monitored and estimates adjusted as needed.

After the electronic commerce site is up and running, a post implementation audit. or a formal review, of the site should be done. This will allow the internal team to examine the objectives, performance specifications, cost estimates and delivery dates that were established in the planning stage and compare them to what actually happened. An overall report should be prepared that analyzes the project's overall performance, how well the project was administered, whether the organizational structure was appropriate for the project and the specific performance of the project. This is a good way for all participants involved in the process to give and receive feedback and learn from project experiences.

In conclusion, there are a number of issues the company must consider when deciding to go on line. These include what type of software, host provider, marketing strategy, outsourcing, training, domain name, total resources to allocate and evaluation of the site to name a few. I have made a number of recommendations to Kate's Treasures throughout this report with regards to going on-line. If Kate's Treasures follows the recommendations set out in this report, I foresee no problems with the company going on-line.