**Stitch It! Case Study**

Stitch It is a small family business based in the Brampton. It was established in 1985 and is still run as a family business with Donald and Ellen Mackenzie and their three sons, Andrew, Cameron and John. The business has provided numerous years of excellent service to a multitude of companies. Their business provides promotional items to various organizations: companies, governmental agencies and various school boards. The items comprise a wide selection of items: apparel such as jackets, sports uniforms, hoodies, T-shirts and golf shirts; paper products such as day timers, flyers, brochures and business cards; plaques and awards both plastic, wood and metal; and accessories such as pen sets, key chains, water bottles, bowls, glassware and mugs. The business was quite successful at the beginning but they have fallen behind the times with the onset of the internet. They realize that there is a tremendous market out there, but they do not have the systems or the technology to access it. Their business systems are paper based. They communicate with their clients by phone, email and fax. They realize that things would be greatly improved if they had a website that not only advertised their products but also allowed customers to place their orders, personalize those items and pay on-line. Their gross annual revenue was about $800,000, but has been declining by about 10% during the past few years. It is split about 60/40 for embroidery/engraving. Currently, they have about 2000 clients of which about 200 are repeat customers. The average order is about $350 but can range anywhere from a one-time order of $150 to a specialty order of $3000.

The paper based system is quite time consuming. It takes about 4 days to process and ship a basic order to a customer. Personalization of an item, such as a jacket or T-shirt, requires another 5 to 10 days for completion. Their business is open from Monday to Thursday 9 am to 5 pm and Friday, 9 am to 9 pm and Saturday 9 am to 6 pm. Donald and Ellen undertake the bookkeeping activities and promote their business to attract new clients. Historically, they have been able to capture 1-2 new clients each month. The bookkeeping takes up about 15 hours each week more or less. Their sons undertake the day-to-day activities necessary to run the business. They also employ 2 part-time employees. The part-time employees are paid $15 an hour and work an average of 10 hours a week. Each family member makes about $45,000 a year and works anywhere from 50 to 70 hours a week.

A number of high schools use their services to provide awards, etc. to their various sports teams during competitions and playoffs. Companies, such as real estate offices, purchase promotional items as rewards and incentives for their sales force. The promotional items span a number of categories and many different price points. The unit price of a varsity jacket is $200 for an order of 12 items or less and $180 for an order of 36 items or less. If more are purchased, the unit price drops to $160 per item. T/golf-shirts range from $10/unit to $30, while caps average about $12/unit. If the customer buys in bulk, the item price is reduced due to the greater volume purchased. Furthermore, the business gives incentives and discounts on specific items and clearance material to encourage increased sales. They also want to give their repeat customers a discount to encourage their continued business. The discount can vary from 3% to 5% to 10% depending on who the customer is, the item being purchased and the value of the order.

Stitch It carries a large selection of the men’s and women’s apparel items such as T-shirts, golf shirts, and caps in order to ensure the availability of the item by size, colour, style and fabric type. This has proven to be very expensive because some styles and colours sell faster than others, leaving the company with leftover inventory that becomes difficult to sell. The owners were hoping to avoid this problem with the creation of a new system. If they could reduce the time taken to order the merchandise and have a shorter turn-around time in filling the customer order, they could carry less inventory and reduce their carrying costs. A large inventory requires a large warehouse which results in higher insurance and carrying costs. Currently, these costs run about 15% of their retail inventory value. They were thinking of having something like a “just-in-time” inventory system where they could order the product from the vendor, personalize it as required and then deliver it to the customer in as short a time period as possible.

The company is known for its personalization of the products they sell. This is done through embroidery and engraving. Different items require a different form of personalization. Apparel items can be personalized with embroidery. Embroidery takes a copy of an image and stitches it onto the item. Different thread thicknesses, thread colours and thread types can be used to create this embroidered image. Normally this is done on apparel items, caps, hoodies, jackets, and even backpacks and gym bags – anything made of a material that is embroider friendly. The cost of the embroidery is dependent on the number of stitches required, the number of items being ordered and the location of the embroidery. Setup costs range anywhere from $30 to $80 per item and include the first 10,000 stitches in the setup cost. If more extensive stitching is needed, an extra charge applies in blocks of 1,000 stitches. Specialty threads may be needed and these are an additional charge to the embroidery. This is in addition to the actual cost of the embroidery. Furthermore, there are specific conditions that must be met in order for embroidered item to look good. Some material types cannot be embroidered. The embroidery text must be more than ¼” tall for ease of readability and design. The design of the left chest patch cannot be more than 4 inches wide. Furthermore, the system must allow the customer to change the design by allowing them to choose lowercase or uppercase lettering, allow placement of the letters on one or more lines, or to place the lettering around the actual design. Any changes to the design such as letter height, number of letters, and letter placement, as in an arc or on multiple lines, would result in an additional item cost. It takes about 5 to 10 days lead time to complete an embroidery order. The embroidery cost ranges anywhere from 15% to 30% of the product price.

Other promotional items such as awards can be engraved or decaled. Awards and plaques come in acrylic, wood and metal compositions. Prices vary by type of material, the dimensions of the item, its shape (round, dome, triangle, block, tower, etc.), special features such as being set in stone, and its texture (like a block of ice). Some can only be engraved while others can be decaled and engraved. Engraving is more expensive than decaling. The cost of the engraving is dependent on the number of letters requested, the size of the lettering, the placement of the letters and the font required. Furthermore, the price of the item is dependent on the quantity ordered (100 or 300), the material it is composed of (metal vs. wood), and the number of colours chosen. In the case of pens, the type of mechanism requested, such as twist or click, affects the item price as does the material chosen (metal vs. plastic). Engraving is about 20% to 30% of the product price.

The company is using a spreadsheet to track their inventory. This is very time consuming and inefficient. They require a system that is faster and easier to work with and one that allows them to see the status of their inventory. A report that prints out those items that are low in stock would be beneficial. It can take about 4-5 days to replenish inventory. When a customer orders items that are not in stock, the owners have to go to another company to place the order. This results in lost revenues for Stitch It. This happens routinely, sometimes 1 or 2 times a month. On average, Stitch It can lose about $400 each time this happens. Donald and Ellen were hoping to have a system that gives them advance warning that items are nearing an out-of-stock situation. Ultimately, the system should be able to give them a tentative purchase order for these items that they can then send to the vendor. The system should also be able to give them a report that shows the costing of the items ordered from the vendor with a summary of the inventory costs by product category. Since vendors can carry duplicate items, Donald and Ellen want to see which vendors carry the best priced items before creating the purchase order.

The large and varied inventory of items forces the owners to deal with a large number of vendors. Some vendors may carry the same products but at different price points while other vendors only carry a specific category of product. The business tracks all of the vendor information: company name and address, contact name, phone number, cell number, products carried, product price, discounts of large quantities, on a form. When Stitch It needs to order products, they complete a vendor purchase order form. The vendor purchase order contains the vendor details, purchase date, item to purchase, quantity, price, any discounts applicable at the time, shipping costs, sales tax and order total. They fax the order to the vendor. When they receive shipment of the order, they must check the shipment with the purchase order. The vendor sends a packing list and invoice with the shipment. In the case of missing or damaged items, Stitch It notes the item, the quantity missed or damaged, a description of the damage and a total dollar value. They call the vendor with this information. In the case of damaged items, they set them aside for pick up by the vendor when the replacement items are shipped. They have to make sure that they are not charged again for the replacement items. This whole order process can easily take a day or 2 to complete. Problem shipments occur about 2-3 times a month. They are hoping that there is an easier way to handle this situation.

The retail part of the business can get very busy. Before a customer can place an order, they need to setup an account for the customer. They need the customer name (including the company name if it is the customer) the address, contact names and business and cell phone numbers. They also do a credit check to see if the customer’s credit is satisfactory.

The actual customer order can be quite complicated. The order needs a unique identifier. Currently they identify the order by the customer name and order date, but this has become ineffective. The items that the customer wants to purchase must be listed and include an identifier, description, the price, quantity, and any discounts that may apply. The engraving or embroidery details must be included with the customer order. The customer is required to pay a deposit for the personalization of the items. This must be processed by debit or credit card. The remaining balance must also be noted. A 50% deposit is required at the time of order and the remainder is due at time of delivery. The deposit is forfeit in the case of cancelled orders once work has been undertaken. In some cases, the customer does not pick up the completed order and Stitch It is then out the money invested in completing the order. This has happened on a few occasions on large orders of $3,000 or more.

This whole personalization process can be quite lengthy and time consuming. All the details for embroidery/engraving are noted on paper. This is a time consuming process particularly when changes need to be made to where it is to be located, the font style, size, etc. There has to be a better way of collecting these details which allows for faster editing of any changes and faster approval by the customer. Donald and Ellen were hoping that the system would allow the customer to choose various items and note any required engraving, etc. by means of a website. Once the customer decided on what they wanted, the request could be reviewed and approved by Stitch It. If there were problems or issues with the request, Donald or Ellen could inform the customer and then get it resolved. In order to ensure that there was no misunderstanding, they would need to keep notes on everything that was discussed with the customer during this entire process.

Currently, sales are calculated manually. With the new system, sales could be calculated automatically for a week, month or year depending upon what is required. The system should also be able to calculate the sales tax the company must remit to the government every quarter. Furthermore, it should be able to show the sales of product by category and the revenue generated from the engraving and embroidering processes. Knowing the dollar sales and units sold of the most popular items would be helpful in increasing profitability as would sales by customer, repeat customers, etc. At present, they track outstanding customer invoices manually, so the system should show them all those customers who still owe them money.

There is the potential to create a system that will address all of these issues. It would allow the owners to increase the profitability of their business. Mistakes would be minimized and the costs of running the business would be reduced.