Preface

This case is based on a company in Fort Worth, Texas that designs, manufactures, and sells tickelopes, a new type of greeting card. The company has an actual product line of over 250 different card designs. This case uses only two designs in order to allow for the use of a common cost sheet, to reduce the number of raw materials required and to make it easier to directly apply concepts. The financial information in the case has been changed in order to protect the confidentiality of the company and does not reflect the company’s actual performance.

The case provides the company’s source data that would be available to the managerial accountant to use to provide information used for management decisions. The student will use the general ledger, a cost sheet they prepare and inventory reports as the source of information for their work. Each type of source data is a different color. Colors are used in each task to indicate which source data to use. The colors highlight the relationships between tasks.

As the students do the work of the managerial accountant they will gain an understanding of how original source data is used and how the information relates and connects. The student is responsible for generating useful information and providing explanations to management just as they would be required to do on the job.

The case is designed to show the “real world” application of common concepts that are taught in every managerial accounting class. Each concept requires a task. Each task provides a brief explanation of the concept and what will be used to do the job and provides instructions for completing the work. After completing each task the student must answer questions that explain the information provided to management.

This case requires students to do the work they would do if they worked for this entrepreneurial company that is currently unprofitable. The student will use information to help management determine how to grow the company and make the company profitable.

Blessed is the one who finds wisdom, the one who gain understanding, for understanding is more profitable than silver and yields better returns than gold. Proverbs 3:13
The Company and the Tickelope:

The greeting card industry was formed approximately 100 years ago. The industry began with post cards, evolved into color folded cards in the 1930s, and has since developed into screen-printed cards with verse. The basic paper materials used for the greeting card have not changed over time.

The founder of the tickelope has developed a patented form of a greeting card made of foam materials; creating a fun way to send a message. The foam card is approved by the U.S. Postal Service and Canada Post as flat mail.

Tickelope, Inc. has been in business for a year and a half and currently has two products, a thank you card and a birthday card. After conducting market research, the company concluded that approximately 25% of cards sent in the mail were for these two occasions. The company strategy was to break into the market with a product people send on a consistent basis. Currently, the company has a product design team working to create designs for other occasions. Expansion of the product line will be necessary to ensure the company’s growth and future profitability. A full line of products will be required to obtain retail space and compete against paper card manufacturers. This expansion is expected to occur in approximately 15 months.

Tickelopes are currently sold at retail locations nation wide. Retail locations where products are commonly sold are Hallmark stores, Pack and Ship and similar locations, specialty card and gift shops and Canadian Postal Service locations.

Each retail location has a display rack that holds approximately 150 tickelopes. The stand alone rack is normally placed at the end of a greeting card isle in the store.

Recently, the company has tapped the direct mail market. Several companies sending direct mail advertising have used the foam on the envelope to get a particular target market’s attention. The design team custom designs a tickelope to deliver a message to the consumer. This is expected to be a significant future growth opportunity for the company.

Tickelopes are sold to retailers for $2.25 each. Direct marketing customers purchase in much higher quantities and pay an average of $2.00 each.

Executive and Administrative Management:

A chief executive officer and a chief operating officer currently lead the company. The chief executive officer is responsible for developing new markets and implementing strategies that ensure future growth of the company. The chief operating officer is responsible for the day to day operations of the company. See the organization chart in Appendix D for the operational structure of the company.
Sales and Marketing:

The company employs 4 sales people. Each sales person is assigned a geographical area of the United States. Sales territories are divided into the Northeast, Southwest, Midwest, and West. Most sales calls are done over the phone, with samples shipped to interested future customers. Occasionally the sales people will make a visit to a new customer or visit a current customer. The company has determined that sales visits to all customers are not cost effective. The sales people operate out of an office in their home. The company provides office equipment for each home office. Sales people are paid a salary and 5% commission on all sales. The customers submit all orders to the sales people. The sales people enter all orders directly into the sales order system of the company. The sales order system generates a packing order printed in the finished goods warehouse. All orders are packed and shipped the same day the order is received.

The Midwest sales person is responsible for marketing. She works with product design to develop brochures that are sent to potential retail customers. She is also responsible for placing advertising in various trade publications. The company has decided to direct all advertising to retailers rather than the end user who sends the card.

The company currently has 3,653 retail customers. Average annual sales to each retail customer are approximately 300 tickelopes. The company sold to eight direct marketing customers this year.

Product Development and Design:

The company has two full time product development employees who are working to develop additional birthday and thank you designs along with an extended product line of greetings for other occasions. These employees design the address card, determine the most appropriate color of foam to use and design the die and the shape of the foam.

All marketing brochures that are sent to potential customers are designed and produced by the product development team. One product development employee also works with customers to design the display racks used in the retail stores. The product development team is also charged with developing new products that use the most cost effective materials.

Accounting:

The company is not yet large enough to require a chief financial officer. The responsibility for accounting is shared by a financial accounting manager and a managerial accountant. The financial accounting manager is responsible for maintaining the general ledger, providing monthly financial statements and day to day accounting operations such as accounts receivable and accounts payable. An accounting assistant, who reports to the financial accounting manager, is responsible for the collection of accounts receivable and paying all invoices. All expenses and asset purchases are recorded in the general ledger as the accounting assistant enters the invoice for payment. The accounting assistant enters the account to be charged when she enters the invoice for payment.
Accounting - continued:

The managerial accountant’s responsibility is to prepare the annual budget, do all inventory accounting, provide cost analysis, provide information for decision making and provide cost saving ideas to management. The company’s payroll is processed externally by Automated Data Processing (ADP). Sales and accounts receivable are automatically recorded in the general ledger when the warehouse worker scans the order as shipped to the customer.

Inventory movement and time spent to manufacture the product is not recorded in the general ledger as it occurs. Data is collected throughout the manufacturing process (see below), however, there is no direct interface to automatically record inventory movement in the general ledger. Journal entries are made manually at the end of each month to record the cost of goods manufactured and report the proper inventory balances.

The company uses a normal costing system for inventory transactions. The cost of direct materials and direct labor is recorded at actual costs. Manufacturing overhead is applied to jobs based on the amount of direct labor hours used to manufacture the product. Manufacturing overhead is adjusted to actual at the end of the period.

The Facility:

The company operates out of one facility in Fort Worth, Texas. The facility is approximately 60,000 square feet. The facility is used as follows:

- Direct material receiving area: 2,000 square feet
- Direct material warehouse area: 6,000 square feet
- Finished goods and warehouse and shipping area: 1,000 square feet
- Manufacturing area: 40,000 square feet
- Product development and design area: 3,000 square feet
- Guest and lobby area: 2,000 square feet
- Administrative area: 6,000 square feet

The lay out of the facility is as follows:

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/ /  / Shipping / FG/  / 
/ R/M / W / / / / 
/ r / a / ______/ ______ 
/ e / r / / / / 
/ c / e / Manufacturing 
/ e / h / / / 
/ i / o / / / 
/ v / u / / / 
/ i / s / Product / / 
/ n / e / Development / Guest / Administrative 
/ g / & Design / 
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The Production Process:

Direct Materials:

Direct materials required to manufacture the product consist of sheets of colored foam, a pre-printed design address card, a flat piece of paper cut and creased to be folded into an envelope, and an insert card that fits inside the envelope. Raw materials used for packaging are a pre-printed clear flat plastic bag with a preprinted logo and product instructions. The bag is made with an adhesive strip that sticks together at the top when closed. Indirect materials used in manufacturing are: oil for the cutting machines, blades for saws, glue and bar-codes.

The colored sheets of foam are purchased from a company in Taiwan. It takes 2 months to receive the foam sheets once the order is placed. The foam arrives at the manufacturing facility in sheets of foam that are twelve feet long, three feet wide and one-eight of an inch thick. Each color of foam has its own raw material number.

The pre-printed design address card, the paper that is folded into an envelope and the insert card are purchased from a local print shop. The company negotiated with many local suppliers and selected the supplier who could provide the best quality at the lowest price. The design address cards are ordered in boxes of 1,000. Currently, the company has two designs. The envelopes and insert cards are received in boxes of 5,000. The same envelope and insert card are used for both designs. It normally takes two weeks to receive product from the local print shop once an order has been placed.

The plastic bag used for packaging is purchased from a large supplier in China. It takes two months to receive the bags after the order is placed.

The stacked sheets of foam are stored on large warehouse shelves. The paper products and plastic bags are stored on shelves in the box that they arrive in from the supplier. Each color of foam and box of paper or plastic materials is clearly labeled and bar-coded.

Direct materials are inspected, counted and scanned as they are placed on the shelf. The receiving document is initialed for accuracy, approved for payment and sent to accounting to be matched with the invoice for payment.

Manufacturing the Product:

Finished Goods are maintained at approximately 200% of next months projected sales. The production manager monitors the amount of finished goods and sales during the week and places daily production orders into the inventory system based on projected needs. Production normally occurs in a job of 500 products. A table on wheels, 10 feet long by 5 feet wide, is assigned to each job. All work in process for the job is moved through the production process on this table. Each step in the manufacturing process is considered a work station.
Manufacturing the Product – continued:

The production manager enters a job request into the inventory system that states the product and the quantity to produce. A job number is assigned by the system. A bill of materials is generated and printed in the warehouse and a table on wheels is assigned. The bill of materials lists the type of direct materials and the quantity of each required to produce the job. A warehouse employee takes the assigned table and pulls the required material from the warehouse and places it on the table. The bill of material allows for 5% waste or spoilage and the table has 5% more material than required to make the product.

The large sheets of foam are cut into small squares using a table saw. The bill of material states the size of the square that must be cut to get the most products out of one sheet of foam. An employee places the sheets of foam on a table and uses a yard stick and a black marker to mark the lines that must be cut. The sheets of foam are then moved onto the cutting table and cut into squares using a table saw with a 15 inch blade. The cutting table is grooved to ensure the squares are cut straight.

The squares of foam are then taken to a cutting machine. The design is cut using a “die”. The “die” is a square block of wood with thick razor blades laid out in the shape of the foam required for the tickelope. The cutting machine presses the square of foam against the “die” and cuts the foam to the shape of the die. The square pieces of foam are placed on the machine. The machine grabs one square of foam at a time, presses it against the die which cuts it and removes it so that the next piece of foam can be grabbed and cut. The machine operator places the cut pieces of foam in a side box. The pieces of foam cut to the shape of the design are placed on the production table to be attached together.

Each tickelope requires two pieces of shaped die cut foam, each a different color. The pieces of foam are cut with pegs that attach together. A worker puts the two pieces of foam together before moving the table to the next work station.

The table is then moved to the envelope folding work station where the workers fold envelopes by hand. The envelopes are purchased with creases that make it easy for the folding to occur straight. The folded envelopes are placed back on the table.

The table is then moved to the glue work station. The printed address card is run through a roller that applies glue to the back side. The address card is then placed on the front of the foam by hand. The workers must take special care to ensure that the address card is placed in the correct spot.

After the address card is placed on the front of the shaped foam, the folded envelope is glued on the other side. A roller is used to apply glue to the back side of the folded envelope. It is then very carefully placed by hand on the other side of the shaped foam.
Manufacturing the Product – continued:

The glue dries almost immediately and the address card and envelope cannot be adjusted if placed incorrectly.

A worker then places the insert card inside the envelope. The product is placed on the table and taken to the packaging workstation.

The employee who packages the product also serves as the final quality inspector. Each tickelope is placed in a clear plastic bag and sealed by hand. A bar code is placed on each bag. The amount of finished goods does not usually total 500 tickelopes because of human errors that occur during the manufacturing process.

Any usable direct materials that are left on the table after production is complete are taken back to the warehouse, scanned and placed back on the shelf.

Work In Process

Jobs started and not yet complete are work in process. At the beginning of this year, the company had one job of 500 products that was ready to be put on the cutting machine. At the end of this year, the company had one job of 500 products that was ready to be moved to the packaging workstation. Work in process for the company is considered to be immaterial to total costs and is valued at the estimated cost on the cost sheet for 500 products for the actual work completed. Manufacturing overhead is applied at 50% of the estimated cost for one product.

Recording Inventory Movement and Time Spent in the Inventory System:

The company uses a customized inventory system that tracks inventory movement and the amount of time that is spent at each work station by job number. Hand scanners that scan bar codes and allow for quantity inputs are used in the warehouse and at each work station. A scan occurs in each and every step of the manufacturing process.

Each job number has a bar code that is placed on the assigned work table. As the table moves through the manufacturing process, the bar code is scanned and a work station number is entered.
Recording Inventory Movement and Time Spent in the Inventory System—continued:

Direct Materials:

Each type of direct material is assigned a number and a bar code is placed on the box of direct materials or by the shelf of foam. Each color or design has a different number. The direct material bar code is scanned and the quantity is entered as the direct materials are removed from the shelf and placed on the assigned work table.

All unused direct materials left on the table after production is complete are taken to the warehouse and scanned as they are put back on the shelf.

Direct Labor:

Each manufacturing employee has a picture identification card with a bar code representing the employee number. Immediately before performing work on a job, the workers scan their identification card, scan the job number on the work table, and enter the code for the work station where the work is performed. The job number and employee badge is scanned again when the work is completed at that particular work station. This scans note the time the work begins and ends at the work station. The scanning process described above occurs at each work station.

Finished Goods:

Each finished product has a bar code on the package. The bar code is scanned when each product is placed on the shelf as finished goods.

The bar code on the finished product is scanned as the product is placed in the box that is shipped to the customer.

Procedures and Controls:

The procedures stated above that are followed as the manufacturing process occurs are documented and strictly enforced. The integrity of the data is dependant on the employee scanning each barcode or employee badge at the appropriate time. The only paper documentation that is used in production is the bill of materials for each job and the packing slip that is placed in the box that is shipped to the customer. All other production data is generated from scans and stored in the inventory system.

The production manager generates a daily report of all jobs that states the amount of direct materials used and the amount of time spent at each work station for each job. Unusual amounts easily stand out. The production manager follows up with workers to determine the issue or problem that caused a significant difference from standard. Corrective action is taken as necessary.
Recording Inventory Movement and Time Spent in the Inventory System - continued:

The inventory system generates reports that detail the quantity of each type of inventory currently on hand. Reports are also generated which show the quantity of finished goods per job and the quantity of materials used to complete the job. Inventory is counted at the end of every month. The actual count is compared to the inventory quantity in the system and an adjustment is made to set the system quantity to the actual count.

Reports:

See Appendix A for the inventory system reports used by the production manager and the managerial accountant.