Finance task 3 business plan sample

Business, Marketing

Shuzworld needs to decide which would be more economical: reconditioning their existing equipment for this production, buying new equipment, or outsourcing the production to China. Reconditioning which has a fixed cost of $50, 000 and included as a variable cost of $1, 000 for every 1, 000 sneakers produced. By purchasing new equipment it has a fixed cost of $200, 000 and a variable cost of $500 for every 1, 000 sneakers. By outsourcing production to China they will incurr no fixed costs, and the variable costs will be $3, 000 for every 1, 000 sneakers that will be produced.

Inputting this data into POM for Windows gives the following results.

A visual representation is shown below:

These types of calculations can be used to determine the breakeven volume for Shuzworld’s complete set of options. The statistical data above states that the breakeven volume for reconditioning, versus buying new equipment is 300 units. Then the breakeven volume for reconditioning versus outsourcing is 25 units, and then the breakeven volume for buying new equipment versus outsourcing is 80 units.

The focus here is on the outsourcing opportunity, which shows that there wouldn’t be any initial or fixed costs, and the variable cost would only be $3 million which is twice as much based on the amount of reconditioning the old equipment and it increases up to four times the amount compared to purchasing new equipments. Even though the fix cost is increased, the variable cost will not if compared to the option of outsourcing or reconditioning. Listed below is a graph called a crossover chart which shows each of the financial advantage opportunities that are mentioned above.

When analyzing the graph above, it becomes very apparent that if the demand for Samba Sneakers is between zero and 25 units, then outsourcing would be the best option. Then if the demand is between 25-300 units, then reconditioning the equipment becomes the optimal choice. The option of buying new equipment becomes the best choice if the company has a demand of over 300 units.

The best option for the company will be determined by their demand level. Shuzworld hasn't given any indication of the amount of demand they expect to see, so guessing would be the only option at this point. It's unlikely that there will be a very low demand (less than 25 units), because the Samba Sneaker is a new product. It is quite possible that the company will see a demand of 25-300 units, because a demand of more than 300 units seems elevated for a new product. The demand of 25-300 units would make reconditioning the equipment the best option.

Additional facts to consider and recommend would be to recondition; which would be a good option except that the operating director of the plant, Alistair Wu, would not like the fact of outsourcing. Shuzworld is sensitive about any type of production that is not done in-house. The other important piece is that buying new equipment for this new product would be a bad decision, as they are unsure of how it will perform in the future market of consumers.

The statistical data and points taken from this case all point towards the optimal choice to be reconditioning of the existing equipment. The statistical data was calculated using POM for Windows. Then the Breakeven/Cost-Volume Analysis module was used for the fact that it had the option of the

cost-volume analysis. This was the most appropriate tool to use because there was no given data for revenue or sales projections. The cost-volume analysis required only the fixed and variable costs, and the volumes associated with those costs for such analysis.

Forecasting

Opening a new outlet store can be very confusing and hard work with plenty of trial and error attempts. Focusing on futuristic sales goals by determining the previous sales trends within the company and the competitors will be required, which is called forecasting. Below listed is a method called least square regression method which is used in analyzing and forecasting. By using the least square method it can predict future sales using straight line regression series model. By using x and y intercepting points and the changes in the series we can get the slope. Changes in any line can be determined by slopes, and the sales forecast can be determined by using the least squares method for determination which is exhibited below.

given output for the least squares method which satisfies the objectives of this specific task required.

In this example “ x” is the time series which is shown by quarters. By focusing on the third quarter of the year 2009, the sales forecast projected will be $121, 861. 10 which increases in the fourth quarter of 2012 to $169, 744. 40 which is a total difference of $47, 883. 30.

The primary difference between exponential smoothing and least square regression is that; in smoothing exponentially lower importance is placed on the tasks that are being carried out. In exponential smoothing the recent years are given more preference compared to the other years. However, the

least square regression method primarily corresponds to the exponential errors which have a normal distribution for the purpose of carrying out the forecast.

Control Chart

Using control chart metrics, we can easily improve the quality of the production line at Shuzworld. A control chart shows a graphical representation display of process of data over a certain timeframe. It is specifically used to separate assignable and natural causes to variations which are specific to production metrics. A natural cause is a variation that the company can expect to see by chance. Using a normal distribution pattern, the production shows that everything is in control mode. Sources can be tracked by using the assignable causes which is the one variation that can be tracked. Production of quality can be interfered with by measures of old machines or even employees that are slower than others which decreases production outputs.

The control chart for Shuzworld shows a dual-density rubber foam molding machine which creates soles for a number of different shoes offered. Each hour it randomly selects around 15 soles and evaluates them over a 16-hour period. The goal set for the control limit is 99. 73% on this selective process and the standard deviation is . 5 inch. By using the control chart metrics Shuzworld can improve the quality of the shoes. A control chart decides the MAD, MSE and thee cumulative errors which in turn can show the most up to date information that is being used to what is being currently projected. A control chart shows actual data which can deviate from different types of historical trends. This in turn determines if the changes to the information

are natural or if they have deviated due to some type of interference.

In forecasting sales for the mini stores in the mall, the control chart might show if there is a decline in sales due to seasonal changes that are natural. It can also show if the decline in sales is due to poor performance of the staff. The increased sales of each year often occur between black Friday and Christmas. After Christmas each year the sales decreases because the holidays are over and some customers are returning gifts that they aren't happy with, which shows a natural deviation of the sales declining.

Shuzworld has a (UCL) Upper Control Limit of 10. 375 inches and a (LCL) Lower Control Limit of 9. 625 inches. There were two of the samples which fell outside these limits. In analyzing the data it shows that the samples used are considered " out of control". Only thee samples which fall between UCL and the LCL are deemed natural variations. Due to the out of control samples shown, the overall process is deeming to be erratic and shows production is no longer in control. Shuzworld needs to configure an assignable cause that must be decided, in order to get control of the production process. Possibly have the machines serviced to determine the possible assignable cause or the deciding factor of erratic samples since they weren't selected until near the end of the 16-hour sampling period allotted.

The chart provided by Shuzworld shows the control limits, and sample fraction defectives, for a total of 20 employee operators of the eyeletting machines. The employees use these specific machines to manufacture the eyelets in the men's shoes and boots. The samples used were 100 pieces from each employee and the errors were then calculated. The final result showed the control limit being 99. 73%.

The UCLp of 0. 125 and the LCLp of 0. Using the P-chart, it calculates the attributes that are being measured. This equates to the measurements in terms of the amount of defects involved. The chart above shows that two of the employees do fall outside the limits. The employee #13 and #20 are the ones out of control overall. These two employees need to have the quality of their work examined in order to determine if it is the equipment of the employee that present a serious problem for the manufacturing process or their performance.

Improving quality is aligned with being more productive and is the ending goal at Shuzworld. Making sure there is no defective equipment being used, or product is produced in order to keep between the lines stated above in the chart. Eyelet shows extreme growth due to factors of the ability to provide consumers with the highest possible quality product if both the employee and the machine are running well. Using this method they can assure that the database of statistical information being used doesn’t have incomplete quality of data focused on for determining the best operational decisions for the company. After all, providing the best quality for our consumers in order to make big profit is the ending goal at Shuzworld. As with many businesses, quality is the key factor in order to make the difference in a brand that represents the company. The defective information and chart can give a visual that there might be an area that needs updating or configured properly to flow better and improve operations and efficiencies at Shuzworld.

References

- Taylor, B. W & Russell, R. S. (2007). Operations Management (6th Edition). United States: John Wiley and Sons, Inc.

- Heizer, J., & Render, B. (2010). Operations management (10th ed.). New Jersey: Pearson

- Brown, S. (2001). Operations Management. (6th Edition). United States: Routledge.

- Brennan, L. L. (2010). Operations Management. (1st Edition). United States: McGraw-Hill.