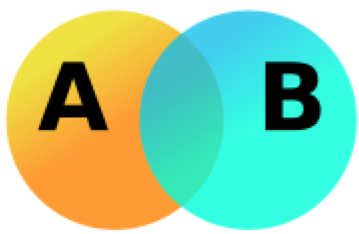
Foundation Simulation Final Report

MANA 4322 – Organizational Strategy

Example



Sensors, Inc.'s Mission Statement:

The Mission of Sensors, Inc. is to provide high quality sensors to the electronic sensor industry for distribution world wide. Sensors will produce a variety of sensors in both the High and Low Tech markets using established market specific R&D methods and price them competitively within this highly competitive market. Sensors is committed to producing products that have excellent designs and quality attributes.

Original Strategy:

At the outset of incorporation, Sensors, Inc.'s management decided that it would concentrate on a strategy of being a Cost Leader with Product Lifecycle Focus. In this strategy, we will focus on keeping our R&D, production and material costs low and compete with the other companies in our industry on the basis of cost. We will introduce new products into the High Tech market every other year or so and allow them to move through the perceptual map into the Low Tech market and then eventually become obsolete. We will measure our performance in terms of Stock Price, ROE and ROS.

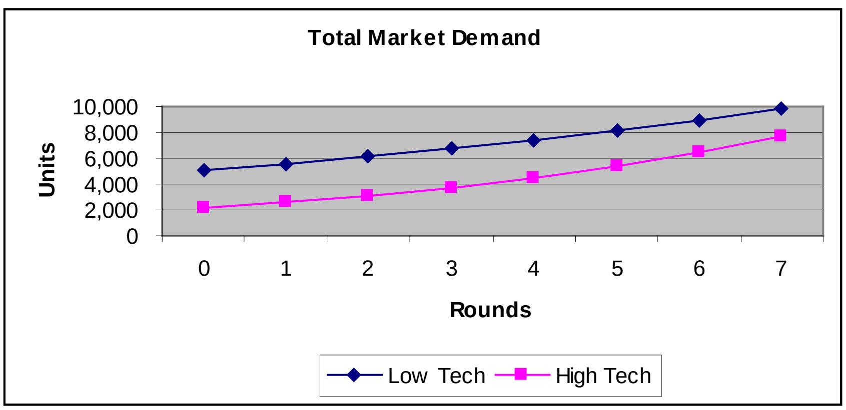
Environmental Analysis:

Electronic sensors are used in a wide variety of industries and applications and are in constant need of modifications to meet customer demands. The customers usually like to purchase smaller sensors with higher performance, especially so in the High Tech Market. In the Low Tech Market, larger, slower sensors are the customer's choice. A sensor is a device that will sense a change, such as in atmospheric pressure, that will then change voltage and transmit the information to another device such as a thermometer. After much research, Sensors, Inc. decided to enter this market and with the use of specialized software, Capsim ® Simulation, make critical decisions about R&D, Marketing, Production, Finance, TQM and HR.

Way back in 2008, each of the companies in the electronic sensor industry was on an even keel. Along with Sensors, Inc.'s Andrews division, there were five other identically situated companies. Each of the six companies produced one sensor that sold in both the High and Low tech markets. As time went on, these companies began to differentiate their sensors in the areas of price, age, reliability and positioning (size and performance).

Customers within the Low Tech market had specific buying criteria that they were interested in for the sensors they purchased. They mainly focused on price but age, reliability and positioning, in that order, were important to them as well. The customers within the High Tech market also had specific buying criteria but they focused more so on positioning with age, price and reliability, in that order, not being as important to them.

The Andrews division of Sensors competed against these six other companies over a seven year period and during this time, the Low Tech market created more demand for product than did the High Tech market. Low Tech started out demanding 70% leaving High Tech with 30% of the market. When the seven year period was over, Low Tech Customers still demanded a greater portion of the production; they had 56% of the market leaving High Tech with 44%. As you can tell from this reduction in market for the Low Tech and increase for the High Tech, they each had different growth rates. Low Tech's growth rate was 10% where High Tech's was 20%. These growth rates corresponded to the demand for units produced.



Internal Analysis:

Round 0 – ending December 31, 2008

The ending of this round was the start of the simulation. Each of the identically situated companies that competed within the electronic sensor market had one product. Each product had 1/6th or 17% of the market in both the Low and High Tech markets. Each had a Stock Price of $11.15 per share to build upon, an ROS of 6.1% and an ROE of 19.3%. This even keel would eventually begin to spread as the rounds completed. From the very beginning Sensors's Andrews company had a Promotional and Sales Budget of

$1,000 each, as did the other 5 companies. These budgets funded the marketing department's efforts to advertise our products. We felt that advertising was important, how else would our customers know about our products and services, we didn't want to leave anything to chance and have our customers just stumble across our product.

Round 1 – ending December 31, 2009

This is the year/round that things became interesting. I was hired as CEO to run the business and make the strategic decisions. Working with key personnel within the company, we decided that we wanted to make sure we had products in both markets. Since we only had the one product, Able, which I had inherited from my predecessor, we decided we needed another product, so we invented Ace. Able was repositioned slightly and Ace was positioned to attract customers from both market segments. We increased both our sales and promotional budgets to get our name out in front of our customers. Apparently our customers liked our product so well, they bought everything we had produced as well as all inventories that were left over from last year, thus we stocked out. We lost critical sales to the other companies within our industry. For this year, we could only sell our Able product because Ace had not come out of R&D yet. Able did generate interest in both of the markets, as we had hoped, with most of the interest, and sales, coming from the Low Tech Market. Since Ace was going to be coming out of R&D during the first quarter of the next year, Capacity and Automation needed to be purchased and to fund them we issued $2,000 in long term debt in the form of Bonds.

In this year, Sensors did succeed in raising the stock price for our investors but lost ground in ROS and ROE. Since our strategy is to measure our performance by each of these criteria, we knew that we needed to perform better in the next year.

Round 2 – ending December 31, 2010

Much better, our stock price, ROE and ROS are all moving in the right direction. Our stock price and ROS might not be the best ones in the market, but our ROE is; so we are making some profit off the money that our shareholders have invested. We had the best sales when compared to our competitors with the downside being that we stocked out again. We had decided not to reposition either of our products but did reduce the price of Able. The promo and sales budgets for both of our products were set to the same amount which was a reduction from the previous round. These budgets were implemented to make sure our products were accessible and that they had good customer awareness. Able had more awareness in both markets than did Ace, this is most likely due to the fact that Ace was new to the market, not coming out of R&D until March of this year. Able was a known product and was available to be sold the entire year. Again this year, most of the interest for our products came from the Low Tech market, 66%, and the High Tech market took the remaining 34% of our products. We definitely needed to figure out a strategy to produce enough product that we could garner enough sales in each market but not stock out; we are losing critical sales to our competitors. Since our original strategy was to invent a new product every other year or so, maybe when we put our new product into R&D next year, it will be able to help garner sales in future years.

Round 3 – ending December 31, 2011

Boy did we ever underestimate the power of decisions. Our ROS, ROE and Stock Price, as well as sales and most of the rest of our numbers are better than our competitors; but still the dreaded Big Al came to visit us. Even though he was 'nice enough' to give us a short term loan, he does command a hefty interest rate to be repaid with the loan. He only gave us enough to bring our cash balance to zero so that meant we wouldn't have any cash to start the fourth round/year with. This would have been the year that a new bond issue would have been very helpful, for nothing else but to lower the amount Big Al would have 'lent'. The power of hind sight is 20/20. Thankfully, this was the only year that Big Al had to visit.

Our inventory did not stock out this year, which was something we had been contending with for the first two rounds, so we were able to hang on to a little inventory and didn't lose the critical sales to our competitors. The positions of both Able and Ace were left alone but the MTBF was reduced to reflect the fact that the products were aging. We should have reduced our price for the same reason but instead left it as is. This is our third year, so we needed to invent a new product, Allani, named after my beautiful granddaughter, was invented in our R&D department in this year. This product was positioned in such a manner as to appeal to both the Low and High Tech markets. In hindsight, we can see that this product's

MTBF was set too low. This new product would not be available for sale until March of the 4th round, only giving us 9 months of sales in that year and of course, non for this year.

Our accessibility and awareness within both the Low and High Tech markets is still good. The Low Tech market must really like our products more than the High Tech because again, for the third straight round in a row, the Low Tech market took most of our product at 75% and that left 25% for the High Tech market. It appears that the visit from Big Al was necessitated by the purchase of automation for Allani and the capacity purchase for both Ace and Allani. When we add the fact that credit terms for our customers has been 45 days all throughout the rounds, we are giving our customers more time to pay for their purchases, thus reducing cash receipts.

Round 4 – ending December 31, 2012

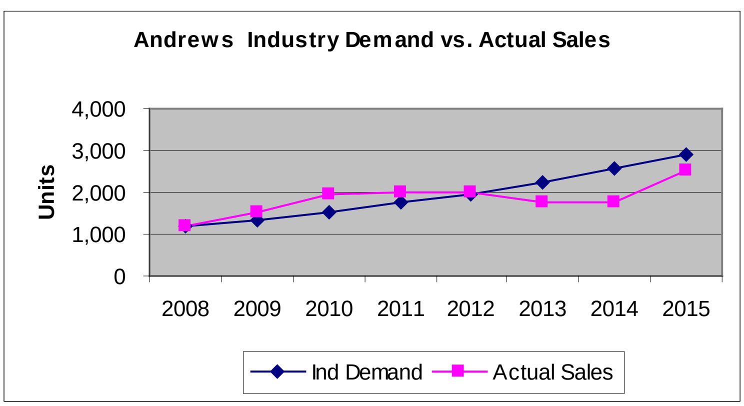
At least this year we were able to retain some cash and did not require a loan from Big Al. All the numbers continue to be strong and our Stock Price is increasing. We are trying to learn from our mistakes and so we decided to increase the MTBF on Able and Ace to see if we could generate more interest in these two products. Allani was left alone since it still had not come out of R&D. The price for Able and Ace were both reduced, also to generate interest. At least we didn't stock out on Able and Ace but since Allani was brand new, that product did sell out all that was produced. That was ok since its production was low anyway. Able was priced less than Ace and must have appealed to the customers more than did Ace, we didn't stock out on either product but Able had less left in inventory.

The Sales and Promo budgets were reduced this year but not by very much, we still had good accessibility and awareness generated by our spending, thus giving our Marketing department access to funds to continue to advertise our products. We definitely wanted our customers to see what our product has to offer and not just stumble across it as they are shopping for their sensor needs. The Low Tech market still continued to command the lion's share of our product with that segment's purchases being 76%, this number just continues to grow, and the High Tech market getting 24% of all of our products sold. Now since our sales are growing, our stock price is going up and we have not stocked out, the next thing to work on is getting more sales in the High Tech market. Our strategy has changed slightly from the very onset, we have migrated away from the Cost Leader with Product Lifestyle Focus, our costs are not staying low but we are inventing new product and we will situate it in the High Tech Market to eventually move through the perceptual map to the Low Tech Market to eventually be rendered obsolete.

Round 5 – ending December 31, 2013

Looking back at our original strategy of inventing a new product every other year or so, this is the year that a new product needed to be put into R&D, so we invented Adam. Adam was positioned such that it would appeal to both the Low and High Tech Markets. Able is definitely aging but is still appealing predominately to the Low Tech Market. From the Fast Track report, Allani appears to be the only product of ours that appeals to the High Tech Market. With the introduction of Adam next year, this should change. Accessibility and Customer Awareness in both the Low and High Tech Markets still looks good for Sensors's Andrews company.

Since Adam was coming out of R&D in the next year, we needed to purchase automation and capacity for it. In doing so, we reduced the capacity for Able due to the fact that it was aging and would eventually be rendered obsolete, but right now we needed this product to help garner sales. For the first 3 rounds, we were able to forecast and sell more product than was our fair share of the market, the 4th round was about even and then this 5th round started the shift to selling less than our share.



When we compared our forecast and sales to the other companies, we found that two other companies were in the same boat as we were and three of the companies were capturing our critical sales.

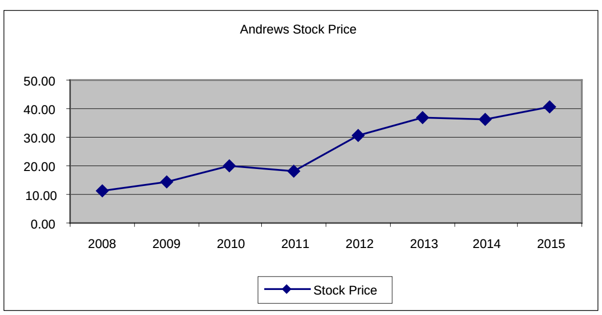
Our next concern was to find out how we could turn this around, from the graph you can tell that we did not succeed in these efforts.

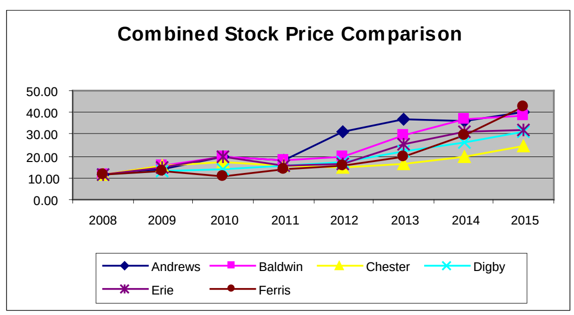
Thinking back to the round that Big Al came to visit, we considered our options on our cash status. Big Al visited when we invented a new product and that was what we were doing this round as well. Since we had decent cash and felt our sales would be ok, we decided not to sell another bond; we also decided not to invest in any TQM in order to save cash. We knew the downside of no TQM would be such things as no reduction in R&D cycle time, nor reduction in labor and material costs; these were the initiatives we liked to invest in.

This round did see a huge increase in our Stock Price. Our Stock Price is much better than our competitors and so were our ROE and ROS. The Low Tech Market is continuing to take the lion's share of our production, this year it is 85% Low Tech and 15% High Tech.

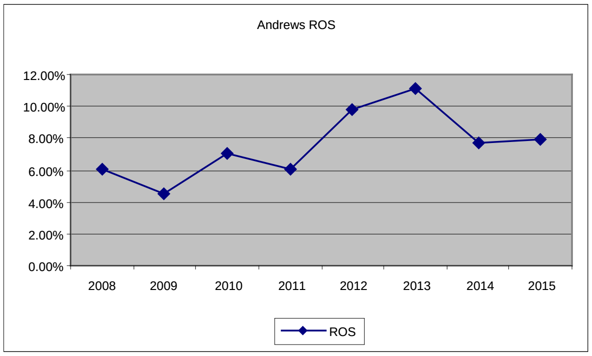
Rounds 6 & 7 – ending December 31, 2015

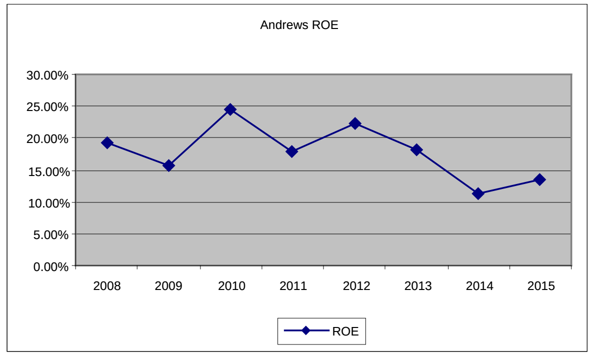
Moving on into these final rounds, our Stock Price continues to do well; it decreased slightly in round 6 but did move in the right direction for round 7. We ended round 5 with a stock price of $36.89 and round 7 ended with a stock price of $40.39. When this is compared to our competitors, only Ferris had a stock price that was slightly higher than ours.

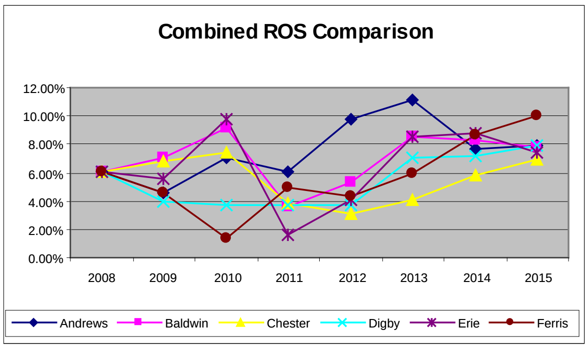


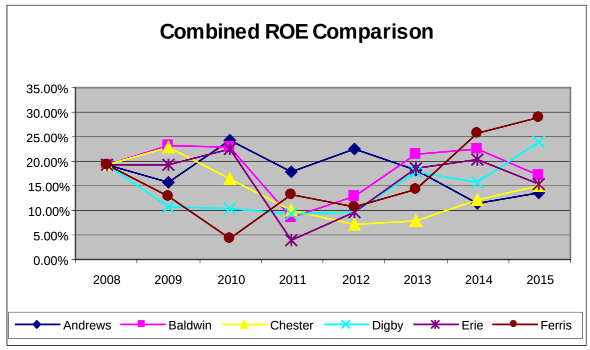


We decided to combine the discussion of these two rounds because they were fairly similar. Round 6 was the round that the numbers we were competing on took a slight dip and then started coming back up in round 7. Our ROS and ROE dropped and never fully rebounded. As you can see with ROE, those numbers were all over the board. When compared to our competitors, you can see that the same thing was happening to them.

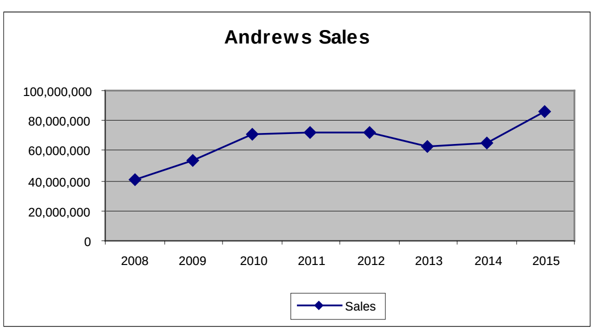


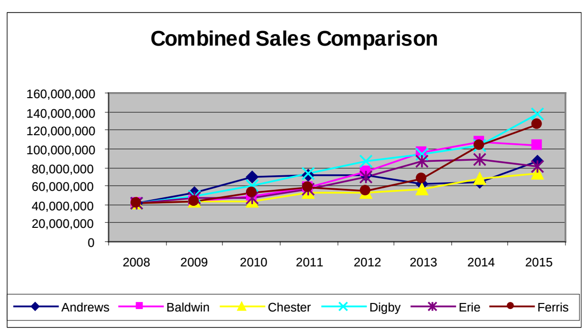






In round 6, we started investing in TQM again. These initiatives seem to help somewhat. We did increase capacity for both Allani and Adam and decreased capacity in both Able and Ace. The decrease was to eventually set them up for retirement and the increase for Allani and Adam was to set them up to take the places of Able and Ace. Even though our sales rose from $41M from round 0 to $86M in round 7, we did not have near the sales that we wanted in either round 6 or round 7, we just seemed to be hindered by the products that our competitors were producing.





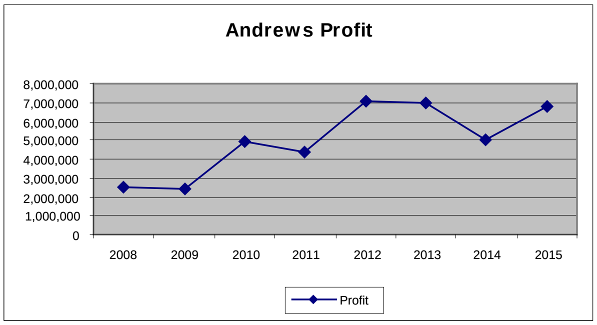
As we finish up all the rounds, our accessibility and awareness within our segments is still good, as a matter of fact, Erie, one of our competitors was the only one that came close to us in accessibility. Our spending on both the promotional and sales budgets have made sure that our customers are aware of our company and our products and they have easy accessibility, they can easily be found. In order to make our products more appealing, in the 7th round we did some slight modifications to their size and performance and reduced their prices. We knew what our fair share of the market's unit sales should be but we were not able to sale all that we produced in either the 6th or the 7th rounds. The Low Tech Market continued to command our products with 82% going to them and 18% into High Tech as we finished round 7. As we completed round 7, market share within the six competing companies changed drastically, Sensors's Andrews company ended with the lowest overall market share at 14.37% and Digby with the highest at 20.92%. We lost ground in market share when compared to when the simulation started.

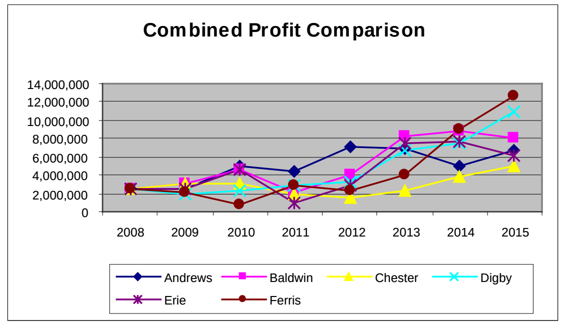
Deviations:

Sensors, Inc's original strategy was to be a Cost Leader with Product Lifecycle Focus. We quickly deviated from this strategy because we did not keep our sales prices low, we did try to keep our R&D, labor and material cost to a minimum but we wanted the sales so we increased the price to our customers. It is always a mistake to change strategies midstream and I believe we paid for it in the last 3 years. We did move our strategy more toward Differentiation and still wanted to compete on the basis of Stock Price, ROE and ROS. In the differentiation strategy, we wanted awareness, accessibility and good designs, as well as, we wanted to have product in both segments of the market and to create new products as the others aged and moved through the perceptual map; so we did keep with the original strategy of creating a new product every other year or so. In our case, we created a product in the first, third and fifth rounds.

Evaluation:

Sensors, Inc. did succeed in a number of areas. We were able to increase our Stock Price for our shareholders by 262%. We increased our ROS by a mere 3%; this slight increase meant that we were a little bit more efficient in our operations. ROE was a different story though, it was one of our measures that we wished to compete on and unfortunately, we lost ground by 3%, which means that we were not as profitable with our shareholder's money as we were when these rounds started. Monthly sales started climbing from the very beginning and then hit a plateau in the 3rd through 5th rounds, it dipped in the 6th and climbed again in the 7th. These charts can be seen in other sections of this report. Monthly profits were another area that increased from round 0 to our final round 7, this increase was 173%. Even though our profits were respectable, we still ended the simulation below all but one of our competitors.





Conclusion:

In conclusion, I would like for our shareholder's to know that Sensors, Inc. is still committed to producing good quality sensors to be marketed in both the Low Tech and High Tech Markets. We believe that we could improve performance in the coming years as long as we continue to monitor both markets and position our sensors to the specifications that the customers like. As the CEO of this company, I have been very conservative with the decisions that I have helped to implement for Sensors, Inc., this is an area that needs to be worked on for the future performance of the company. Other steps we will take are to watch our competitors more closely each year to ascertain their strengths and weaknesses. I believe this was one of the areas in which Sensors was weak; we did not watch our competitors close enough. They were getting more sales during the last rounds of the simulation because we failed to analyze their strategies. We have learned a lot from the past seven years and I believe that we have learned from mistakes we have made and can build upon the things that we have done right.

Acknowledgement:

Cover sheet symbol found at: http://en.wikipedia.org/wiki/Venn_diagram