

WISCONSIN SCHOOL OF BUSINESS

TITANIUM

Markstrat Simulation

Contents

Introduction: Executive Summary	2
Recap: First 3 Periods	3
Period 0	3
Period 1	4
Period 2	5
Lessons Learned.....	6
Customer	7
Sonites	7
<i>Product</i>	7
<i>Positioning</i>	7
<i>Advertising</i>	8
<i>Price</i>	8
<i>Product</i>	8
<i>Positioning</i>	8
<i>Advertising</i>	9
<i>Price</i>	9
Competition.....	9
Research and Development.....	13
Market Research	14
Commercial Team and Production.....	16
Conclusion.....	18
Decision Journal	Error! Bookmark not defined.

Introduction: Executive Summary

In the 10-period Markstrat simulation, our team, TITANIUM, focused on a strategy of accurate positioning and competitive awareness.

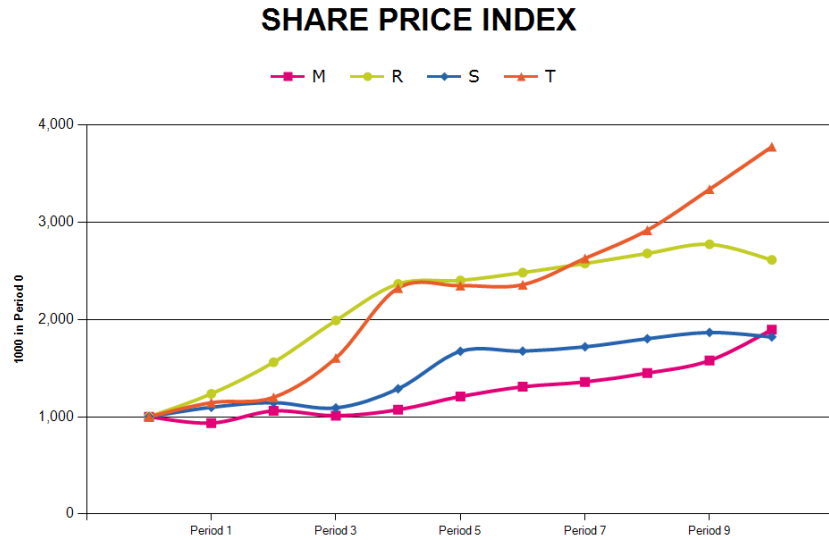
This enabled us to continually grow in market share and profits. We overtook the share price index lead in period 7 and saw continual and

sustainable growth through the end of the simulation.

Our initial position gave us two products, TOPS and TONE, in the Sonite market. Through use of market research and benchmarking tools we decided to drop the TOPS product to focus in on the TONE product. We positioned the TONE product in the Professional and High Earner segments through use of market research and advertisement.

Our initial strategy for the Vodite market was twofold: get the early mover advantage and continue to target the higher end market (Innovators and Adopters segments). We learned after launch that the Follower segment would be highest growth and most profitable segment so we adjusted our positioning to target Followers. We learned that sticking to your guns has value, but doing so blindly could have cost us the simulation.

We used market research and research and development extensively to achieve our goals of accurate segmentation and targeting. By doing so, we were able to have effective advertisement, high market share, and high profits.



Recap: First 3 Periods

Period 0

During period 0 of the Markstrat simulation our team spent time becoming familiar with our current products and how they fit into our industry. It was immediately apparent that our two products, TONE and TOPS, were performing very differently within our industry.

We were able to use the basic information provided to us as well as market research studies to grasp a better understanding of our products' performance. The Industry Dashboard showed that TONE was a top selling brand in both retail sales and volume while TOPS was near the bottom. In reviewing the Financial Report for Sonites it became clear that TONE and TOPS were also contributing disproportionately to our revenues. TONE accounted for 74% of our revenue while TOPS accounted for 26%. The difference in contribution after marketing was even more pronounced with TONE at 90% and TOPS at 10%.

Some of this marked difference in revenue contribution could be attributed to the smaller market share of TOPS. Another explanation for the products' performance differences could be seen in the Consumer Survey and Panel. These studies showed that the two products were positioned very differently in the market. TONE was most favored by High Earners and Professionals while TOPS was most favored by a low-spending segment: the Explorers. In looking at the Market Forecast we found that the Explorers segment would eventually have negative growth. Moreover, we found that the base cost for TOPS was very high relative to its sale price. Overall, most of the information that we gained about TOPS in period 0 was inauspicious.

Looking at the Industry Dashboard, we discovered that each team in our industry began with the same Share Price Index; however, nothing else was similar among the four teams. We began with the second highest revenue and had a fairly high value market share compared to our

unit market share. It was apparent that team R would be our major competitor. The products ROCK and TONE were both targeted toward Higher Earners and Professionals, while ROLL and TOPS were both targeted toward Explorers.

In deciding how many of each product to produce, we found the Production Report, Market Forecast and Market Report very important. We analyzed the Market Report in order to gain a better understanding of our percent unit share within the industry. We then applied these percentages to the market size growth in units shown in the market forecast to get a rough estimate of how many we would sell in the next period. Finally, we subtracted the units that we currently had in inventory to come up with a number for production.

$$\text{Next Period Market Size} \times \% \text{ Market Share} - \text{Inventory} = \text{Production Amount}$$

This served as the basic function for predicting production amount. However, in order to be more accurate in our production numbers, we also took into account the growth of the target segments for each product. We were able to use the +/- 20% flexibility in production to our advantage. We found it beneficial to overproduce by roughly 10-15% so that our revenues wouldn't suffer from underproduction. We found this strategy successful in the following period's results.

In analyzing the industry we noticed that there was very minimal brand awareness for both products but fairly high purchase intention for TONE. In other words, those who had knowledge of TONE wished to buy it. With that said, we felt we should increase our advertising expenditures for TONE in order to strengthen consumer awareness of this brand.

Period 1

An important realization that we made after analyzing the results of our first period decisions was that TOPS's cost of goods sold exceeded its sales revenue. After noticing this, we

faced two alternatives: (1) Reduce costs by proposing an R&D project to modify certain features of TOPS, or (2) Discontinue TOPS. After submitting an online query we found that it would be too expensive to run an R&D project and decided to discontinue the product.

With the advertising and commercial team expenses that we saved by discontinuing TOPS, we began to invest more in TONE to build more brand awareness. Ultimately, the decision to discontinue TOPS was positive to our net contribution and share price. Another major decision that we made in Period 1 was to order market research for Vodites. Our goal in ordering market research so early was to launch our Vodite quickly and gain a first-mover's advantage. However, we would later find out that team R was still able to launch its Vodite before we could.

Period 2

This period our team was able to grasp a much better understanding of how to more effectively target our desired segments through the use of market research and advertising expenditures. By increasing our advertising expenditure in previous periods we were also able to raise brand awareness for TONE.

By looking at industry growth by segment and our current product features, we decided to target Professionals. In order to capture more market share, we needed to align our product attributes more closely to the ideal values expressed by Professionals segment. We found that this would put us in direct competition with the ROCK product. We used the Semantic Scales market research to analyze and target the Professionals' ideal values. Mathematically we were able to find the exact amounts by which we needed to modify perceptions of certain product features in order to be almost exactly aligned with the ideal values of the Professionals. We were then able to modify these perceptions through multidimensional and semantic advertising.

This period we submitted our R&D project for Vodites. Using market research that we ordered last period, we were able to choose product attributes that were closely aligned with our target markets of Adopters and Innovators.

Lessons Learned

Overall, our group needed time to fully understand how to use our market research in order to more effectively allocate our advertising expenditures. By Period 3 we had found ways to use our consumer panels and surveys to target our products exactly where we wanted them. However, one downfall was that as we moved the perceptions of our product features, the segments would change their ideal values. In later periods of the simulation we were able to understand the trends in the changes of the ideal values of our target segments. Using this information we were able to more closely position our features to where the target segments' ideal values would be in the next period.

Our production function proved successful throughout most of the periods. However, there were a select few periods in which we over-or under-produced slightly. Most of the difference between the actual sales amount and our estimated production amount came from unexpected sales in the other segment groups that we had not been targeting.

Throughout the simulation we really took advantage of our market research. However, there were only a select few market research studies that we used repeatedly. In order to save money, we alternated the Consumer Survey study and the Consumer Panel study from period to period. We also compared market research from current periods to previous periods in order to get a better understanding of different trends and if our advertising expenditures were performing as planned. Our group was also very proactive in ordering market research for Vodites before beginning our R&D. This helped us throughout the R&D process because we were more

certain of the product's ideal assets. Other market research studies that we found helpful were Market Forecasts, Semantic Scales and Multidimensional Scales.

Customer

Sonites

Product

When we started the game we had two nearly identical products in the Sonite market. One, the TONE product had a slightly higher-end configuration. The TOPS product was slightly lower. We tried to position the TONE product as high-end and the TOPS product as low-end. We learned that the configuration could not be overcome and that TOPS's features were too high-end to be positioned as low-end. We investigated an R&D project to reconfigure the TOPS product to more closely align with the low-end target. The cost was so high that we chose to cut the product from our line-up. We learned that it is sometimes better to cut our losses than to keep bleeding money.

Positioning

The decision to cut the TOPS product was made because we were able to position the product sufficiently low enough with our base costs. We positioned the TONE product as our high-end product and chose to keep it there even after we cut the TOPS product. We decided to pursue the High Earners and Professional segments. We tried to position based on profitability per unit instead of profit via volume. We learned that this was feasible, but there were also some issues with profitability. In order to have a product that was desirable to the high-end segments, there had to be a higher base cost. We used the market research to help us position the TONE product as closely as possible to the ideal values for High Earners and Professionals. Once we were well established, we worked to ensure that we had a solid market share for our target segments.

Advertising

We used a number of different advertising strategies to achieve our marketing goals. Our goals changed over time. First, the objective was positioning. We used the semantic scales and consumer panel to direct our advertising. Once our product was well positioned, we focused more on brand awareness. Our goal was to draw as much market share for these targets as possible.

Price

For the Sonites product we varied our price only a small amount from period to period (See Diary). Most pricing changes were based on competitive movements and profit goals.

Vodites

Product

When we first decided to introduce a Vodite product, we started an R&D project for a high-end product. Once the project was finished we realized that the product actually was more closely aligned with the lower market configuration. We learned that it doesn't take long for the ideal values in a market to change. This is especially true in an emerging market.

Positioning

We designed our TEEF product to be positioned for the Innovators and Adopters segments. However, by the time our R&D project was implemented, we found that our most profitable strategy going forward would be to target Followers. We learned about how marketing strategy may have to be adjusted when the circumstances change. We conducted another R&D project to reposition TEEF to be even more closely aligned with the Followers segment. This segment seemed better due to its growth potential according to the Market Forecasts we ordered. We used the Semantic Scales and Consumer Panel to help home in on the target.

Advertising

Vodite advertising strategy was very similar to that of Sonites. We started out focusing on positioning. We used the Market Research to choose our targets for advertising objectives. We decided on a higher level of advertising expenditures for the Vodite market. We hoped to go after the faster growing market in the Vodites.

Price

Price for the Vodite product was always constrained by our base costs and profitability target. We consistently used advertisement to improve perceived value and keep our price in line with the target market. We also were able to end up with the highest *selling* price in the Vodites market but Followers perceived that price to be lower than all other products. We learned that advertising could alter consumers' realities.

Competition

In our 10-year period of activity, we put the majority of our focus into two areas: how our target customers perceived our products relative to their ideal tastes, and how our competition was positioning itself (the subject of this portion of the report). We learned quickly that there were certain niches within the Sonites market that were occupied by consumer segments that had large variations in ideal product attributes; understanding where we fit into that mix and with whom we were competing was key. Largely by the luck of the draw, we were given a product (TONE) that aligned most closely with the wants of the Professionals and High Earners segments, and we only had one product (ROCK) to compete against for those consumers' dollars. It would turn out that the Rawesome company would be our main competition for the remainder of the 10-year period. Our low-end product, TOPS, was well liked by the Explorers segment, but it had much

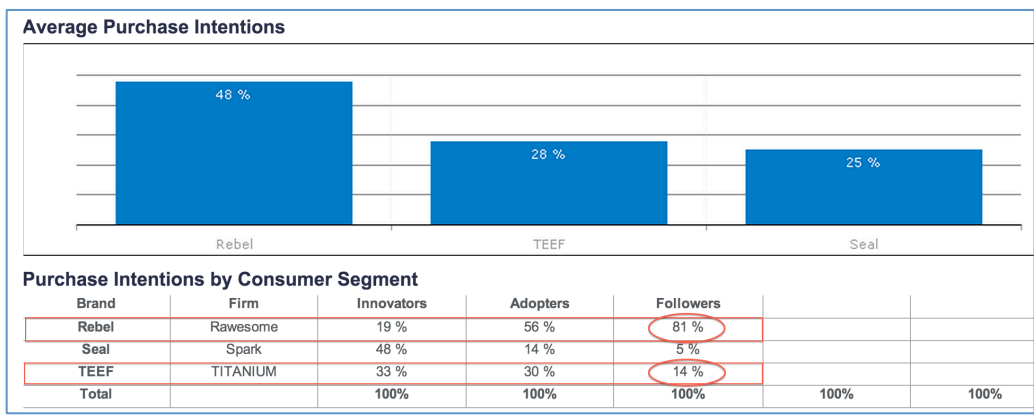
more competition there. The chart below shows our competitive focus for TONE (red) and TOPS (blue) as of period 0.

Brand	Firm	Explorers	Shoppers	Professionals	Highs Earners	Savers
MOST	MAMBA	6 %	18 %	1 %	0 %	57 %
MOVE	MAMBA	10 %	16 %	6 %	2 %	2 %
ROCK	Rawesome	17 %	6 %	43 %	35 %	1 %
ROLL	Rawesome	13 %	4 %	9 %	3 %	1 %
SOFT	Spark	6 %	12 %	1 %	0 %	32 %
SOLO	Spark	13 %	35 %	6 %	2 %	6 %
TONE	TITANIUM	12 %	5 %	27 %	56 %	1 %
TOPS	TITANIUM	23 %	4 %	7 %	2 %	1 %
Total		100%	100%	100%	100%	100%

We monitored our competition and our positioning relative to theirs very closely in the opening periods. By looking at semantic scaling and multidimensional scaling reports, we could tell where TONE stood in relation to ROCK and the Professionals and High Earners segments. Our goal was to use advertising to keep TONE’s attributes in the middle of those segments’ ideal values, and, most importantly, closer than ROCK’s perceived attributes. ROCK never really made any unexpected moves to outdo us in this area and never had any drastic increases in ad spending. As we had success, we continued to feel comfortable with our strategy on TONE. The only change we made was to lower the price of TONE to match ROCK’s. We could have made a more aggressive push to take over some of ROCK’s sales with increased advertising or an R&D project, but since we were the ones playing catch-up, so to speak, we didn’t feel threatened by Rawesome, and we knew we could make up ground in the Vodites market where everyone would start with a blank slate. We essentially coexisted with Rawesome without much friction. It’s possible that, had Rawesome made a bigger move, we would have been caught off guard.

Our decision to drop TOPS (discussed in previous sections of the report) was not so much based on any competitor’s actions but more so based on the poor design of the product in relation to customers’ desires.

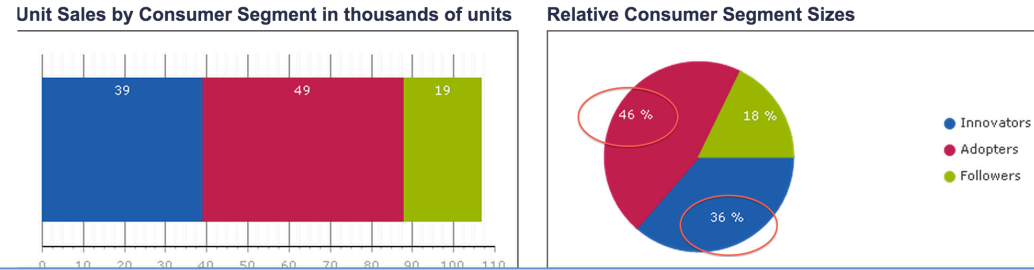
In the Vodites market, we were slightly disheartened that Rawesome beat us to the punch by introducing their product (Rebel) first, in period 4. That made us push our R&D project through in period 4 so that we could launch our Vodite (TEEF) in period 5. Not being the first-mover wasn't such a disadvantage though, as the market for Vodites was still very small in period 4, and we were able to see how Rebel's positioning worked. After we introduced TEEF, we quickly realized from market research that while we were positioned decently for the short term, the future didn't look bright. The graphics below and at the top of the next page show that in period 5, TEEF was positioned for Innovators and Adopters, but our main competitor, Rebel, was positioned for Followers, which was the segment with the highest expected growth.

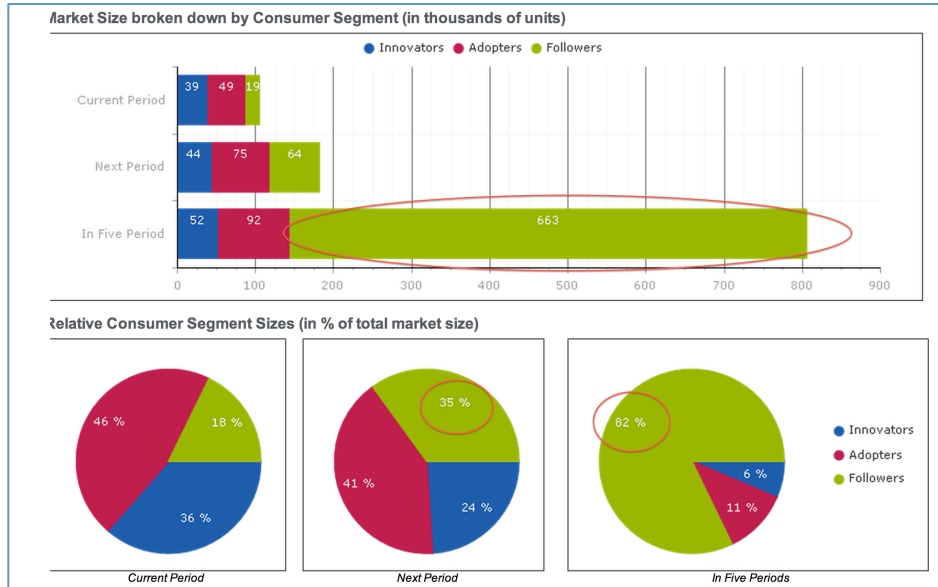


Market Shares by Consumer Segment (%Unit)

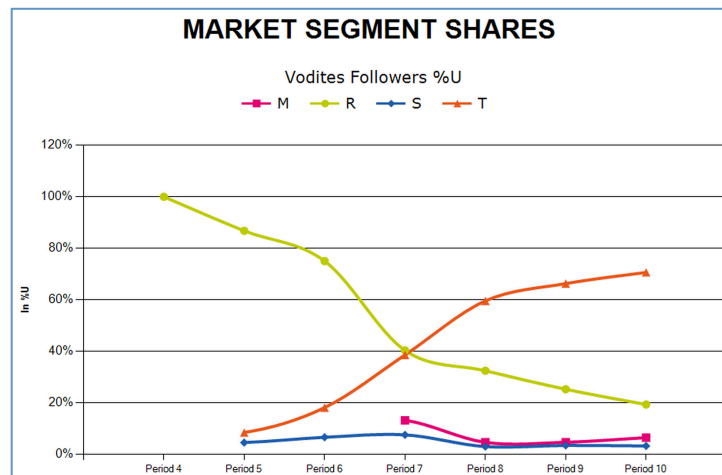
Brand	Firm	Innovators	Adopters	Followers
Rebel	Rawesome	22 %	64 %	87 %
Seal	Spark	54 %	15 %	5 %
TEEF	TITANIUM	25 %	21 %	9 %
Total		100%	100%	100%

Industry Volume (based on units sold)
 The charts below give the unit product category sales by consumer segment and in total. The relative sizes of the 3 consumer segments are provided as well.





Seeing that Rebel was better positioned for the future made us quickly change our strategy with TEEF—we shifted our advertising focus to Followers and, in period 7, completed an R&D project to bring TEEF’s attributes more in-line with Followers’ ideal values. This project simultaneously lowered the base cost of TEEF, because we were producing a higher quality product than was necessary to attract Followers. That and increased advertising expenditures resulted in a huge success. As shown in the graph below, our market share in the Followers segment increased drastically as we implemented our new strategy. By period 7 we had matched Rebel’s market share, and by period 8 we had nearly doubled its market share.



Rawesome didn't make any moves to stave off our attack in the Vodites market, and our nearly uninhibited success catapulted us into the share price lead by period 7, and that lead only continued to grow for the following three periods. Whether or not we knew it at the time, we had learned from our experience with Sonites that if we offered a product that was closer to what the customers wanted than competitors' products, they would buy it in droves. We had also learned that advertising was powerful in increasing your target segment's purchase intentions. In hindsight, we could have run an R&D project on TONE to execute the same type of strategy (lower costs/align product features with target's ideal values), but we felt, correctly so, that advertising alone could keep us about even with ROCK.

If we had to surmise, we would say that our competitors would report being more surprised by our actions than we were with theirs. We were the only company that didn't really play by the status quo, as evidenced by dropping the TOPS product and quickly realigning our TEEF product to match consumer's tastes. A unique understanding of the market dynamics combined with the gall to make pivotal decisions led us to dominating our competition.

Research and Development

R&D had a major influence in our decision to discontinue TOPS. As discussed more in depth in our recap of the first three periods, our company realized negative returns from this product in the early going. We discussed changing the product attributes through an R&D project to decrease some of the product's production cost to result in a higher, positive margin. However, after submitting an online query we found that this option would be very costly and ultimately decided to discontinue the product.

Our team was very proactive in ordering marketing research before beginning R&D projects. We found this strategy very successful in the launch of new or modified products. For

example, before we submitted an R&D request to modify some of the product assets of our Sonite, TONE, we ordered Multidimensional and Semantic Scale research to more accurately determine the assets that needed to be changed.

We found that R&D was a very expensive process. However, through breaking down the process into several periods we were able to reduce some of those costs. We also found that our finalized R&D projects were very beneficial in circumstances where advertising was not sufficient in repositioning our product quickly enough.

Market Research

Throughout the simulation we frequently utilized the market research and found that this was to our benefit. However, as mentioned above, there were only a select few market research studies that we used repeatedly: Consumer Survey, Consumer Panel, Market Forecasts, Semantic Scales and Multidimensional Scales. We were able to analyze the research studies from previous periods and compare them to current periods in order to gain a better understanding of different trends in our industry. Our group was also very proactive in ordering market research for Vodites before we planned to begin our R&D. This helped us throughout the R&D process because we had a good idea of what attributes were most important for our target segments.

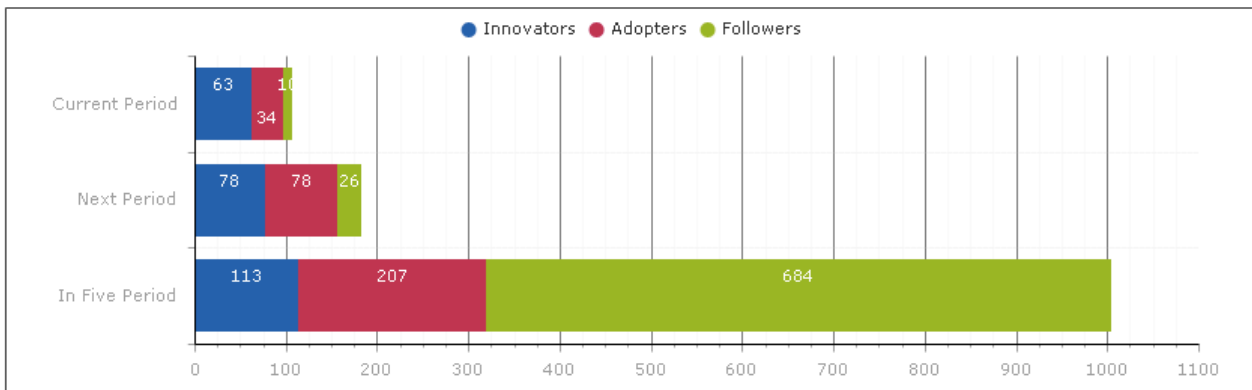
We found the Consumer Survey and the Consumer Panel very helpful for determining production amount and where to allocate our commercial team spending. We were able to use the information from the Consumer Survey to determine which segments would most likely be buying our product and if our advertising was successfully raising brand awareness and purchase intention. This research also helped us to allocate our commercial team spending to more effectively target different segments. The Consumer Panel gave us more thorough information on the market shares by consumer segments. We were able to compare this data to the Market

Forecast of the consumer segments to calculate an appropriate production amount. We found that both sets of research did not show dramatic changes from period to period and they revealed similar findings. That said, in order to save money we alternated the Consumer Survey study and the Consumer Panel study every other period.

Semantic and Multidimensional Scaling was the most useful in deciding on how to allocate our advertising expenditures and design our R&D projects. We were also able to reflect on the studies from previous periods in order to understand different trends and if our advertising expenditures were performing as planned. Throughout the simulation, one of our main strategies was to position our product more closely to our target segments than the competition. We were able to use these studies to pinpoint the ideal product assets and which had the most value to those in our target segments. We were also able to determine the position of our closest competitors and modify our advertising or submit an R&D report to reposition our products.

Our group ordered a Market Forecast almost every period of the simulation. We found that the Market Forecast was the most helpful in the early stages of our products. For example, at the beginning of the simulation, our group purchased Marketing Forecasts on our Sonites in order to more effectively estimate our production amount and identify strategic target segments. In the later periods we found that Market Forecasts were less helpful for Sonites because the changes in the Market were less volatile and therefore we continued to base our production numbers on previous Market Forecast studies. In the early stages of our Vodite production we also used Market Forecast studies routinely because of the major changes in segments sizes in the new market. An example of the changes in the consumer segments in the beginning periods of the Vodite market is shown in the graphic on the next page.

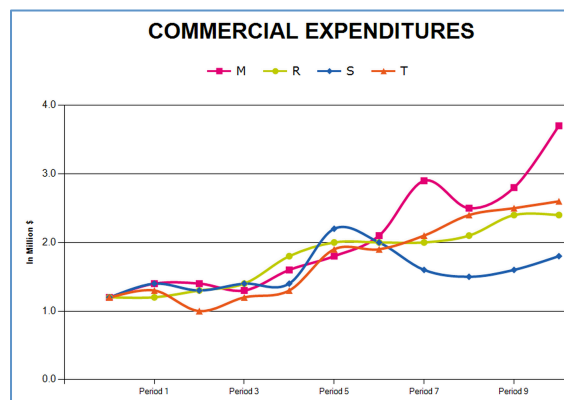
Market Size broken down by Consumer Segment (in thousands of units)



This graphic taken from a Market Forecast report in period 5 shows the forecasted growth in the three market segments.

Commercial Team and Production

To be honest, we are not sure if our sales forces were appropriate in either industry. In the Sonites market, we worked off what we were given with in period 0, tried to match competitors' spending, and added team members when the market grew. What we did do effectively was match the proportion of sales team members dedicated to each channel with the purchasing patterns of our target customers. For instance, when we saw that Followers in the Vodites market made about 30% of purchases in both specialty and online stores, and the remaining 40% in mass merchandisers, we distributed our sales team accordingly. The graph below shows that we were very much in line with the commercial expenditures of the rest of the industry.



Perhaps we should have been spending more because we had greater revenues, but not doing so didn't seem to inhibit our growth any, and we figured there was no need to add fixed costs that weren't absolutely necessary. Ordering a distribution panel would have let us know what percentage of each channel we were covering with our sales force, but we didn't think it was worth the cost of the report to do so. We were having success without it, and figured that we could closely estimate the necessary size of the sales force as the two markets expanded. Looking back, the one-time cost of one report wouldn't have been such a big expense, and it could've given us valuable insights into our sales team's size relative to competitors'.

As far as production goes, we only had a few periods in which demand fell outside the +/- 20% range of our estimates. Usually, when we missed our guess, we underestimated the demand for our product. This cost us potential sales in TOPS in period 1 and in TONE in periods 2 and 3. By period 4 we were able to correctly estimate TONE's production, and as the Sonites market entered maturity (at least for High Earners and Professionals), we didn't have to deviate much from that level of production.

In our launch period of Vodites, we greatly overestimated demand for TEEF and were left with 58,000 leftover units of inventory. In the following period, we overcorrected by not producing any new units of TEEF. We thought the leftover inventory would be enough to meet demand, but it wasn't, and once again we lost potential sales. After instituting our repositioning strategy for TEEF, we once again underestimated demand in period 8, but in periods 9 and 10 we were within the acceptable range. For the most part, we based our inventory decisions off market forecasts and our expected market shares for corresponding periods. We ran into trouble with our production levels when our estimates for our expected market shares were wrong; when we made pivotal strategic decisions, we often underestimated the effectiveness of these moves, and so we

lost an unknown amount of potential sales. Perhaps we were a bit too conservative with our estimates, since the holding costs weren't too significant in the grand scheme of things. If we had to do it again, we might be more comfortable with being a little more liberal with our production estimates and dealing with any associated holding costs.

Conclusion

In the Markstrat simulation, we learned the importance of having a consistent and accurate strategy. We also learned the importance of varying that strategy in reaction to market changes and brand portfolio.

We utilized the market research and objective based advertisement to define and capture market share in our targeted segments. Constantly adjusting to changes in these segments and understanding them enabled us to capture market share and ultimately the highest share price.

Change is one thing that we were ready for and reacted to. When our initial targeting in the Vodite market proved inaccurate or at least misguided, we adjusted to compensate. The importance of not being stuck in our initial beliefs may have saved us the game.

Overall, our experience with this simulation was a very positive one. We learned how important it was to keep track of as many factors as possible *and* to know how to act on that information. We could have the best strategy in the world but if we didn't have good information, the strategy would be misguided. The information was out there, we just had to track it down and interpret it.