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ENT 2112 Entrepreneurial Opportunity Analysis

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Post Simulation Reflection Paper

Introduction

In Quarter 3 Atomic Bikes announced a temporary branding shift. Our new mission statement was to “give value to our friends, and attract, recruit, and retain smart and hard-working friends.” While this was only a temporary change, it shows the core of who we are as a team. We all knew and were friends with at least one other member of the team before forming Atomic Bikes. Austin introduced me to RJ and highly recommended him for the team. I had no objections as I have worked with Austin before and trust his judgement. Arden and Ben I both knew from past classes and had collaborated with on various assignments or study guides, met through mutual friends, or both.

Quarter 1

Going into the simulation, the only thing I knew about it was that the “business” was making and selling bikes. I was over the moon. As someone who loves bicycles, this was going to be my thing and I was going to kill it. I am super familiar with market trends, components and their differences and applications, and any other bicycle related pieces of information. I already knew several different kinds of bikes I wanted to

design and was confident that our company, Atomic Bikes, would be the best in the market.

Imagine my surprise when I logged into the simulation for the first time and saw components names that were general descriptions of a part and did not indicate quality. In addition, some of the part descriptions or depictions were not accurate to real life. For example, the simulation recommends a 2x7 drivetrain for road bikes. 2x7 has not been standard since 2013 and most road bikes today are on 2x11 or 2x12. The narrow range is extremely limiting. This sudden shift from reality quickly broke the simulation for me and I found it very difficult to divorce reality from the simulation to make the right decisions in game. Thankfully, I was not in charge of designing the bikes and Ben did a great job designing them to meet the simulated market needs.

When it came time to divvy up the responsibilities, we each chose something that was either our strong-suit or an area of interest. Because there was no one section dedicated to Business Analytics, I chose Manufacturing as my primary responsibility. I enjoy optimizing manufacturing processes and thought that this would be a good way to learn more about manufacturing and how it works and can be optimized. Our team norms were relaxed and understanding, but also set so that everyone knew their responsibilities going in and could be held to them. However, we trusted each other to get the job done, let each other know if we ran into issues, and to work together to take up slack where it arose.

Quarter 2

Quarter two was a little slow like Quarter one because we did not have any stores open yet. We continued the trends we set in Quarter one of aggressively opening new sales channels, competitively paying employees, and increasing manufacturing capabilities.

Quarter 3

Quarter three was a big deal. It was the first quarter where we saw sales results from the previous quarter and had a chance of making an income. We came out of the gate doing well, but we could have done better. Cycle-Path had 30% market share which was double our 15% which landed us fourth in market share. Breaking it down by market segment, our best seller was our speed bike with 26% of the market and then the mountain bike with 17% of the market. Because we did not design a recreation bike, we were not expecting to sell well in that market and didn't. We captured just 4% of the recreation market. Drilling down those sales by channel, we see that just over 56% of our sales came from the web. With such great sales, we were close to turning a profit in our second quarter but still came up just under \$68k short. Thankfully, however, our balanced scorecard total performance was the highest of any company with a score of 3.595 and Alpha Bikes in second at 2.311. Everyone else was below one or at zero.

Because our N-7 hadn't sold as well as it could have, we redesigned it to better match trends that our market research indicated. It now came with a better seat and brakes. To fill our gap in the recreation bike market, we designed the He-2 which came

with the same new saddle we put on the N-7, more comfortable handlebars, and an attractive plastic basket so that people could take some belongings with them on their pleasure cruises. We also priced the He-2 extremely competitively with a \$50 lower MSRP than our best competitor. To match changing market trends, we also updated our advertisements for each bike and changed the media placement strategy. Again, to stay competitive, we opened new stores in New York City and hired more salespeople and increased compensation packages.

Lastly, in manufacturing, we doubled our expected demand per salesperson and thought very carefully about how to balance our production levels with what we knew about the past quarter and with our new and updated bikes in quarter three. To minimize operating costs while maximizing capacity, we made sure that we ran just under maximum capacity to allow for downtime and prevent backups. We applied the same principle of maximizing the marginal rate of return in allowing just one hour of overtime which we planned not to use. It was for emergencies only. We also bought as many 3D printers as we could afford without going bankrupt.

Quarter 4

Quarter three saw the downfall of Atomic Bikes and the rise of Alpha Bikes. We grew 1% to 16% market share but Alpha now had 23% of the market. In a surprising change of pace, our brick-and-mortar stores were now 59% of our sales. The best news of all was that we had now generated our own profit and had a net income of \$123,357.

We again modified our brands. The O-8 was still selling very well so we changed the N-7+ back to the N-7 with upgraded components and changed the He-2 to the He-2+, again with updated components. To maintain profits, we raised our prices to reflect the upgraded component costs and to stay competitive in the market. We updated our advertisements to reflect the changes made. New this quarter, we invested in search engine optimization to increase our web traffic and sales. We also decided not to open any new sales centers this quarter as the markets were already quite full and we did not believe we would get good enough returns on our investments.

Quarter 5

Leaving Quarter four, we were sufficiently humbled by Alpha Bikes. Their total performance score was triple ours. Nevertheless, we persisted and managed to gain market share to rise to 19%. Store sales continued to outpace web sales at just under 70% of our total sales.

In Quarter five, we finally changed our O-8 to be the O-8+ and also updated our other two models to the N-7+ and He-2. We also put lots of money into research and development because we had tons of cash on hand and nowhere to spend it. We also successfully licensed the 1x11 drivetrain we had researched to Olympus Bikes and were able to make some money back on that investment directly. We also updated all our ads to reflect our updated models.

By the time we made it to manufacturing, we realized that we would not have enough capacity to meet expected demand and tried our best to maximize manufacturing and artificially limit demand. We increased prices across the board and

laid off salespeople so that our demand would not be so high. In addition, we increased overtime availability and operating capacity, even at the detriment of higher costs. Lastly, we bought as many new printers as the game allowed us to.

Quarter 6

Because of the stock outs and ill-will generated, our total performance was quite poor at eight times less than that of Alpha Bikes who still held first place. Thankfully, we only had 121 penalty units from ill will although that may have been able to make up the gap between us and the people next highest in market share with them at 12% and us at 11%. This time our web sales was much lower than in person sales with 1200 sales on the web to 2250 sales in person.

We again redesigned all bikes and ads with our new technology that we had acquired through research and development, increased employee compensation packages to the maximum allowed, and tried to fix our runaway demand. Seeing that our attempts to limit demand were successful in quarter five, we took it even further in quarter six by raising prices, laying off more salespeople, and limiting expected demand per person.

Conclusion

Coming out of quarter six, we were able to close the gap in total performance quite a bit with a score of 62.8 to Alpha Bikes' 110.5. We were also successful in limiting demand so that we had no ill will units or stockouts. The final result was 28% market share to Alpha Bikes' 29% and a net income of \$1.1 million.

Overall, once I got past my mental roadblocks of the simulation not reflecting real life, I had a really good time with the simulation and learned a lot about working as a team, what it takes to get a company off the ground, and what challenges I might face if I started a company. I did find it frustrating, however, that the simulation put limits on what we could do as a company as that really broke the immersion for me. I would absolutely work with my team again given the opportunity.