

Andrews Company Performance Summary

Anthony Manderichio

Southern New Hampshire University

OL-421: Strategic Management & Policy

Instructor Morgan Demase

December 12, 2021

Andrews Company Performance Summary

Executive Summary

Progress of the Company

In the beginning, Andrews and our five competitors were established as a result of a government division of a preexisting electronic sensor monopoly. Back then, our companies' electronic sensors were significantly misaligned with the needs of both the low-tech and high-tech market segments. While our product price of \$34 equally aligned with the needs for both low-tech and high-tech market segments, its three-year age effortlessly aligned with the age needs of the low-tech market. In weighing our initial decisions, we understood that age has an importance of 29% to both the low-tech and high-tech market segments. What this meant for us was that age counted towards roughly one third of the importance for both market segments. In terms of product specifications, the product reliability and position aligned with neither the needs of the low-tech or the high-tech market segments. While position only counted towards 9% of the low-tech importance, it counted towards 33% of the high-tech importance. Additionally, while reliability counted towards 21% of the low-tech importance, it only counted towards 13% of the high-tech importance. Notwithstanding the fluctuations of importance for position and reliability, the crucial information here was that both components could be corrected by making minor adjustments within the R&D department via repositioning our product. However, age is not something we could either add to or subtract. Given these circumstances, our organizations first move was to target Able's price, reliability, and position to match the needs of the low-tech market segment (Capsim Management Simulations, Inc., 2021).

Throughout the years, Able has underwent four instances of repositioning to realign it with the needs of the low-tech market. During this timeframe we also introduced a second

product for the high-tech market segment named Able. Throughout the years, Able has similarly underwent two instances of repositioning to realign it with the needs of the high-tech market. If we review Figures 1 through 5 we can see that Able was perfectly aligned with the low-tech market segment during 2023, 2025, 2027, and 2029. Whereas Able was perfectly aligned with the high-tech market segment during 2025, 2028, and 2029. Unfortunately, Able hadn't finished R&D until 4/7/2026 so when this product finally hit the market in 2026 it was misaligned with the position needs of the high-tech market segment.

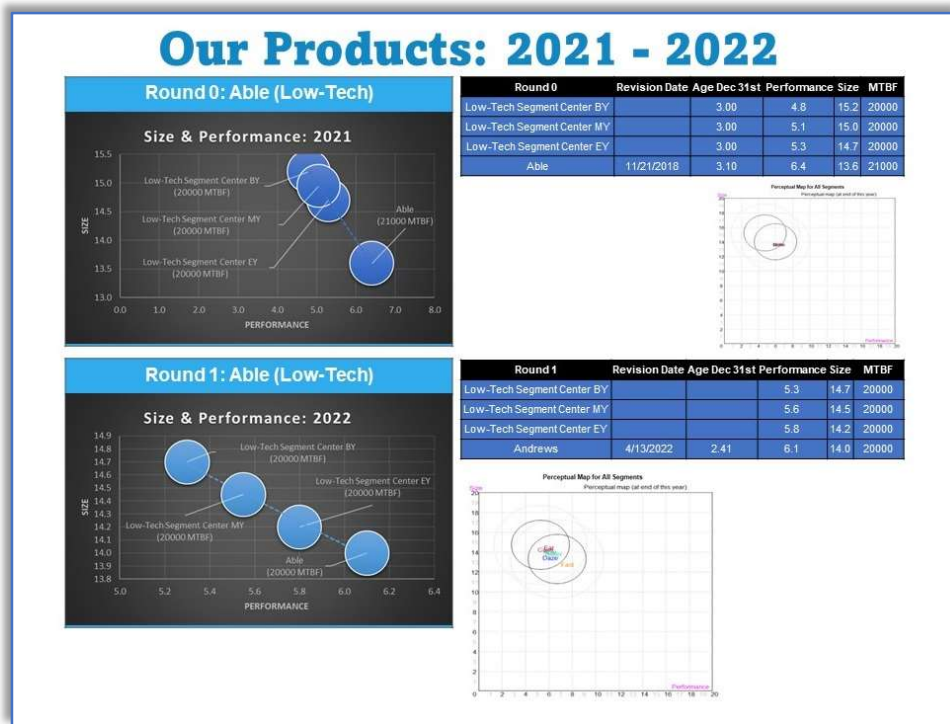


Figure 1. Our Products: 2021 - 2022. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.



Figure 2. Our Products: 2023 - 2024. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

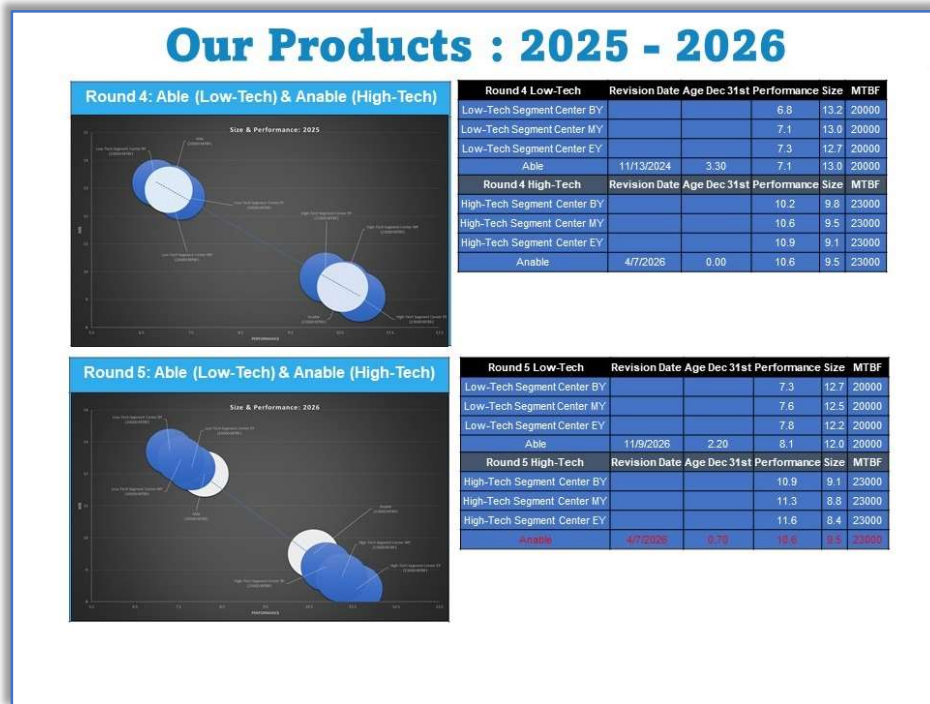


Figure 3. Our Products: 2025 - 2026. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

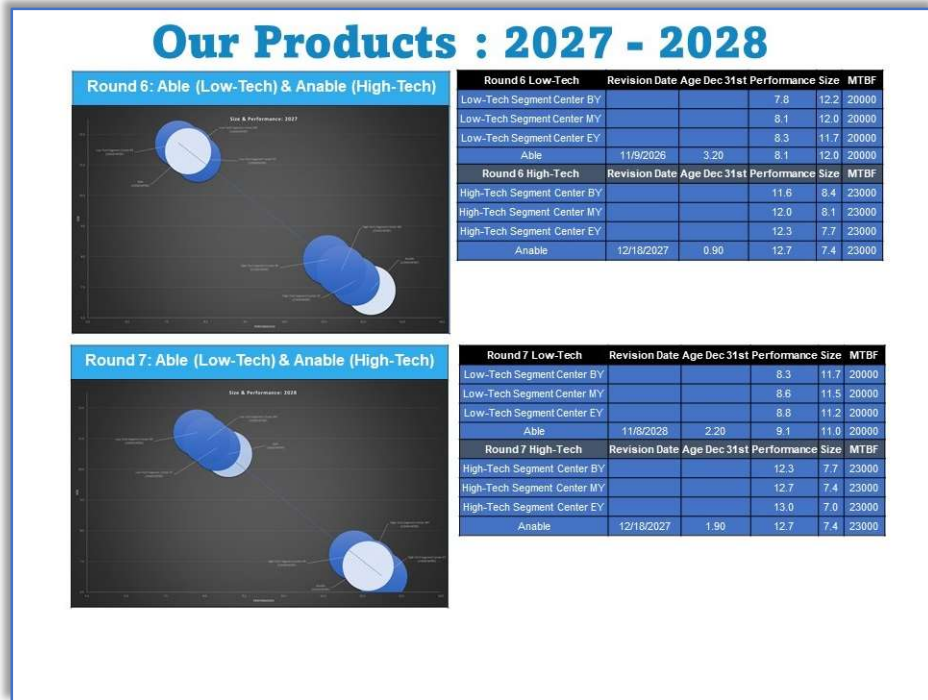


Figure 4. Our Products: 2027 - 2028. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.



Figure 5. Our Products: 2029. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

As we began our journey, Andrews set out with an overarching Broad Differentiator strategy because we had learned from our prior experiences that we needed to modestly invest in long term bonds and retire long term bonds whenever possible. We preferred to borrow current debt vs. bonds, pay dividends, invest reasonably in automation and capacity, and try to avoid

extending and reducing AP lag time too frequently. Prior experience had taught us that we needed to have a presence in both market segments and both our products should have the best possible design to meet the needs of the customers. By promoting our products we'd establish customer awareness, and the prices we selected would provide easy accessibility while still being slightly above average. In the end our goal was to utilize capacity and automation to keep costs down so we could ensure our goal of product accessibility could be met (Capsim Management Simulations, Inc., 2021).

As the years have gone by a few changes that have taken place have surrounded the need to separate our strategy based upon departments as opposed to trying to maintain an overarching strategy for our entire organization. Within our R&D department we have selected a Broad Cost Leader strategy because we do not believe in the waste associated with decommissioning a product line, and we aimed to introduce and maintain products within both the low-tech and high-tech market segments. We wished to keep these products up to date and current without sacrificing our "cost/price advantage" that we gained through high automation levels. Within our Marketing department we maintained our Broad Differentiator strategy by sending aggressively in the promotion and sales in both market segments. We had optimal products and we wanted our customers to know about them and be able to afford them, no matter the cost. Within our Production department we returned to the Broad Cost Leader strategy by ensuring that we significantly invested in automation throughout the years. Overall, this strategy has allowed us the privilege to be able to afford to invest in our Marketing promotion and sales and keep labor and material costs down. Moreover, we have always significantly invested in our HR department throughout the years via maxing out our Recruiting Spend at \$5000k, and Training Hours at 80

since 2023. Over the course of these past years, this strategy has increased our productivity index to 127.9%, and reduced our turnover rate to 5.9%.

If we review Figure 6 below all of our competitors are lagging far behind our HR investments, and as a result we have the highest productivity index, and lowest turnover rate out of all five of our competitors. Within our Finance department our strategy again returned to the Broad Differentiator strategy by primarily issuing stocks and utilizing cash from operations. We found that we preferred to utilize current debt over long term debt. This was because we were risk adverse to debt and preferred the lower interest rates associated with current debt as opposed to the high interest rates associated with long term debt. Likewise, we aimed to keep our leverage between 1.5 and 2.0 so we could ensure there was never a need to ever utilize an emergency loan (Capsim Management Simulations, Inc., 2021).

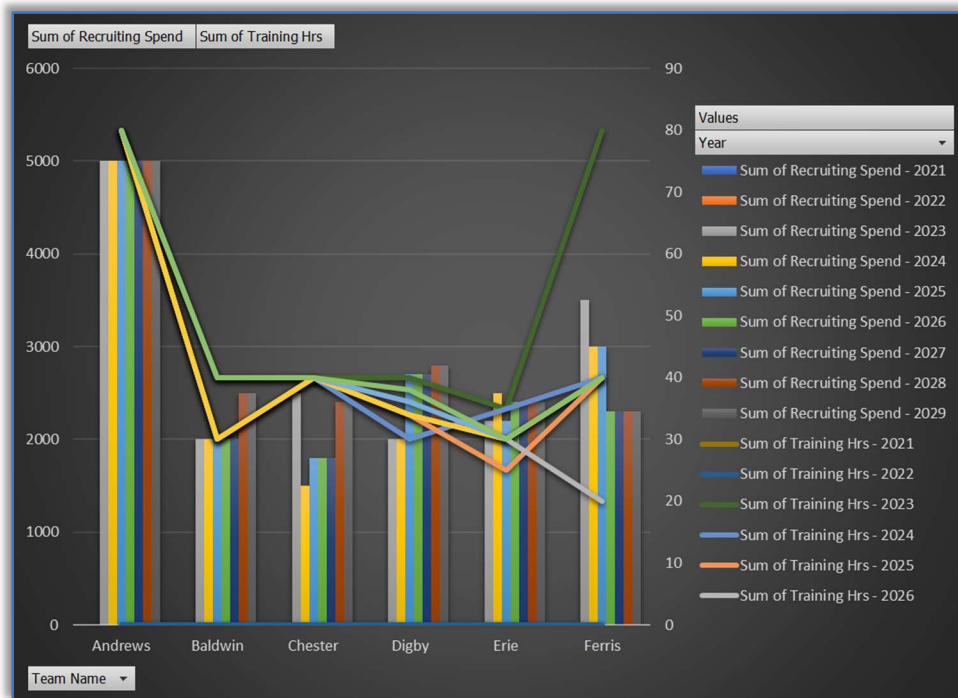


Figure 6. Sum of Recruiting Spend & Sum of Training Hours Trend. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Consequently, Andrews has always been afforded the opportunity to differentiate itself and gain a competitive advantage by designing quality products while increasing customer awareness, customer accessibility, customer satisfaction, employee retention, and shareholder value. Throughout the course of these past eight years, Andrews has built a legacy of commitment towards our customers, employees, and establishing ourselves as a leader in both the low-tech and high-tech market segments. As such, we have fully committed ourselves to thoughtfully managing our Research & Development, Marketing, Production, and Finance departments through the use of the strategies mentioned above. As a reward for this loyalty, within our most recent four-year period we have become the number one leader in both the low-tech and high-tech market segments. As seen in Figure 7 below, in our most recent year our low-tech product, Able, has outsold our competitor's product, Cake, by nearly 46% by selling 2984 units. In reviewing our high-tech product, Anable, it has similarly outsold our competitor's product, Dust, by nearly 7% by selling 1656 Units. Overall, these numbers tell us that we doing great. we're making very smart choices and we have little need for deviation from our current strategy.

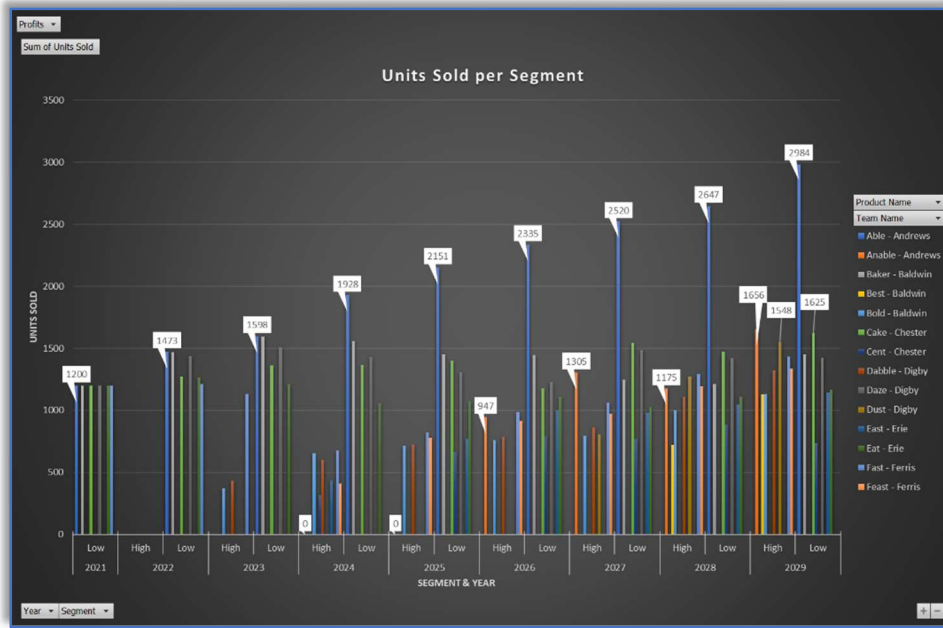


Figure 7. Units Sold per Segment. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Current Situation

SWOT Analysis	
<p style="text-align: center;"><u>Strengths</u></p> <ul style="list-style-type: none"> • High profits • Terrific margins • Exceptional cash management • Low employee turnover rate • High productivity • High customer awareness, accessibility, and satisfaction 	<p style="text-align: center;"><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Product alignment in relation to R&D Revision Dates • Occasional lapse in forecasting • Low product diversity • Inadequate working capital • Negative balance surrounding free cash flow
<p style="text-align: center;"><u>Opportunities</u></p> <ul style="list-style-type: none"> • Increasing our market share by introducing additional high-tech products • Improving forecasting models • Reducing our product pricing • Closely aligning our product positioning with our R&D revision dates • Increasing working capital • Increasing free cash flow 	<p style="text-align: center;"><u>Threats</u></p> <ul style="list-style-type: none"> • Losing additional market share • Competitors undercutting our prices

Table 1. SWOT Analysis. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Andrews strengths come from several places and encompass our high profits, terrific margins, exceptional cash management, low employee turnover rate, high productivity, high level of customer awareness, accessibility, and satisfaction. In reviewing Table 2 below it shows us how deeply our commitment to our employees runs as compared to our competitors.

Likewise, if we consider Table 3 below we can see that our promotional and sales investments have made a significant impact on our cumulative profits. Similarly, if we consider Figure 9 below we can see how our commitment to high levels of automation have afforded us the opportunity to lower our material costs over time.

	Training Hrs	Recruiting Spend	Turnover Rate	Productivity Index
Andrews	560	\$35000	5.9%	127.9%
Baldwin	240	\$15000	8.0%	109.7%
Chester	280	\$14200	8.2%	116.2%
Digby	246	\$17700	8.0%	112.4%
Erie	215	\$16500	8.5%	111.8%
Ferris	300	\$18700	7.9%	114.2%

Table 2. The relationship between Training, Recruiting, Turnover, and Productivity. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

	Total Promo Budget	Total Sales Budget	Total Cumulative Profit
Andrews	\$21800	\$42200	\$118940529
Baldwin	\$23100	\$22300	\$54509810
Chester	\$15675	\$16925	\$29729929
Digby	\$24175	\$20525	\$68209342
Erie	\$14500	\$14475	\$31619998
Ferris	\$20500	\$17125	\$63944432

Table 3. The relationship between Promo Budget, Sales Budget, and Cumulative Profit. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

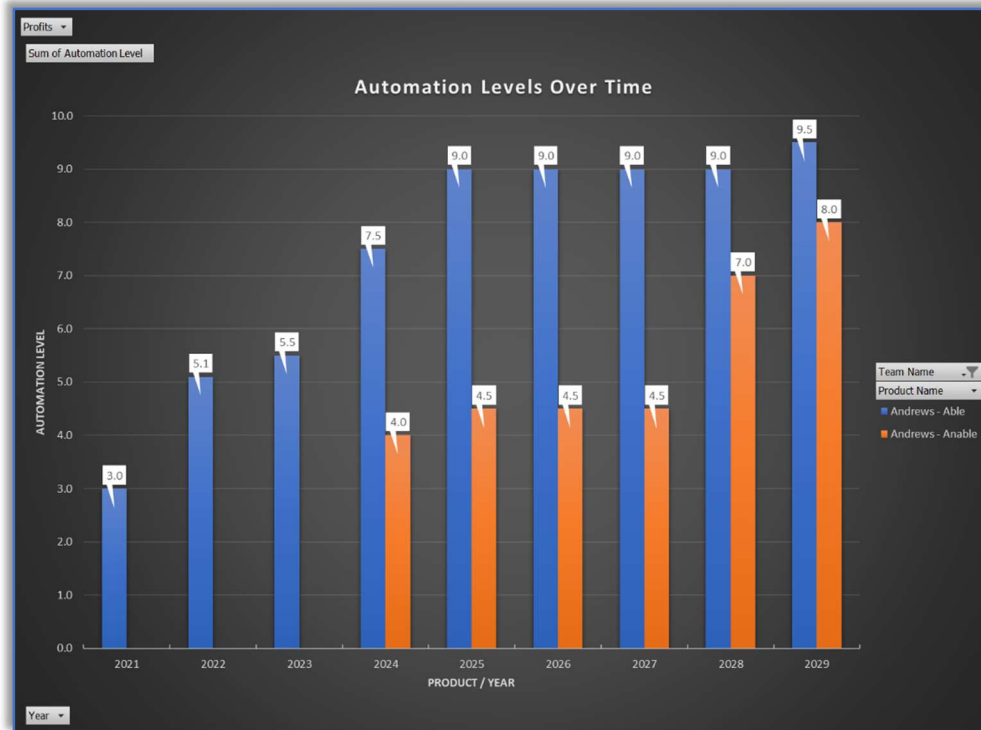


Figure 9. Automation Levels Over Time. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Andrews weaknesses come from several places as well and they encompass product alignment in relation to R&D Revision Dates, occasional lapses in forecasting, low product diversity, inadequate working capital, and a negative balance surrounding free cash flow. The product alignment discrepancies surround Able being perfectly aligned and available within the low-tech market segment during 2023, 2025, 2027, and 2029. Additionally, Anable was perfectly aligned and available in the high-tech market segment during 2028, and 2029. This means we missed quite a few opportunities to align our product with the needs of the Market Segments over the course of the years. Our misjudgment in forecasting cost us a loss in sales during 2022 and 2023 as seen below in Figure 10. Additionally, our misjudgment in forecasting caused us to overproduce substantially during 2024, 2025, 2027, and 2028. When compared to the other organizations over time our forecasting shows as lacking significantly in 2027 as seen in Figure

11. In 2024 our inventory carry fees cost us \$899k, in 2025 \$1042k, in 2027 \$1391k, and in 2028 \$1663k. In total these inventory carry fees have costed us \$5544k, which is not an insignificant amount. To avoid these fees going forward we will need to tighten down our forecasting.

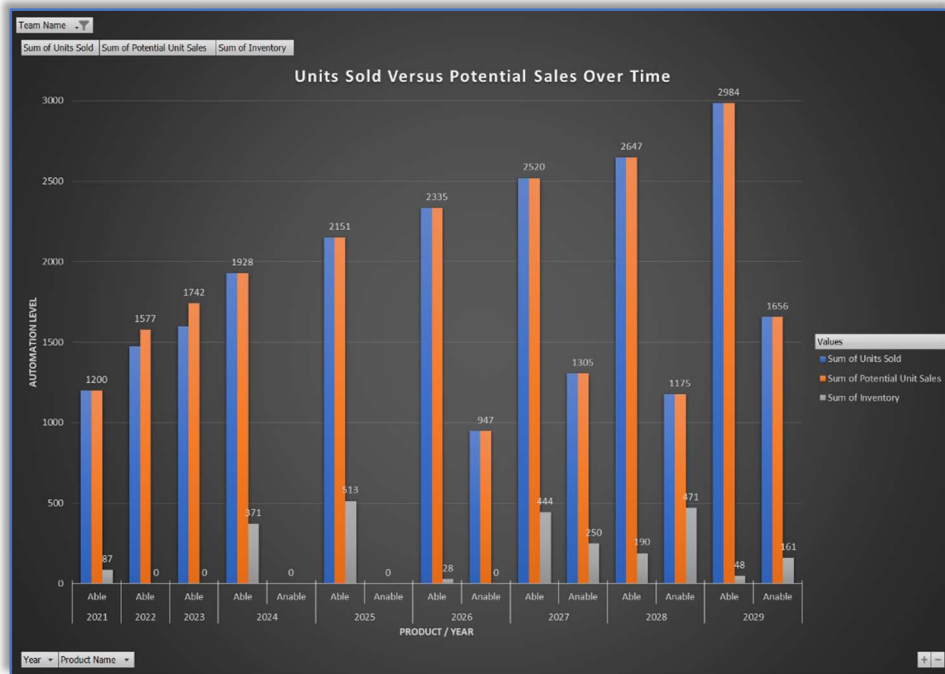


Figure 10. Units Sold Versus Potential Sales Over Time. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

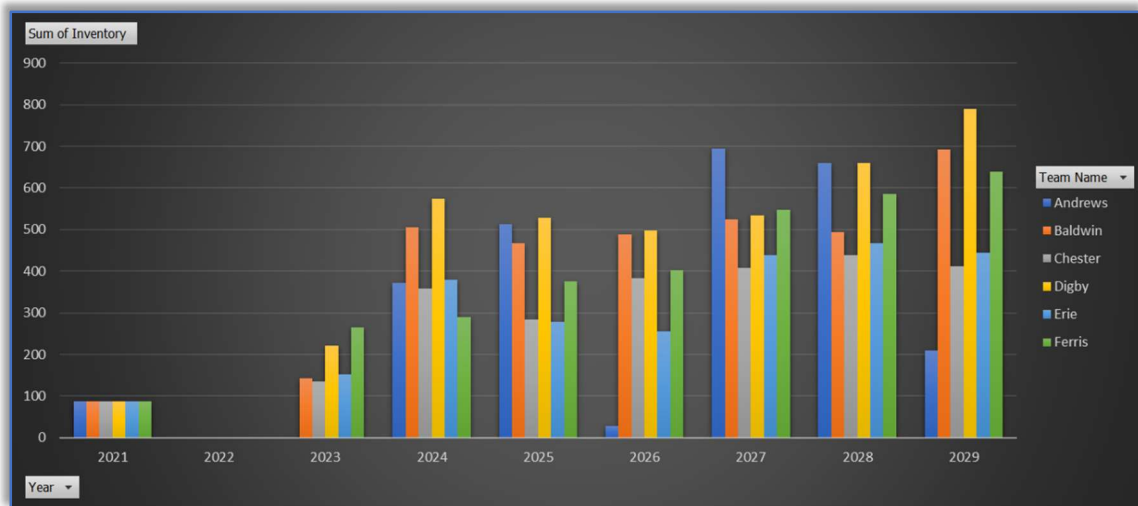


Figure 11. Sum of Inventory. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Regarding our product count we can see from Figures 12 & 13 that Baldwin and Digby are outpacing us on product count and product diversity. From experience we know this information may align with a drop in Market Share so we'll need to be mindful of our breadth of product diversity. Regarding our working capital, we had insufficient working capital in 2022, 2024, and 2028 to 2029. The most impactful fact about this is that we only had 54.3 days of working capital in 2029, and our current ratio was 1.6 as seen in Table 3 below. Additionally, we carried a negative balance surrounding free cash flow in 2022 to 2025, and again in 2027 to 2028. Although our free cash flow in 2029 was \$40,502,738 we will need to be mindful not to repeat the mistakes of the past with regards to free cash flow.



Figure 12. Count of Product Name. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.



Figure 13. Count of Product Name per Segment. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

	Actual
Sales	\$151,598,800
Emer. Loan	\$0
Curr. Assets	\$61,086,583
Curr. Liabilities	\$38,552,731
Working Cap.	\$22,533,852
Days W. Cap.	54.3
Curr. Ratio	1.6

Table 3. Working Capital. Data retrieved from “Round 8 Analyst Report,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Andrews opportunities surround increasing our market share by introducing additional high-tech products, improving our forecasting models, reducing our product pricing, closely aligning our product positioning with our R&D revision dates, increasing our working capital, and increasing our free cash flow. While the majority of these opportunities have already been discussed, we have yet to discuss our product pricing. If we review the Figure 14, the low-tech

pricing chart & Figure 15, the high-tech pricing chart we can see how our top competitors, Baldwin and Digby, are undercutting our prices, and we have an opportunity to fix this.



Figure 14. Low-Tech Pricing. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.



Figure 15. High-Tech Pricing. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Andrews threats surround losing additional market share, and competitors undercutting our prices. As mentioned previously we must be steadfast in introducing additional products in the upcoming years. To maintain our current Market Share of 23.69%, as seen in Figure 16 below, this must be done immediately. Digby and Baldwin have been swiftly gaining Market Share since their introduction of additional high-tech products in 2026. Similarly, these two competitors have been undercutting our prices according to the data provided in Figure 14 and Figure 15 above. These are our greatest threats and we must be mindful to act on them as quickly as possible if we are to continue to succeed.

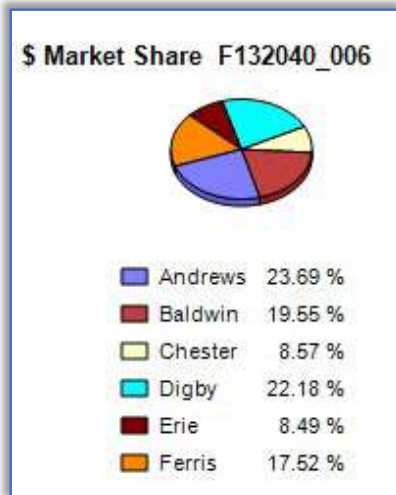


Figure 16. High-Tech Pricing. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Future of the Company

While reviewing the Sum of Units sold per organization in Figure 17 below, we can see that our combined sales in both the low-tech and high-tech market segments have placed us as the number one leader in sales for the fourth straight year. However, we must maintain awareness on the fact that our two leading competitors, Baldwin and Digby, have been growing their sales significantly in the most recent three-year period. As a result, our market share has

been reduced from its height of 26.66% in 2027 to 23.69% in our most recent year. Regardless of this challenge, we have a lot to be proud of based on the chart below.

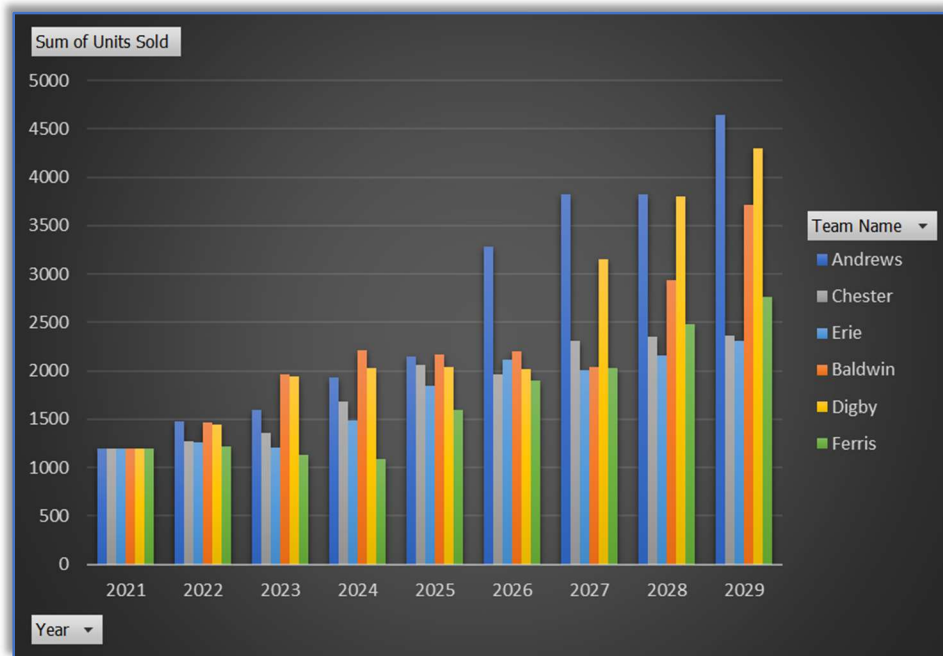


Figure 17. Sum of Units Sold. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

As we dive deeper into the data behind this information, we can clearly see that our sales have far surpassed our competitors in Figure 18 below, and our profits far outweigh the profits of our competitors in Figure 19 below. Reviewing this information tells us that while our competitors may be catching up to us on sales, when it comes to profits our organization has clearly become a leader. These results are partly due to us maximizing our investments in automation, and partly due to our significant investment in our TQM efforts through investing \$750k across the board during 2024 to 2025, and \$500k across the board in 2026. If we review Figure 20 below, we can easily see that while our labor and materials costs have been reduced, our profits have significantly increased. What all this information tells us that now is a great time to

adjust our pricing and invest in additional R&D product inventions so we can take advantage of the opportunities this good fortune has bestowed upon us.

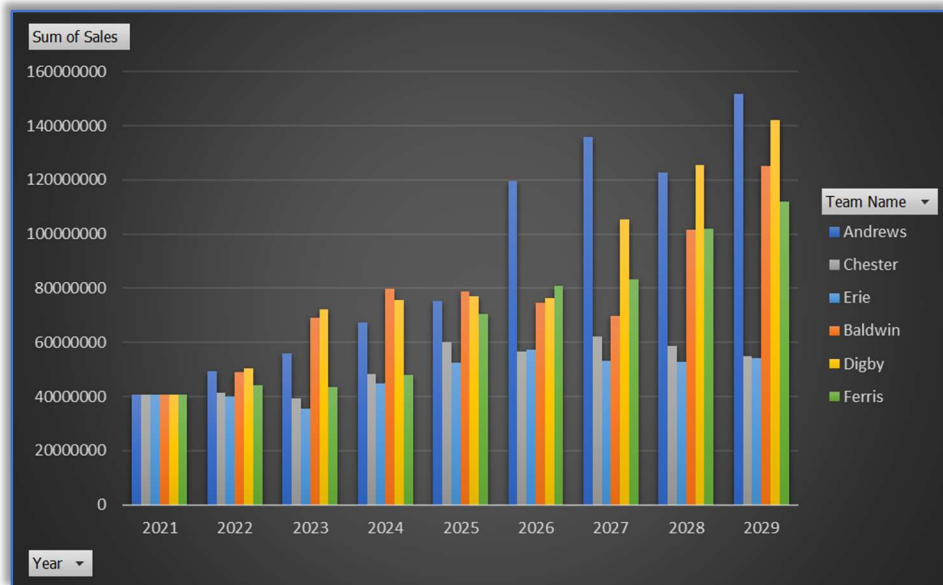


Figure 18. Sum of Sales. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

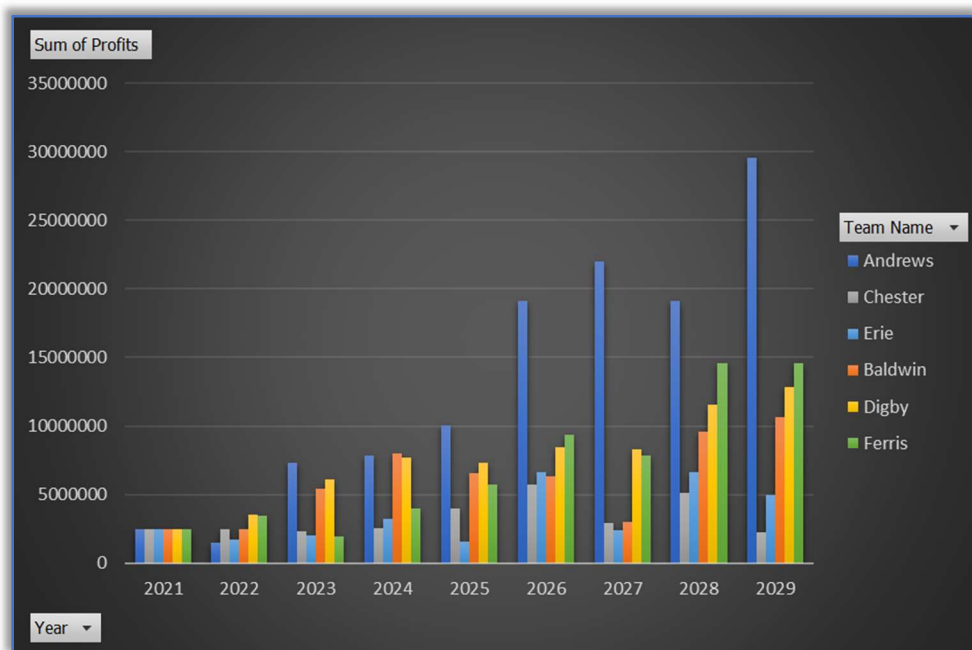


Figure 19. Sum of Profits. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.



Figure 20. Labor & Material w/ Profit Trend. Data retrieved from “Foundation® FastTrack,” by Author Unknown, 2021, Capsim Management Simulations, Inc.

Ethical, Legal, and Social Challenges

The main Ethical and Social challenge behind an organization such as Andrews is supporting the triple bottom line: people, planet, and profits. To do this we need to consider our impact upon the environment, society, and economy. We need to strive to reduce our environmental, social, and economic impacts. Business Sustainability 1.0 and 2.0 take the inside out approach where the company avoids negative side effects by improving its impact on the triple bottom line. To be better than our competitors we must invest in Business Sustainability 3.0 efforts. Doing so would allow us to take the outside in approach where we create positive effects by providing active contributions to make the planet better. We would do this by making improvement efforts an integral part of our corporate offerings (HSG University of St. Gallen, 2016).

One of the ways we could ensure we were modeling ourselves after Business Sustainability 3.0 would be to hire locally, and ensure that we are paying wages that allow us to

raise the quality of life for our employees. Another way we could ensure we were modeling ourselves after Business Sustainability 3.0 would be to reduce waste and invest in local environmental cleanup so we can ultimately leave the environment better off than when we found it. To measure our impact we need to ensure that we are using quantitative measurements with regards to our impact on people and profits. However, we need to use qualitative measurements with regards to our impact upon the planet. Two of the questions we might ask ourselves surrounding the planet are: is the air more breathable, is the environment healthier, and is the water cleaner than when we arrived?

One legal consideration for us is are we at risk of violating any additional antitrust laws like we did in 2021? By our original company becoming so large that we became a Market Power and a monopoly we put ourselves in jeopardy of being split into several smaller organizations. Of even greater importance, we limited competition by being a monopoly and this caused high prices for our customers. Although the government disbanding our organization allowed us to become this great company that we are today there is serious concern for a repeat offense. Thus, we should be mindful of our growth and ensure we are acting ethically with regards to our business choices going forward.

Global Considerations

Reducing waste that is produced through rework and overproduction are significant concerns on a global scale. In order to support the triple-bottom line we need to be mindful to perform our Business Sustainability 3.0 efforts. We also must ensure our production department forecasting is not causing us to overproduce like we had done in the past. While inventory carrying fees are certainly a concern for us, the waste associated with overproduction of goods that will not be purchased is even more alarming. To reduce our impact on a global scale we

must get better at forecasting and providing goods utilizing Just In Time production. We invested significantly in TQM, and we should honor the rewards we have reaped as a result of our efforts.

Professional Reflection

Throughout this project I reflected on all of my prior coursework throughout my degree, but three courses in particular struck me as the most relevant to this capstone. In particular, my prior Six Sigma, Operations Management, and Managerial Accounting courses jumped out at me as the most relevant courses with regards to this capstone. The Six Sigma course taught me to look at projects as an opportunity for improvement. In considering this I looked at this CAPSIM simulation as something that was broken that needed fixing. In order to determine the best way to fix the Andrews corporation I initially went into the practice rounds with the mindset of how can I best break the practice rounds to determine what I need to do to be successful in the actual rounds. I ran through five of these practice rounds and during these rounds I borrowed too much, generated too many product lines, ran out of stock, over marketed, increased and decreased the lag time for AP, and over revised and over invented products. One important thing I learned is that it's extremely important that I establish better forecasting, and after carefully reflecting on those practice rounds I thought I fully understood how to be successful in the actual rounds.

When the actual rounds arrived I kept a spreadsheet of all the moves I and my competitors made and utilized this spreadsheet to develop the charts and tables you find throughout this paper. After competing in round one I found that I even though I wanted to introduce the second product line in round one I was unfortunately not able to do so due to the limited production budget. To ensure that I could do this in round two I set a goal to become a leader in the low-tech market segment so I could increase my profits and have more funding available for production in round two. To get there, I adjusted my R&D to revise my existing

product to align it with the needs of the low-tech market segment at the optimal level for round two and set an optimal price point after performing some pricing research. I also increased my automation levels to save labor costs in round two and increase my overall assets. I also invested heavily in promotion to align myself with the Broad Differentiation strategy and improve the customer survey scores. I had come across a tutorial that pointed me towards the balanced scorecard and made modifications to bring my balanced score card up from a 63 to a 98. When it came to production, my forecasts told me that I would only need a certain amount of product, and the capacity looked like it could meet the forecasted demand. However, what I hadn't considered was how the marketing I selected in round one was going to affect my immediate forecasting. In order to finance the production upgrades I wanted, I borrowed mostly short-term debt and stocks, but I also utilized bonds as needed. The result of my forecasting was that I experienced a stock out, and the end results of my finance funding was a lower-than-average stock price (Capsim Management Simulations, Inc., 2021).

To get better within the subsequent rounds I committed myself to watching roughly 20-24 hours of CAPSIM videos to try to get a better grasp of what I was doing in CAPSIM. Two of the best video's I'd seen on CAPSIM surrounded calculations involving forecasting and R&D design. The forecasting video showed me an example of how to build out a spreadsheet to gain a good understanding of your best case and worst case scenarios for my low-tech and high-tech market segment products (Profgarrett, 2016). The R&D design video showed me an example of how to build a spreadsheet to allow you to calculate the optimal performance and size for my product (Jahilo, 2019).

Some of the major takeaways I had from a prior Six Sigma course were that in order to coordinate a successful project extreme care needs to be taken during the first three stages of

DMAIC. If you haven't developed a proper problem statement based on the customer's need it will drive you further and further down a rabbit hole. However, if you start off a project by asking the right questions: What is the actual problem? What does success look like for the customer? What does success look like for the stakeholders involved in the process? Do we have the data necessary to measure the problem? Once we have the data, is there a better way to analyze it? What causes can potentially derail the process? How can we best solve the problem and avoid negative impacts? These questions help us gain a better sense of where the gaps exist, what the customer ultimately hopes to accomplish, and how we can best accomplish that goal. However, the success of the project ultimately resides with leadership.

Some of the major takeaways I had in my Operations Management course were that in order for a business to remain sustainable it needs to focus on the triple bottom line. This was keyed in on within the Ethical, Social, and Global considerations. Regarding the takeaway I had from my Managerial Accounting course I had learned in this course how to price my products so that I was taking variable and fixed costs into consideration, but also providing a fair price for my customers. As a result, these two courses helped me greatly throughout the course of this final in terms of the level of detail I was able to get into surrounding the choices that were made throughout this CAPSIM simulation. Going forward eventually I would like to run my own business and this course has been a huge eye opener for me in terms of how I can best lead and manage my future organization.

References

- Capsim Management Simulations, Inc. (2021). 12 Six Basic Strategies - Broad Differentiator. Retrieved from <https://ww2.capsim.com/guides/foundation2013/the-guide/12-six-basic-strategiesbc9c.html>
- Capsim Management Simulations, Inc. (2021). Foundation® FastTrack. Retrieved from https://ww3.capsim.com/student/portal/index.cfm?template=reports.reports.annualNewspaper_2004
- Capsim Management Simulations, Inc. (2021). Introductory Lesson. Retrieved from <https://ww3.capsim.com/student/portal/index.cfm?template=gettingStarted.IntroductoryLesson>
- Dynamic Dune. (2019). Capsim - Balanced Scorecard Overview. Retrieved from <https://www.youtube.com/watch?v=ngdQsXHPkjc>
- Hayes, A. (2021). Shareholder Value Definition. Retrieved from <https://www.investopedia.com/terms/s/shareholder-value.asp>
- HSG University of St. Gallen. (2016). Little Green Bags: True Business Sustainability. Retrieved from <https://www.youtube.com/watch?v=AEFqUh4PMmI>
- Jahilo. (2019). CAPSIM - 1st Place Winning R&D Decisions (Beginner to Expert). Retrieved from <https://www.youtube.com/watch?v=Ew1NusMzDBE>
- Jahilo. (2019). CAPSIM - Marketing: Tips, Analysis & Strategy (1st Place). Retrieved from <https://www.youtube.com/watch?v=blddoEzrbeo>
- Kenton, W. (2021). Strength, Weakness, Opportunity, and Threat (SWOT) Analysis. Retrieved from <https://www.investopedia.com/terms/s/swot.asp>

Profgarrett. (2016). Capsim Forecasting: How many units do we make? Retrieved from

<https://www.youtube.com/watch?v=SEmZF5ss4qM>

Quickbooks.com. (2021). What is a Business Performance Report? Retrieved from

<https://quickbooks.intuit.com/ca/resources/finance-accounting/what-is-a-business-performance-report/>