

Ferris Final Presentation

Robyn Weber, Griffin Feldman, Francine Oflas,
Jennifer Kwok, and Reilly Dicker



Our Mission

We create technology that advances your community, one piece of metal at a time.

Our Vision

By repurposing our product line to finely cater to our clients, we allow our customers to access the peak of sensor technology.

Our Values

We believe in high performance, smaller size, and efficiency. We care about making our company an enjoyable place to work and creating products that our customers are proud to own.

Overall Strategy and Results over six rounds

Niche Differentiator:

- ❖ Focus: High End, Performance, Size
- ❖ Retired two products to pour resources into remaining three

Overview of Our Five Year Plan:

- R&D
 - Focus for High end, Performance, and Size
- Manufacturing
 - Enhance plant utilization and invest in automation immediately
- Marketing
 - Price products according to varying customer values to capture 9 - 11% market share
- Sales
 - Pour into sales and promo budget to increase awareness and accessibility
- Finances
 - Focus on taking long-term debt to enhance long-term profits

PROFIT

HIGHEST VALUE:
\$4,185

RESULT:
\$(57,441,450.00)

WEIGHT: 20%

ROS

HIGHEST VALUE:
4.1%

RESULT:
(23.29)%

WEIGHT: 20%

STOCK PRICE

HIGHEST VALUE:
\$34.25

RESULT:
\$1.00

WEIGHT: 30%

MARKET CAP

HIGHEST VALUE:
\$68,000,000

RESULT:
\$2,191,984

WEIGHT: 30%

Selected Success Measures

Research and Development

Expected vs Actual Results

Our first goal was to have all the three products in the customer criteria buying range for product performance, size, and reliability by Year 5.

- Based on intended target segment for each product:
 - Fist = HIGH END, Foam = PERFORMANCE, Fume = SIZE

| | Round 1 | Round 2 | Round 3 | Round 4 | Round 5 | Round 6 |
|------|---------|---------|---------|---------|---------|---------|
| Fist | ✗ | ✗ | ✗ | ✓ | ✓ | ✓ |
| Foam | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ |
| Fume | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ |

- Round 3 and Round 4: Because of the revisions made to Foam and Fume during Round 1, these products fell off their targeted segment in the perceptual map.
- Able to make strategic R&D Revisions that put us back to the intended target segment and still reach our goal by Year 5!

Research and Development

Expected vs Actual Results

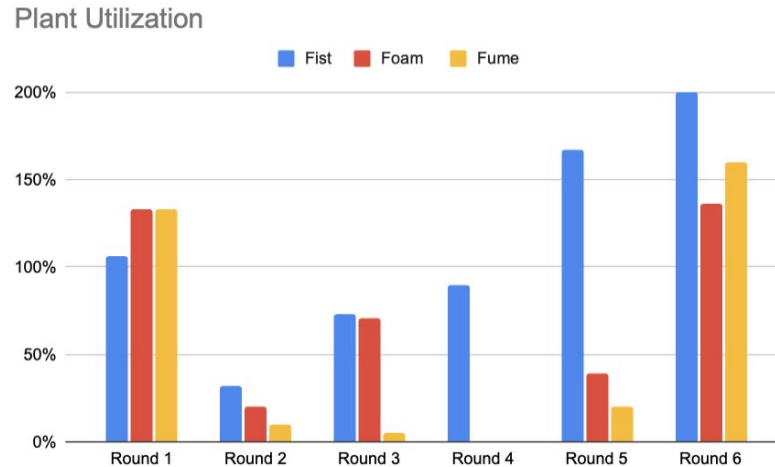
Our second goal was to keep the revision dates of all products to be within a year to ensure newly revised products are launched annually and age of product stays within Customer Buying Criteria.

- Customer Buying Criteria of Market Segment
 - 1) HIGH END: 0 Years - 29%
 - 2) PERFORMANCE: 1 Year - 9%
 - 3) SIZE: 1.5 Years - 29%
- ROUND 1 - Made R&D Revisions that took more than one year
 - Fist: Over 1 year
 - Foam: Over 2 years
 - Fume: Over 2 years
- By ROUND 4 - Ensured all remaining R&D Revisions only spanned ONE YEAR
 - Maintained One Year R&D Revisions

Manufacturing

Expected vs Actual Results

- Our first goal was to enhance our plant utilization to between 80 and 90% for each product.



- Our second goal was to increase automation to 6 for all three products by year 5 and continuing to increase gradually after. We did not meet that goal.

Marketing

Expected vs Actual Results

ROUND 1: We we aimed to put all of our products in high end following the niche differentiator strategy (not realizing there was a performance & size had their own categories).

ROUNDS 2 & 3: We realized we actually wanted Fist in high end, Foam in performance, and Fume in size and started gradually adjusting the price to the correct range

ROUNDS 4-6: All three products were near the customer buying criteria range. We priced them on the higher end because our customers did not place high value on the price of the product.

In the end, we exceeded our goal of reaching a net profit of \$800. By Round 6 we had a net profit of \$3,531!

Market Share (2022-228)

Round 1: 5.9% - 7.1%

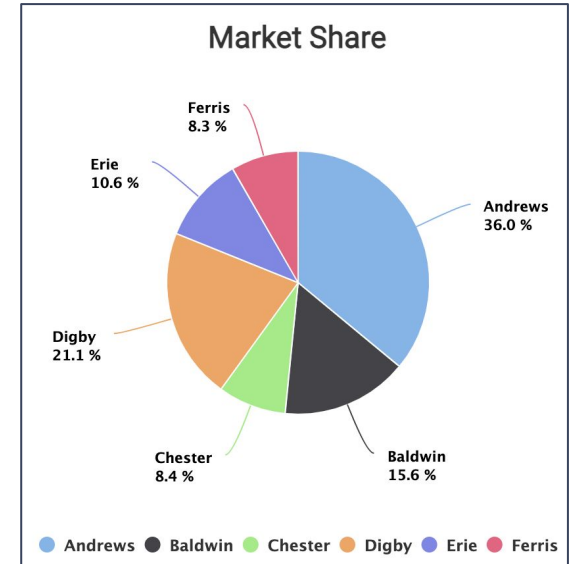
Round 2: 4.3% - 5.4%

Round 3: 3.1% - 3.9%

Round 4: 3.5% - 4.7%

Round 5: 4.1% - 5.6%

Round 6: 6.4% - 8.3%



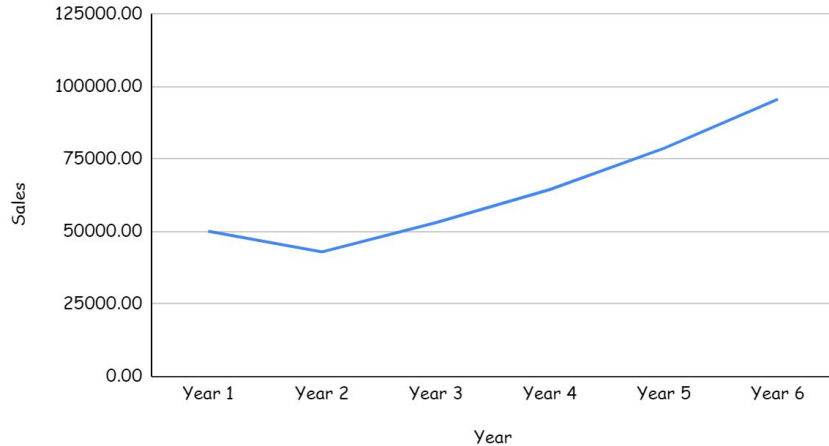
While we did not reach our goal of 9%, it is clear if our company's value continues to grow at this rate, we will shortly obtain it.

Sales

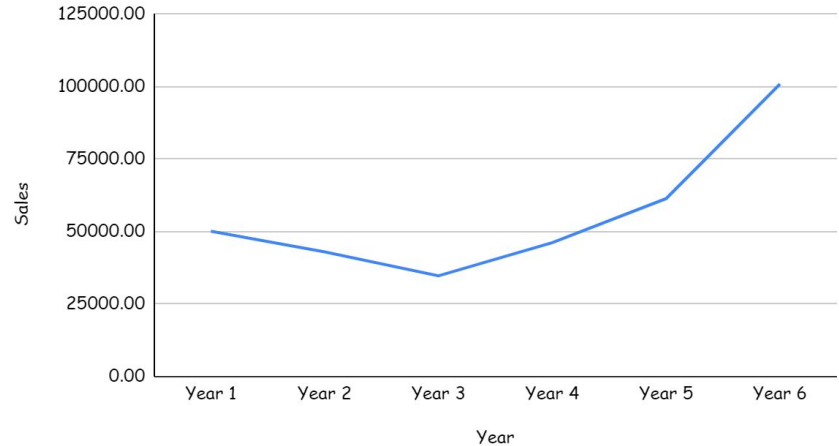
Expected vs Actual Results



Projected Sales



Actual Sales

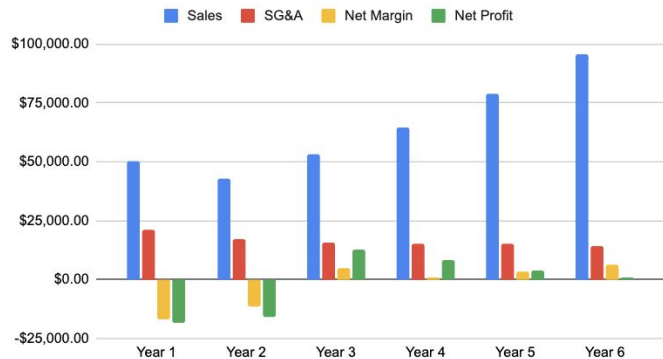


| SALES | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|----------|----------|----------|----------|----------|----------|-----------|
| Expected | 50163.00 | 43017.00 | 53126.00 | 64548.08 | 78748.66 | 95679.53 |
| Actual | 50163.00 | 43017.00 | 34772.00 | 46230.00 | 61411.00 | 100907.00 |

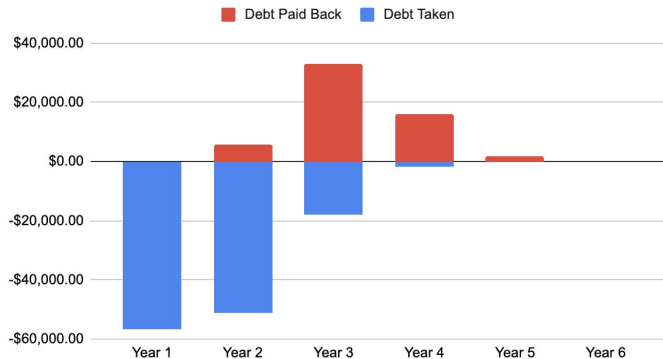
Financial Plans

Expected vs Actual Results

Expected Financials



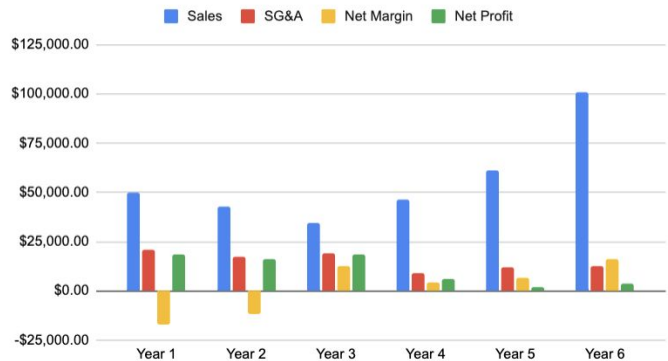
Longterm Debt Payback Structure - Expected



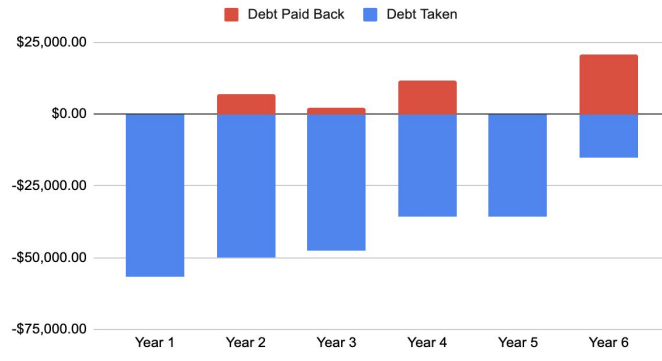
When creating our five-year plan, we didn't account for a robust loan payback structure and were stuck with limited growth as a result.

Ideally, our net margin should have grown more stable allowing us to not only be more liquid, but to be debt free.

Actual Financials



Longterm Debt Payback Structure - Actual



Year 1 (2023)

Research & Development

| | Size | Perform. | MTBF | Revision Date |
|-------------|------|----------|--------|---------------|
| Fist | 9.8 | 2 | 22,500 | 10-June-2024 |
| Foam | 9.8 | 2 | 22,500 | 21-May-2025 |
| Fume | 9.8 | 2 | 21,500 | 18-June-2025 |

Marketing

| | Price | Sales Budget | Promo Budget |
|-------------|---------|--------------|--------------|
| Fist | \$33.75 | \$2,500 | \$3,000 |
| Foam | \$33.00 | \$2,500 | \$3,000 |
| Fume | \$33.00 | \$2,500 | \$3,000 |

Production

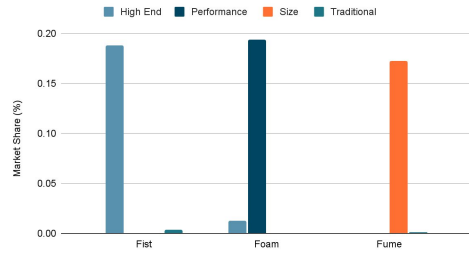
- Increase automation and capacity for ALL THREE plants
- Produced above forecasted units: 800-900 units per product

Finance

- Stock Issued: \$10,000
- Bond Issued: \$15,000

| | Accessibility | Awareness |
|-------------|--|--|
| Fist | 37% Traditional, 66% High End | 81% Traditional, High End |
| Foam | 37% Traditional, 66% High End , 56% Performance | 79% Traditional, High End, Performance |
| Fume | 59% Size | 79% Size |

Market Share Per Product



- ◆ Traditional: 0.7%
- ◆ High End: 20.20%
- ◆ Performance: 19.40%
- ◆ Size: 17.3%
- ◆ Stock Price: \$1
- ◆ Long revision dates

Year 2 (2024)

Research & Development

- We kept the same size and performance that we had chosen in round 1 (**P: 9.8, S: 10.2**) for all of our products because they could not be adjusted due to round 1's changes taking longer than a year.

Marketing

| | Price | Sales Budget | Promo Budget |
|-------------|---------|--------------|--------------|
| Fist | \$38.00 | \$3,400 | \$1,750 |
| Foam | \$30.50 | \$2,200 | \$1,400 |
| Fume | \$34.00 | \$2,550 | \$1,450 |

| Accessibility | | Awareness | |
|--|--|-------------------------------------|--|
| 84% in high end | | 96% in high end | |
| 27% in traditional, 67% in performance | | 87% in traditional, 87% in high end | |
| 73% in size | | 88% in size | |

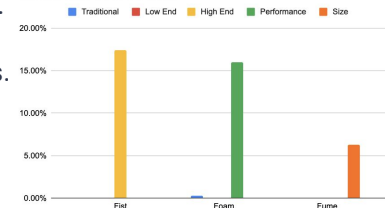
Production

- We produced much more than we sold so we did not stock out of any products and had lots of sensors to carry into 2025 (177 Fist, 162 Foam, 176 Fume).

Financials

- We did not issue any stocks or bonds.
- We had a \$5,904 emergency loan.
- We spent \$5,000 on human resources.

Market Share Per Product



Year 3 (2025)

R&D

- Foam and Fume's R&D still could not be corrected because the changes we made in round 1 were still incomplete. We did, however, increase the performance and decrease the size for Fist .

Marketing

| | Price | Sales Budget | Promo Budget |
|------|---------|--------------|--------------|
| Fist | \$38.00 | \$4,000 | \$1,750 |
| Foam | \$31.25 | \$4,000 | \$1,800 |
| Fume | \$33.25 | \$4,000 | \$1,750 |

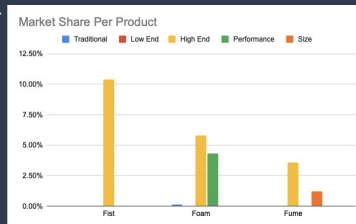
| Accessibility | Awareness |
|--|--|
| 100% in high end | 100% in high end |
| 26% in traditional, 100% in high end, 92% in performance | 100% in traditional, 100% in high end, 100% in performance |
| 26% in traditional, 100% in high end, 97% in size | 100% in traditional, 100% in high end, 100% in size |

Production

- Our products did not stock out.
- We decreased our capacity significantly.
- We increased Fume's automation by 0.5.

Finance

- We retired \$100 of stock and \$2,200 of bonds.
- We spent \$6,000 in human resources.
- We had a \$1,008 emergency loan.



Year 4 (2026)

R&D

- We are still trying to get Foam & Fume into the correct segment by adjusting size and performance
- We also maximized reliability in Foam since it was highly valued by customers, and slightly decreased it in Fume

Marketing

- We slightly decreased price for Fume because it was not selling
- We significantly decreased the Promo Budget
- We also decreased the Sales Budget

Production

- We produced 0 units for Foam and Fume since we already had inventory not sold from Round 3

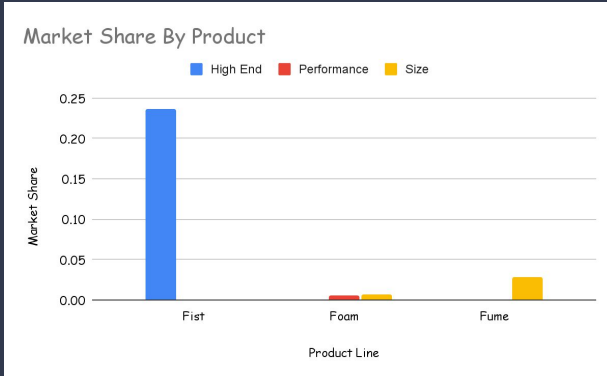
Financial

- Our stock remained at \$1.00

| Round 4: Actual Market Share in Units | | | | | |
|---------------------------------------|-------------|---------|----------|-------------|-------|
| Name | Traditional | Low End | High End | Performance | Size |
| Fist | 0% | 0% | 18.10% | 0% | 2.30% |
| Foam | 1.10% | 0% | 3.10% | 0% | 0.70% |
| Fume | 0% | 0% | 2.90% | 0% | 1.40% |

Year 5 (2027)

- ❖ Adjusted products to fit new customer buying criteria
- ❖ Updated unit sales forecast and produced more products
- ❖ Invested in CPI in Total Quality Management and Manufacturing and Sales in HR
- ❖ Issued \$5000 current debt
- ❖ Could not increase capacity or automation



Fist: 23.7%

Foam: 0.1%, 0.5%, 0.7%

Fume: 2.8%

Year 6 (2028)

R&D:

- Finished our products within their ideal Performance, Size, and Reliability

| Research and Development | | | |
|--------------------------|-------------|------|-------------|
| Name | Performance | Size | Reliability |
| Fist | 14.3 | 5.7 | 25,000.00 |
| Foam | 15.4 | 11.8 | 27,000.00 |
| Fume | 8.2 | 4.6 | 21,000.00 |

Marketing:

| Marketing | | | |
|-----------|------------------|--------|------------------|
| Year 5 | | Year 6 | |
| Name | Units Forecasted | Name | Units Forecasted |
| Fist | 1350 | Fist | 1550 |
| Foam | 250 | Foam | 950 |
| Fume | 100 | Fume | 800 |

Production:

- Even though we were not able to increase capacity, we were able to work within our restraints and sold out both Foam and Fume

Finance:

- Our stock price remained at \$1.00 and we didn't produce enough revenue to pay off our long term debt

| Actual Market Share in Units | | | | | |
|------------------------------|-------------|---------|----------|-------------|--------|
| Name | Traditional | Low End | High End | Performance | Size |
| Fist | 0.00% | 0% | 18.50% | 0% | 0.00% |
| Foam | 0.00% | 0% | 0.00% | 17% | 0% |
| Fume | 0% | 0% | 0.00% | 0% | 14.70% |

Full Financials Summary

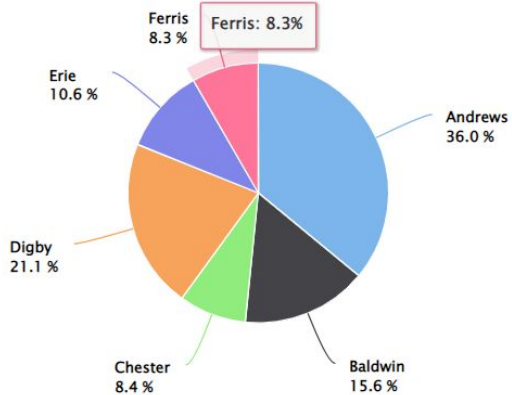
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|--|-----------------------|-----------------------|-----------------------|----------------------|----------------------|--------------------|
| Sales | \$ 50,163.00 | \$ 43,017.00 | \$ 34,772.00 | \$ 46,230.00 | \$ 61,411.00 | \$ 100,907.00 |
| VARIABLE COSTS | | | | | | |
| Total Variable Costs (Labor, Material Carry) | 40,028.00 | 30,955.00 | 24,452.00 | 29,138.00 | 39,332.00 | 68,969.00 |
| Contribution Margin | 10,135.00 | 12,062.00 | 10,319.00 | 17,092.00 | 22,080.00 | 31,938.00 |
| PERIOD COSTS | | | | | | |
| Depreciation | 6,167.00 | 6,167.00 | 3,313.00 | 3,313.00 | 3,313.00 | 3,313.00 |
| SG&A | | | | | | |
| R&D | 3,000.00 | 2,441.00 | 1,817.00 | 2,628.00 | 2,364.00 | 1,407.00 |
| Promotion | 7,500.00 | 4,600.00 | 5,300.00 | 4,200.00 | 4,200.00 | 4,200.00 |
| Sales | 9,000.00 | 8,150.00 | 12,000.00 | 1,800.00 | 5,100.00 | 6,100.00 |
| Admin | 1,455.00 | 2,185.00 | 288.00 | 633.00 | 558.00 | 925.00 |
| Total Period Costs | 27,122.00 | 23,543.00 | 22,718.00 | 12,574.00 | 15,535.00 | 15,945.00 |
| Net Margin | (16,987.00) | (11,480.00) | (12,399.00) | 4,518.00 | 6,545.00 | 15,993.00 |
| Other Expenses | 3,386.00 | 5,000.00 | 5,403.00 | 8,000.00 | 4,700.00 | 4,500.00 |
| EBIT | (20,373.00) | (16,480.00) | (21,982.00) | (3,482.00) | 1,845.00 | 11,493.00 |
| Interest Paid | 7,878.00 | 8,028.00 | 6,973.00 | 6,044.00 | 5,209.00 | 5,950.00 |
| Taxes | (9,888.00) | (8,578.00) | (9,854.00) | (3,334.00) | (1,178.00) | (1,940.00) |
| Net Profit | \$ (18,363.00) | \$ (15,930.00) | \$ (18,300.00) | \$ (6,192.00) | \$ (2,186.00) | \$ 3,531.00 |

Full Financials Summary

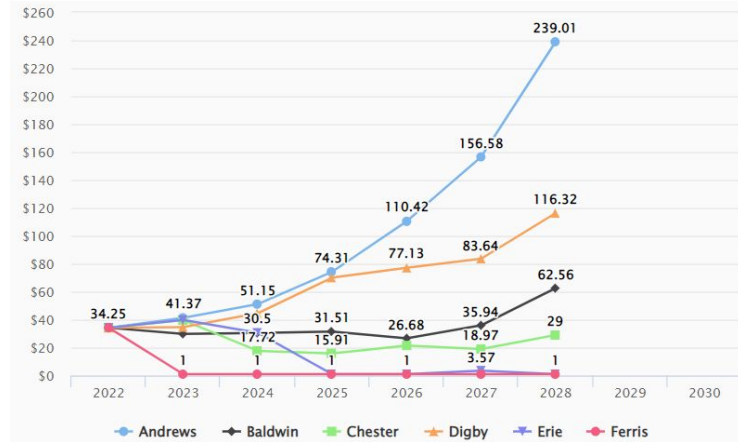
| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|-------------------------------------|--------------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Assets | | | | | | | |
| Current Assets | | | | | | | |
| | Cash | \$0 | \$0 | \$0 | \$7,149 | \$2,670 | \$0 |
| | Account Receivable | \$4,123 | \$3,536 | \$5,716 | \$7,600 | \$10,095 | \$16,587 |
| | Inventory | \$28,940 | \$16,506 | \$17,122 | \$3,416 | \$2,106 | \$10,410 |
| Total Current Assets | | \$33,063 | \$20,042 | \$22,838 | \$18,165 | \$14,871 | \$26,997 |
| Fixed (Long-Term) Assets | | | | | | | |
| | Plant and Equipment | \$92,500 | \$92,500 | \$49,700 | \$49,700 | \$49,700 | \$49,700 |
| | Accumulated Depreciation | -\$18,767 | -\$24,933 | -\$16,503 | -\$19,816 | -\$23,129 | -\$26,443 |
| Total Fixed Assets | | \$73,733 | \$67,567 | \$33,197 | \$29,884 | \$26,571 | \$23,257 |
| Total Assets | | \$106,796 | \$87,609 | \$56,035 | \$48,049 | \$41,442 | \$50,254 |
| Liabilities & Equity | | | | | | | |
| Liabilities & Equity | | | | | | | |
| | Accounts Payable | \$5,026 | \$1,359 | \$2,270 | \$1,482 | \$3,725 | \$7,498 |
| | Current Debt | \$5,495 | \$12,854 | \$1,008 | \$11,663 | \$5,000 | \$28,455 |
| | Long-Term Debt | \$56,700 | \$49,750 | \$47,513 | \$35,850 | \$35,850 | \$15,000 |
| Total Liabilities | | \$67,221 | \$63,963 | \$50,791 | \$48,995 | \$44,575 | \$50,953 |
| Owners' Equity | | | | | | | |
| | Common Stock | \$28,360 | \$28,360 | \$28,240 | \$28,240 | \$28,240 | \$28,240 |
| | Retained Earnings | \$11,216 | -\$4,714 | -\$22,994 | -\$29,186 | -\$31,373 | -\$28,939 |
| Total Owners' Equity | | \$39,576 | \$23,645 | \$5,246 | -\$946 | -\$3,133 | -\$699 |
| Total Liabilities and Equity | | \$106,797 | \$87,608 | \$56,037 | \$48,049 | \$41,442 | \$50,254 |

Competitor Analysis

Market Share



Stock Price



ANDREWS: killed it.
DIGBY: is strong.
BALDWIN: is solid.
ERIE: is good.
CHESTER: is getting there.
FERRIS: is trying their best.



Contingency Plans and Sensitivities

- In 2026, our market share was not between 9 and 11%, however we could not follow through with our contingency plan because the banks stopped granting us loans and we did not have the capital to introduce a new product.
 - In 2026 our profits were more than 10% above where we expected them to be, but we were still making negative profits and accumulating debt, so we could not pay off our long term debt.

Business Learnings

- ❖ Revision dates are very important!
- ❖ Emergency loans are bad.
- ❖ Performance and size are their own market segments.
- ❖ CAPSIM has six, not eight rounds.



Team Interaction

Our team worked together very well. Each person had unique strengths that contributed to our success. Everyone was happy to help one another.

