



# PRESENTATIONS

- Path to the Titan of Sensor Industry

ERIE – Team 5



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THE STAGE HAS BEEN SET  
go ahead and follow the basic 5 steps

1

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Strategies

2

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Paths to Success

3

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Learning from  
Pitfalls

4

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Metrics Results

5

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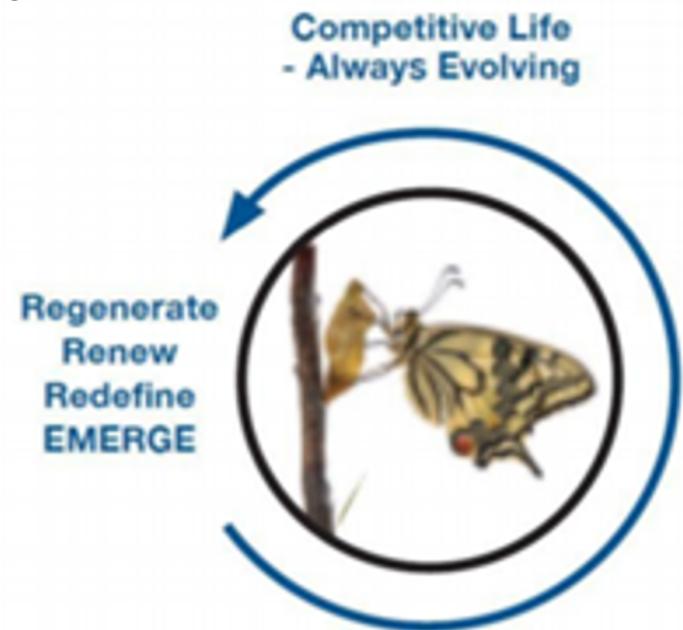
Summary

# Shaping Strategies to Win Business in a Competitive Market

- Conducting **industry research** to support decisions on price, size, MTBF production and other metrics.
- Analyzing the **competitors' behaviors and strategies**
- Combining with **data analytics** to make strategic decisions
- Incorporating **scenario analysis** to prepare for worse case

# Changing through Competition on Different Aspects

- Achieving Industry-leading position in **TQM** investments
- Introducing **new products** to diversify revenue streams
- Increasing **automation** to become niche cost leader
- Handling **HR issues** during salaries negotiation and  
**retiring long-term debts** when having sufficient cash



# Mapping the Process of Company Growth with Effective Metrics

Cumulative Profits

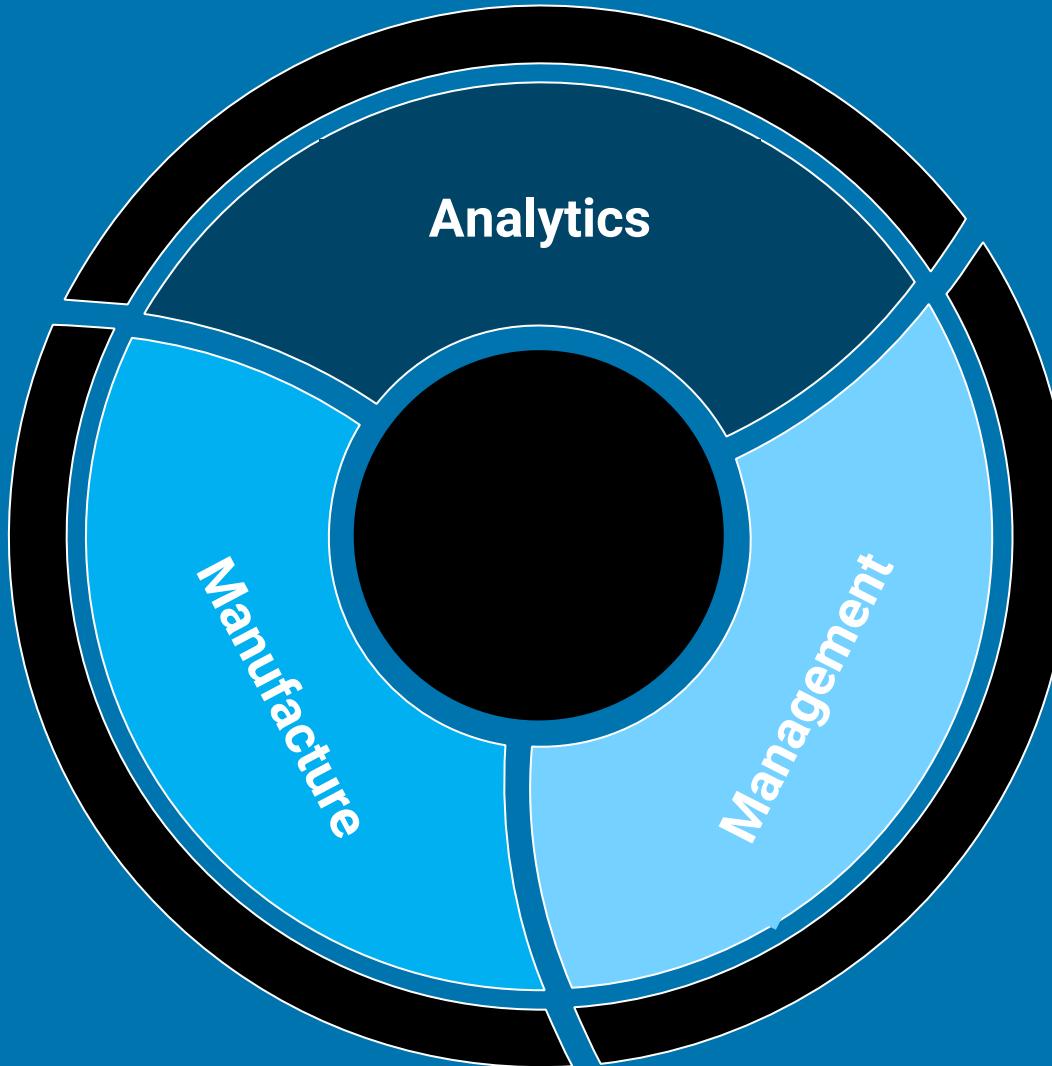
Ending Market Capitalization

Return on Equity

Return on Sales

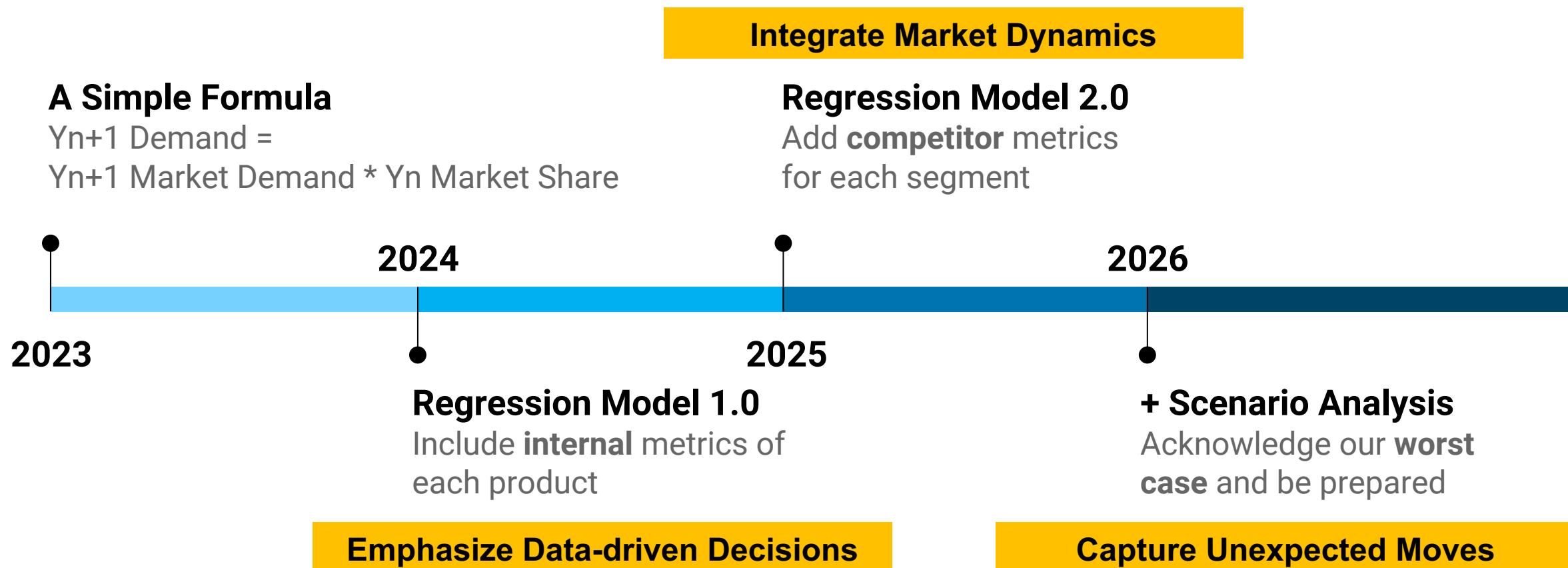
Comprehensive Measurements for Success

# Paths to Success

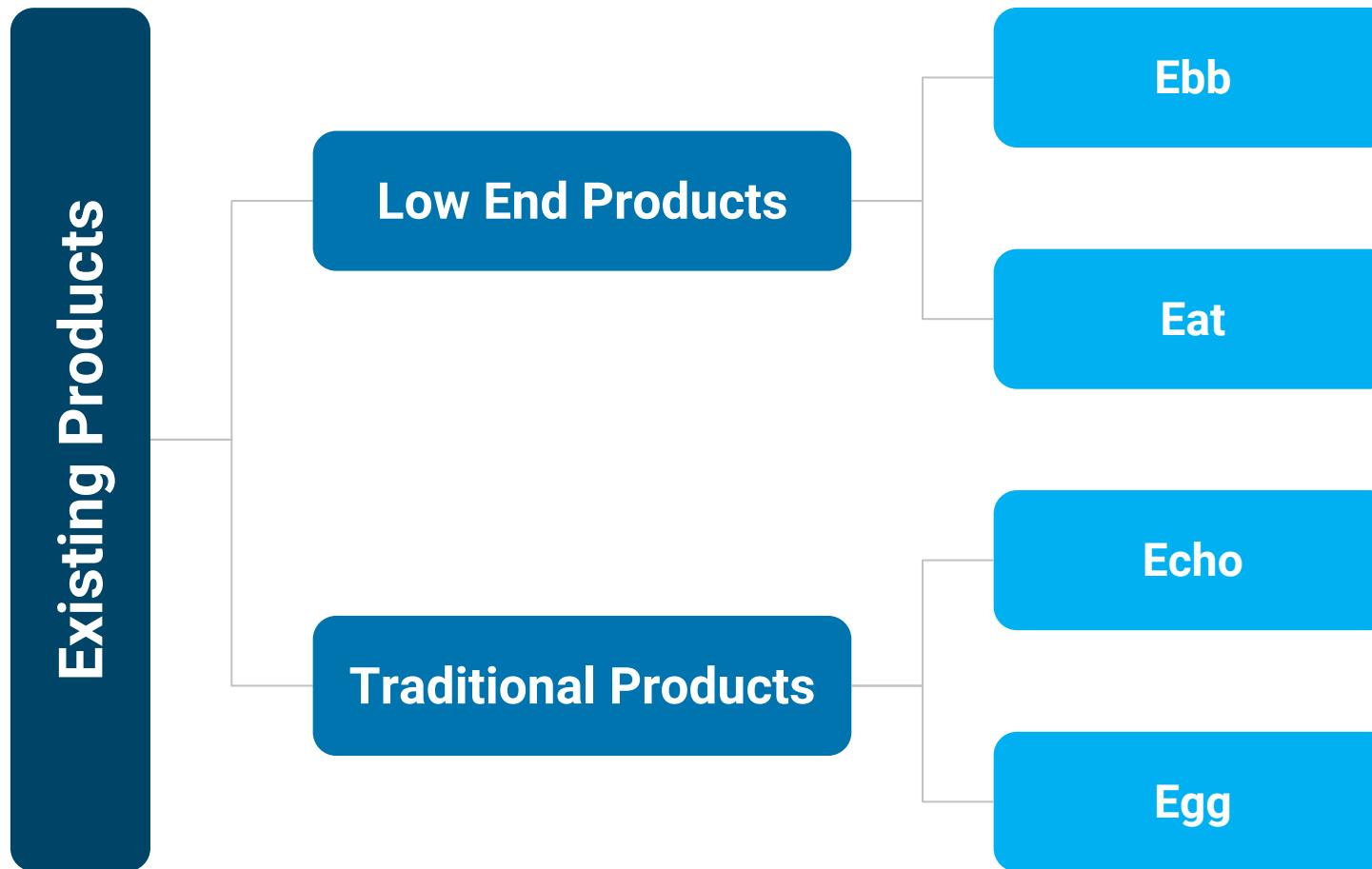


# Evolving Data Analytics Approach for Better Performance

Demand Prediction Method + Qualitative Analysis of Market = Final Production Schedule



# One Model Per Product Brings Higher Predictive Power



## Regression Model Formula

$450 - 317 * \text{Price} + 0,48 * \text{MTBF} - 19,47 * \text{Bead Price} + 0,03 * \text{Cedar Sales} + 1,19 * \text{Bead Sales}$

$7298 + 14822 * \text{Actual Market Share} - 1968 * \text{Potential Growth Rate} + 11884 * \text{TQM Demand Increase} - 401 * \text{Price}$

$-1953 + 28,16 * \text{Price} + 0,22 * \text{MTBF} - 2,32 * \text{Sales Budget} + 2 * \text{Bold Sales} - 2,3 * \text{Daze Sales}$

$12186 - 0,39 * \text{MBTF} - 5,18 * \text{Sales Budget} - 13,14 * \text{Bold Price} - 0,94 * \text{Bold Sales} - 0,23 * \text{Daze Sales} + 0,27 * \text{Egg Demand}$

# Best Model Didn't Come in One Step, and Required Fine Tuning

What are our inputs and output?

- Y: Next year demand
- Erie related Xs: Price, MTBF, TQM demand increase, market share, potential growth rate ...

**Top competitors related Xs:**  
Price, MTBF, unit produced, inventory, market share ...

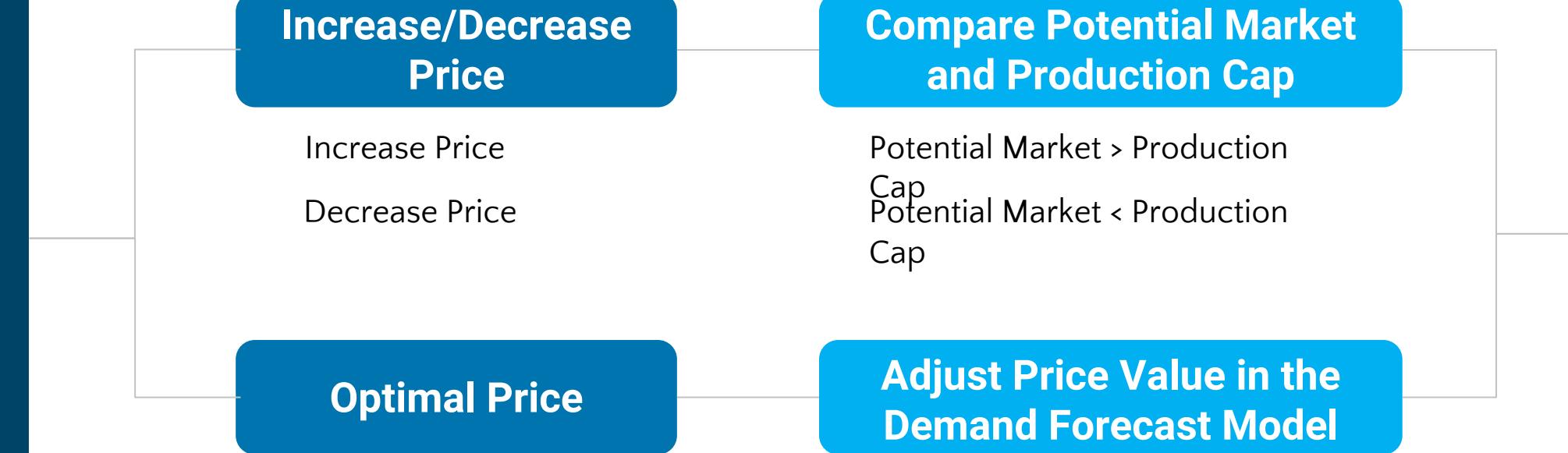
How to build the model?

- Ran the **full model**
- Selected **different combinations** of Xs and checked the results

What's the best model?

- Picked the model with the **least discrepancy** between actual potential Ys and predicted Ys

# Dynamic Pricing Strategy Supports Profit Optimization



# Sustainable Competitive Advantage is the Key

## Identify Product - Market Fit

- Focus on **Low-end and Traditional Market**
- Study the design of **other best-selling products** to keep pace with the market: reliability, age, ideal position

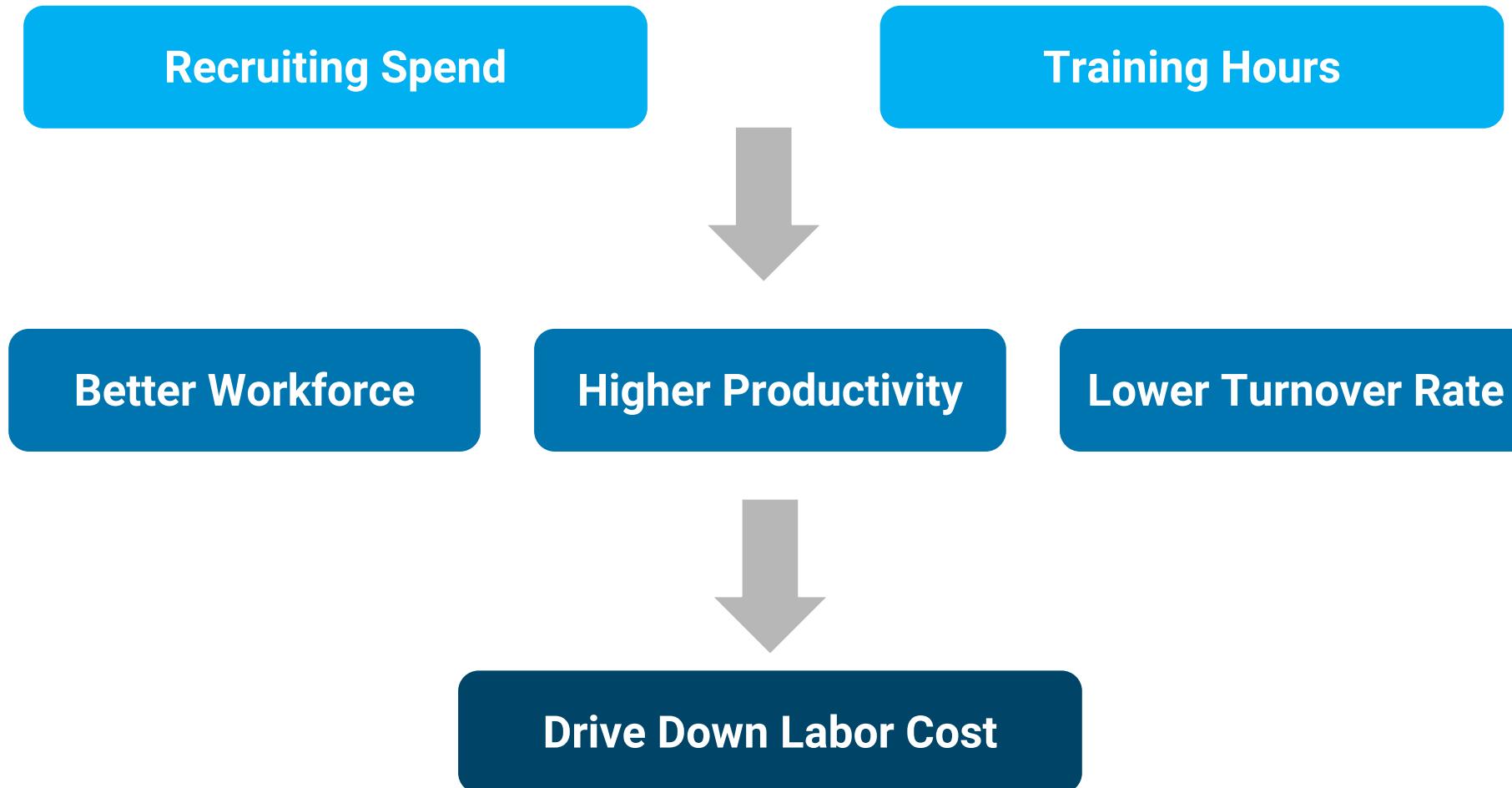
## Understand Our Competitive Strength

- **Price Advantage** in target market: we offered lower price
- Good starting point at **automation level**

## Make Move at Early Stage

- Further increase **automation level**
- Heavy investment in **TQM**
- Reduce cost to achieve **higher profit margin** with lower price charged

# Human Capital Investment Lowers Labor Cost



## Learnings from Pitfalls (Mistakes & Key Learnings)

- From New Product Launch Strategy Perspective
- From Production Capacity perspective

# Building New Products Needs More Comprehensive Analysis

New product Launch

Why is it not successful?

What we can improve?

- Aim to **diversify** the product portfolio by entering high end and size markets
- **Conducted ROI analysis** to **forecast** new product performance and believed that the new product will perform well
- Used **sensitivity analysis** to sell capacity at last round to save costs

- Overlooked the impact of **sales** and **promotion** budget on new product's demand
- Assumed similar pattern as existing product lines' performance

- Should've conduct more **comprehensive** analysis on new products' industry
- Should've build regression model based on **industry and competitors'** position

# Production Capacity Needs Planning Ahead

## Production Capacity Planning

- In early rounds, the products' demand were met and Erie's share in **low end and traditional markets** was significant
- In later rounds, we bought some portion of **capacity** for popular products
- We **also sold some capacity** for **new products** that do not have good sales performance

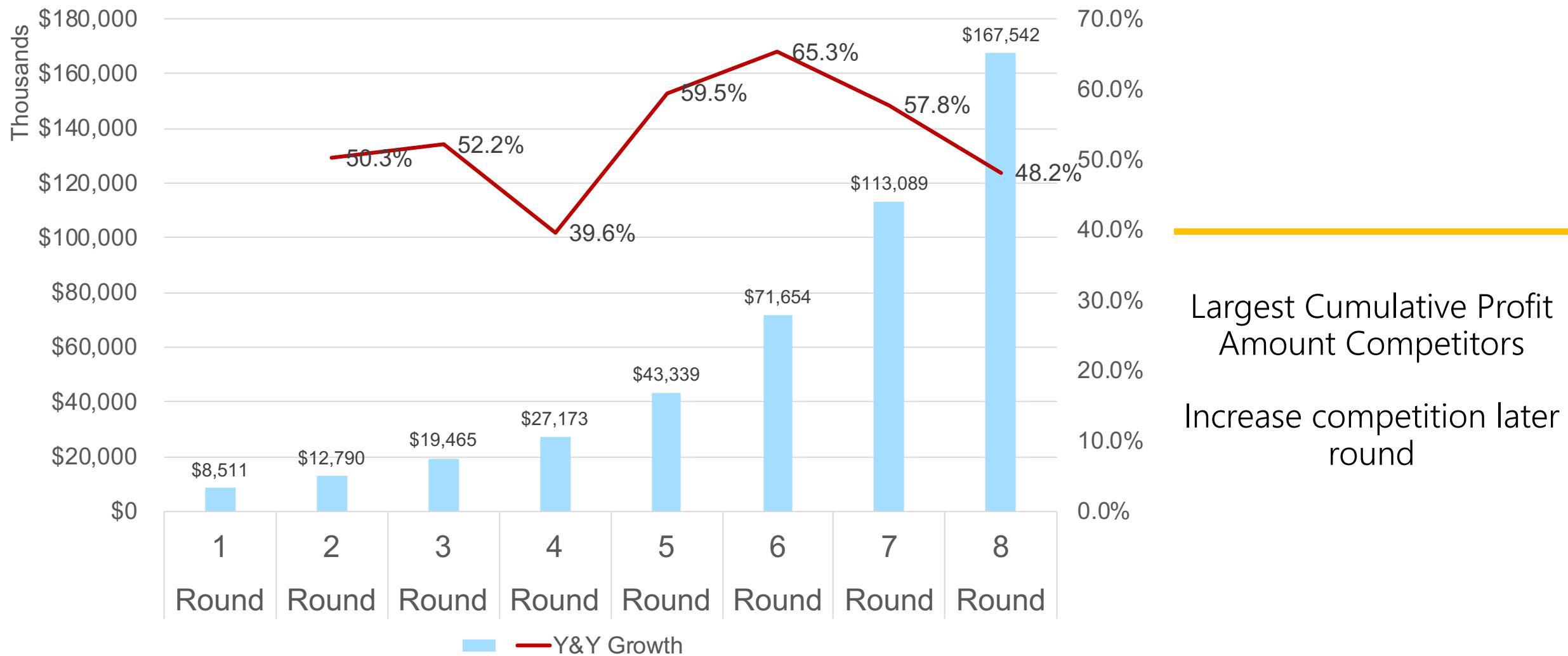
## Why is it not successful?

- **Did not expect the huge demand increase** of existing products due to **TQM effects**
- Buying capacity in 2nd shift cost a lot, preventing us from further reducing labor cost
- **Short in cash position** in later rounds to buy capacity

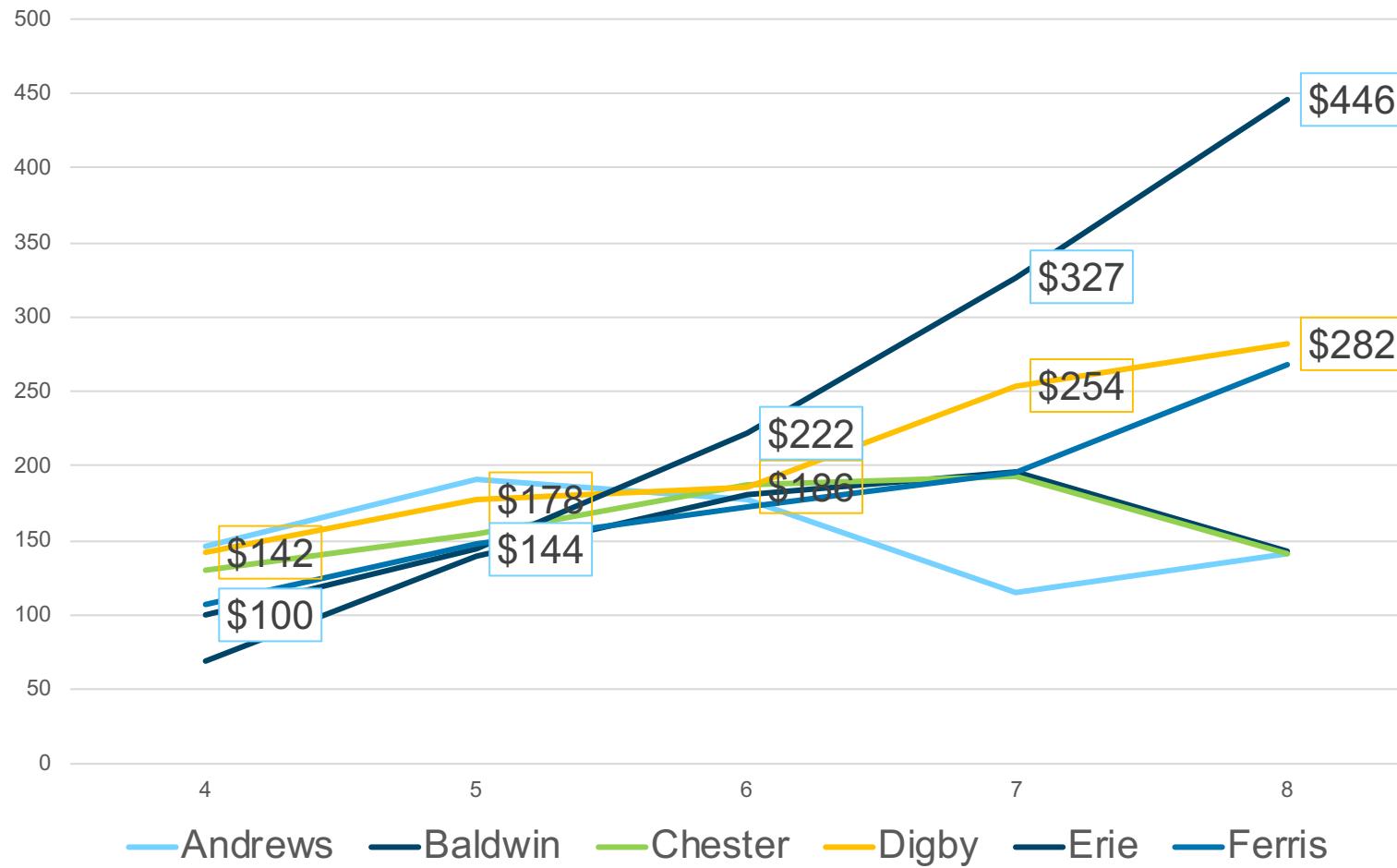
## What we can improve?

- Should've taken consideration of **TQM demand increase effects and anticipate** the **potential demand**
- Should've plan to purchase capacity in earlier rounds when we have sufficient cash

## Cumulative Profits

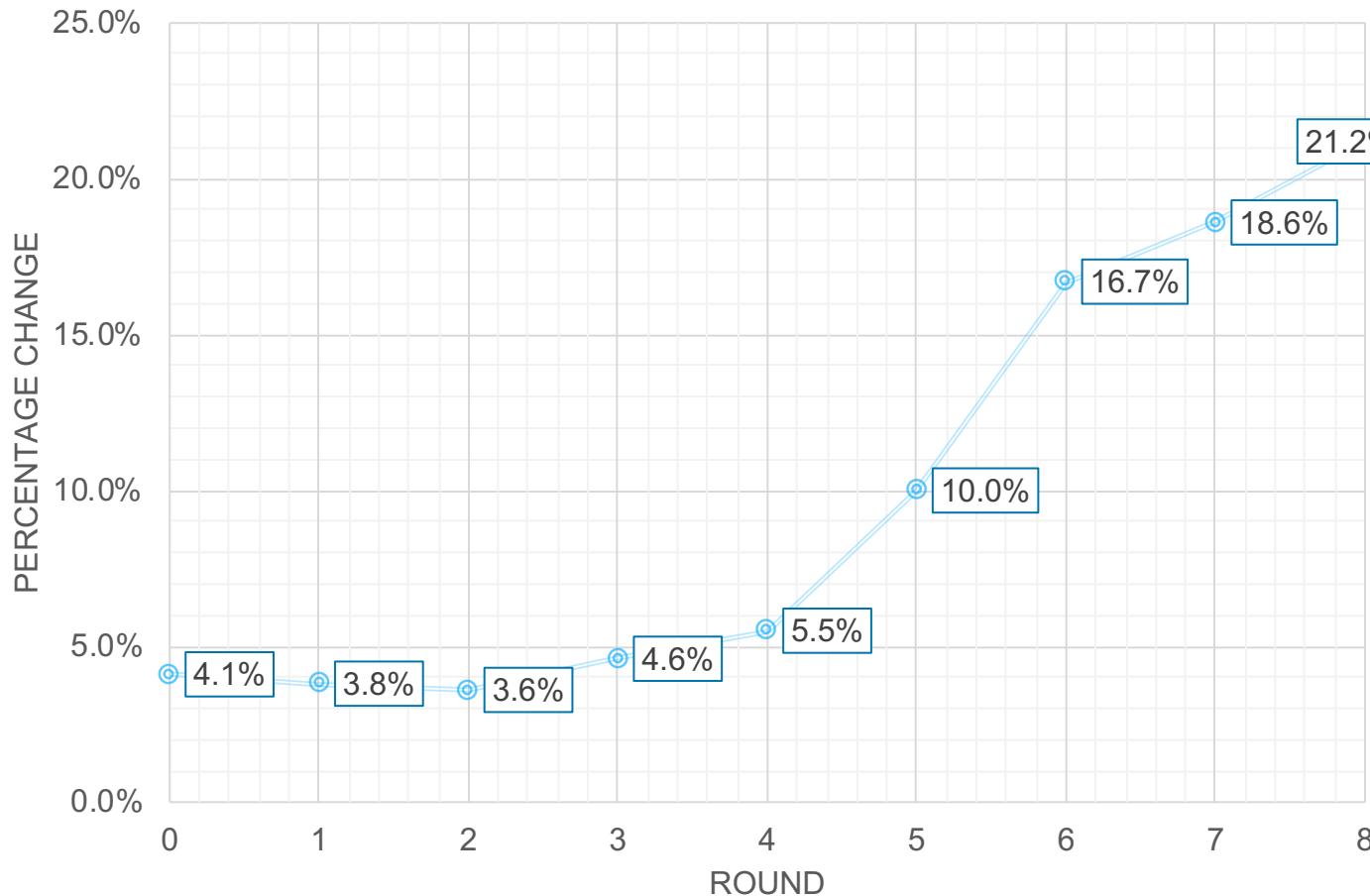


## Ending Market Cap (M)



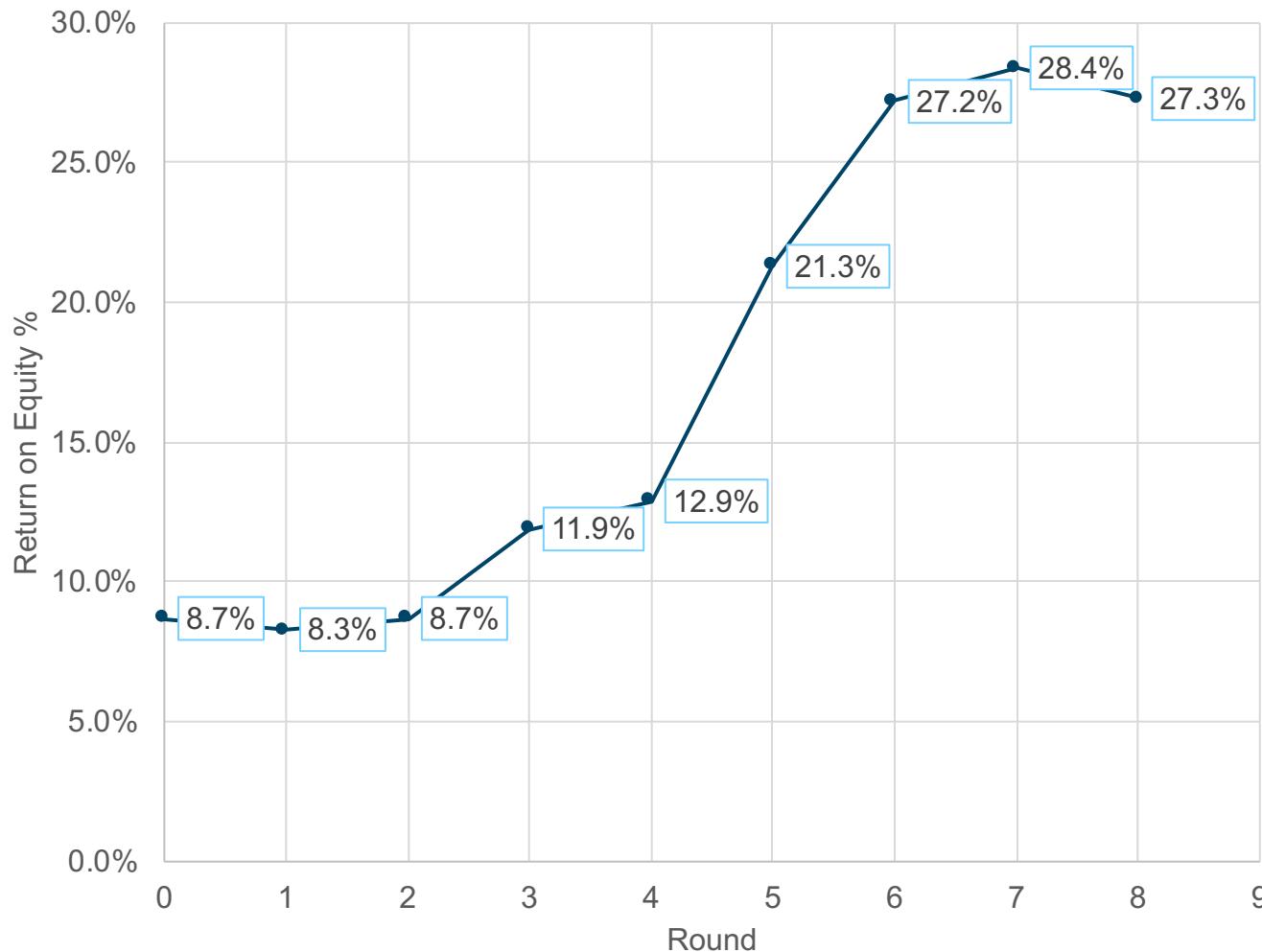
Highest Ending Market Cap  
Growing from 446% since  
round 4.

## Return on Sales



Round	Company	Growth
4	5.5%	20%
5	10.0%	82%
6	16.7%	67%
7	18.6%	11%
8	21.2%	14%

# Return on Equity



Round	Company	Growth
4	12.9%	8%
5	21.3%	65%
6	27.2%	28%
7	28.4%	4%
8	27.3%	-4%



LARGE CASH POSITION: \$46.7M



TOTAL ASSET: \$215,609



TOTAL LIABILITIES: \$16,4M

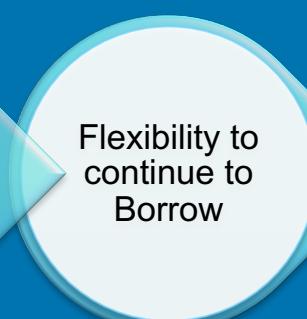


TOTAL EQUITY: \$199,201



ENDING STOCK PRICE: \$233.73

## WHAT IS THE FUTURE FOR OUR COMPANY?





# Appendix

Thank you

# Smart Teamwork Allocation

## Different Segments

- **Traditional**  
**Hongfa and Zhiyao**
- **Low-end**  
**Anyu and Yishi**

## New Products

- **Elk**  
**Victor**
- **Ezz**  
**Anyu and Yishi**

## Evolving with time

- **External Enhancements**  
such as TQM, Automation,  
Buying Capacities and HR .  
**Victor leads the team**

- Allocating different market segments to different teammates help us specifically gain the insights to certain markets and beat main competitors.
- Collaborating together for the external enhancements prevent biased decisions.