

# **INTUITIVELY SEGMENTATION FINDINGS**

**GROUP 2**

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# TOPICS FOR TODAY'S DISCUSSION

- Key Findings
- Exploratory Data Analysis
- Customer Segments
- Inventory Segments
- Next Steps

# KEY FINDINGS

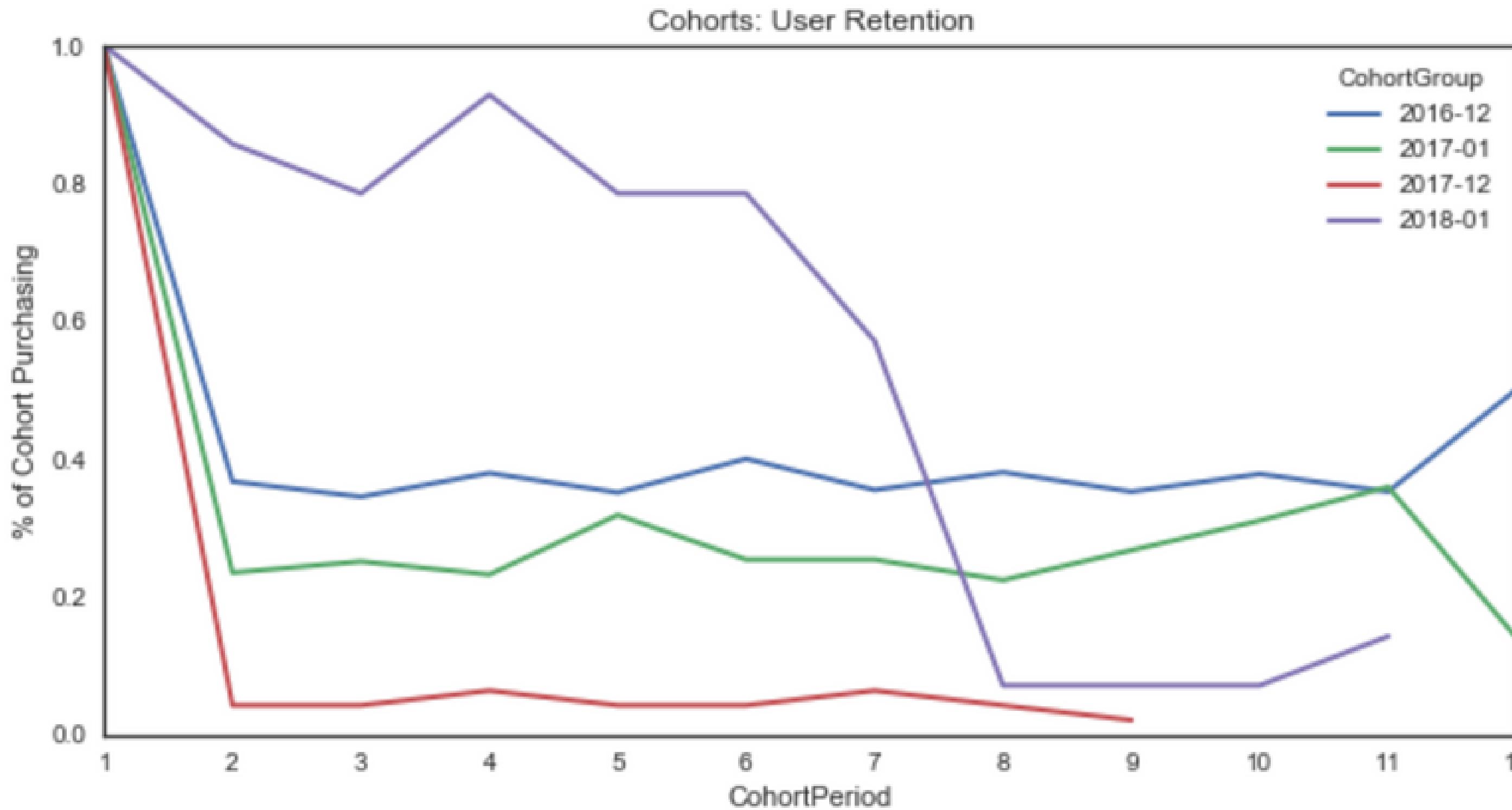
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CUSTOMER  
SEGMENTS

3

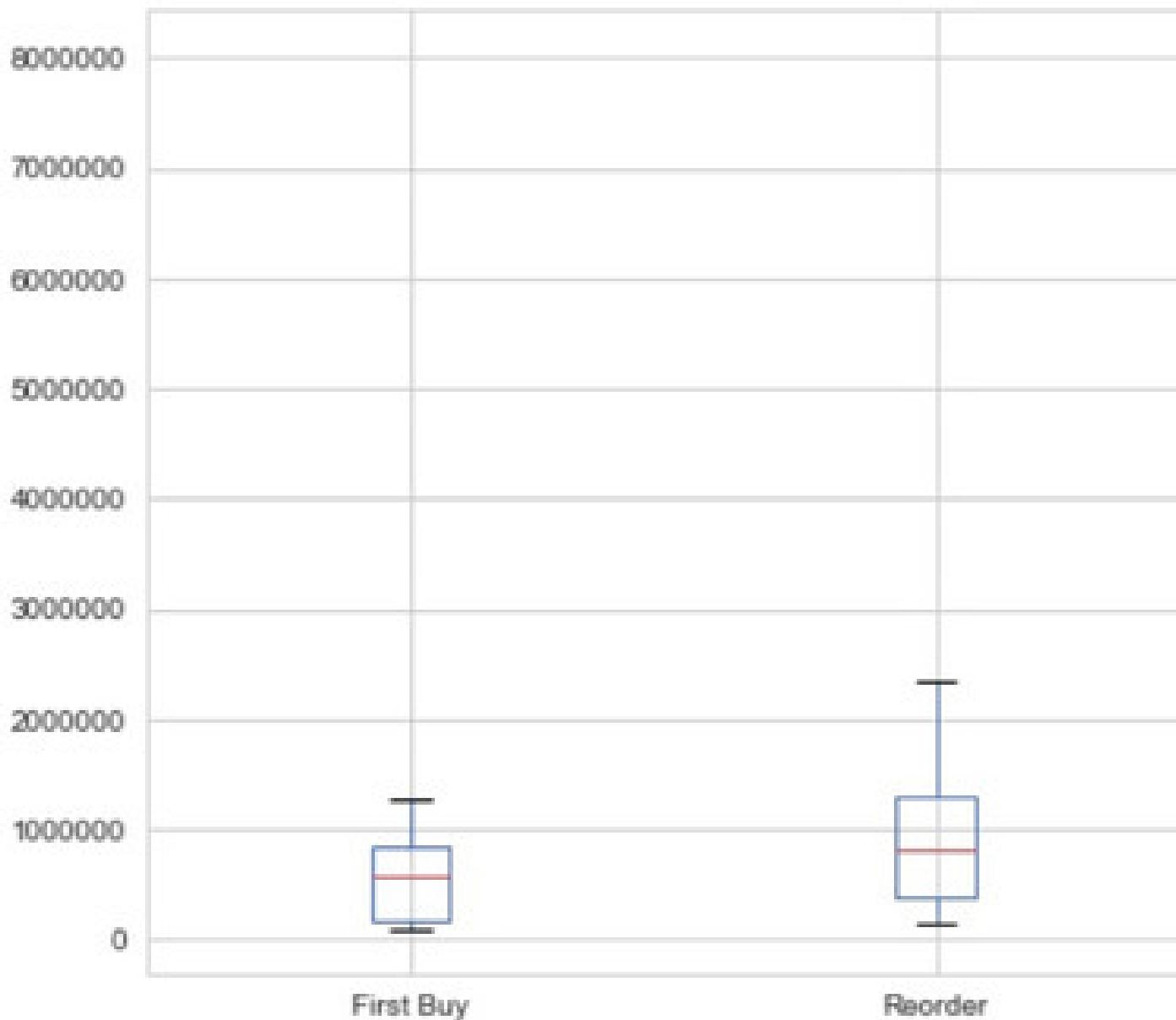
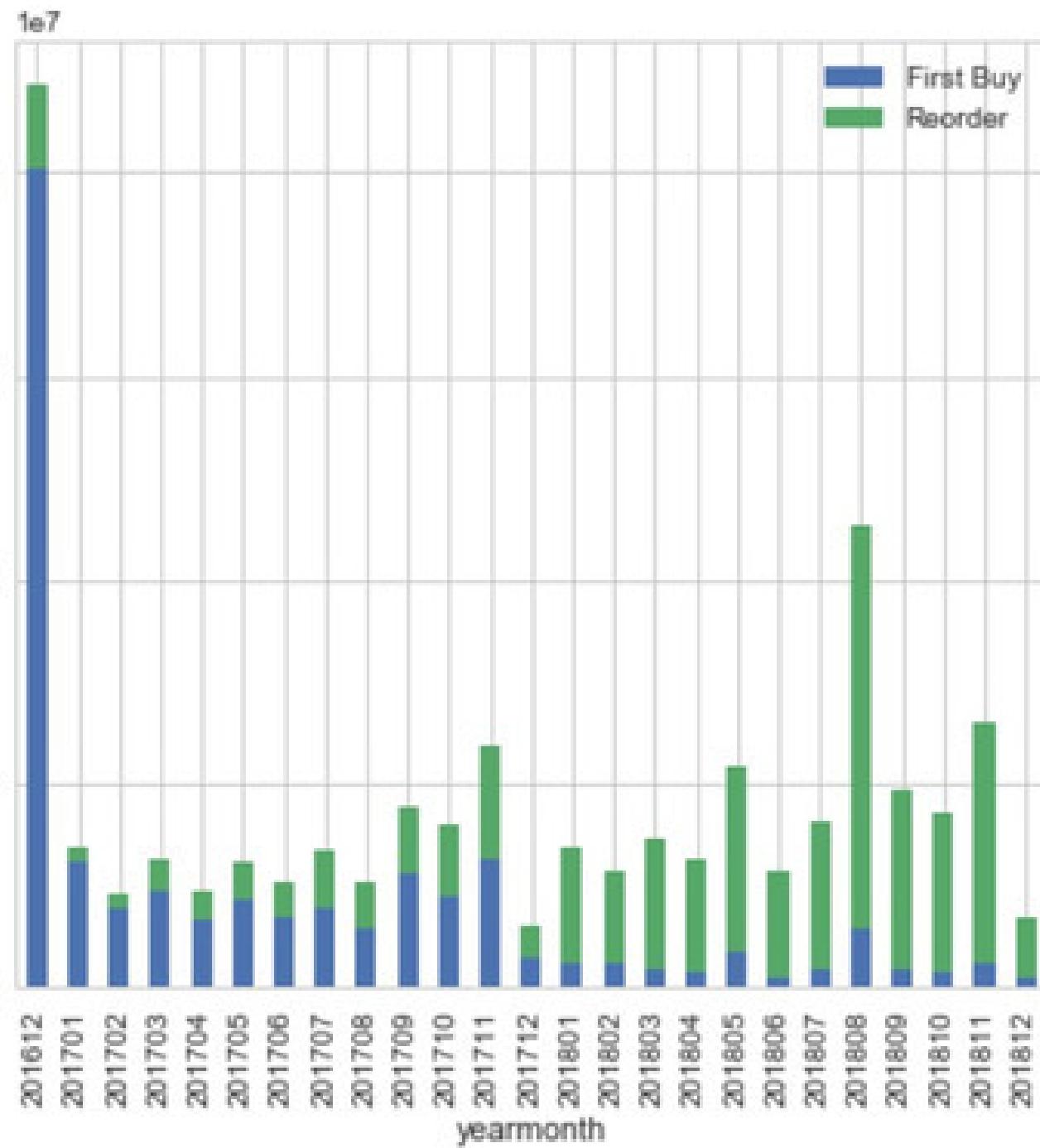
INVENTORY  
SEGMENTS

# EDA - INTUILIZE CUSTOMERS



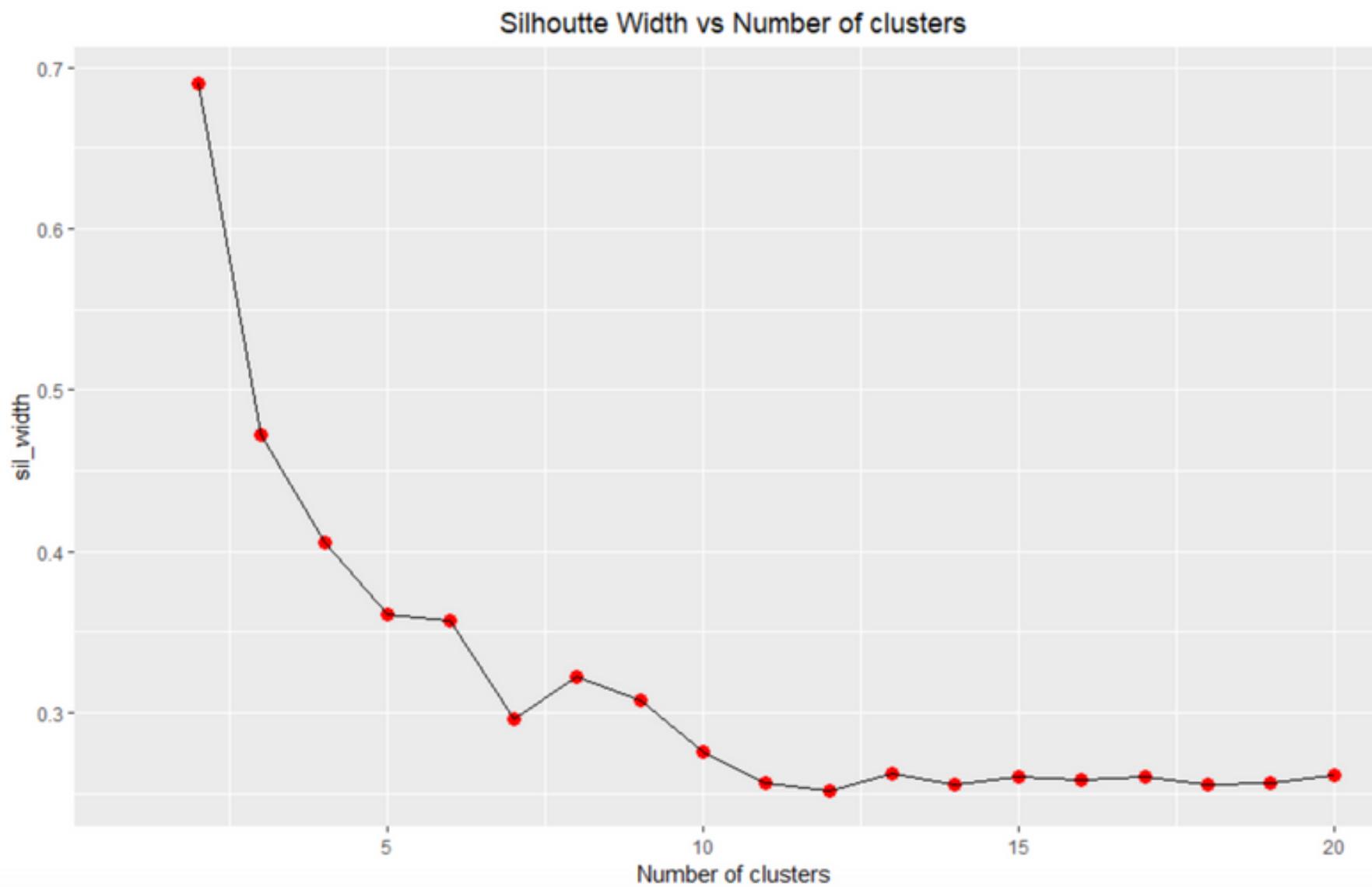
**Cohort Analysis:**  
Users during December 2016 have churned the least  
Requires further analysis to understand the difference in behavior

# EDA - INTUILIZE CUSTOMERS



- We see a drop in **first time customers**
- There may be an **awareness issue**

# CUSTOMER SEGMENTATION



We clearly see 5 distinct clusters

- Clustering Technique - Partitioning around medoids
- Criteria for no. of clusters - Elbow Plot of silhouette width

# CUSTOMER SEGMENTATION - 1st ITERATION\*

## Yacht Club

761 customers

58 avg. order/cust.

Avg. GM% : 28.2%

Last ordered: Nov. 4, 2018

## Prodigies

867 customers

106 avg. order/cust.

Avg. GM% : 11.5%

Last ordered: Dec. 22, 2018

## Bingers

48 customers

2,415 avg. order/cust.

Avg. GM% : 18.4%

Last ordered: Dec. 20,  
2018

## Latent

125 customers

891 avg. order/cust.

Avg. GM% : 14%

Last ordered: Dec. 19, 2018

## Lepers

2,341 customers

78 avg. order/cust.

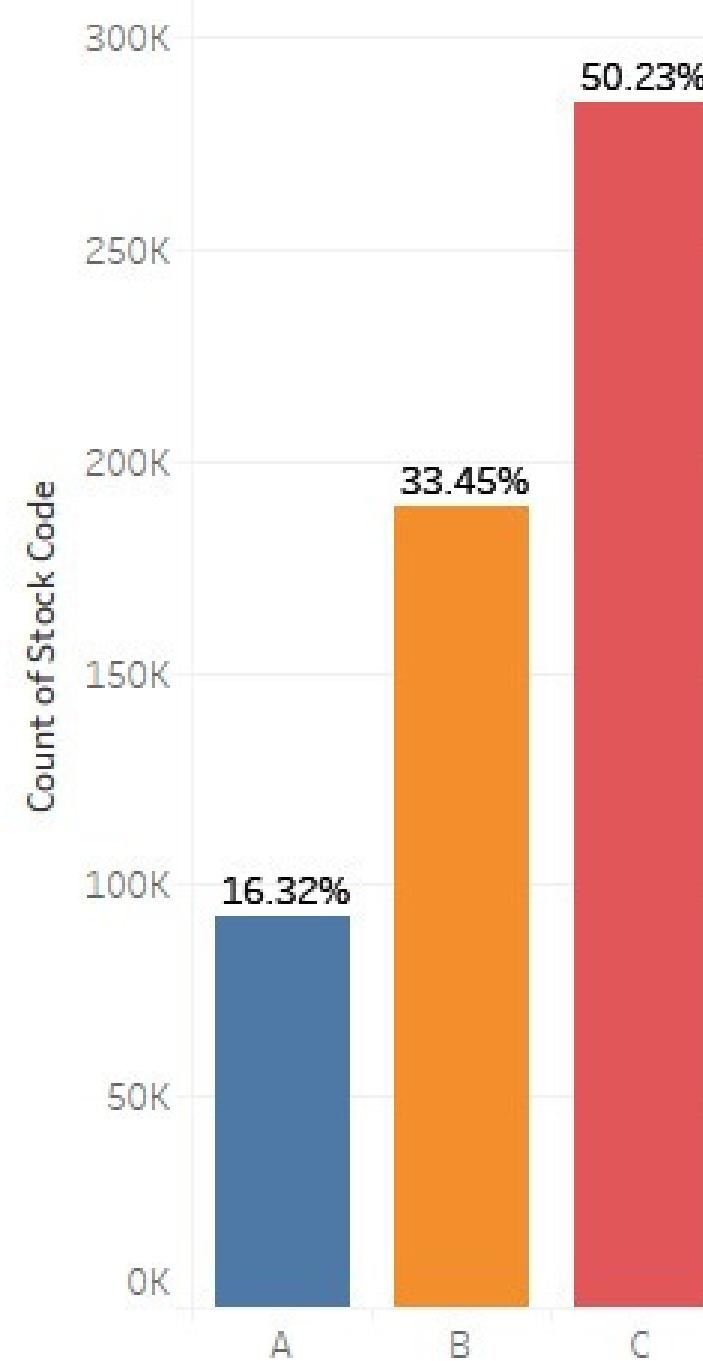
Avg. GM% : 4.5%

Last ordered: Apr. 24, 2018

\*This was the 1st iteration with PAM method. Later, we moved to RFM model to further segment\*

# INVENTORY SEGMENTATION - 1st ITERATION\*

Inventory Segments



**3 Inventory Segments**

**Methodology - Pareto's Principle**

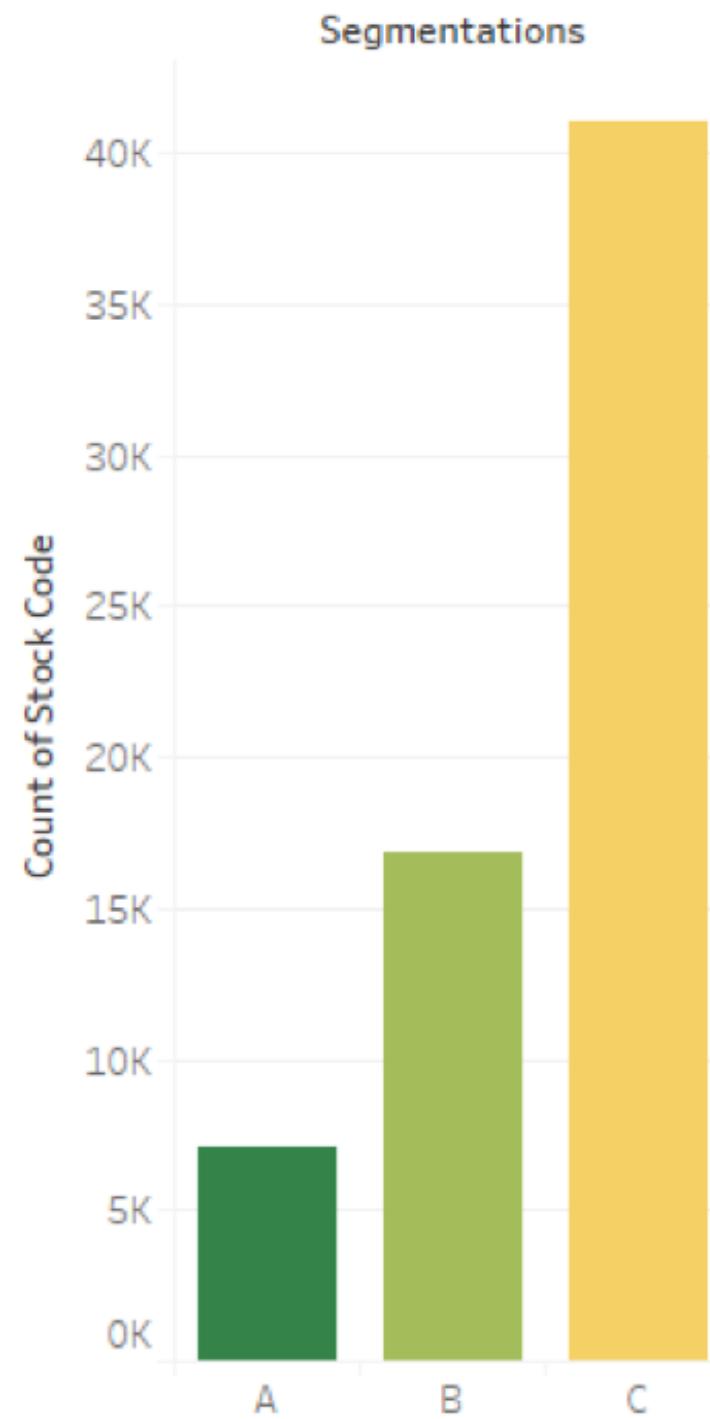
**Segments -**

- High Demand
- Medium Demand
- Low Demand

\*This was the 1st iteration with ABC method. Metrics used are Sales volume, Revenue, Profit Margin & Last Inventory Restock

# INVENTORY SEGMENTATION - 2nd ITERATION\*

Distribution of Inventory Segments



**3 Inventory Segments**  
**Methodology - Pareto's Principle**

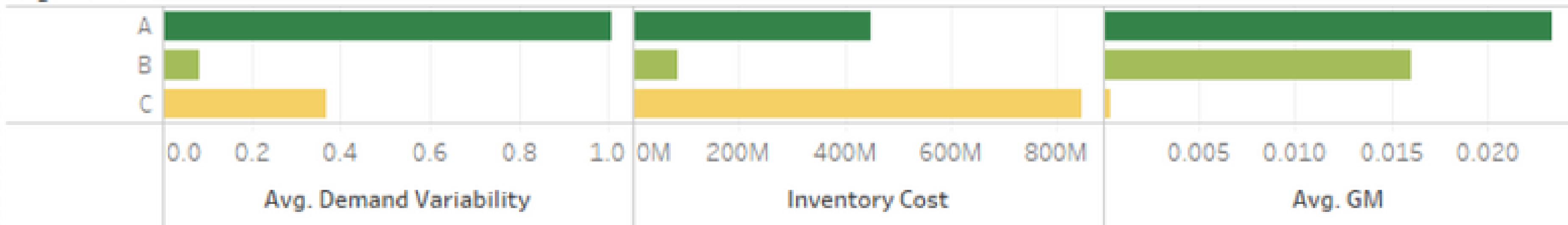
**Segments -**      A  
                          B  
                          C

Later, as per the feedback we redefined our metrics as GM%, inventory cost & demand variability to recreate our segment\*

# DISTRIBUTION OF METRICS FOR EACH INVENTORY SEGMENT- 2nd ITERATION\*

Demand Variability, Inventory Cost and GM Across Segments

Segmentati...



# NEXT STEPS

## 1. Customers -

- Research scoring techniques
- Extend the cohort analysis

## 2. Products -

- Investigate better segmentation techniques
  - ABC analysis with FCM clustering

## 3. Incorporate today's feedback

# **INTUITIZE CUSTOMER RANKING AND SCORING**

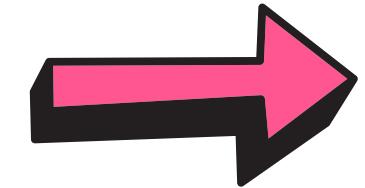
# FOR TODAY'S DISCUSSION

- Finding the Best measure to Score and Rank
- Customer Ranking
- Customer Scoring
- Future Prospects

# FINDING BEST MEASURE TO SCORE AND RANK THE CUSTOMERS

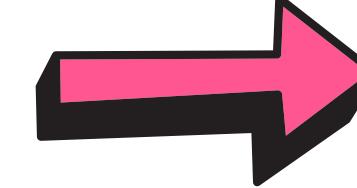
## STEP # 1

Forecasting  
Purchases Next  
Month



## STEP # 2

Customer Life  
Time Value  
Analysis



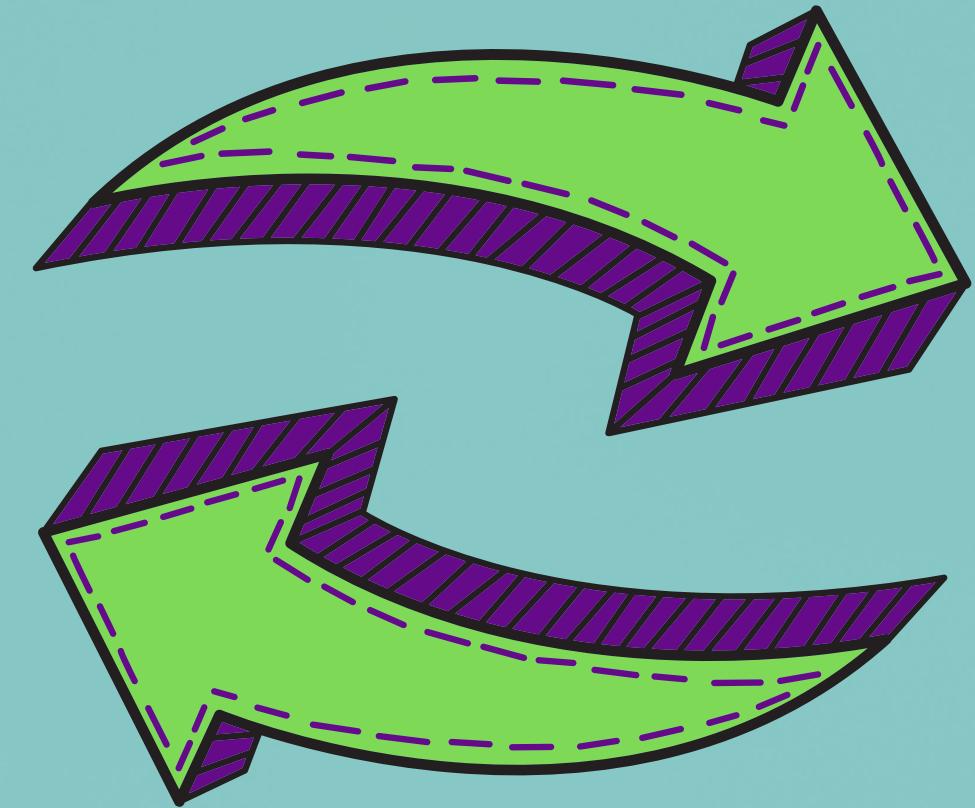
## STEP # 3

Expected  
Profit  
Generation



Best Measure to Rank & score

**EXPECTED  
PROFIT  
GENERATION**



**CUSTOMER  
SCORING**

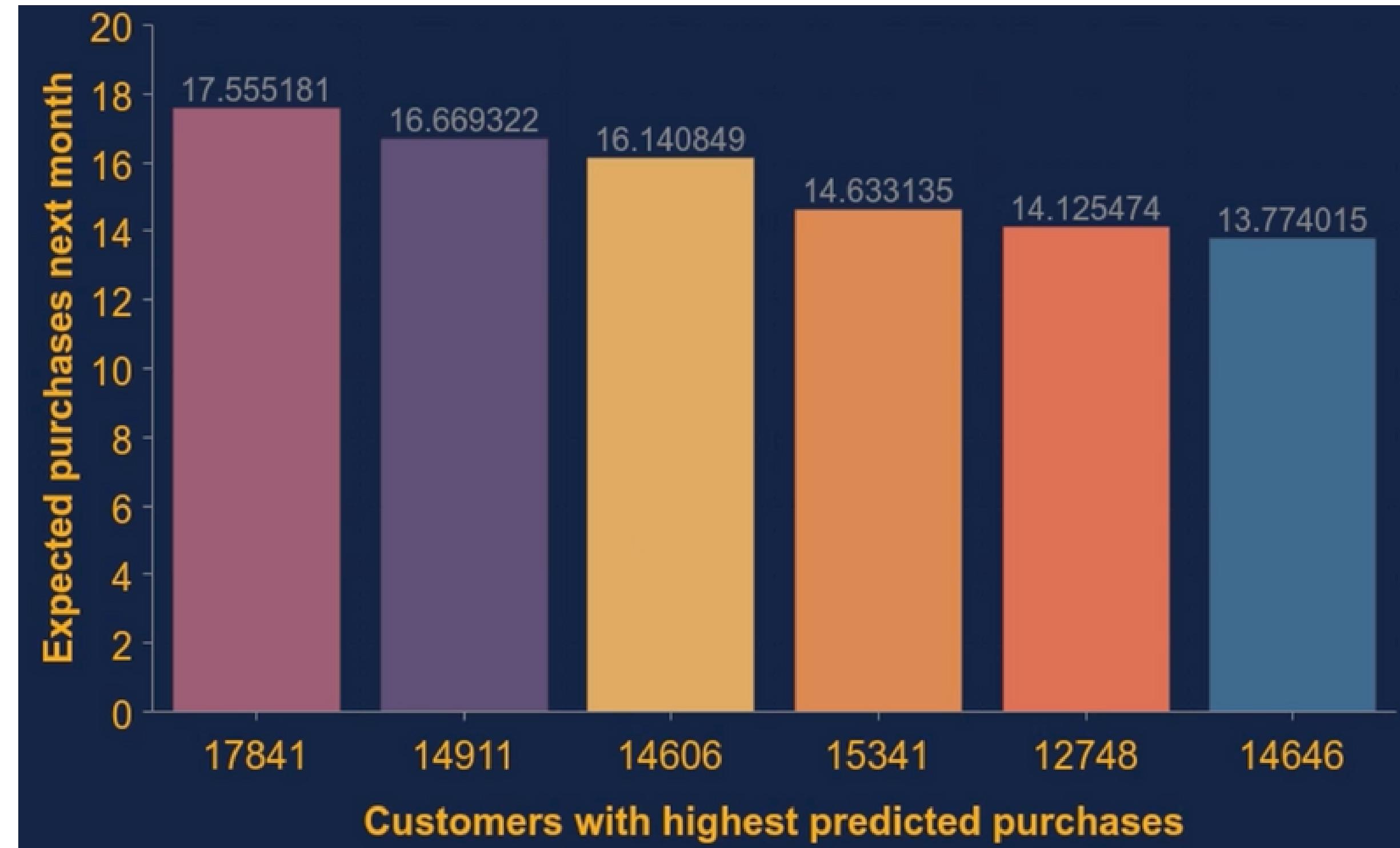
# RANKING AND SCORING

## STEP # 1

### Predicted Purchases

By understanding their purchasing pattern, we have predicted their future purchases based on the probability of their activity in their life time

# PURCHASES NEXT MONTH FOR CUSTOMERS WITH HIGHEST PREDICTED PURCHASES



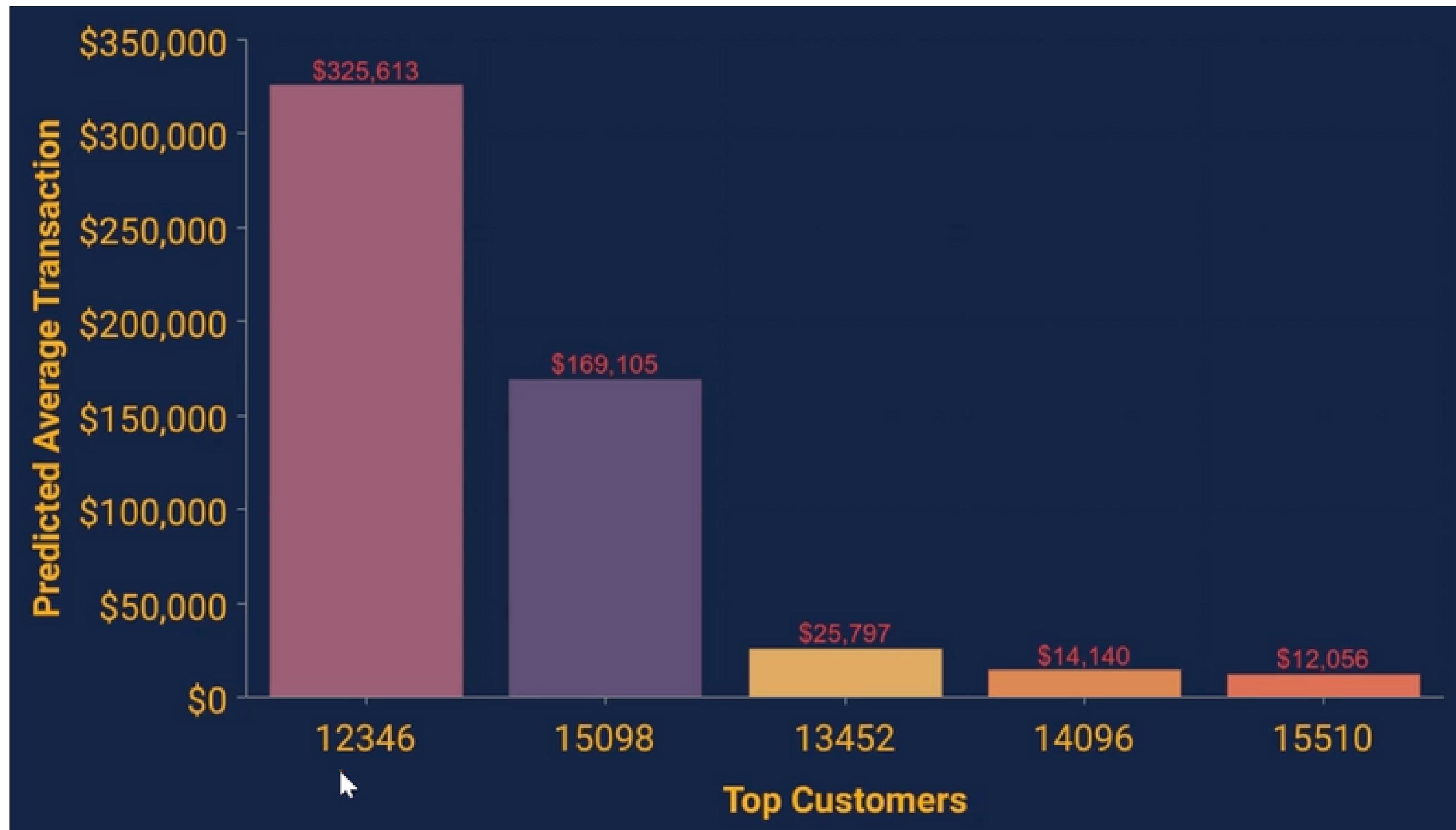
# RANKING AND SCORING

## Life Time Average Transaction Value

### STEP # 2

Using Gamma Gamma modeling we have predicted the average transaction value of each customer's life time which is called as Customer's Lifetime Value

# PREDICTED AVERAGE TRANSACTION VALUE FOR TOP CUSTOMERS



# RANKING AND SCORING FINAL STEP

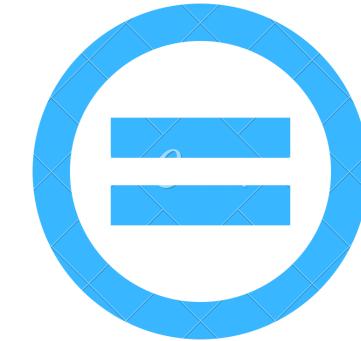
**Best Measure : Expected Profit  
Next Month**

**STEP # 3**

Using the best measure we will be ranking the customers with the metric value descending

# BEST MEASURE

## Expected Profit Next Month



Lifetime  
Average  
Transaction  
Value

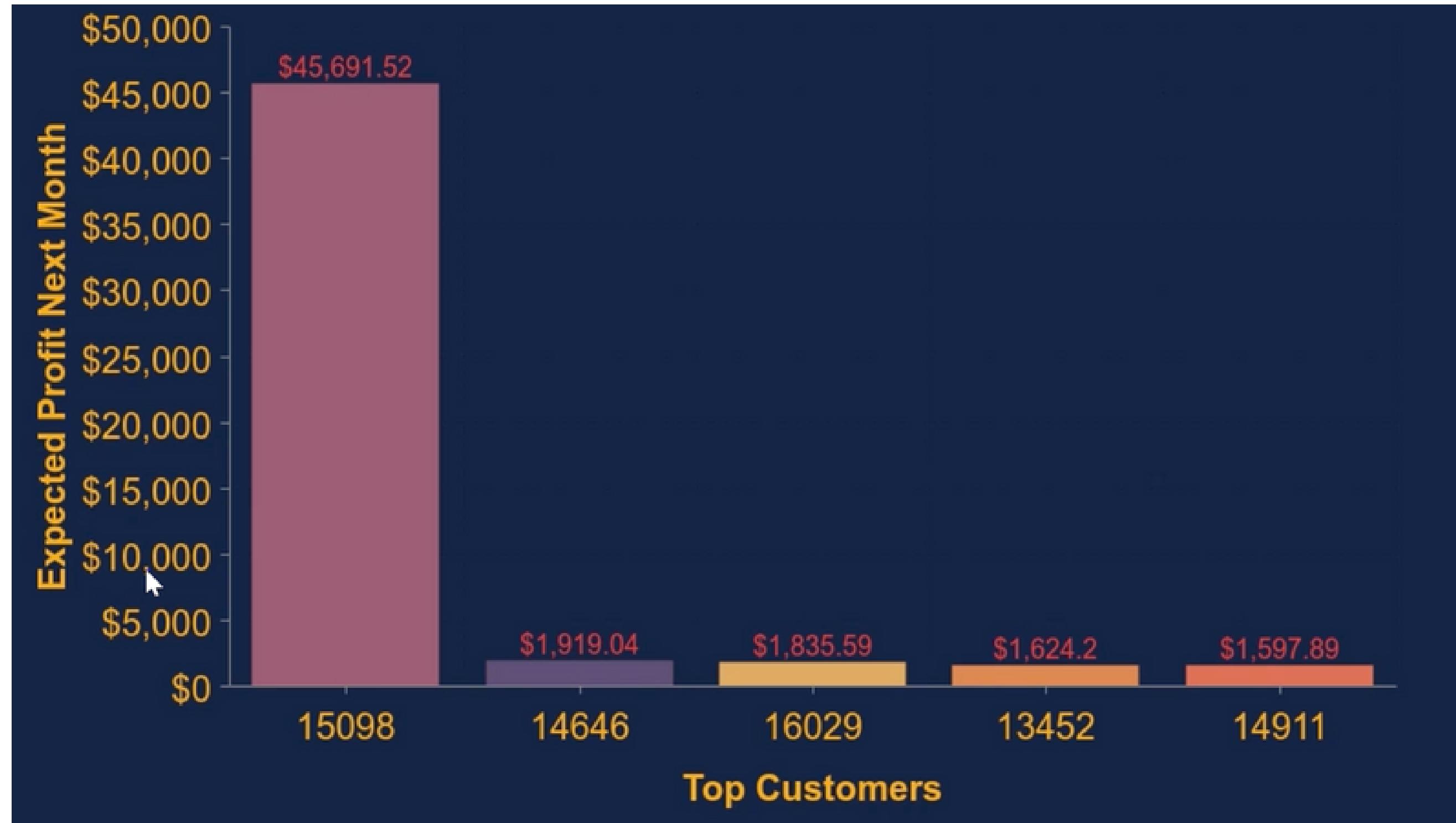


Average  
Gross  
Margin  
Percentage



Expected  
Purchases  
Next Month

# EXPECTED AVERAGE PROFIT NEXT MONTH FOR THE TOP CUSTOMERS



# CUSTOMER RANKING

Rank	CustomerID	Predicted Purchases	Life time Average Transaction	Average Gross Margin %	Expected Profit Next Month
1	15098	0.41	169104.78	66.67	45691.52
2	14646	13.77	2582.27	5.40	1919.04
3	16029	9.90	1763.60	10.51	1835.59
4	13452	0.11	25796.98	58	1624.20
5	14911	16.67	1427.10	6.72	1597.89
6	17450	4.65	4024.76	7.97	1490.04
7	16203	6.58	2958.26	7.27	1415.83
8	18102	3.64	4301.22	8.67	1357.08
9	12415	9.06	2334.22	6.32	1337.83
10	17841	17.55	902.32	6.74	1067.58

# CUSTOMER SCORING

- Scored them on the basis of their contribution of value
- Each score corresponds to the expected profit generation in the range of hundred times the score

Customer	Expected Profit	Score
15098	45691.52	456
14646	1919.04	19
16029	1835.59	18

# CUSTOMER SEGMENTS

Segments

Big Sharks

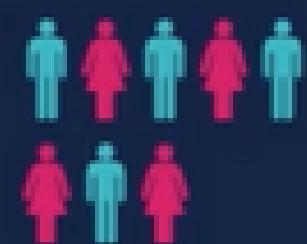
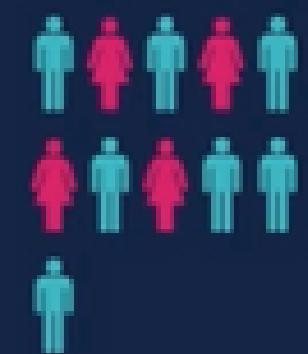
The Lion's Share

The Elephant In The Room

All Bark No Bite

Pig Headed

Count



Count %

11%

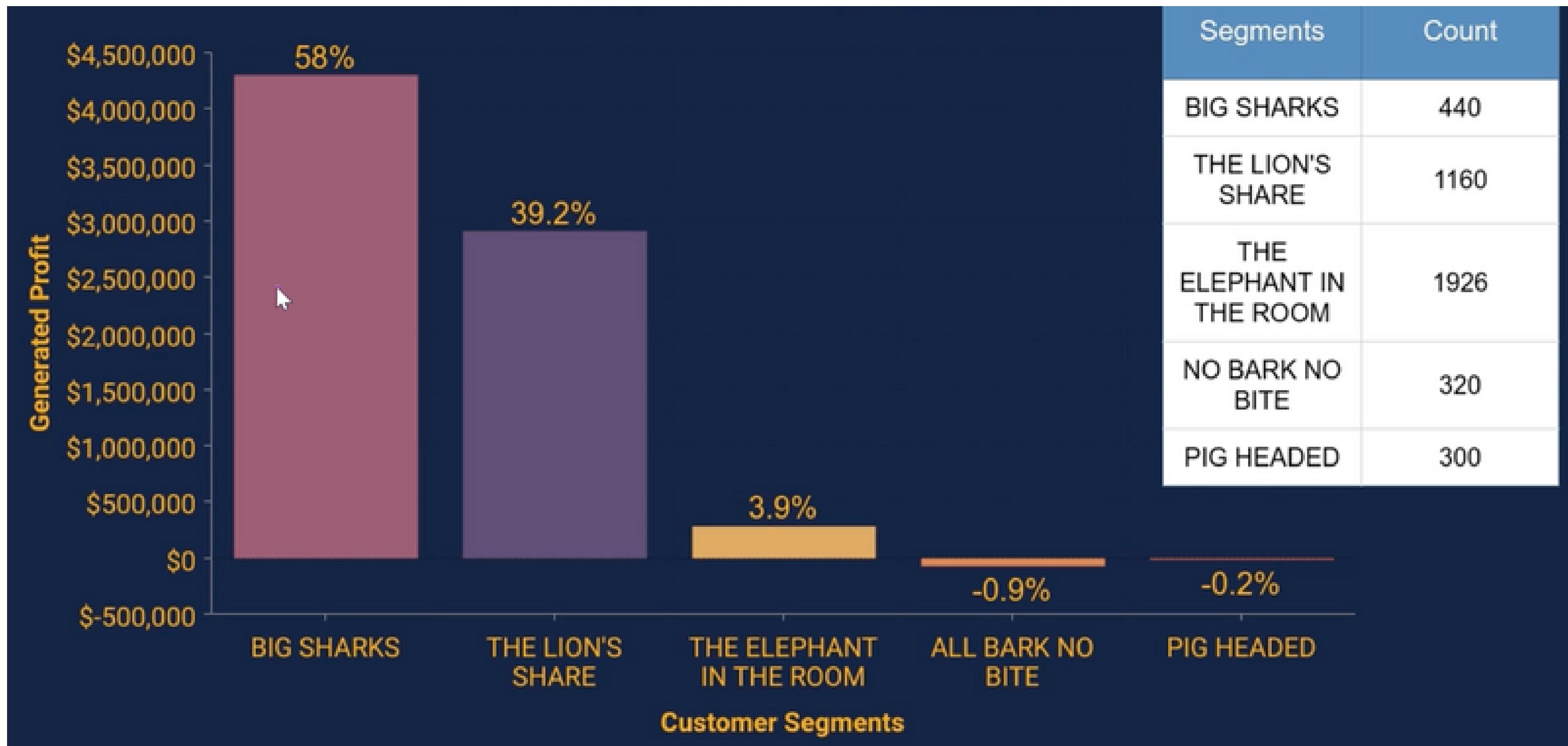
28%

46%

8%

7%

# GROSS MARGIN BY EACH SEGMENT



# RECOMMENDATIONS

## BIG SHARKS

1

Focus on loyalty programs & value added offers through product recommendations based on previous purchases

## THE LION'S SHARE

2

Comprises of three types:  
Market expensive products to some, Give aggressive incentives to some & plan strategies for churned ones

3

THE ELEPHANT IN THE ROOM  
Just as the name suggests it's better to worry less about them, giving incentives and displaying features to them can work to attract them

4

## ALL BARK NO BITE

These are like the mosquitoes that neither bites nor leave you. They will annoy you. Get rid of them

5

## PIG HEADED

Do not spend a penny to reacquire them. they are gone for good.sat bye forever

# FUTURE PROSPECTS

1

Customer Profitability Classification using  
Machine Learning

2

Customer Sales Forecasting on a hierarchical  
basis

3

Estimate this firm's value for Intuizel and  
recommend if there is worth buying it

# **FINAL INVESTMENT PITCH**

# BEFORE WE BEGIN...

Reflecting on Nixon, the movie -

- 5 minutes felt like an hour

Reflecting on our 2nd Presentation -

- 8 minutes felt like 40 seconds

**Lesson Learnt : The value of time**

# **QUESTION :**

**Where do I invest my \$5 Million  
Dollars to get the highest ROI?**

# INVESTMENT ON CUSTOMER SIDE

Investment on Customer Side

Investment on Inventory Side

Total Investment

## 5 Customer Segments

	<u>Number</u>	<u>GM%</u>	<u>ROI*</u>	<u>Score</u>
<b>Big Sharks</b>	<b>440</b>	<b>58.0%</b>	<b>19.0%</b>	<b>3.1</b>
Royal Lions	1,160	39.2%	65.0%	2.5
<b>Decisive Elephants</b>	<b>1,926</b>	<b>3.9%</b>	<b>13.0%</b>	<b>1.9</b>
All bark, no bite	320	-0.9%	6.0%	1.8
Pig - Headed	300	-0.2%	0.0%	0

\* ROI calculated using Forecasted Profits/ Forecasted costs

# INVESTMENT ON INVENTORY SIDE

Investment on Customer Side

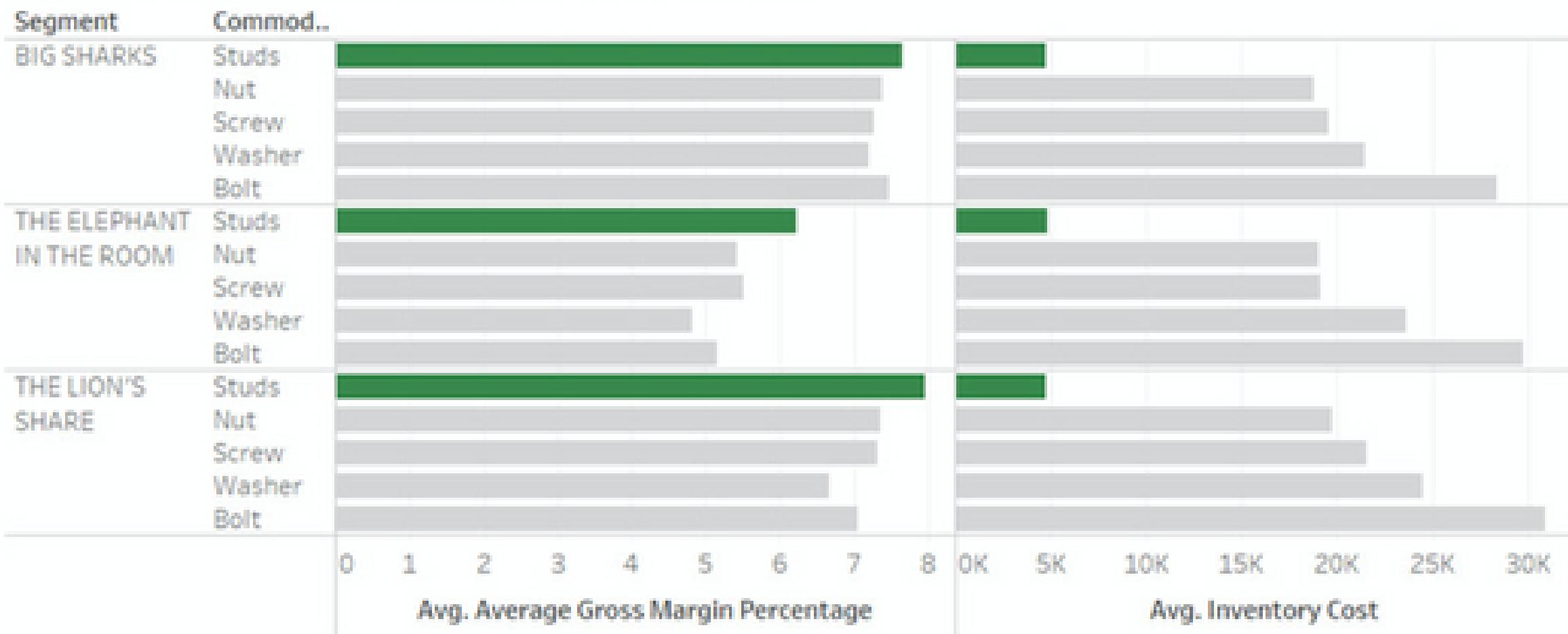
Investment on Inventory Side

Total Investment

## What should we sell? Studs

Forecasted Sales for  
Studs: \$6,572,412\*  
Investment to be  
made: \$3,900,000  
ROI: 68%

Studs is the best commodity to invest in.



# TOTAL INVESTMENT - \$5,000,000



## 1. Production Costs\* - \$518,810

## 2. Industry Networking Event – \$583,594

- Customer Loyalty Program: Premium, Platinum & Gold
- Held in UK & then introduced to other countries

## 3. Increasing Brand awareness – 16% of marketing budget

- Email campaigns to customers - \$1,000
- XYZ's Weekly Newsletter (success metric – signups)
- Website revamp – Case studies & Testimonials - \$5,000

## 4. Activities for Studs - \$3,900,000

- Negotiate lower prices with suppliers, asking for discounts because we plan to buy in bulk
- Run a marketing campaign around studs & ask customers to pre-order inventory

**THANK YOU**