

# EMPOWERING

COMMUNITIES SWIRE ADVOCATES SERVE



*Coca-Cola*

SWIRE COCA-COLA, USA

DRIVEN TO WIN



SWIRE COCA-COLA, USA

## BUSINESS CASE CONTENT

1. Business Problem
2. Business Proposal & Result
3. Data Preparation & Wrangling
4. Data Modeling
5. Business Process Suggestions
6. Q&A
7. Appendix

DRIVEN  
*to Win*

# Business Problem



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Annual Cutoff Gallons  
Threshold

400

GALLONS

[Year 2] Cost Savings to  
Offboard to White Truck

64%

OR

\$52M

Forfeited Additional  
Revenue

\$69.7M

-

\$74.0M



RED CUSTS



WHITE CUSTS



MISSED OPPORTUNITY

# Business Proposal & Results



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1

## Potential cost-savings

25% - \$45.5M

2

## Potential Revenue maintained

\$170.63M @ 20% PM

3

## Key Success Metrics

### Monthly delivery:

All Customers: **50 cases + gallons** per month

LMP Fountain only: **21 gallons** per month

4

## Applicable Customer Groups

LMP Fountain Only

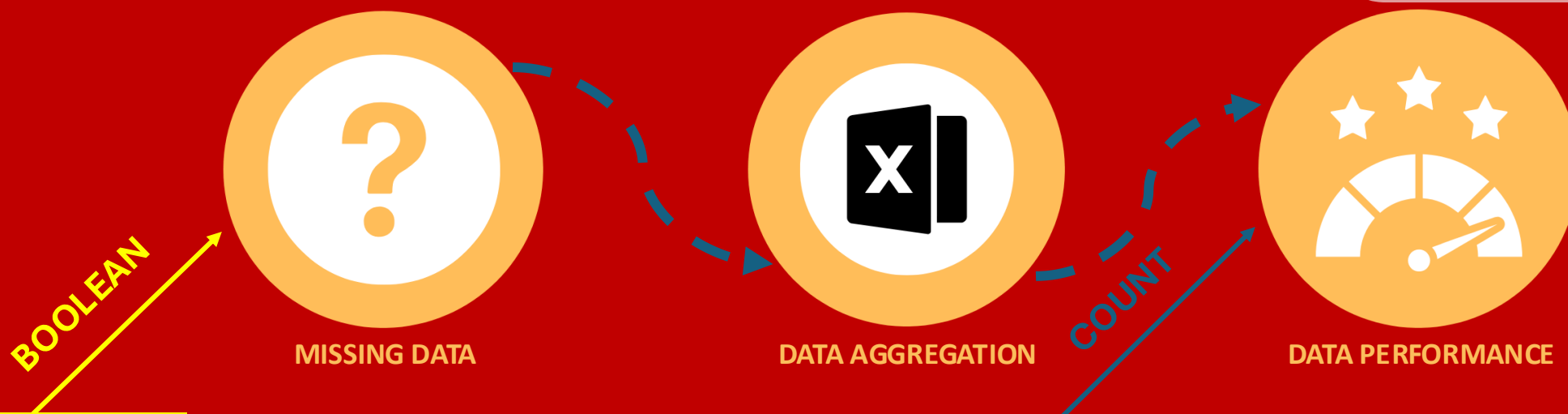
Other Customers

# Data Preparations & Wrangling



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Has Primary Group Number?	Y1_CALL CENTER	Y1_EDI	Y1_MYCOKE LEGACY	Y1_OTHER	Y1_SALES REP	Y1_UNKNOWN	Y2_CALL CENTER	Y2_EDI	Y2_MYCOKE LEGACY	Y2_MYCOKE360	Y2_OTHER	Y2_SALES REP	Y2_UNKNOWN
1	0	0	0	0	24	0	1	0	0	0	0	15	1
1	0	0	0	0	24	3	1	0	0	0	0	15	1
1	1	0	45	0	0	0	3	0	14	0	0	0	0
1	1	0	45	0	0	0	3	0	14	0	0	0	0
1	5	0	0	0	0	0	4	0	0	0	0	0	0
1	9	0	0	0	0	0	9	0	0	0	0	0	0
1	0	0	40	0	0	0	0	0	27	18	0	0	0

\*NOTE: This table includes ORDER\_TYPE and PRIMARY\_GROUP\_NUMBER columns wrangled to be Boolean values and frequency of orders per year (Y1\_ or Y2\_)

# Predicting Potential Partners

*Gallons + Cases and Gallons only modeling*



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Order behavior



Channel types



Delivery volumes

**Goal:** Predicting growth for potential **High-Volume Customers**

**GALLONS + CASE**

**XGBoost**

(Recommended)

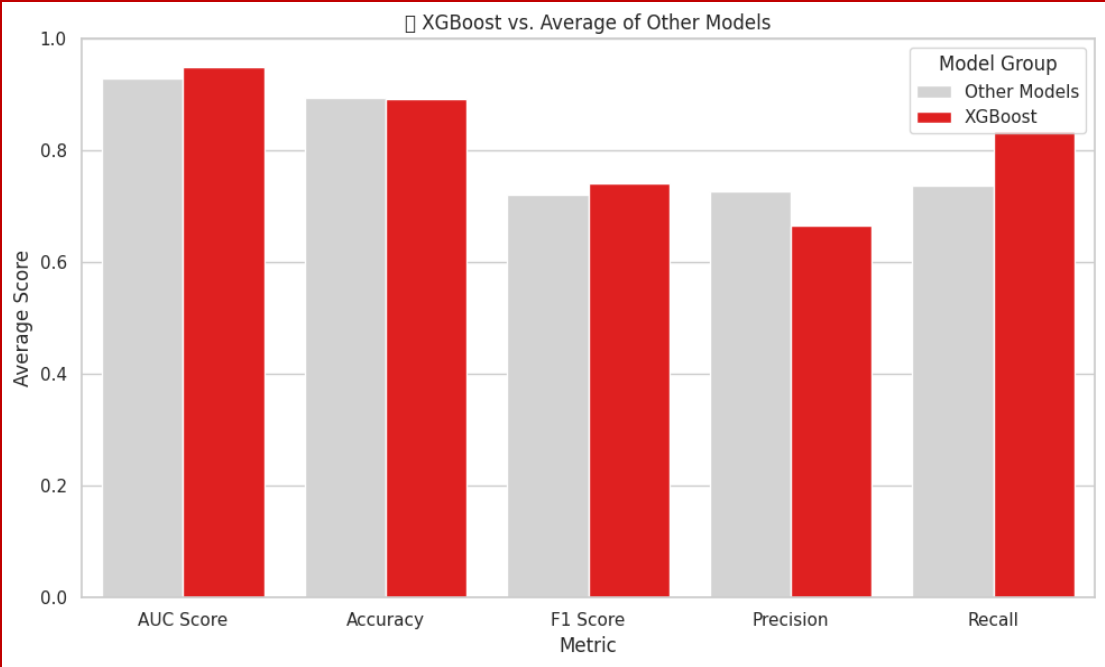
# Predicting Potential Partners

OVERALL MODELING PERFORMANCE RESULTS (All Customers Focus)



SWIRE COCA-COLA, USA

Threshold:  
**615**  
Gallons + Cases



**GALLONS + CASE**  
  
XGBoost  
(Recommended)

index	Model	Accuracy	Precision	Recall	F1 Score	AUC Score
4	XGBoost	0.8932	0.6662	0.8357	0.7414	0.9495
1	Random Forest	0.9103	0.8227	0.6504	0.7265	0.945
5	Neural Network (MLP)	0.904	0.7696	0.6788	0.7214	0.928
2	Support Vector Machine	0.8788	0.6235	0.8542	0.7209	0.9387
3	K-Nearest Neighbors	0.9059	0.7988	0.6498	0.7166	0.9048
0	Logistic Regression	0.8766	0.6187	0.8499	0.7161	0.9347

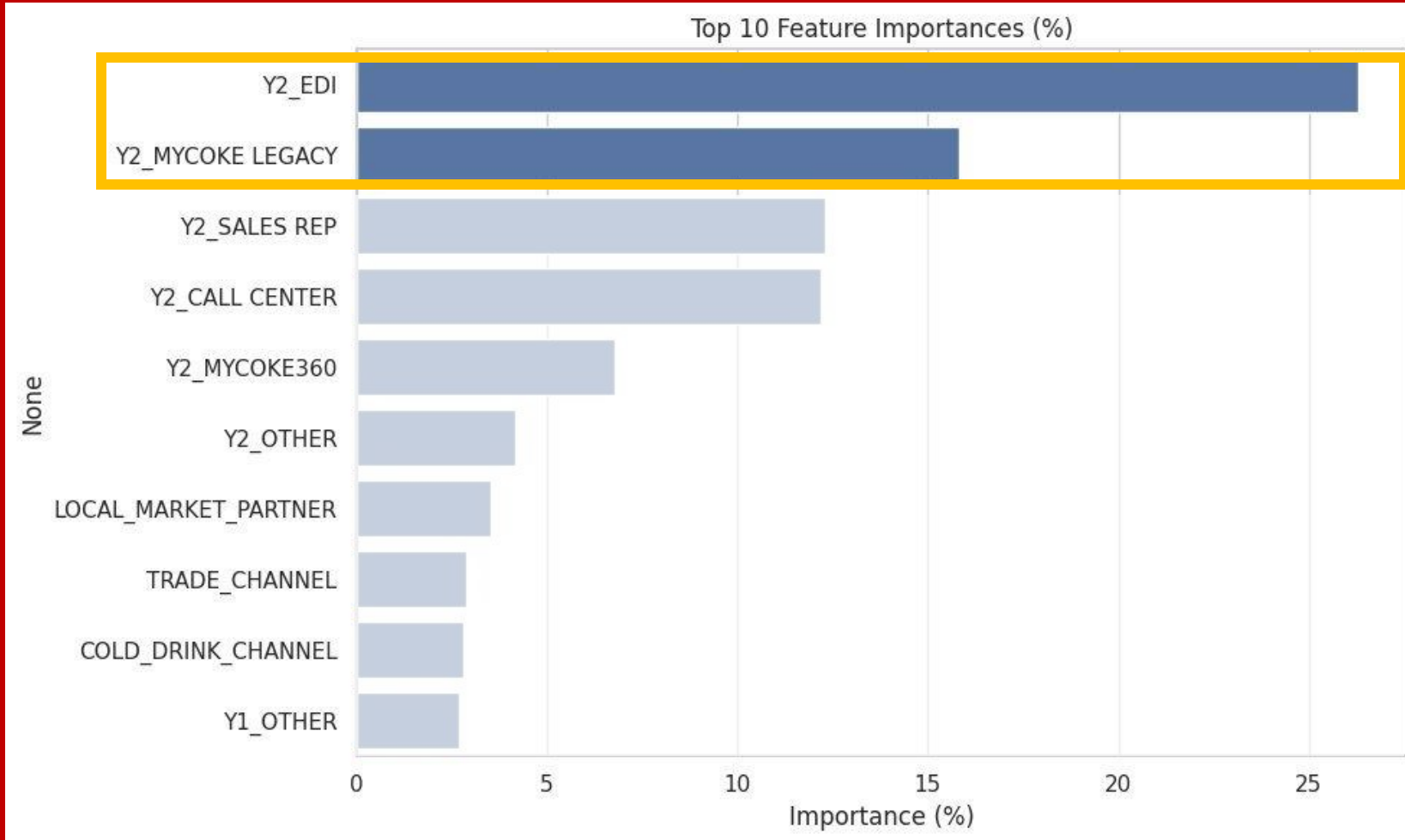


# Predicting Potential Partners

OVERALL MODELING PERFORMANCE RESULTS (All Customers Focus)



SWIRE COCA-COLA, USA



**GALLONS + CASE**

**XGBoost**  
(Recommended)

**43%**

**GALLONS ONLY**

**Logistics Regression**  
(Recommended)

# Predicting Potential Partners

OVERALL MODELING PERFORMANCE RESULTS (*LMP Fountain only Focus*)

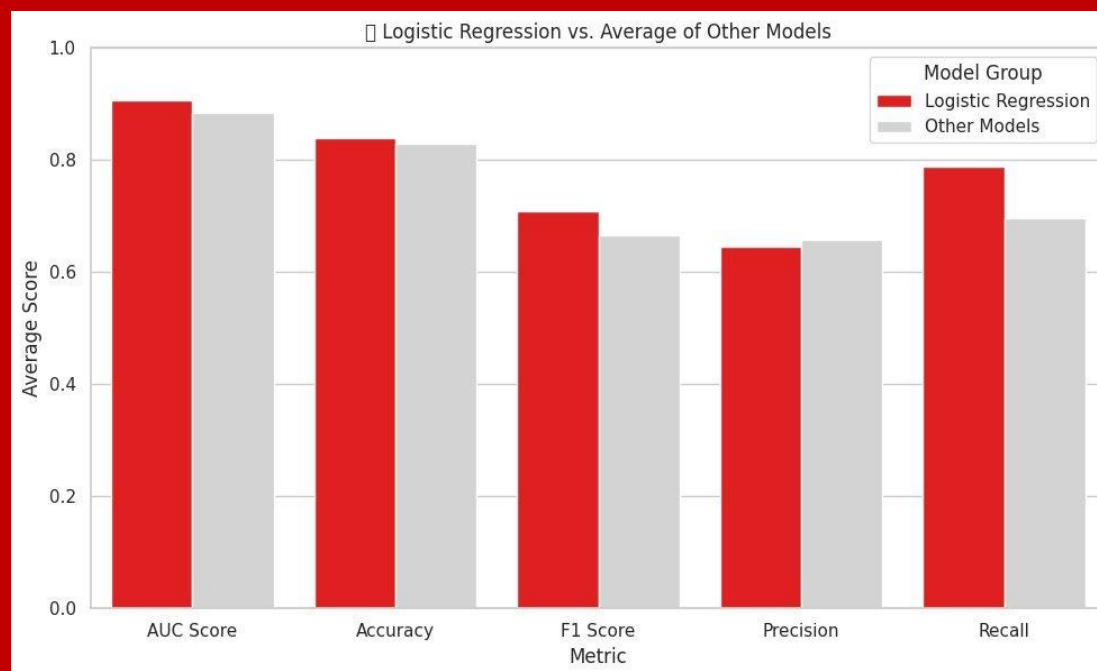


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Threshold:

**350**

Gallons only



**GALLONS ONLY**

Logistics  
Regression  
(Recommended)

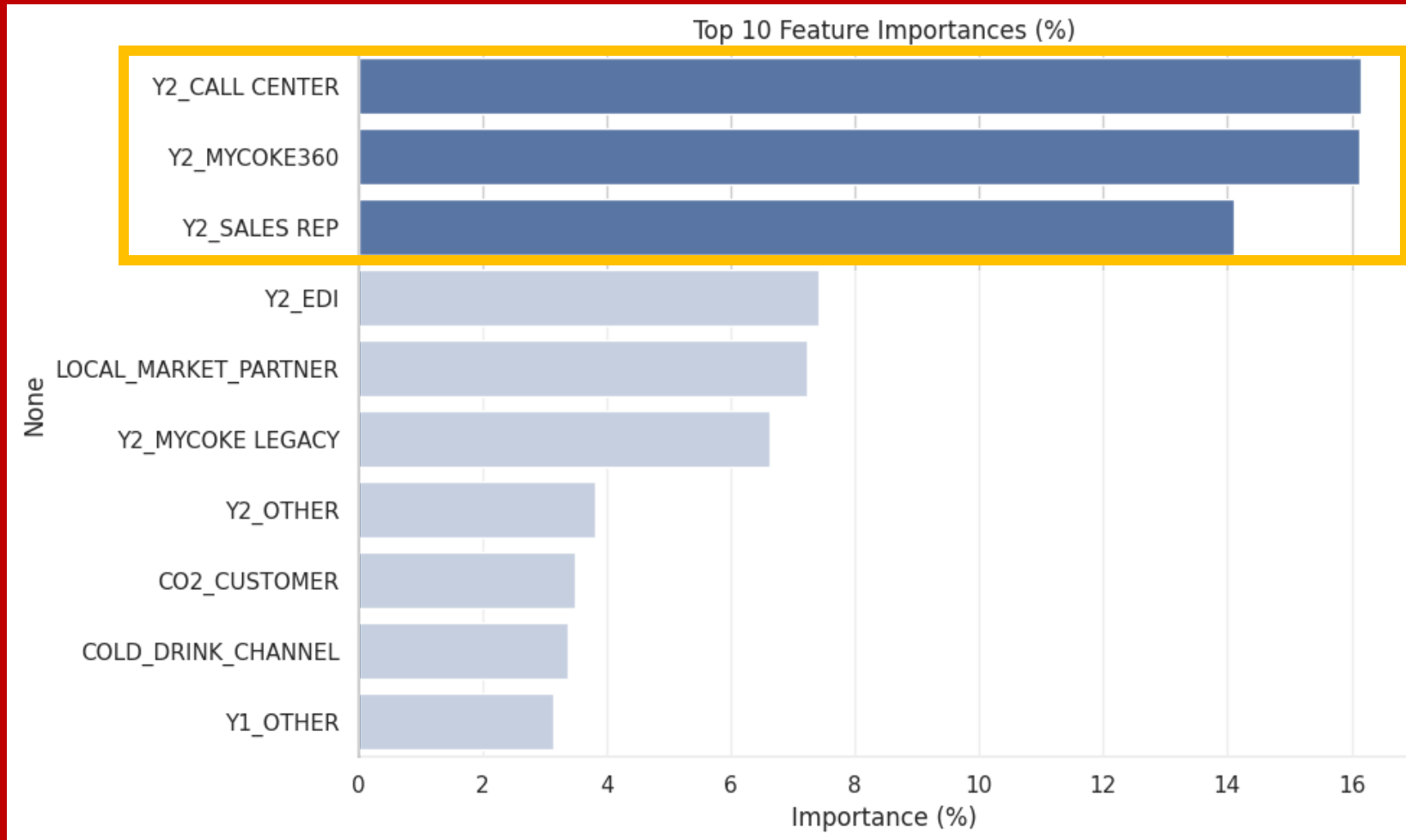
index	Model	Accuracy	Precision	Recall	F1 Score	AUC Score
0	Logistic Regression	0.8404	0.6449	0.7883	0.7094	0.9062
2	Support Vector Machine	0.8154	0.5872	0.853	0.6956	0.8956
4	XGBoost	0.8095	0.5823	0.8113	0.678	0.8904
5	Neural Network (MLP)	0.8391	0.6943	0.6236	0.657	0.8782
1	Random Forest	0.8448	0.7244	0.6005	0.6567	0.8984
3	K-Nearest Neighbors	0.8349	0.6959	0.5899	0.6385	0.8589

# Predicting Potential Partners

OVERALL MODELING PERFORMANCE RESULTS (*LMP Fountain only Focus*)



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**GALLONS ONLY**

Logistics  
Regression  
(Recommended)

**46%**

# Clustering for Customer Profiles

Monthly Order Analysis (AGI)



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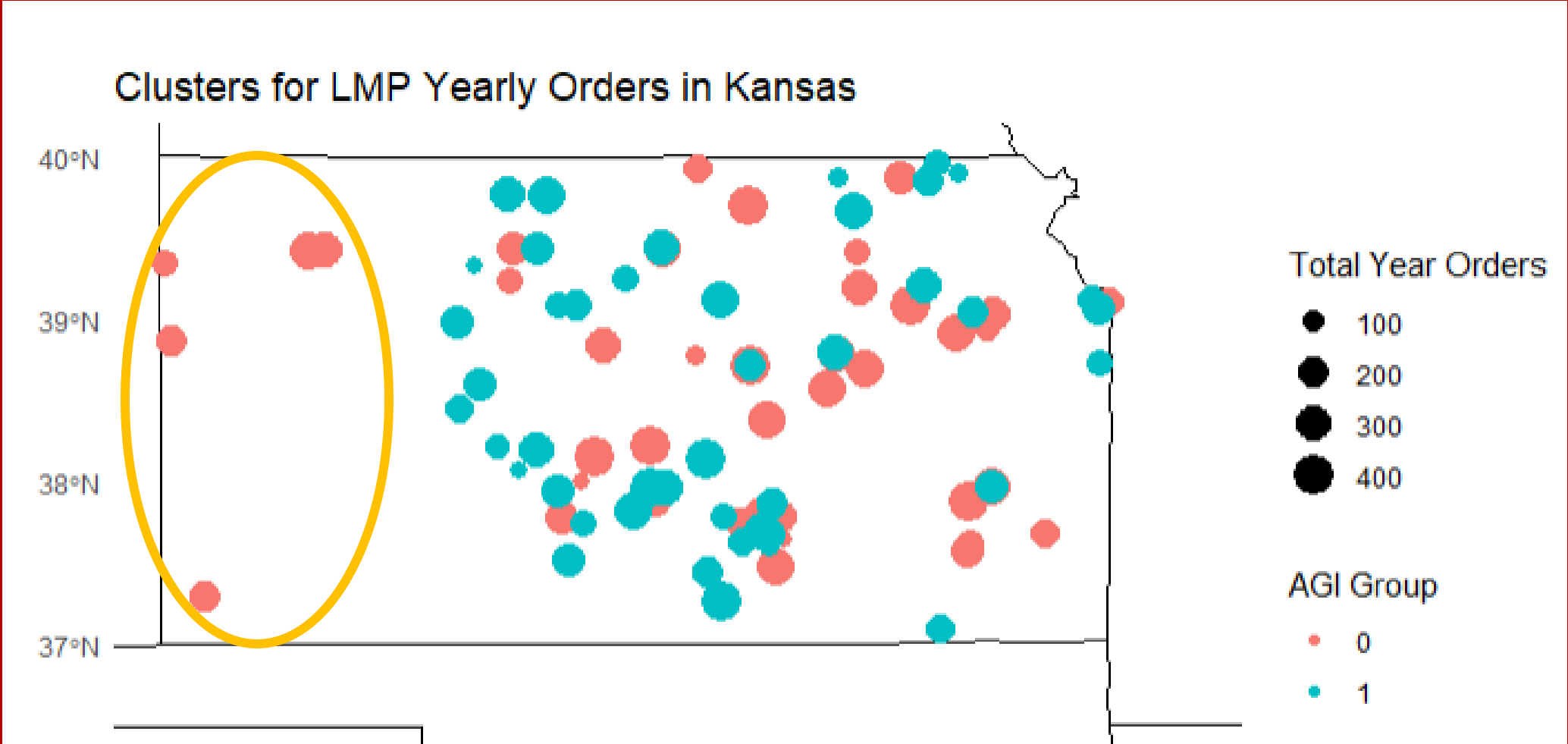
	Gallon-exclusive LMPs	All customers
High potential (0< AGI <96)	<ul style="list-style-type: none"><li>- Primarily order using <b>sales reps</b></li><li>- AGI between 37% and 57%</li><li>-Trade channels hospitality and other dining</li></ul>	<ul style="list-style-type: none"><li>- Primarily order using <b>sales reps</b> and "other" channels</li><li>- AGI between 37% and 56%</li><li>-TC Comp. and other dining</li></ul>
Non-Qualifying (AGI < 0)	<ul style="list-style-type: none"><li>- Primarily order using "other" and <b>Sales Rep</b> channels</li><li>- AGI between -24 and -30%</li><li>-TC hospitality and FC dining</li></ul>	<ul style="list-style-type: none"><li>- Attributes: <b>Sales reps</b>, "other", and <b>call centers</b></li><li>- AGI between -24% and -26%</li><li>-TC outdoor and comp. dining</li></ul>

# Clustering for Customer Profiles

Yearly Order Analysis (Annual Orders)



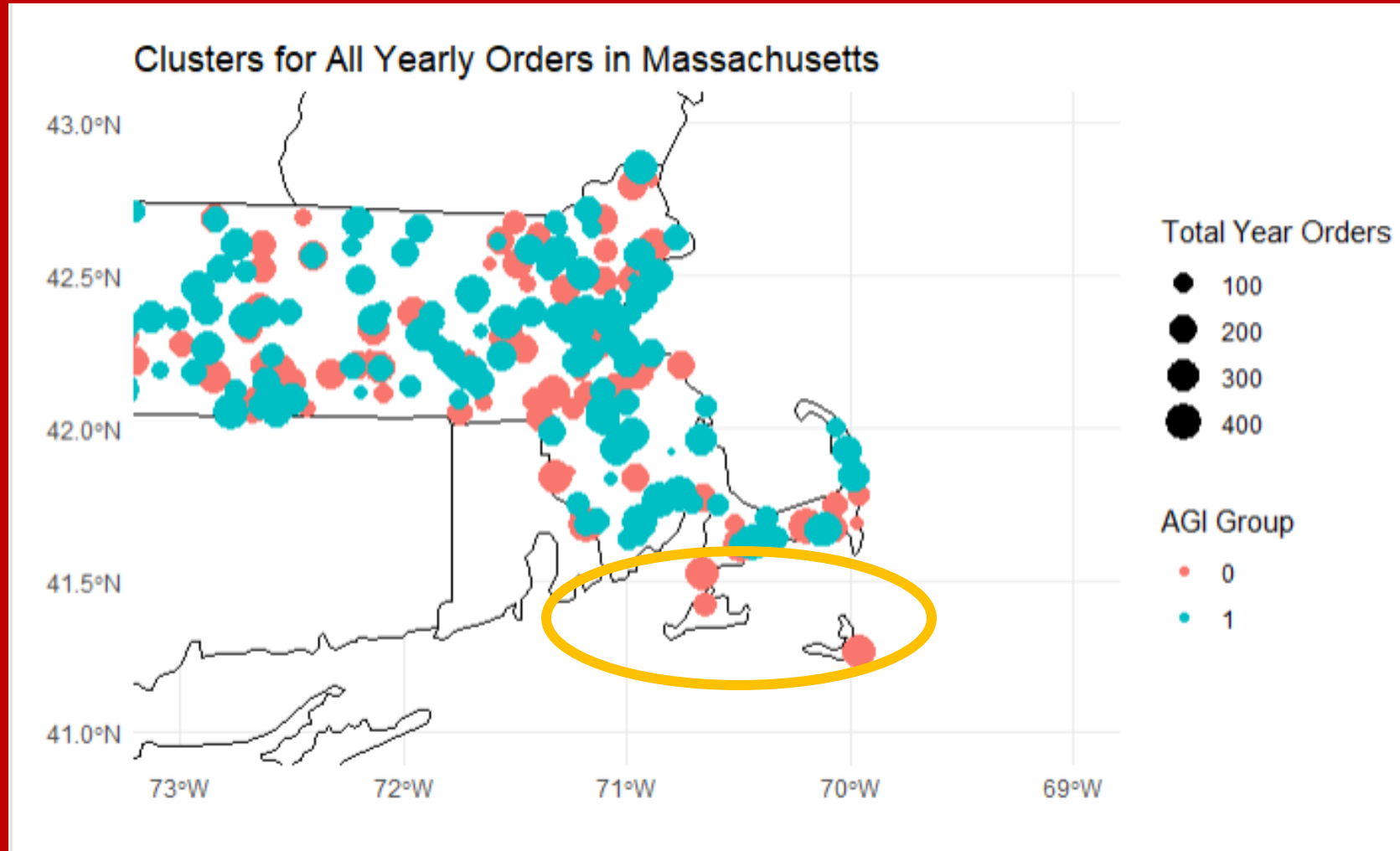
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\*circle indicates non-qualifiers for red truck service

# Clustering for Customer Profiles

Yearly Order Analysis (Annual Orders)



# MARKET CASE-STUDIES



SWIRE COCA-COLA, USA

amazon

Walmart  
Marketplace



Shopee

Lazada

## CUSTOMER LOGISTICS PROGRAM

Every top performing Ecommerce Company have similar programs to onboard/offboard their own **red truck customers**:

1. FBA/FBM
2. SSL Pickup Services
3. WFS

And more..



# MARKET CASE-STUDIES



SWIRE COCA-COLA, USA

amazon

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## CUSTOMER LOGISTICS PROGRAM

Every top performing Ecommerce Company have similar programs to onboard/offboard their own **red truck customers**:

1. FBA/FBM
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And more..

## AGGRESSIVE WHITELISTING PROGRAMS

# Business Process Suggestions



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# OUR

RECOMMENDATIONS

# Business Process Suggestions



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## OUR RECOMMENDATIONS

### Results in Delivery **SERVICES**

OTHER CUSTOMERS	LMP Fountain Only
<b>Suggested Thresholds</b> 615 Gallons + Cases per year = 51.25 Gallons + Cases per month	<b>Suggested Thresholds</b> 350 Gallons only per year = 21.17 Gallons only per month
<b>COST SAVINGS (Year 2 Est.)</b> \$2.7 M	<b>COST SAVINGS (Year 2 Est.)</b> \$7.6 M
<b>RETAINED REVENUE (Year 2 Est.)</b> \$112.4 M	<b>RETAINED REVENUE (Year 2 Est.)</b> \$91.2 M

# Business Process Suggestions



SWIRE COCA-COLA, USA

## OUR RECOMMENDATIONS

### Results in Delivery **SERVICES**

#### OTHER CUSTOMERS

##### Suggested Thresholds

615 Gallons + Cases per year

=

51.25 Gallons + Cases per month

##### COST SAVINGS (Year 2 Est.)

\$2.7 M

##### RETAINED REVENUE (Year 2 Est.)

\$112.4 M

#### LMP Fountain Only

##### Suggested Thresholds

350 Gallons only per year

=

21.17 Gallons only per month

##### COST SAVINGS (Year 2 Est.)

\$7.6 M

##### RETAINED REVENUE (Year 2 Est.)

\$91.2 M

#### BROWN TRUCK PROGRAM

**3PL SLA(s):** Starting Brown-Truck services with UPS, FedEx, USPS, etc.

#### BENEFITS

- On-time delivery
- Wider Customer outreach
- Opportunity Cost-Savings: Forego SCCU physical expansion



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# Q&A

-END-

**TEAM 4:** *Elham Mirza, Joseph Pushnam, Andy Pan, Christopher Joyce*



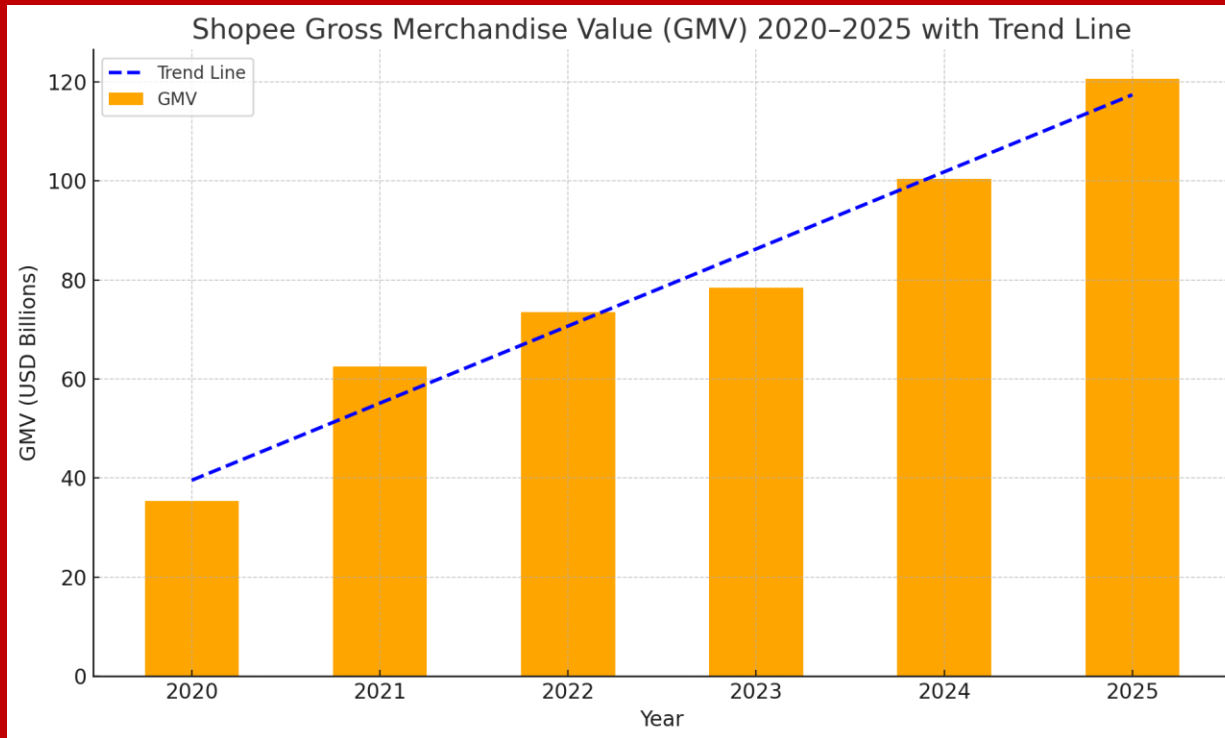
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# APPENDIX

# MAKRET CASE-STUDIES



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GMV Bar Chart Growth are from SEA 10K report and other online resources.

\*GMV = Gross Merchandise Value

## Shopee's GMV Evolution

**2020:** (GMV) reported at **\$35.4B.**

...

**2024:** (GMV) reported at **\$100.5B.**

**2025 (Projected):** to grow by appx 20% to **\$120.6B.**



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# THEIR SUCCESS?

## Campaigns and **on-time delivery services**

### Thresholds

**300 orders** per month

**10 orders** per day

### 3PL SLA

**Quarterly SLAs** penalty if on-time delivery 90-95%

### BENEFITS

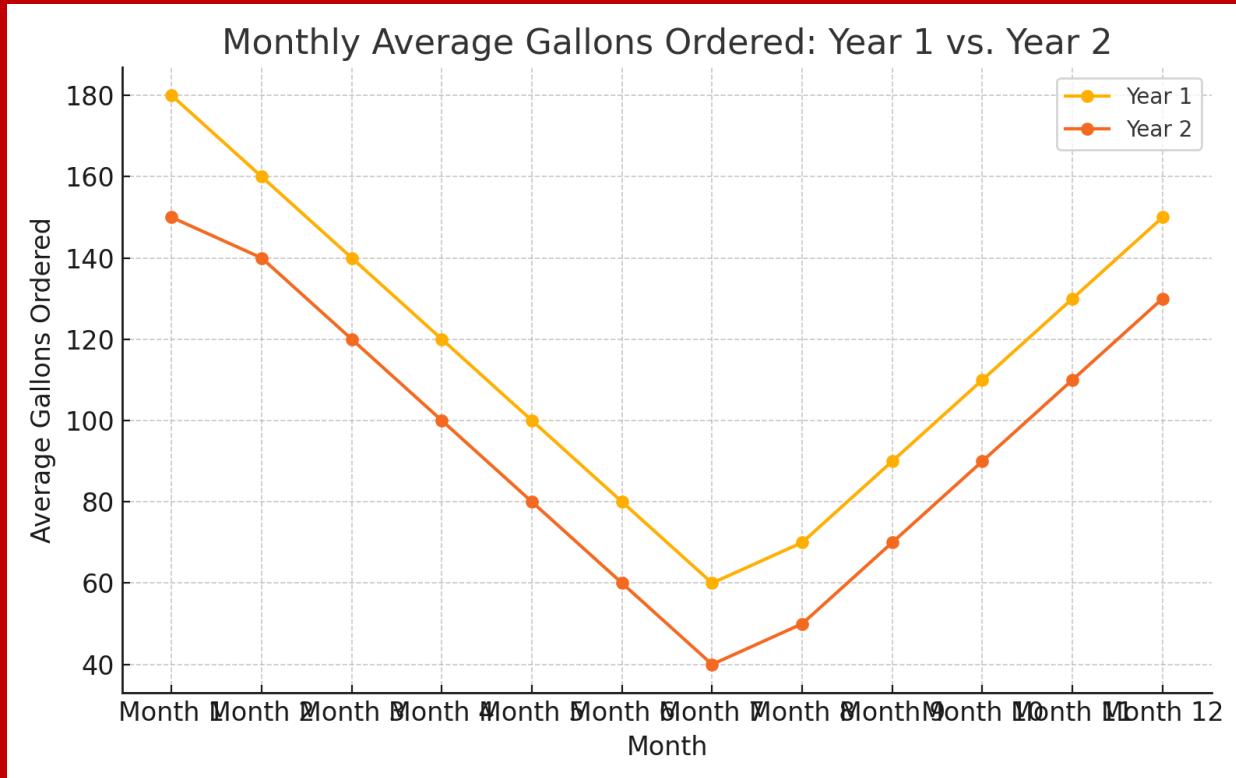
- On-time delivery
- Wider Customer outreach
- Opportunity Cost-Savings: Forego SCCU physical expansion



# Trend Analysis



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## Gallon Trend Analysis

- Y1 – Y2 comparison customer ordering trends suggest a drop within first half of the year. (Month 1 – 7)
- Ordering capacity increases around second half of the year. (Month 7 – 12)
- Year 2 has an average volume dropped from Year 1.
- Suggesting current customers could be unsuitable for LMP (Fountain only) partnership

# Predicting Potential Partners

*RANDOM FOREST MODELING RESULTS*



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Predicting LMP partners  
from Non-LMP



## PREDICTION OF CUSTOMERS

**90%**

Accuracy to identifying actual LMP

**40%**

Accuracy to identifying  
non-LMP

# Predicting Potential Partners

*RANDOM FOREST MODELING RESULTS*



SWIRE COCA-COLA, USA

Predicting LMP partners  
from Non-LMP



## PREDICTION OF CUSTOMERS

90%

Accuracy to identifying actual LMP

40%

Accuracy to identifying  
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# Predicting Potential Partners

*RANDOM FOREST MODELING RESULTS*



SWIRE COCA-COLA, USA

Predicting LMP partners  
from Non-LMP



Potential LMP Customers

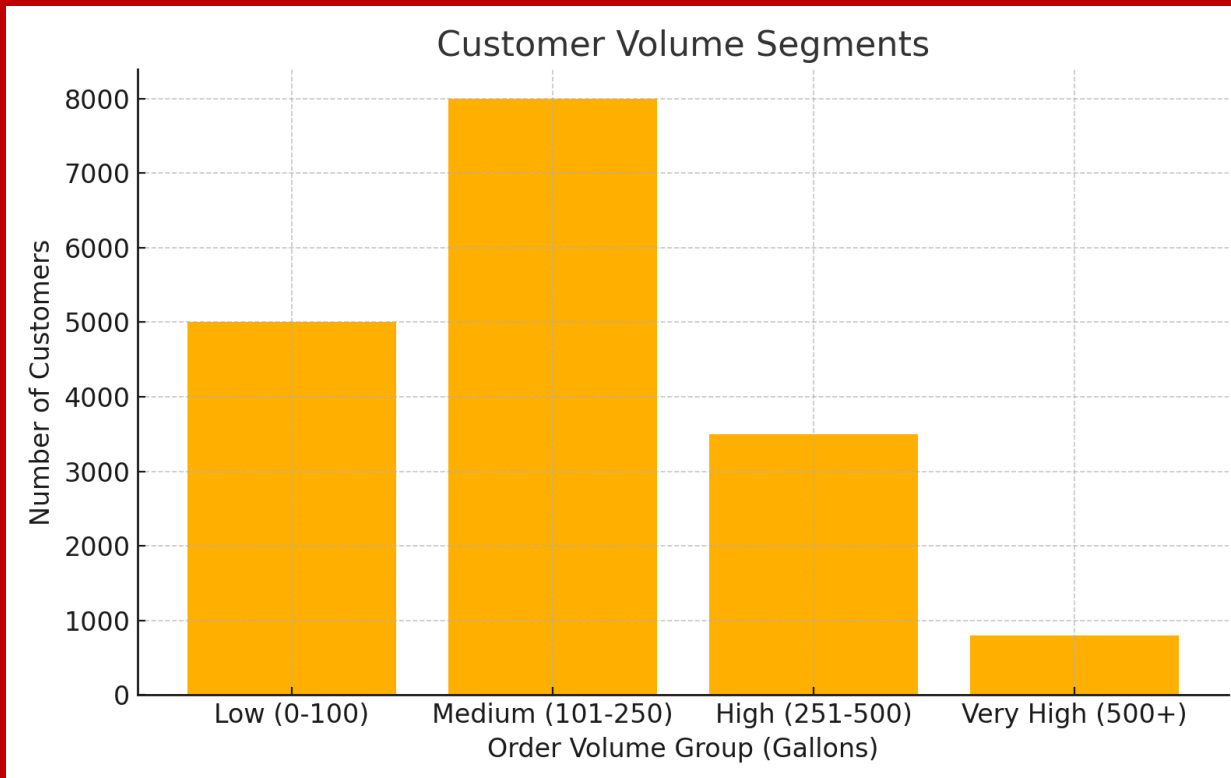
60%

*Note: Suggesting that 60% of misclassified Non-LMP perform similarly to LMP.*

# Gallons only dist.



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## Gallon Trend Analysis

- Majority class appears to be within the Medium bin (150 – 250 gallons ordered per year).
- Median suggests 201 per year gallon
- For "Very High" -end customers may *warrant partnership focus*.

# Clustering for Customer Profiles



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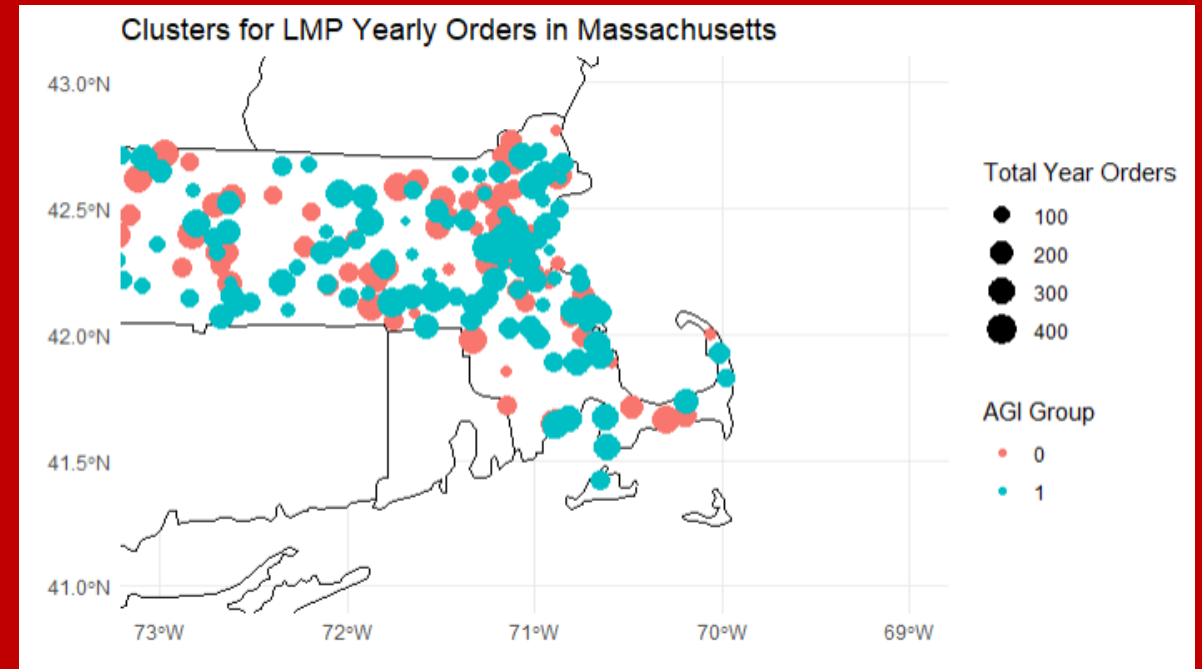
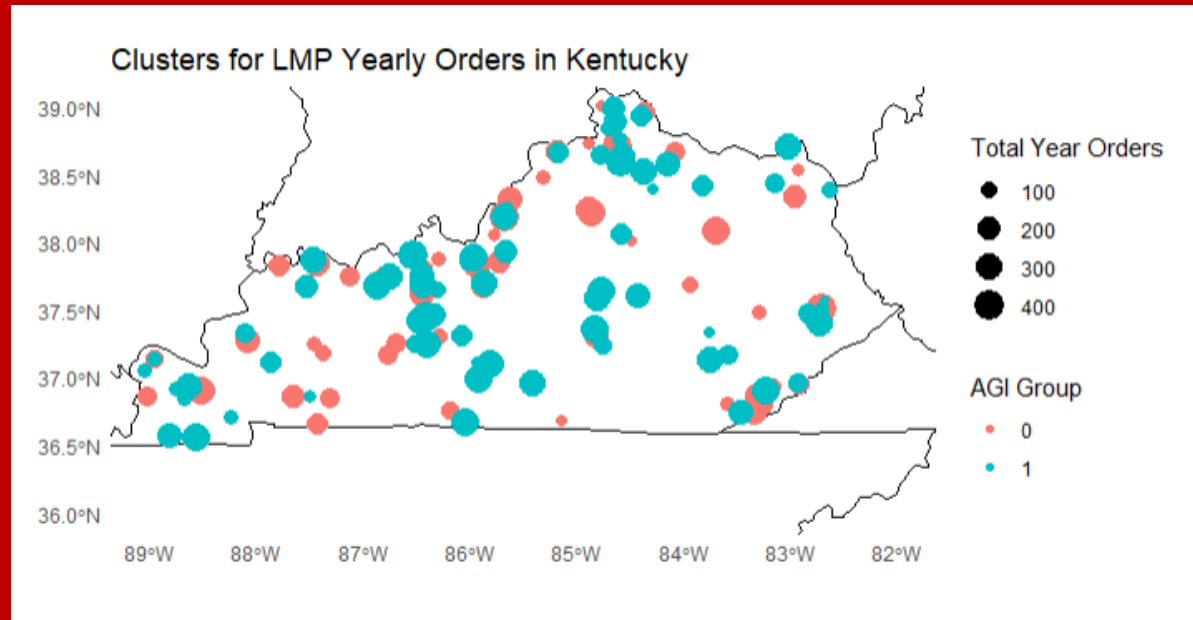
## Monthly Order Analysis

- AGI is a percentage value calculated using the difference, in total gallon equivalents ordered, between the previous month and the current month divided by the current month.
  - Grouped by customer number.
- AGI is applied for two groups of customers: LMP gallon only, and all customers.

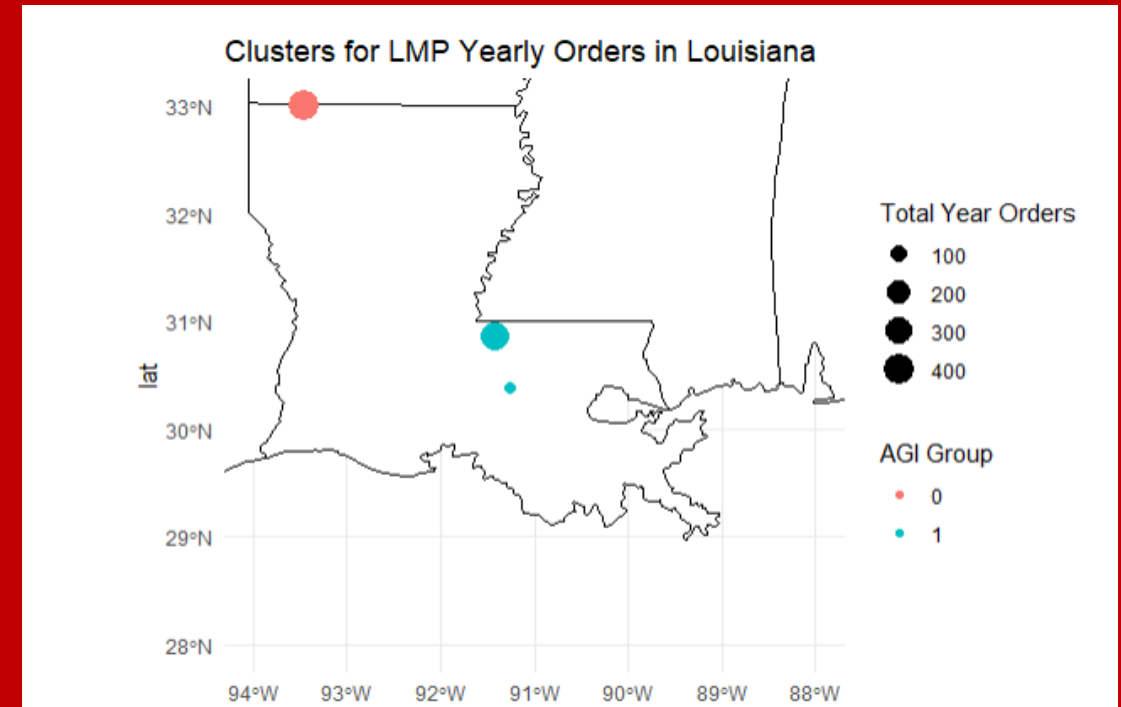
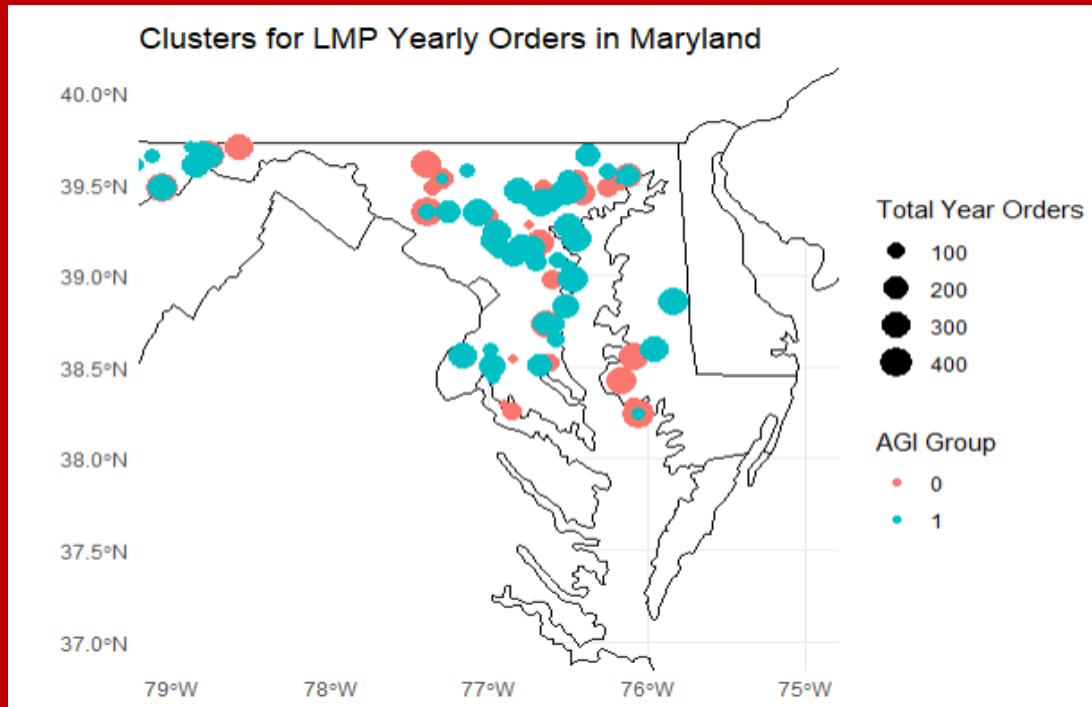
## Yearly Order Analysis (Annual Orders)

- Customer locations were only within 5 states, which is represented in the state-by-state density cluster maps.
- Customer dot color reflects growth (1) or decline (0) and is based on customer AGI across both years.
- All density clustering is performed exclusively for customers ordering less than 400 gallons per year and is applied to both of the aforementioned customer groups.
- Non-qualifying customer areas are circled.

# LMP Gallon-Only State Clusters

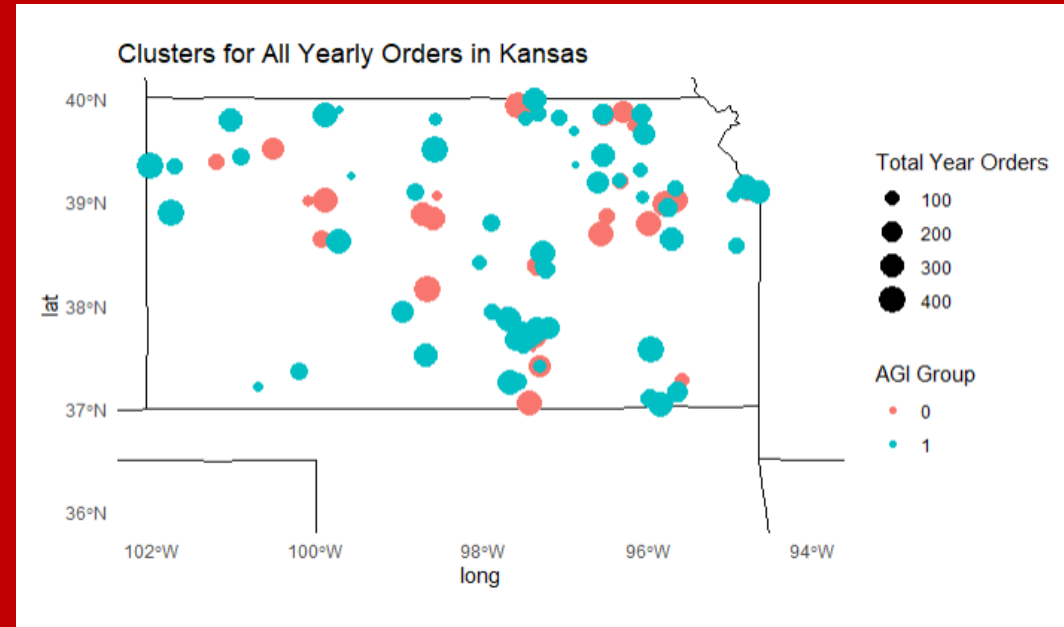
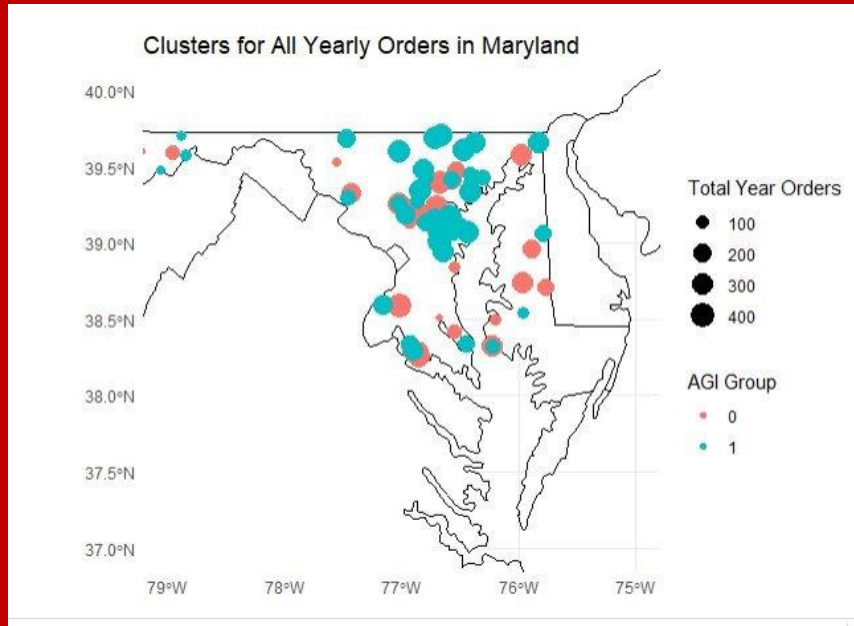


# LMP Gallon-Only State Clusters (cont'd)





# All Customers State Clusters



# All Customers State Clusters (cont'd)

