



CUSTOMER RETENTION

Bellatrix - Team 3C

*This dataset is dummy and provided by Telkom x RevoU

HELLO!

Let's meet our team members!



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Business Background



PaDi UMKM is a growing **e-commerce platform**, established in the middle of 2020. Towards the end of 2020, PaDi UMKM witnessed significant growth in its user base and transaction volume. This time, we need to **analyze customer retention to identify ways to reduce churn and prevent customers from switching to competitors.**


We need to analyze data related to **customer behavior**, purchases, and preferences to identify trends and patterns that can help inform strategies to improve customer retention





Problem Statement

What are the most effective strategies we can implement to improve customer retention?



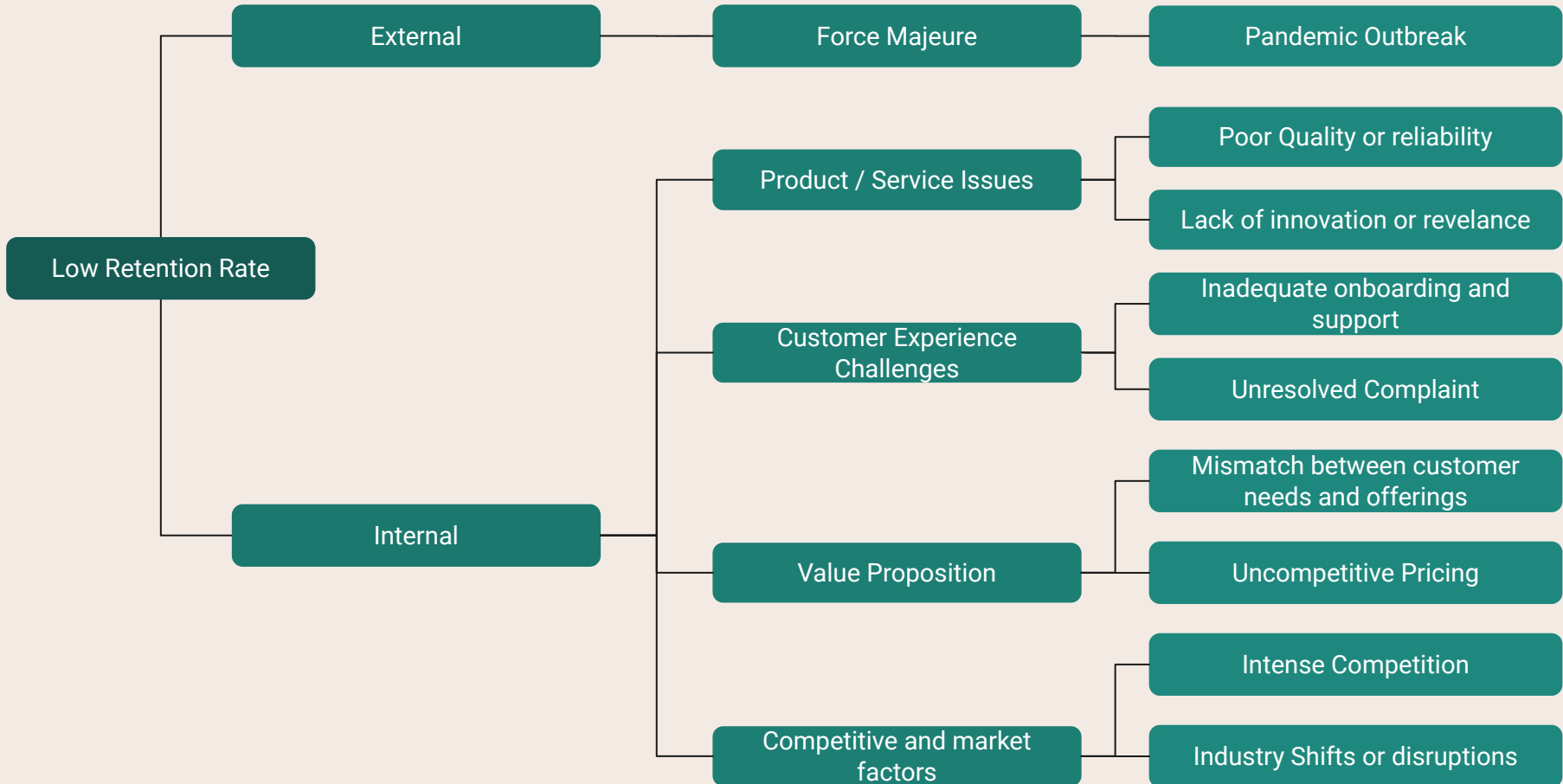


Objective



To find the most effective strategies to improve
customer retention

Root Cause Analysis



Methodology



Data Cleaning

Clean and prepare data using Python to be analyzed



Data Analysis

Gather and prepare data.
Do data analysis to understand the problem.



Segmenting Customer

Use RFM method to determine the cluster.



Insight & Visualization

Visualize the Data and Summaries Insight

Variables



Recency

Measures last purchase or interaction with the company

RFM is a customer segmentation and analysis technique used by businesses to understand and categorize their customers based on their purchasing behavior.



Frequency

Measures how often interacts with the platform within a specific period of time



Monetary

Measures total values or revenue

Our Buyer



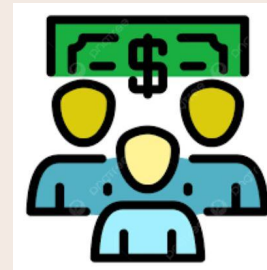
Regular Shoppers

1. Total Buyer: 4665
2. Frequency: 135.693 times
3. Recency: 33 Days
4. Revenue : 23.3 T
5. AOV : 173 M
6. Basket Size : 50.4
7. ARPU: 5.004.995.528



Lost Opportunities

1. Total Buyer: 1671
2. Frequency: 2.522 times
3. Recency: 235 Days
4. Revenue : 301.5 B
5. AOV : 119 M
6. Basket Size : 51.1
7. ARPU : 180.450.549



High Rollers

1. Total Buyer: 64
2. Frequency: 40.287 times
3. Recency: 1 Day
4. Revenue : 3.6 T
5. AOV : 89 M
6. Basket Size : 50.6
7. ARPU : 55.596.582.432



Elite Big Spenders

1. Total Buyer: 15
2. Frequency: 4.501 times
3. Recency: 5 Days
4. Revenue : 13 T
5. AOV : 2.900 M
6. Basket Size : 50.4
7. ARPU : 863.462.666.083

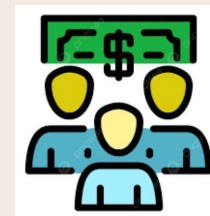
Average Revenue Per User (ARPU)



Regular Shoppers



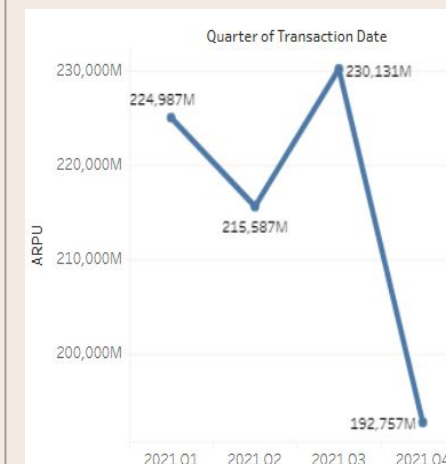
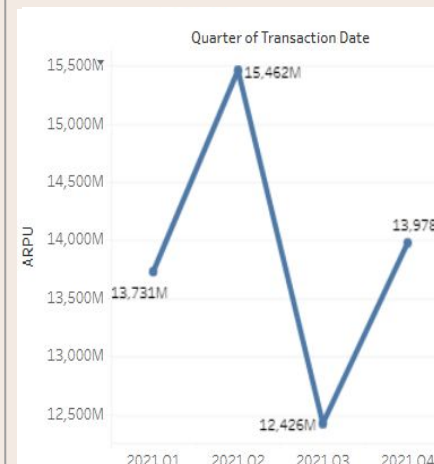
Lost Opportunities



High Rollers



Elite Big Spenders



- In Q4 (September–December), **ARPU decreased** for Regular Shoppers and Elite Big Spenders, while **Lost Opportunities had no transactions**.
- In contrast, High Rollers showed an uptrend in Q3–Q4, emphasizing the needs of investigation in these divergent consumer behaviors during the holiday season.

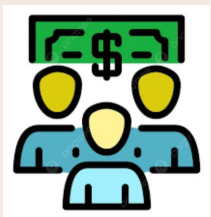
Average Order Value (AOV)



Regular Shoppers



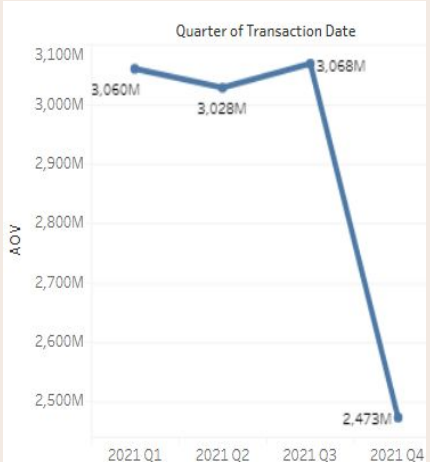
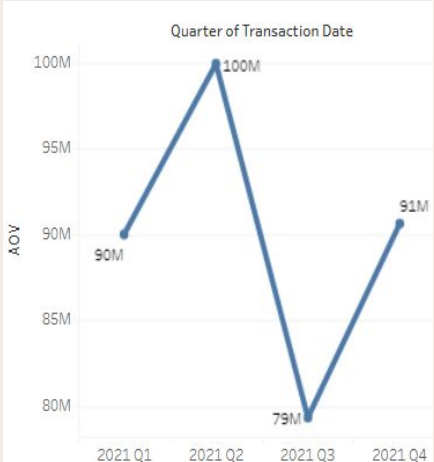
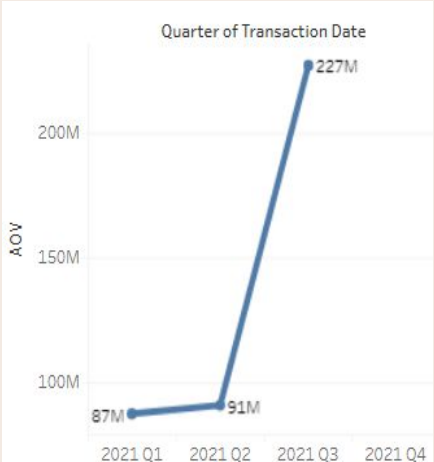
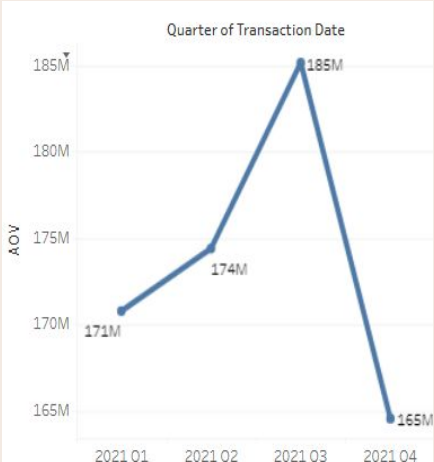
Lost Opportunities



High Rollers



Elite Big Spenders



AOV exhibits a consistent pattern closely resembling that of the Average Revenue Per User (ARPU) within each distinct cluster.

Cohort Analysis – All Cluster

Month of Cu..	Cust per ..	0	1	2	3	4	5	6	7	8	9	10	11
January	2.673	100,0%	74,6%	73,3%	73,4%	74,7%	73,3%	73,8%	73,4%	73,0%	74,6%	73,6%	73,1%
February	672	100,0%	40,5%	40,0%	39,9%	42,0%	40,5%	40,3%	39,6%	41,4%	36,3%	39,9%	
March	438	100,0%	27,6%	28,3%	29,5%	31,7%	27,9%	26,9%	26,3%	27,9%	27,9%		
April	300	100,0%	18,0%	18,7%	19,7%	20,3%	19,3%	21,7%	19,3%	21,3%			
May	254	100,0%	20,1%	16,1%	14,6%	19,7%	16,1%	15,0%	13,8%				
June	220	100,0%	19,1%	11,8%	11,4%	14,1%	13,2%	11,8%					
July	192	100,0%	6,8%	4,2%	6,8%	7,3%	9,4%						
August	174	100,0%	10,3%	6,3%	6,9%	9,8%							
September	147	100,0%	12,2%	10,2%	7,5%								
October	143	100,0%	4,9%	10,5%									
November	130	100,0%	6,9%										
December	133	100,0%											

The matrix above shows the **overall customer retention rate in 2021**. The matrix shows that only Customers acquired in January have a **good retention rate**, customers acquired in February **have a moderate retention rate**, and customers acquired in March and forth have a **bad retention rate**.

Cohort Analysis : Regular Shopper

Month of Cu..	Cust per ..	0	1	2	3	4	5	6	7	8	9	10	11
January	2.383	100,0%	78,9%	78,1%	78,0%	79,4%	77,8%	78,6%	78,2%	78,5%	80,4%	79,3%	78,7%
February	496	100,0%	50,4%	51,6%	50,6%	53,0%	51,8%	51,6%	53,6%	56,0%	49,2%	54,0%	
March	274	100,0%	40,1%	39,8%	40,9%	44,5%	41,2%	43,1%	42,0%	44,5%	44,5%		
April	159	100,0%	25,8%	28,9%	29,6%	34,0%	36,5%	40,9%	36,5%	40,3%			
May	124	100,0%	33,1%	27,4%	26,6%	40,3%	33,1%	30,6%	28,2%				
June	90	100,0%	33,3%	24,4%	27,8%	34,4%	32,2%	28,9%					
July	62	100,0%	11,3%	12,9%	21,0%	22,6%	29,0%						
August	89	100,0%	20,2%	12,4%	13,5%	19,1%							
September	147	100,0%	12,2%	10,2%	7,5%								
October	143	100,0%	4,9%	10,5%									
November	130	100,0%	6,9%										
December	133	100,0%											

- Regular shoppers **closely align** with the overall metrics due to their substantial number of customers.
- The number of Repeat Buyer customers **experienced a decrease from June to July**, followed by a subsequent uptick from July to August. Notably, this pattern differed for Cluster 4, **where the declining trend remained consistent over this period**.

Cohort Analysis: High Rollers

Month of..	Cust per ..	0	1	2	3	4	5	6	7	8	9	10	11
January	64	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Elite Big Spenders

Month of..	Cust per ..	0	1	2	3	4	5	6	7	8	9	10	11
January	15	100,0%	93,3%	93,3%	93,3%	93,3%	93,3%	93,3%	93,3%	100,0%	93,3%	93,3%	93,3%

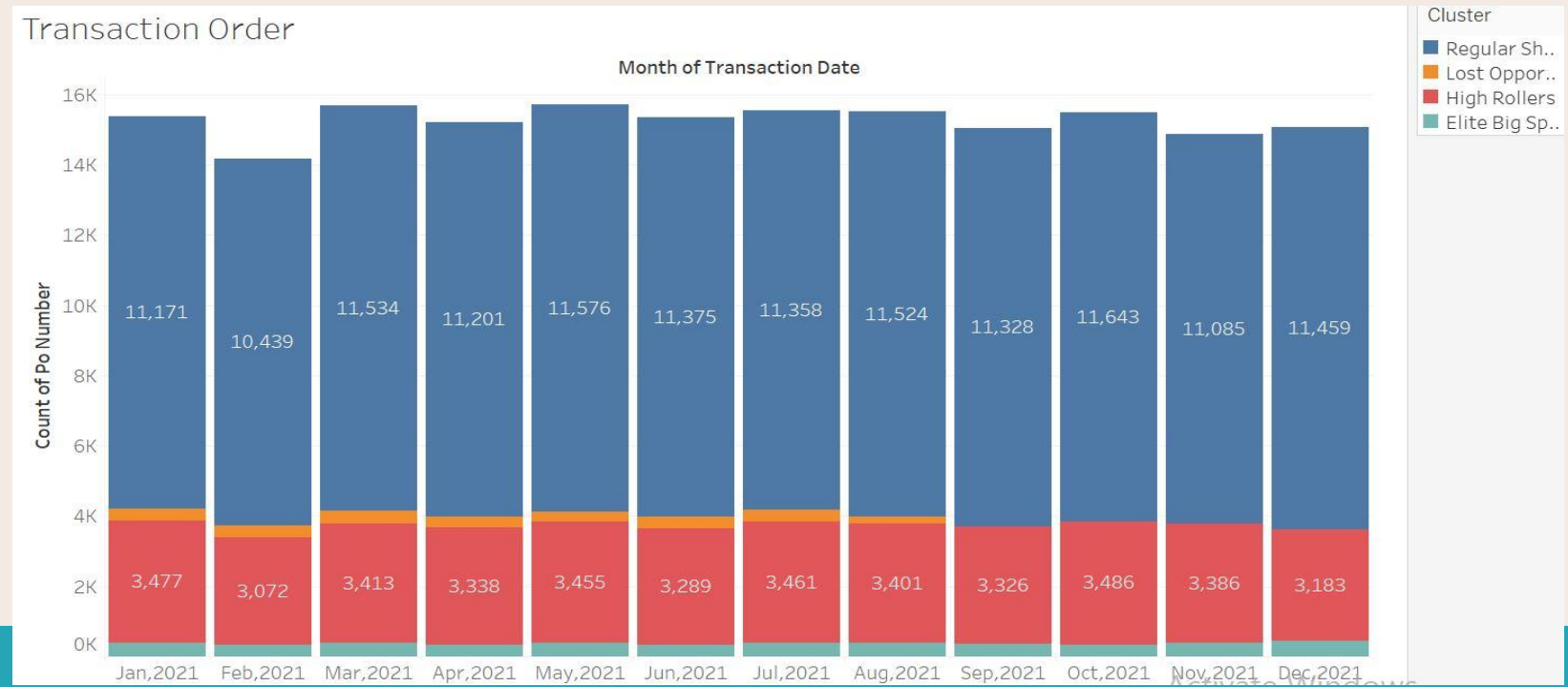
High Rollers and elite big spenders have a very good retention rate. which all of the customers acquired in January.

Cohort Analysis: Lost Opportunities

Month of..	Cust per ..	0	1	2	3	4	5	6	7
January	211	100,0%	18,0%	10,4%	11,4%	12,8%	13,3%	10,4%	9,5%
February	176	100,0%	12,5%	7,4%	9,7%	10,8%	8,5%	8,5%	
March	164	100,0%	6,7%	9,1%	10,4%	10,4%	5,5%		
April	141	100,0%	9,2%	7,1%	8,5%	5,0%			
May	130	100,0%	7,7%	5,4%	3,1%				
June	130	100,0%	9,2%	3,1%					
July	130	100,0%	4,6%						
August	85	100,0%							

Lost Opportunities has the **lowest retention rate of any cluster**. Even in January, when the other cluster has a **high retention rate**, Lost opportunities had a low retention rate. We may have to do a deeper investigation.

- **Regular Shoppers consistently lead in transactions from January to December, with the highest number of Purchase Order (PO)**
- **High Rollers closely trail behind Regular Shoppers in terms of transaction volume. An intriguing observation: Lost Opportunities **completely lost** placing orders between September and December.**



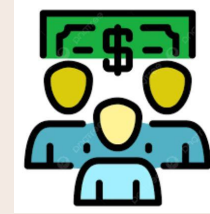
Insight



Regular Shoppers



Lost Opportunities



High Rollers



Elite Big Spenders

Transaction (based on PO number)	Highest Transaction, Count of PO MoM stable	Low Transaction, lost from september to december	2nd Highest Transaction, Count of PO MoM stable	Low Transaction, with range PO number 396 - 437
Average Revenue per User	Moderate num 5.004.995.528	Lowest num 180.450.549	High num 55.596.582.432	Highest 863.462.666.083
Average Order Value	Moderate AOV 173 M	Moderate AOV 119 M	Lowest AOV 89 M	Highest AOV 2.900 M
Top 3 Product	Jasa Konstruksi & Renovasi 16.02%, Pertukangan 12.34%, Elektronik 10.62%	Jasa Konstruksi 25.96%, Jasa Event Organizer 15.29%, Jasa Perawatan Peralatan dan Mesin 11.43%	Elektronik 18.81%, Pertukangan 18.09%, Rumah Tangga 15.72%	Jasa Konstruksi & Renovasi 20.94%, Jasa Mandor & Tenaga Kerja lainnya 16.90%, Jasa Perawatan Peralatan dan Mesin 16.09%
Retention Rate	High	Low	Good	Good

Recommendation



Regular Shoppers



Lost Opportunities



High Rollers



Elite Big Spenders

Continue nurturing the relation with these customer by introducing personalized offers based on their **top product preferences**. For instance, if a customer consistently buys products from the jasa konstruksi category, offers related to interior design or construction safety equipment.

Analyzing their previous preferred products, like **'Jasa Konstruksi' and 'Jasa Event Organizer'**, Offer **discount** could help tailor these efforts more effectively.

This segment's growth could be further boosted by **launching loyalty programs or introducing premium offerings** that align with their preferences

To capitalize on this potential, strategies should be crafted to enhance their purchasing experience, probably by **offering exclusive packages bundling**.

In General



We can do an **EXPO** like already did in Jan 2021
([PaDi UMKM Virtual Expo 2021 Resmi Ditutup](#) | [Republika Online](#))

We need to add a **survey research**, so we can know about which parts they weren't comfortable enough with using our apps.

We need a **loyalty program** to still maintain our beloved customers to consider using our apps for more.

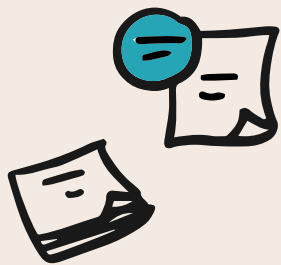
And we need to add **cross-selling** to increase the chance of making them buy us anything they need or to show them also we have anything that they need.



Appendix

- Tableau
- Google Colaboratory





Thank you!

Do you have any questions?



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