



HDI CUSTOMER ANALYTICS

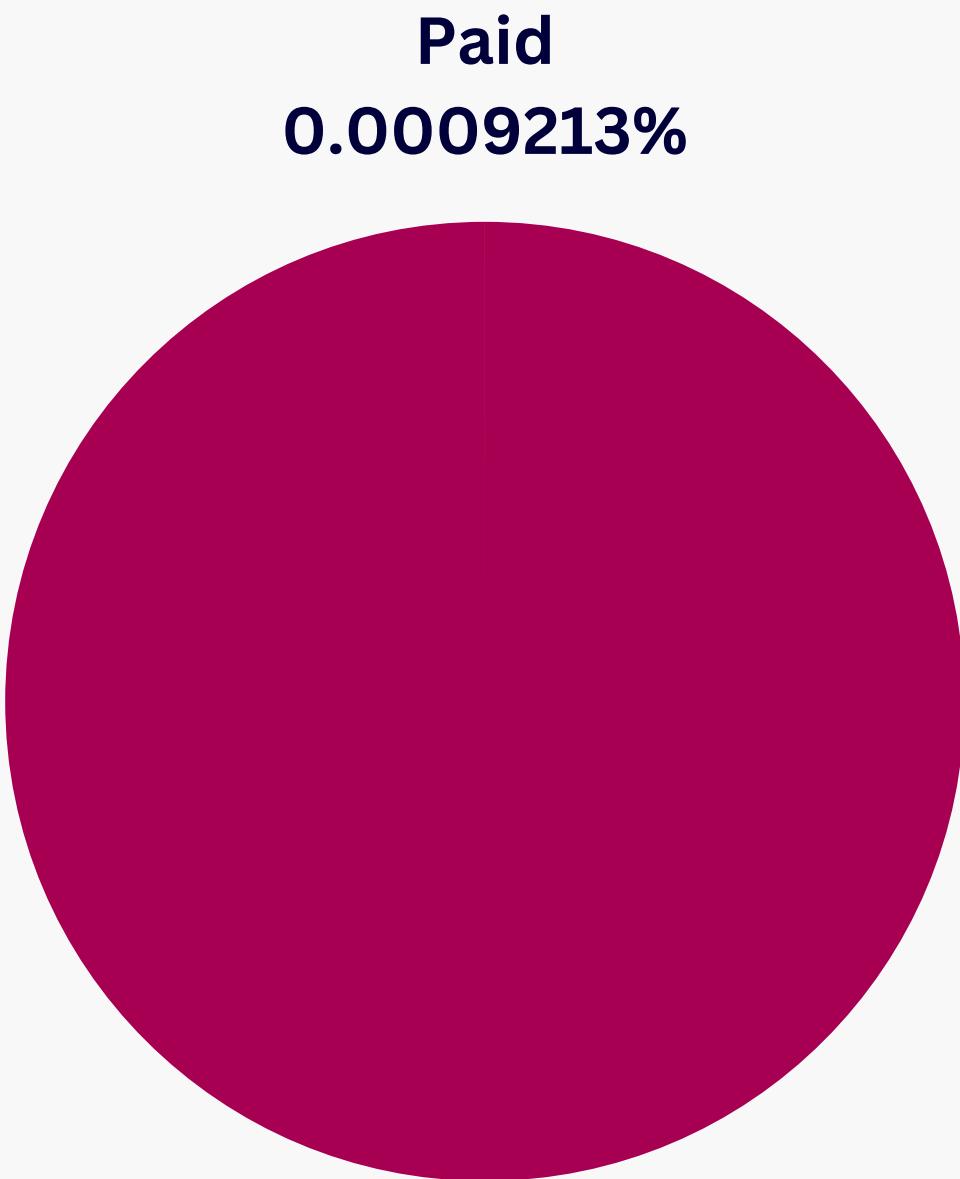
MADT 8101 CUSTOMER ANALYTICS

16 JULY 2023



1,000,000

Transactions in 2021



Paid
0.0009213%

Not paid
99%

Agenda

- 
- 1 Business Overview
 - 2 Business Objectives & Analysis Objectives
 - 3 Customer Segmentation
 - 4 Segment Movement Analysis
 - 5 Business Recommendation: Product Recommendation
 - 6 Business Impact

Business Overview

Business Overview

Customer

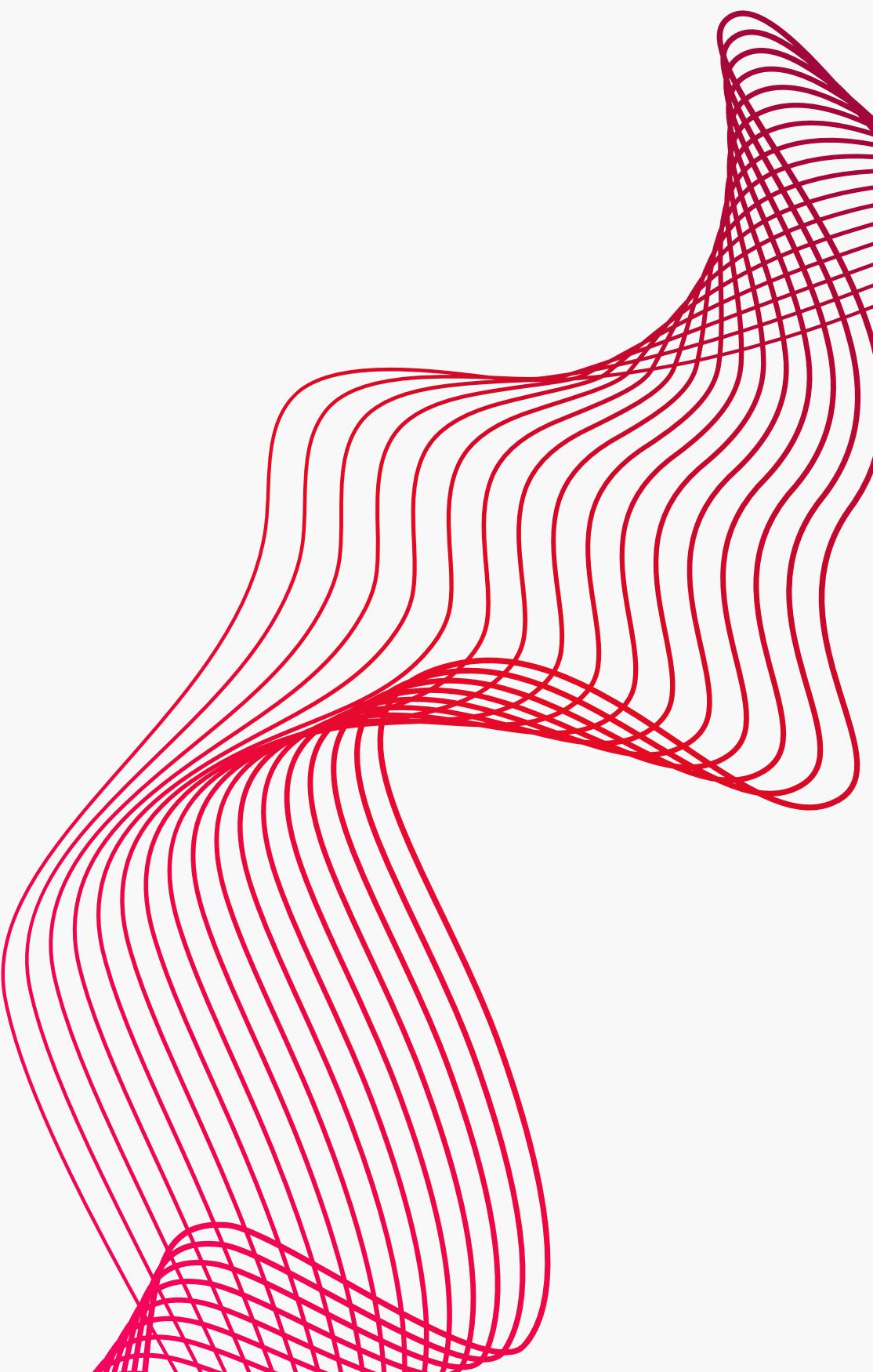
From 2021 to July 2023, the business served **more than 580,000 customers.**

Product

The business has sold **more than 500 SKUs** from the transactions.

Center

The business has **more than 160 centers**, according to the transactions.

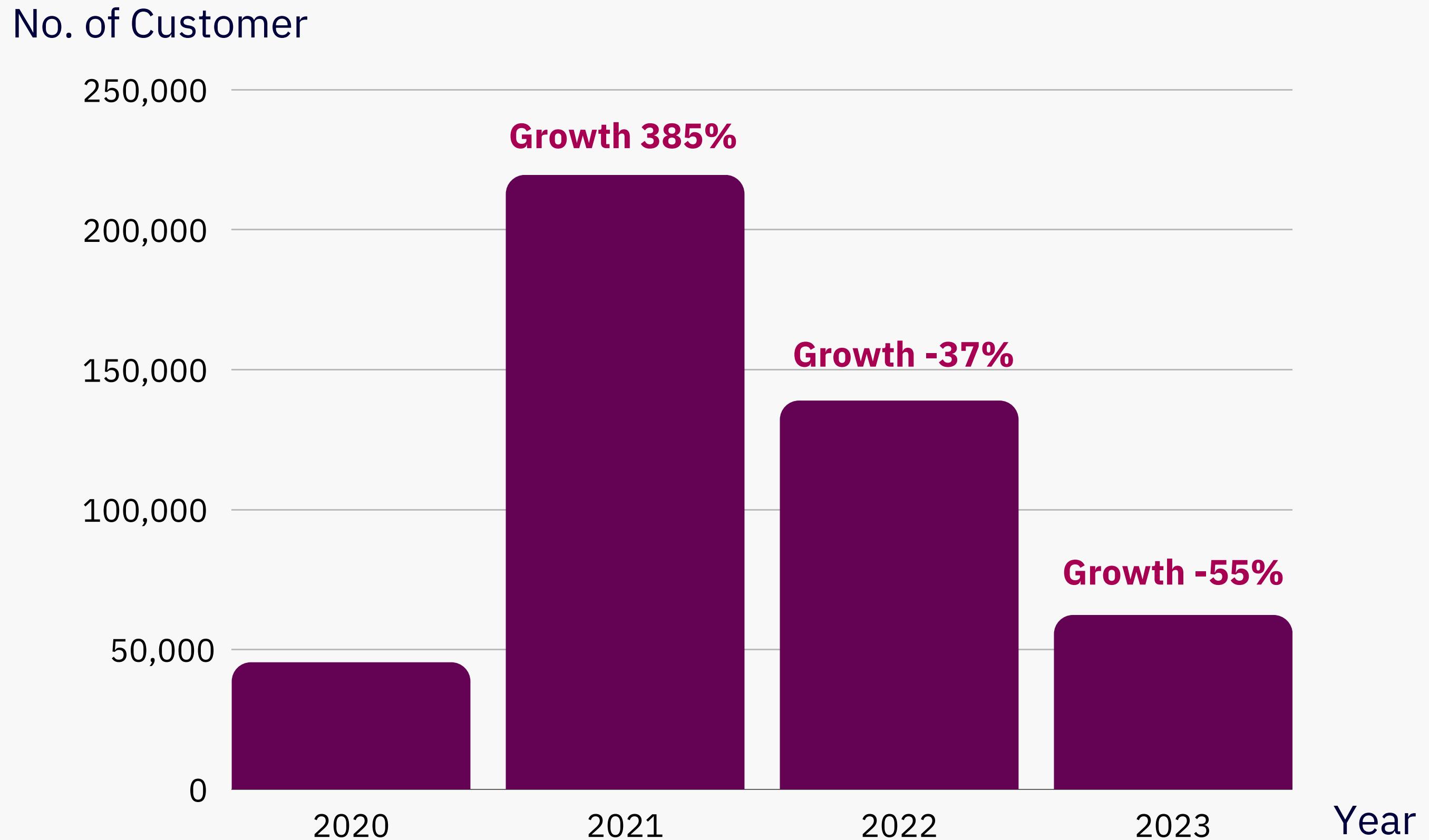




Current Situation

- This current situation covers transactions from the beginning of 2021 to July 2023.

Number of New Customers Join Each Year



Business Objectives

- To convert customers who have not paid for our products yet to willingly pay

Analysis Objectives

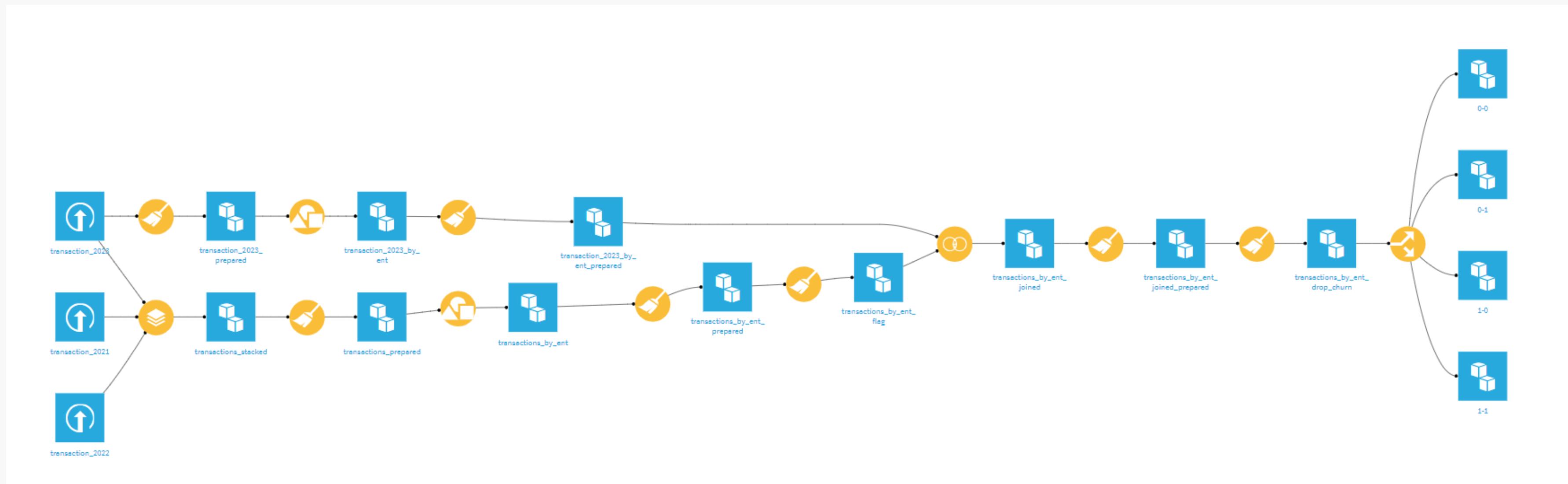
- To divide customers into different segments based on their purchase history
- To identify segment movement of customers
- To analyze and identify recommended products for customers in different segments

Customer Segmentation

Customers Segmentation Flag Logic

	Paid Amount 2021 to 2022 > 0	Paid Amount 2023 > 0	Segment Label
Freeloaders	0	0	0-0
Dormants	1	0	1-0
New Payers	0	1	0-1
Loyalists	1	1	1-1

Workflow



Flag Result

churn	2021_2022_paid_amount_sum	2023_paid_amount_sum	paid_amount_sum	segment_label	21_22_paid_label	23_paid_label
bigint	bigint	bigint	bigint	string	bigint	bigint
Integer	Integer	Integer	Integer	Text	Integer	Integer
0	0	367500	367500	0-1	0	1
0	0	1118000	1118000	0-1	0	1
0	0	0	0	0-0	0	0
0	0	0	0	0-0	0	0
0	238000	0	238000	1-0	1	0
0	0	0	0	0-0	0	0
0	238000	2179600	2417600	1-1	1	1
0	0	0	0	0-0	0	0
0	0	1391000	1391000	0-1	0	1
0	0	0	0	0-0	0	0
0	0	0	0	0-0	0	0
0	0	1537000	1537000	0-1	0	1

Customers Segment Behaviors

Freeloaders

- Customers who have transactions but never paid

Dormants

- Existing customers who have not come back yet.
- Existing customers who came back but not paid.

New payers

- New customers with paid amount.
- Existing customers but recently paid.

Loyalists

- Loyal Customer

Segment Movement Analysis

2022

Not Pay (0)

185,150

Pay (1)

14,540

2023

Not Pay (0)

157,741

Pay (1)

41,949



This Sankey diagram excludes customers who have churned

In Year 2023

Freeloaders

75%

Dormants

4%

New Payers

17.8%

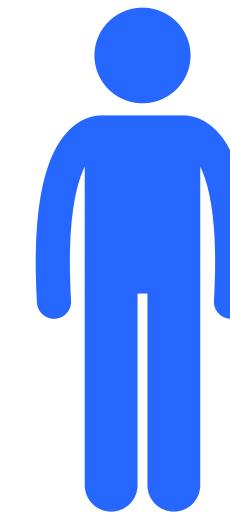
Loyalists

3.2%

The business have customers who actually generate revenue by purchasing products **21%**

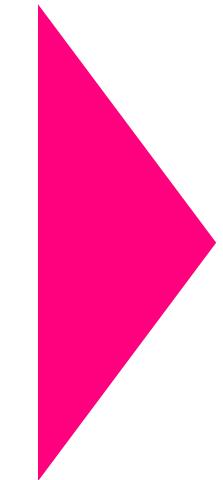
Business Recommendation

Product Recommendation



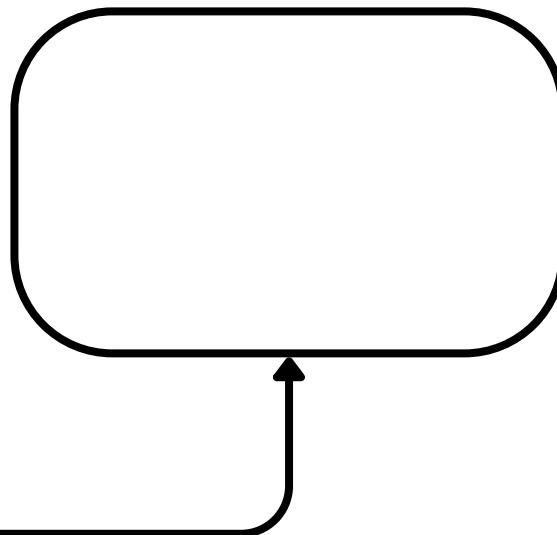
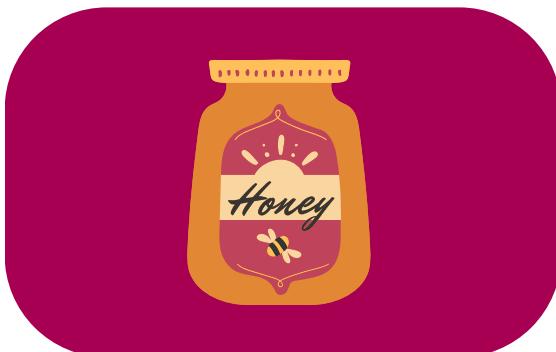
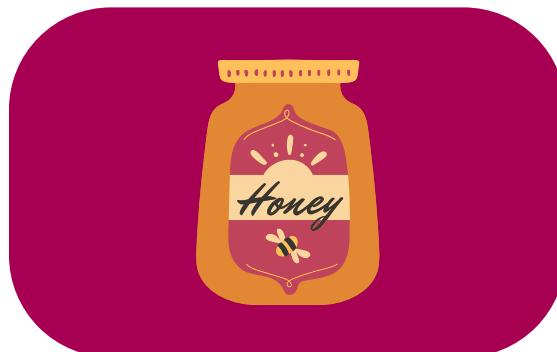
New Payers

0-1

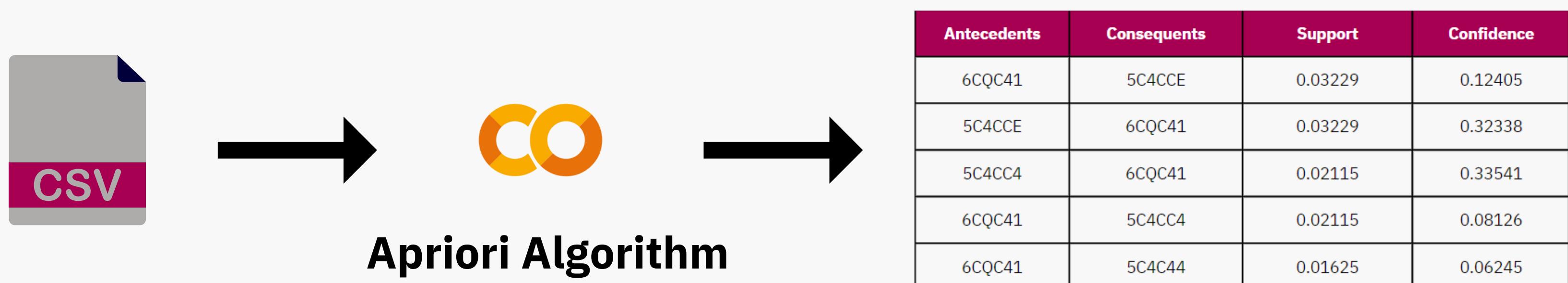


Freeloaders

0-0



Product recommendation flow



Preview of Products Bought Together

Antecedents	Consequents	Support	Confidence
6CQC41	5C4CCE	0.03229	0.12405
5C4CCE	6CQC41	0.03229	0.32338
5C4CC4	6CQC41	0.02115	0.33541
6CQC41	5C4CC4	0.02115	0.08126
6CQC41	5C4C44	0.01625	0.06245

Business Impact

Convert Freeloaders Group To New Payers

$$\text{*Conversion rate} = \frac{\text{No. of newpayers who buy recommended product}}{\text{No. of total new payers}} \times 100$$

*Assumption: This is the possible maximum threshold of the conversion rate

$$\text{No. of converted customer} = \text{Conversion rate} * \text{No. of freeloader}$$

$$\text{Avg. revenue per customer from product recommendation} = \text{Avg of recommended product price} * \text{No. of recommended product per customer}$$

Convert Freeloaders Group To New Payers

Revenue from product recommendation = No. of customer converted customer * Avg. revenue per customer from product recommendation



20,000 M

UP TO

THANK YOU

PRESENTED BY

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