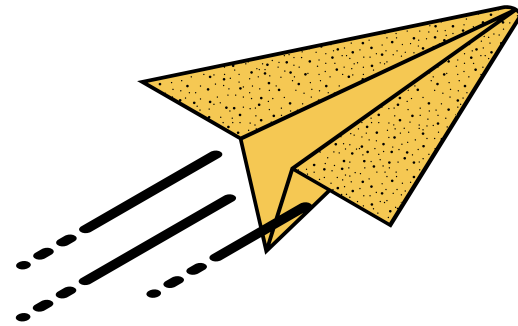
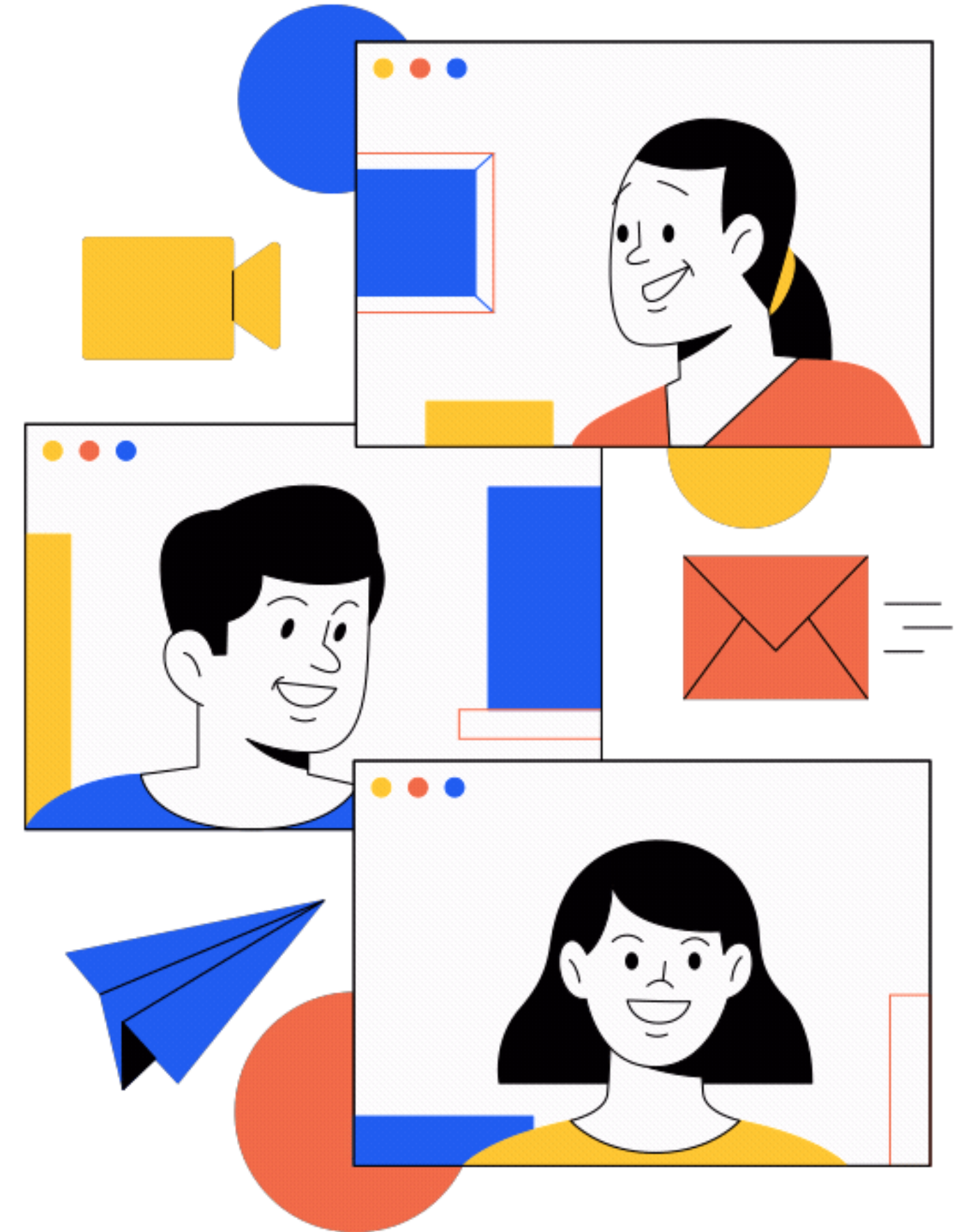


Presented by SiKocak



# DATA CHALLENGE DSW 2023

Customer Churn in Telecommunication Company





# THE TEAM



**Andrew Sukardi**

*Data Science Student*



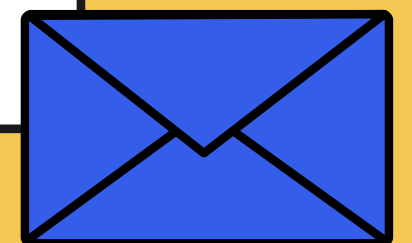
**Sebastian Hariman**

*Data Science Student*



**Vina Nathania Santiko**

*Data Science Student*



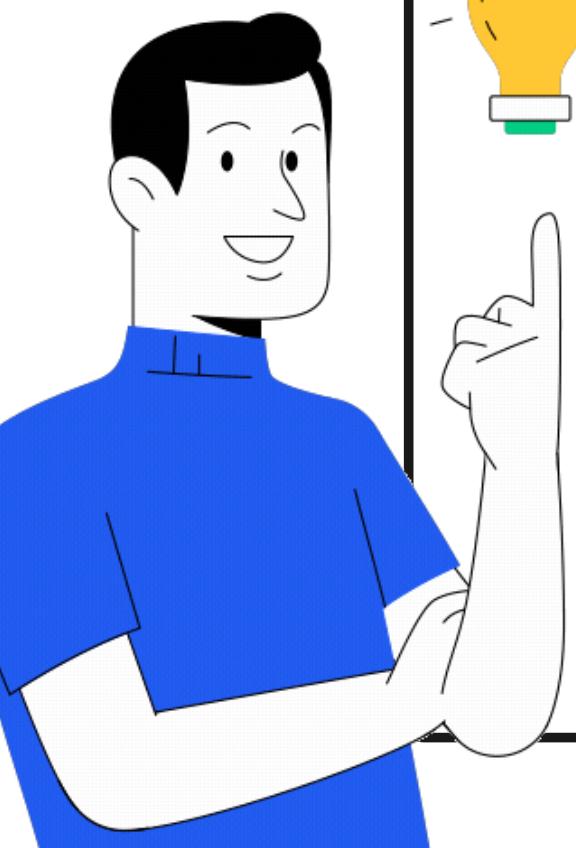


# INTRODUCTION

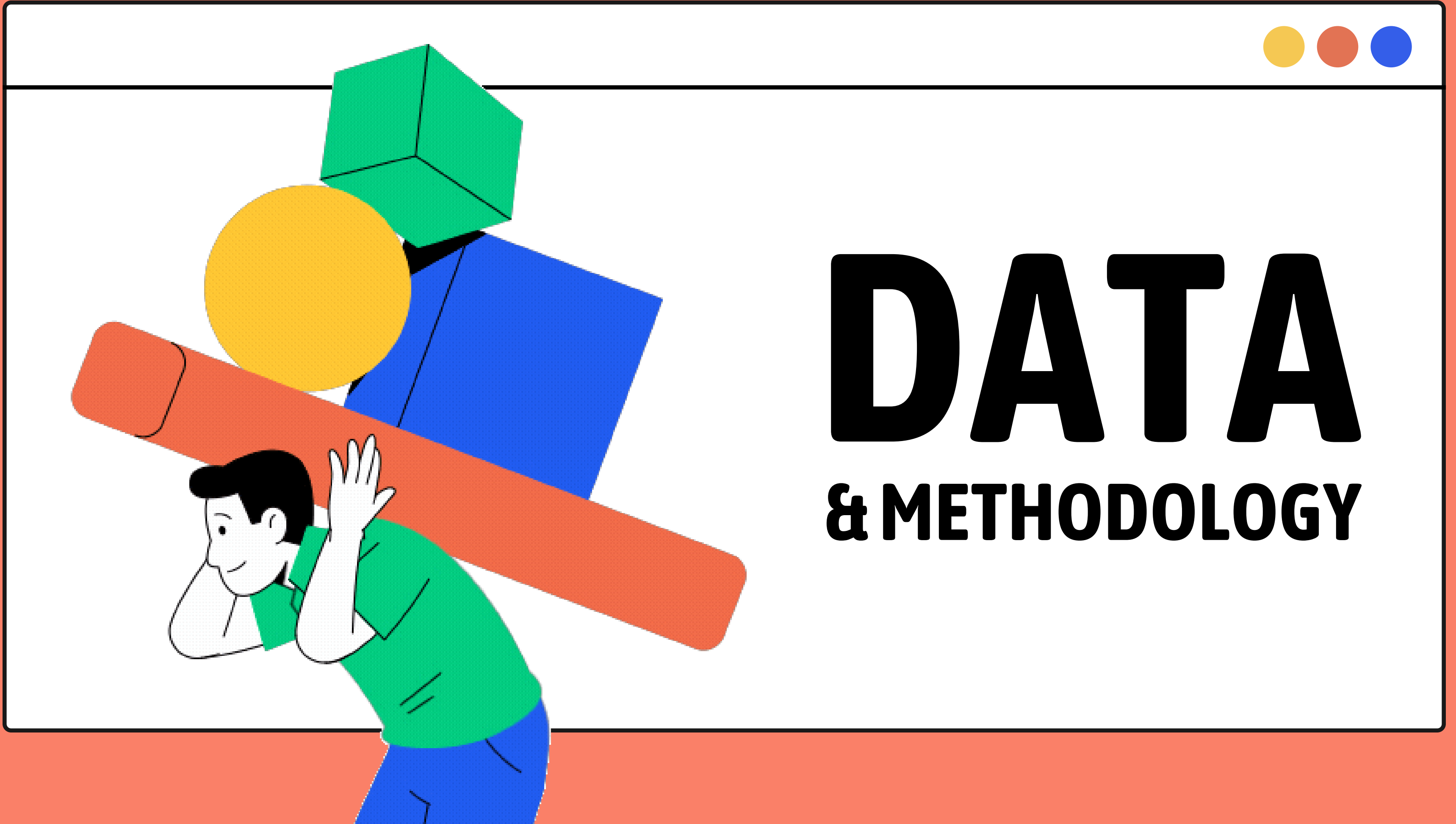
In today's highly competitive telecommunications industry, understanding and analyzing customer behavior is crucial for companies to continue growing and thriving. Customer insights are invaluable for enhancing service quality, increasing customer satisfaction, reducing churn, and maintaining a loyal customer base.



To address this critical need, a solution is needed to provide a telecommunication company with meaningful insights. One way to provide insights is by creating an interactive dashboard. This solution aims not only to unravel hidden insights but also to empower companies with actionable intelligence that can drive strategic decisions and service improvements.

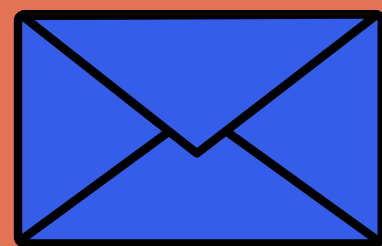






# **DATA**

## **& METHODOLOGY**

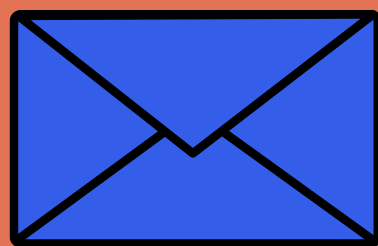


# **DATASET**

The usage of telecommunication services  
in Jakarta and Bandung during the third  
quarter (Q3) of a particular year.

Features: 16

Entities: 7043



+ a b | e a u

**Tableau**

# METHODOLOGY



## 1 - Data Collection

Collecting Telecom Customer Churn Data from online source (Kaggle).

## 2 - Data Analyzing

Checking variable types, number of columns, number of rows, missing value, and relation of the features.

## 3 - Data Visualization

Making graphs and dashboard from the data.

## 4 - Finding Insight

Conclude what we got from data visualizations.

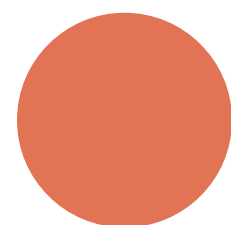
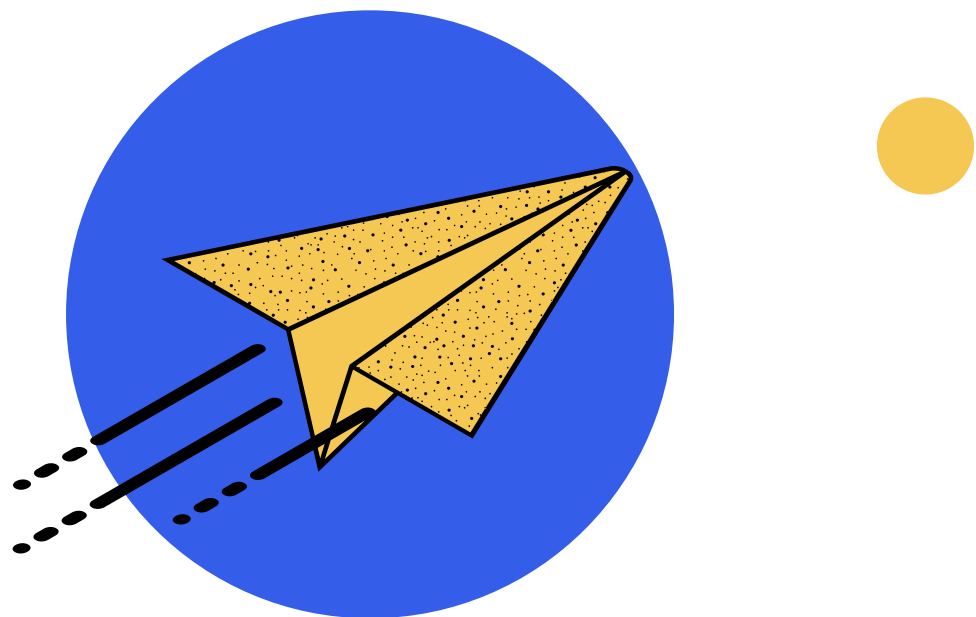
## 5 - Finding Solution

Making solution from insight we got.



# RESULTS

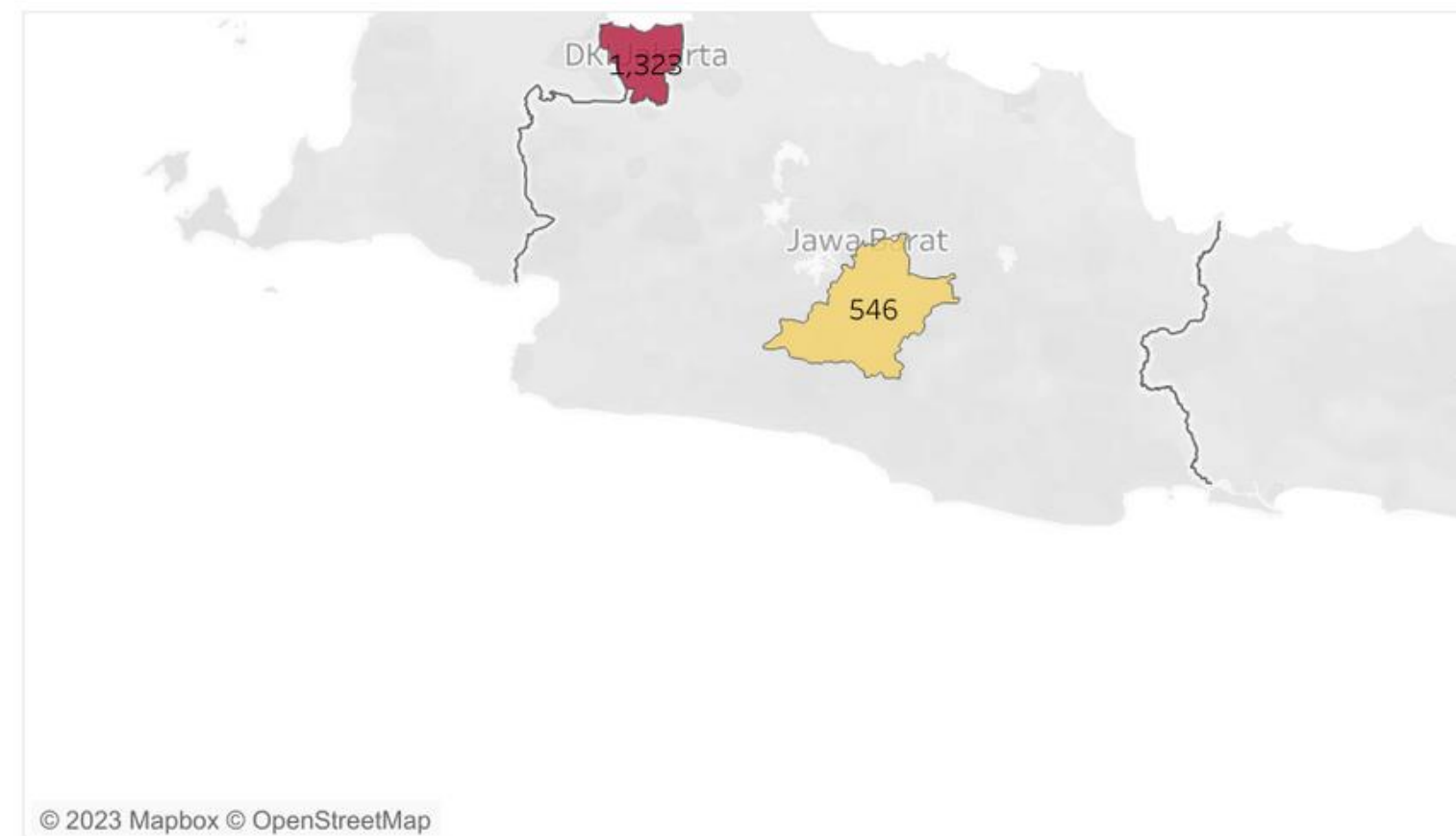




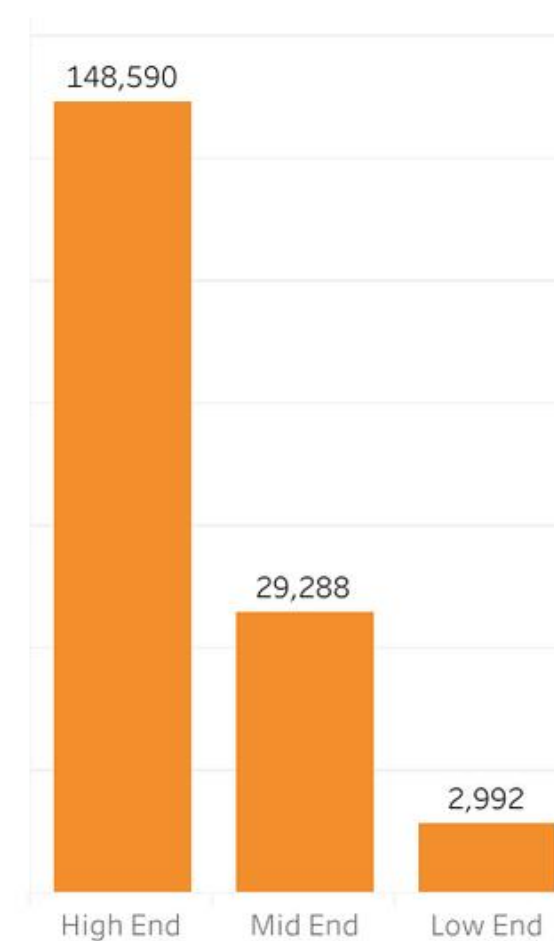
# LOCATION TENURE

Customer churn is highest in Jakarta (1.323 users), and customers with high-end devices are most likely to churn (1.297 users). On average, customers who churn only stay with the company for 18 months, so there is still a possibility of churn during the first 18 months. The largest monthly purchase is Rp148.590 for high-end devices.

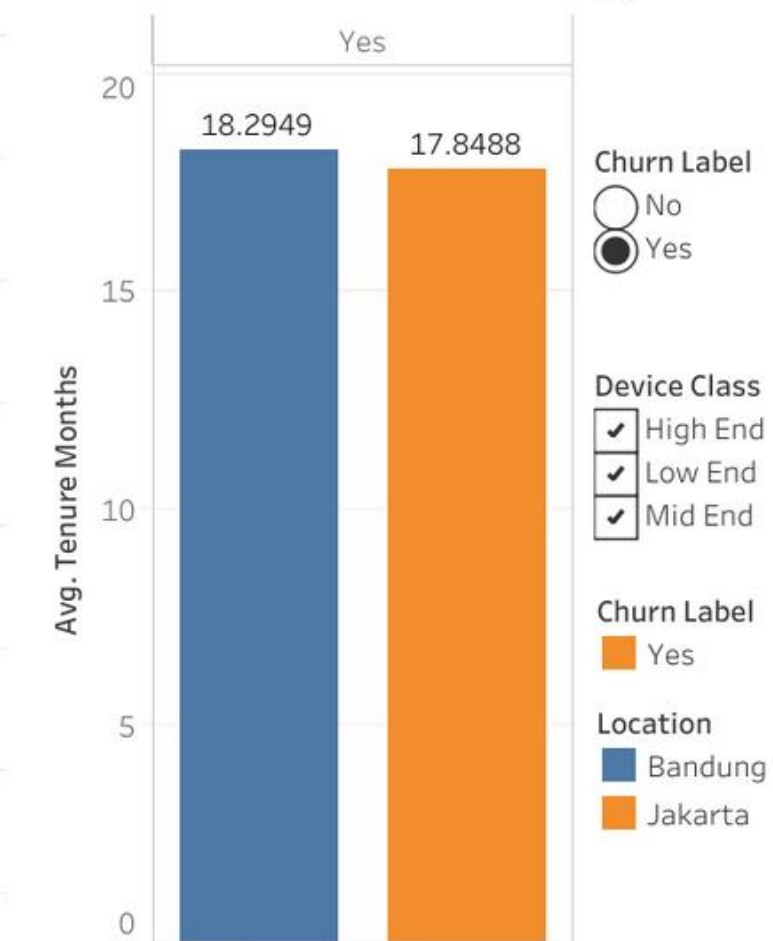
Location Map

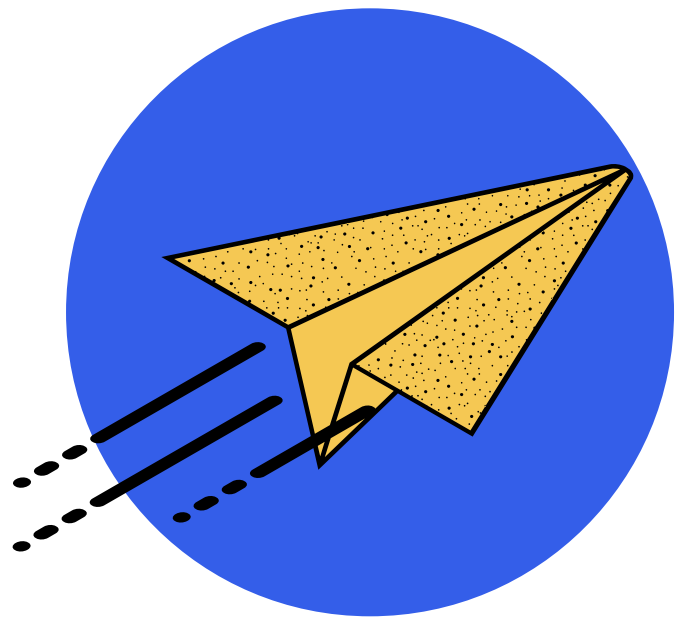


Device Class

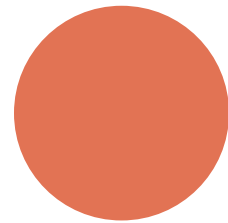


Average Tenure

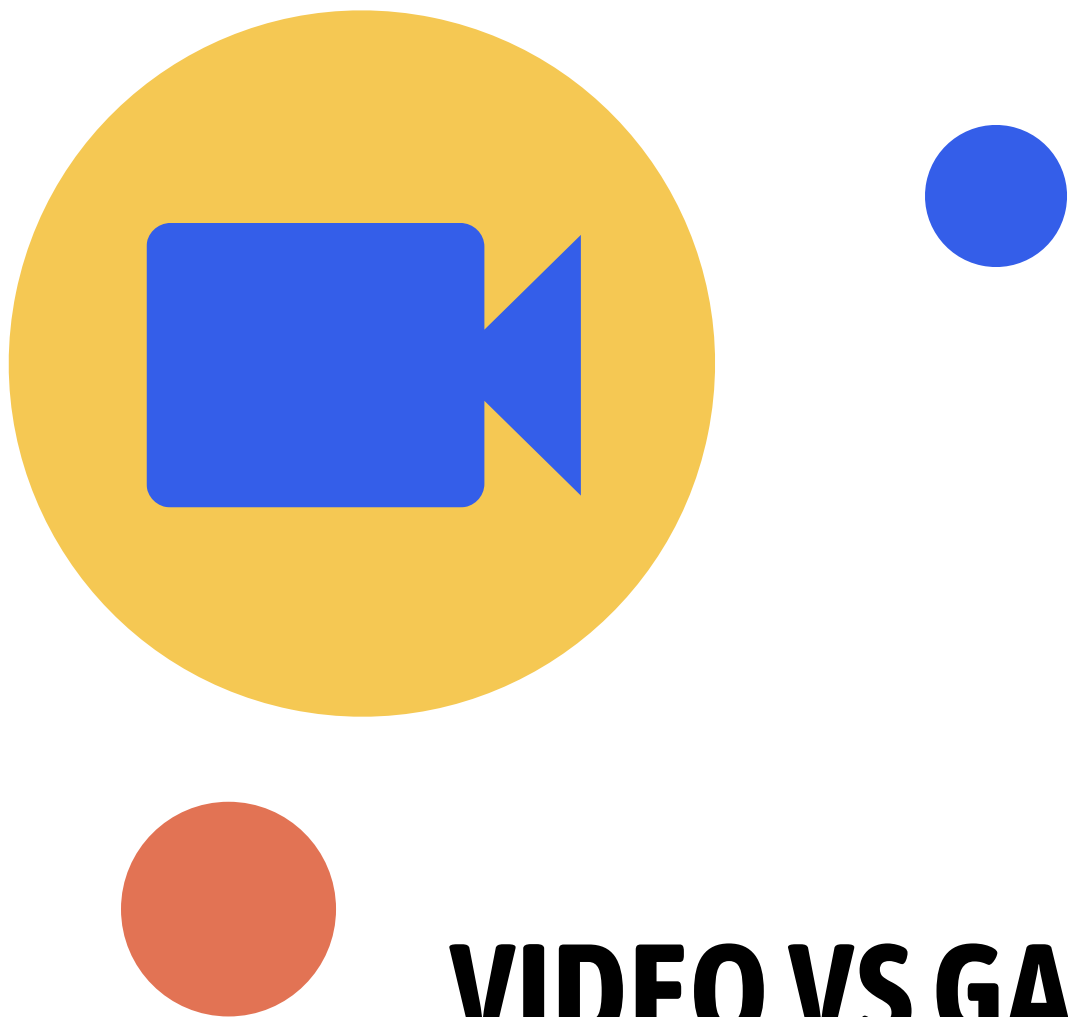




# LOCATION TENURE



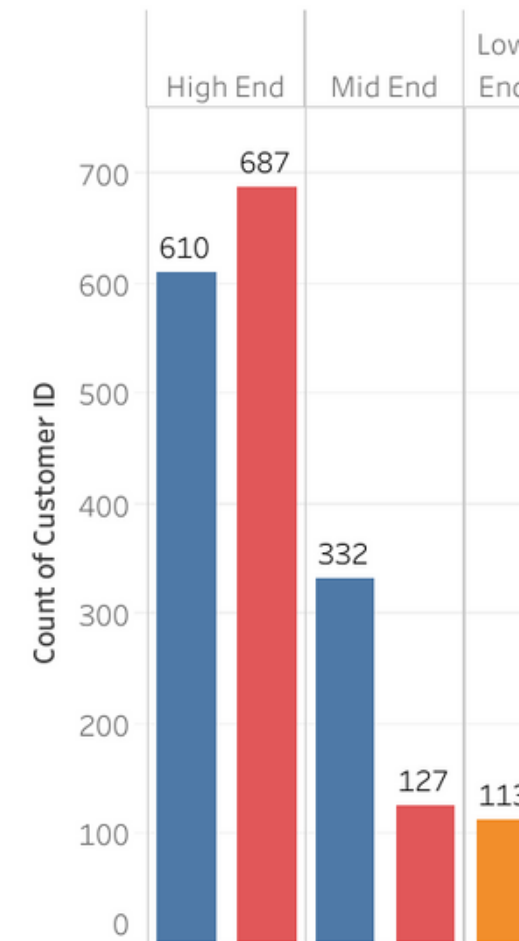
- The high churn rate in Jakarta could be due to a number of factors, including the larger population, the higher level of competition, or the lower quality of service.
- High-class customers are more likely to churn because they have higher expectations for service or because they are more easily able to find alternative services.
- The fact that churn can happen even after 18 months of use shows that companies need to focus on retaining new customers during this period.
- The higher purchase rate of high-class customers shows that companies can focus on targeting high-class customers with marketing campaigns and promotions.



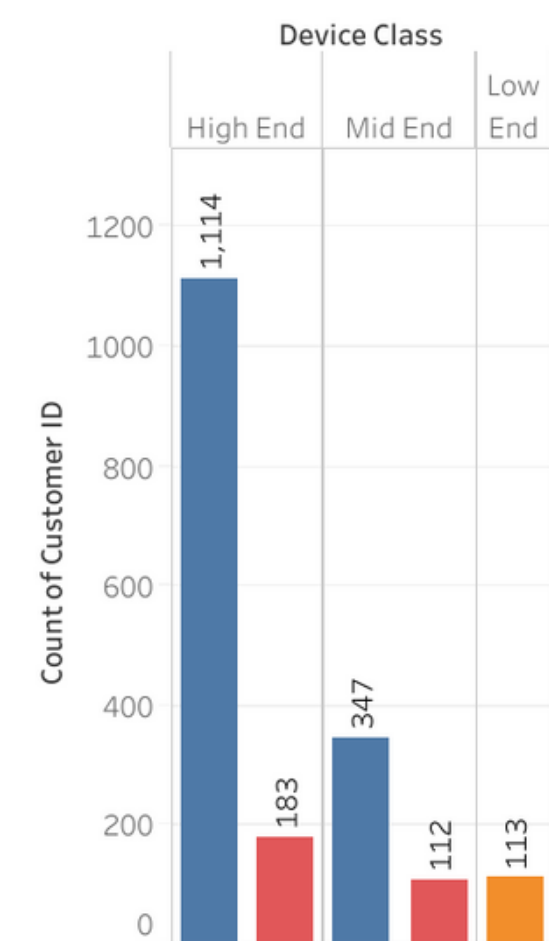
# VIDEO VS GAMES PRODUCT

Customers with high-end devices who have churned are most likely to purchase video products, with 687 users. They are also the most likely to not purchase games, with 1.114 users. And the most common payment method for high-end devices is prepaid credit, with 849 users.

Video Product



Games Product



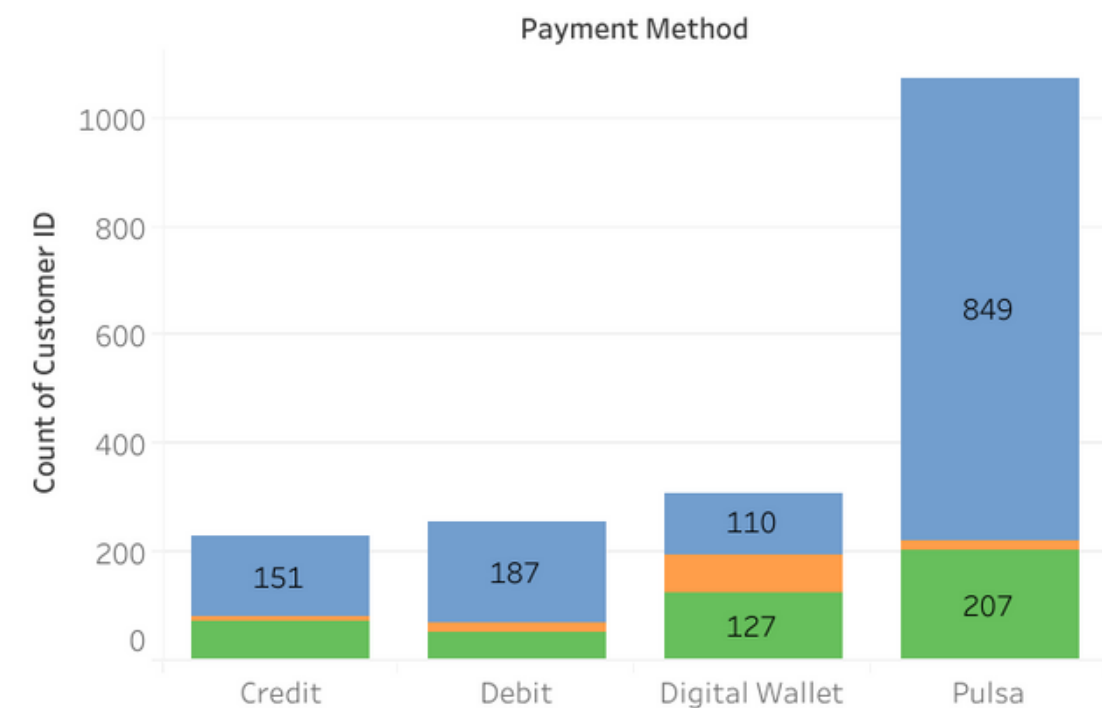
Churn Label  
○ No  
● Yes

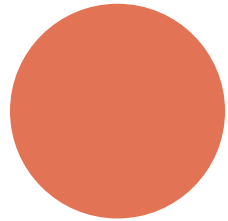
Device Class  
✓ High End  
✓ Low End  
✓ Mid End

Video / Games Product  
■ No  
■ No internet service  
■ Yes

Device Class  
■ High End  
■ Low End  
■ Mid End

Payment Method





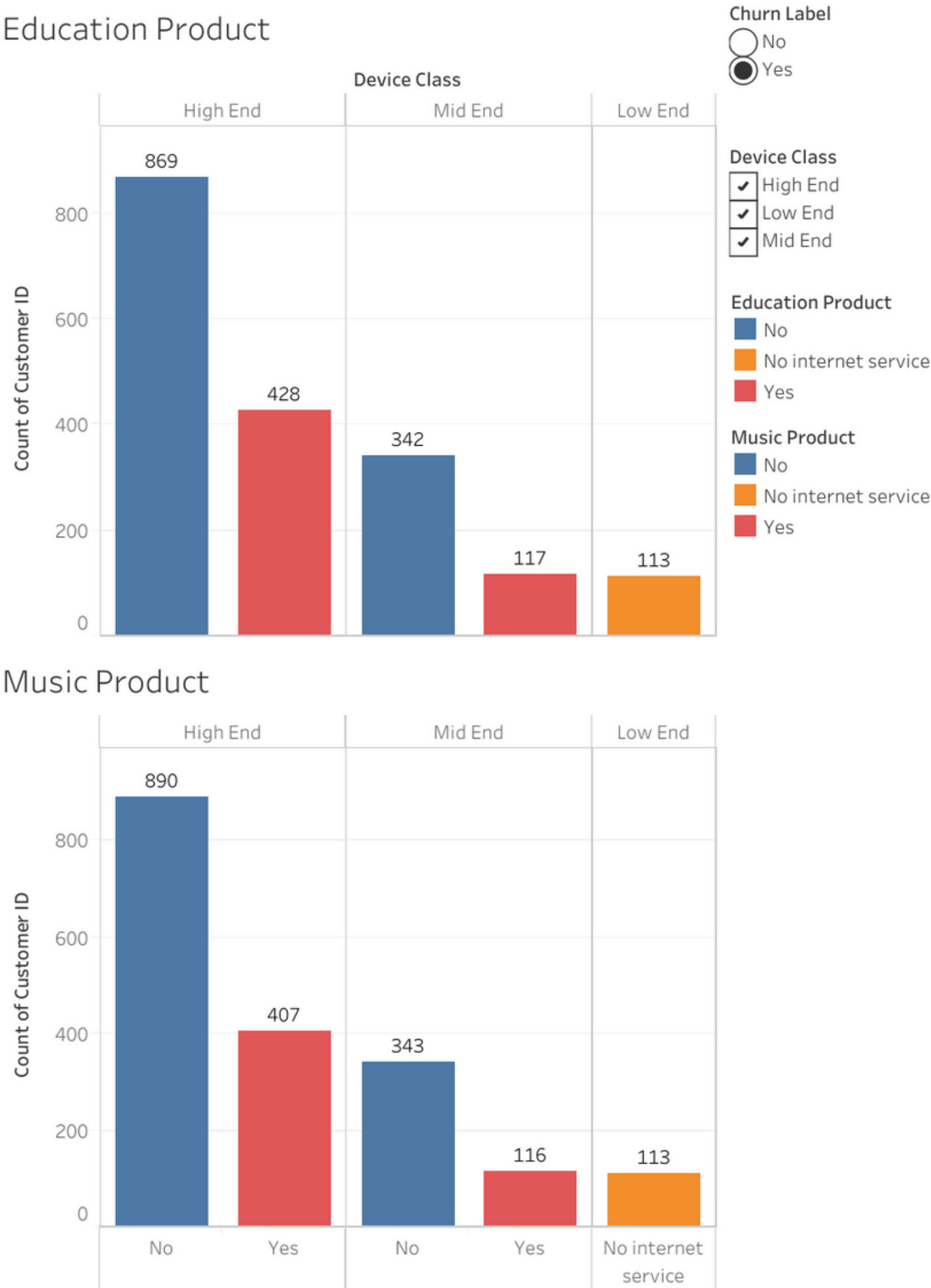
# VIDEO VS GAMES PRODUCT

- The high purchase rate of video products by high-end churned customers suggests that they are looking for high-quality entertainment.
- The low purchase rate of games by high-end churned customers suggests that they are not interested in gaming.
- The high use of prepaid credit by high-end churned customers suggests that they are looking for convenient payment options.



# EDUCATION VS MUSIC PRODUCT

High-end device customers are 50% more likely to not purchase education products, with 869 users. They are also 50% more likely to not purchase music products, with 890 users.







# EDUCATION VS MUSIC PRODUCT

- The high rate of non-purchase of education products by high-end device customers suggests that they are either self-sufficient or that they are satisfied with the education they are currently receiving.
- The high rate of non-purchase of music products by high-end device customers suggests that they are either not interested in music or that they are able to find music that they like for free or at a lower cost.

# SOLUTIONS

- **Location**

Improve the quality of services in Jakarta

- **Product**

Develop products that better suit the needs of mid and low-class customers

Partner with educational institutions or music streaming services to offer exclusive content or benefits to high-end device customers.

Video product needs a reconsideration due to its high underutilization, especially in High-class customers


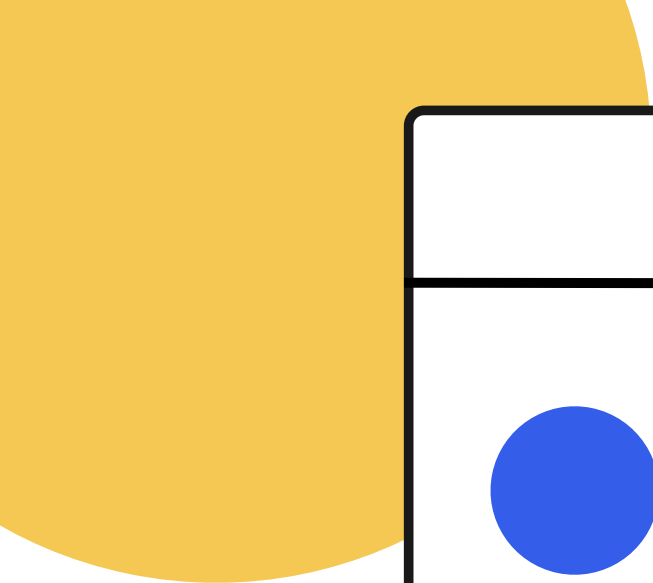


- **Customer**

Establish a customer loyalty program for those who purchase our products

Offer special attention to new customers during the first 0-18 months by providing promotions or special offers

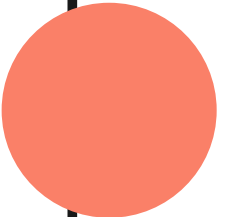
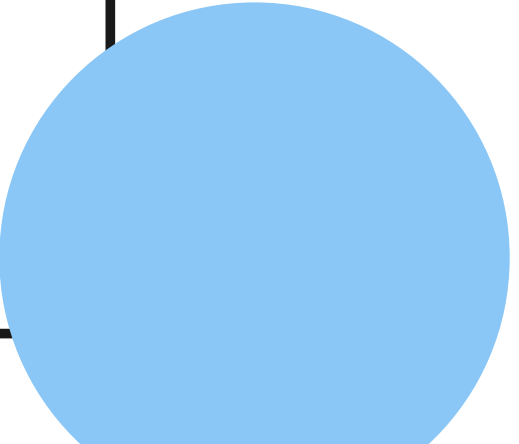
Develop more targeted marketing campaigns that appeal to the interests of high-end device customers.



A stylized illustration of a woman with dark hair in a bun, wearing an orange long-sleeved shirt and yellow pants. She is holding a black tablet in her left hand and pointing with her right index finger towards the text on the screen.A large, solid yellow circle in the top-left corner of the slide.A solid blue circle in the top-left corner of the screen area.Three small circles in the top-right corner of the screen area, colored yellow, orange, and blue from left to right.

Customers with high-end devices in Jakarta are most likely to churn, and they are more likely to purchase video products than games. They are also more likely to use prepaid credit to pay for their purchases. This suggests that the company needs to focus on improving the quality of service in Jakarta, developing products that better suit the needs of high-end device customers, and offering exclusive content or benefits to high-end device customers through partnerships with educational institutions or music streaming services.

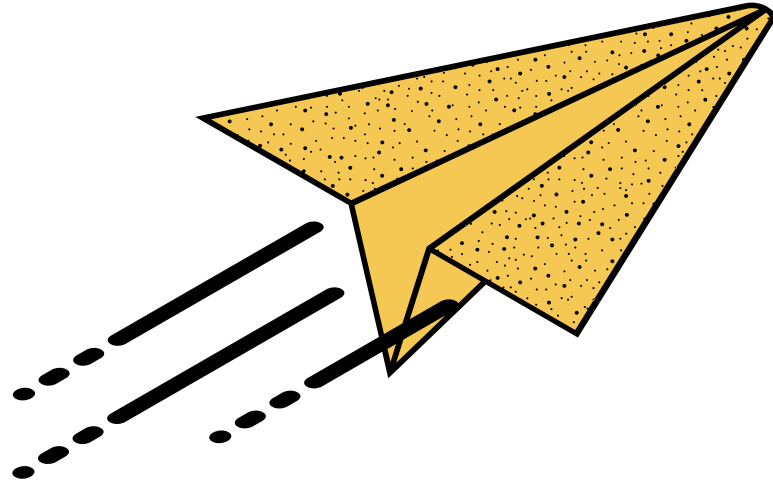
Company needs to take a more targeted approach to customer retention, focusing on the specific needs and interests of high-end device customers in Jakarta. By improving the quality of service, developing better products, and offering exclusive benefits, the company can reduce churn and improve its overall profitability.

A solid orange circle on the right side of the screen.A large solid blue circle in the bottom-right corner of the slide.



# SI KOCAK TABLEAU VISUALIZATION

Presented by SiKocak



# THANK YOU!

