

# Customer Churn Analysis in Banking Sector

BAIT 518 Team Project

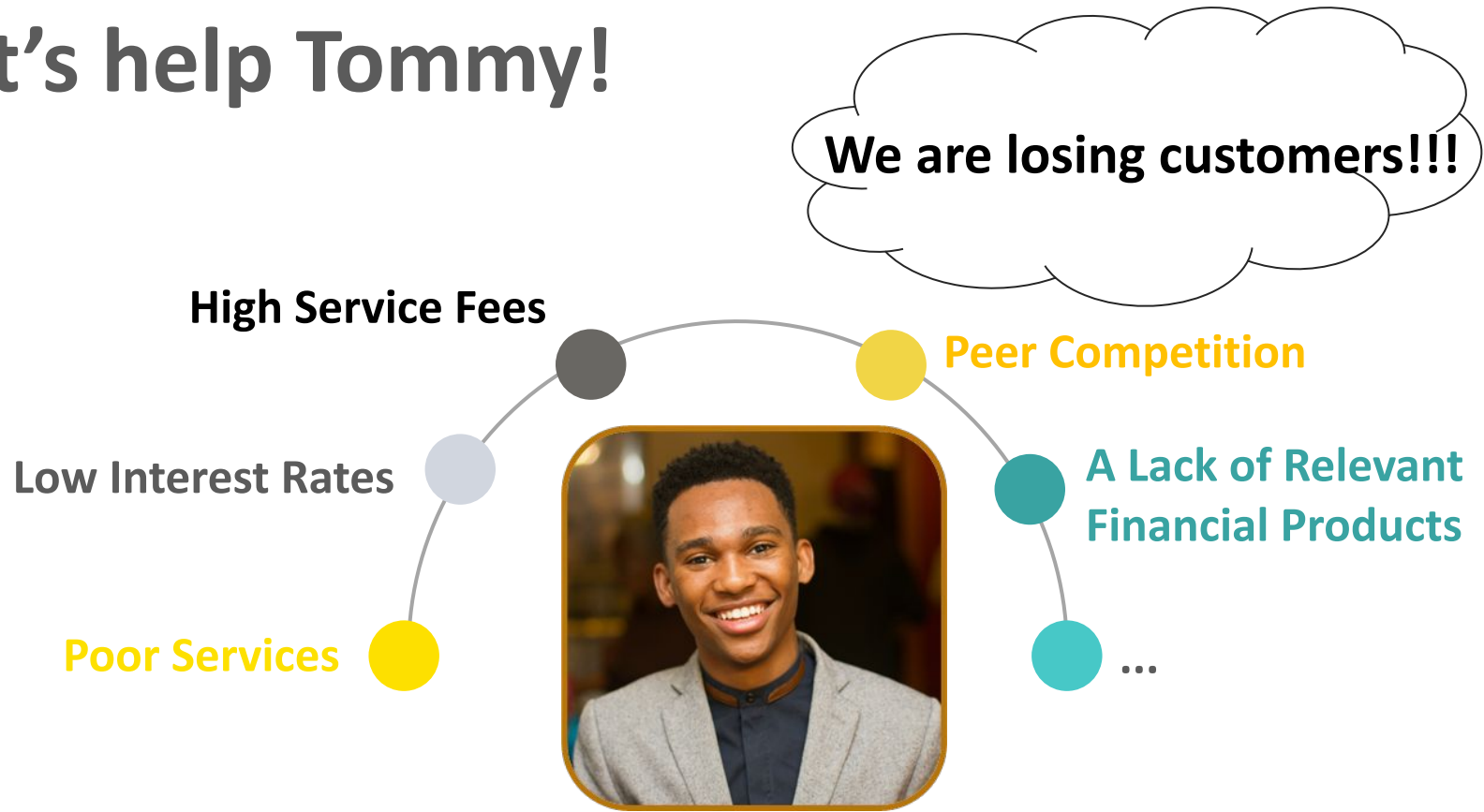
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# BANK



# Let's help Tommy!



**Customer Services Manager at ABC Bank**

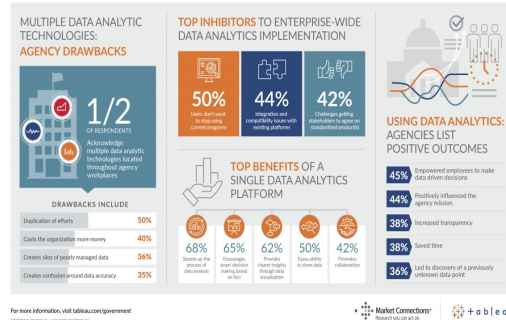
# Executive Summary

## Problem



## Data Analysis & Visualization

**DATA ANALYTICS IN FEDERAL AGENCIES**  
Modernizing Government with a Robust Data Analytics Platform

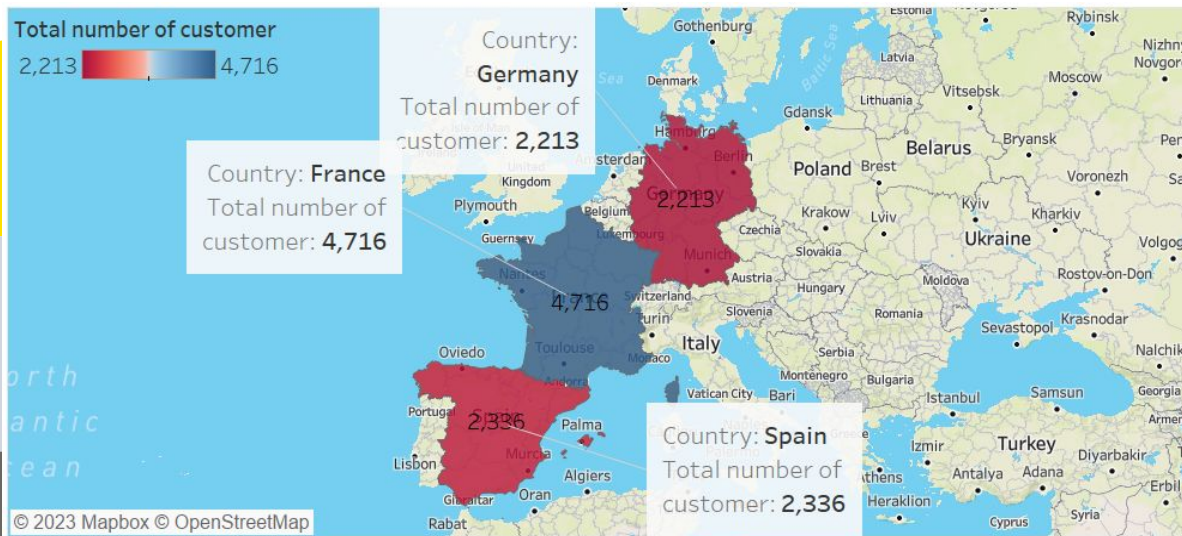


## Recommendation

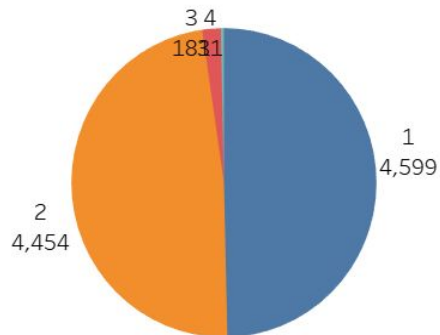


- In Banking sector, the organic growth nowadays is greatly hindered by high customer churn rate
- Using Excel to carry out data cleaning
- Using Tableau to create data visualization
- Product & Service Improvement
- Target Group Focus
- Business Expansion Analysis

# Overview



Proportion of Number of Products



Average  
Estimated  
Salary

100,046

Gender  
Distribution

Gender  
Female 4,129  
Male 5,136

Average  
Balance

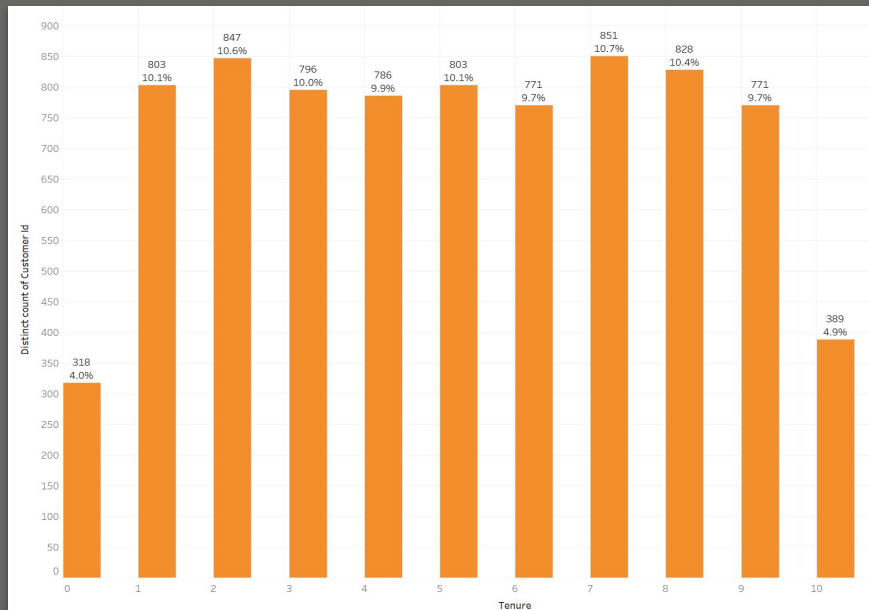
75,309

Average  
Credit Score

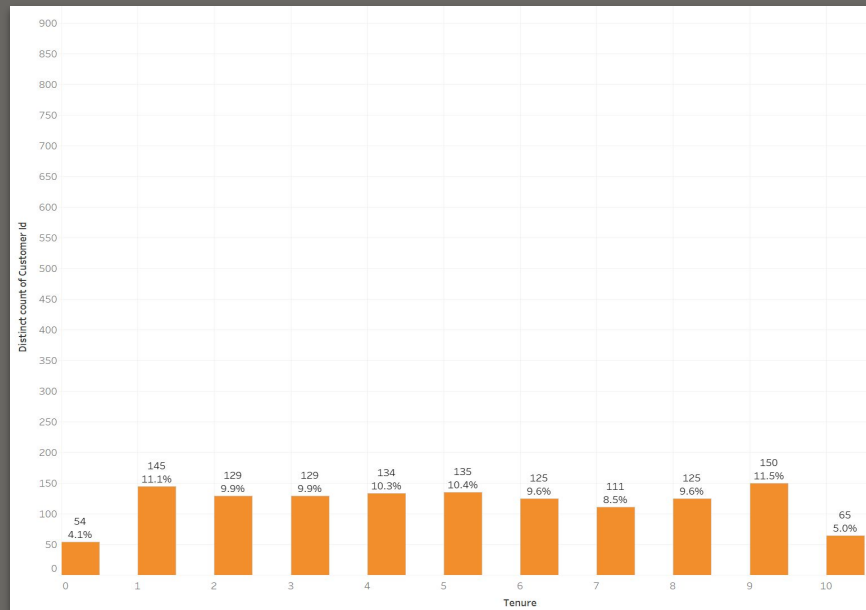
650.9

# Numbers of Customers Categorized by Customer Relationship with Bank

## Non-Churned Group



## Churned Group

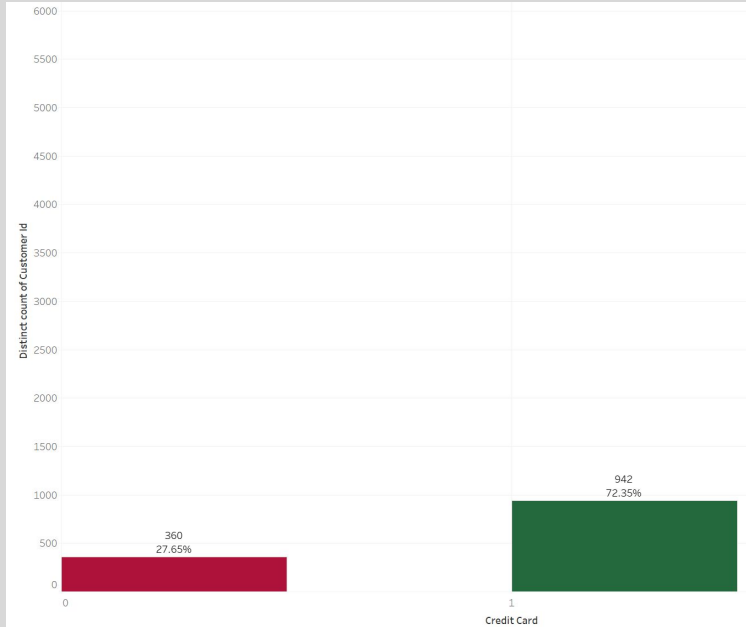
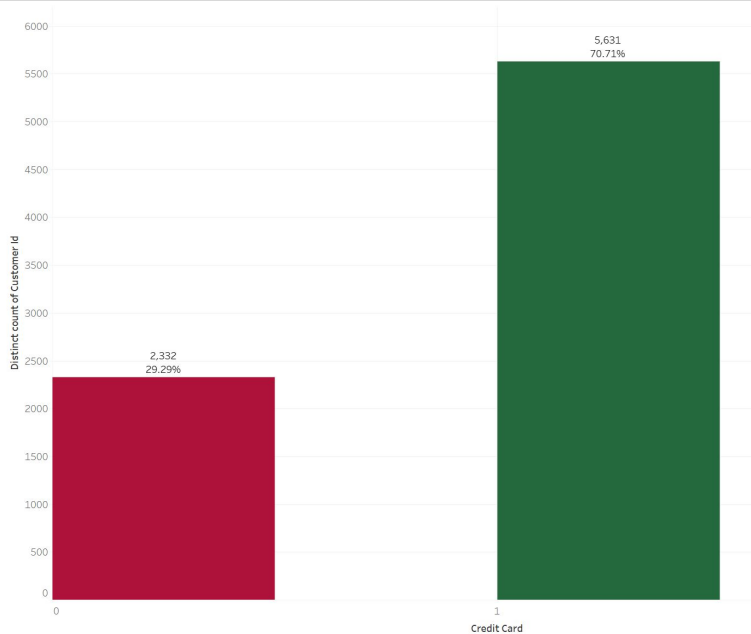


- The distribution has a high level similarity for both groups.
- Tenure might have low correlation with customer churn rate.

# Customers Amount by Credit Card Ownership

## Non-Churned Group

The percentage of having credit card in non-churned group is similar to the churn group.



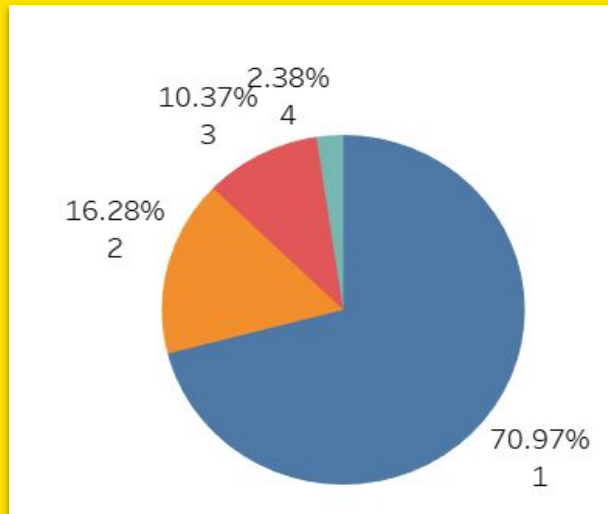
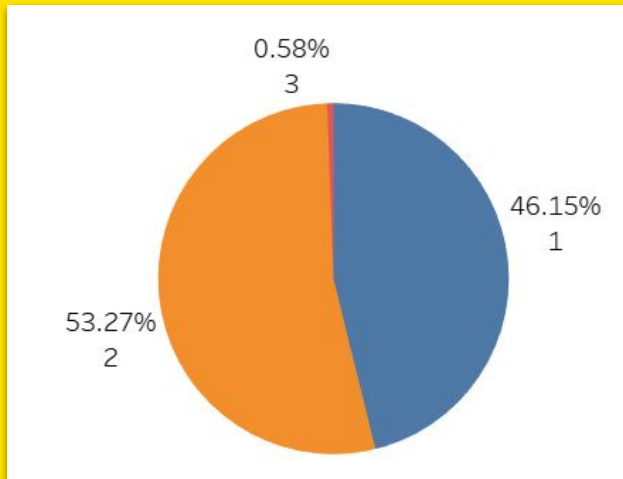
## Churned Group

It can be predicted that ownership of credit card has little effect on churn rate.

# Customers Amount by Number of Products Purchased

## For Non-Churned Customers

- 99% of customers will choose one or two products

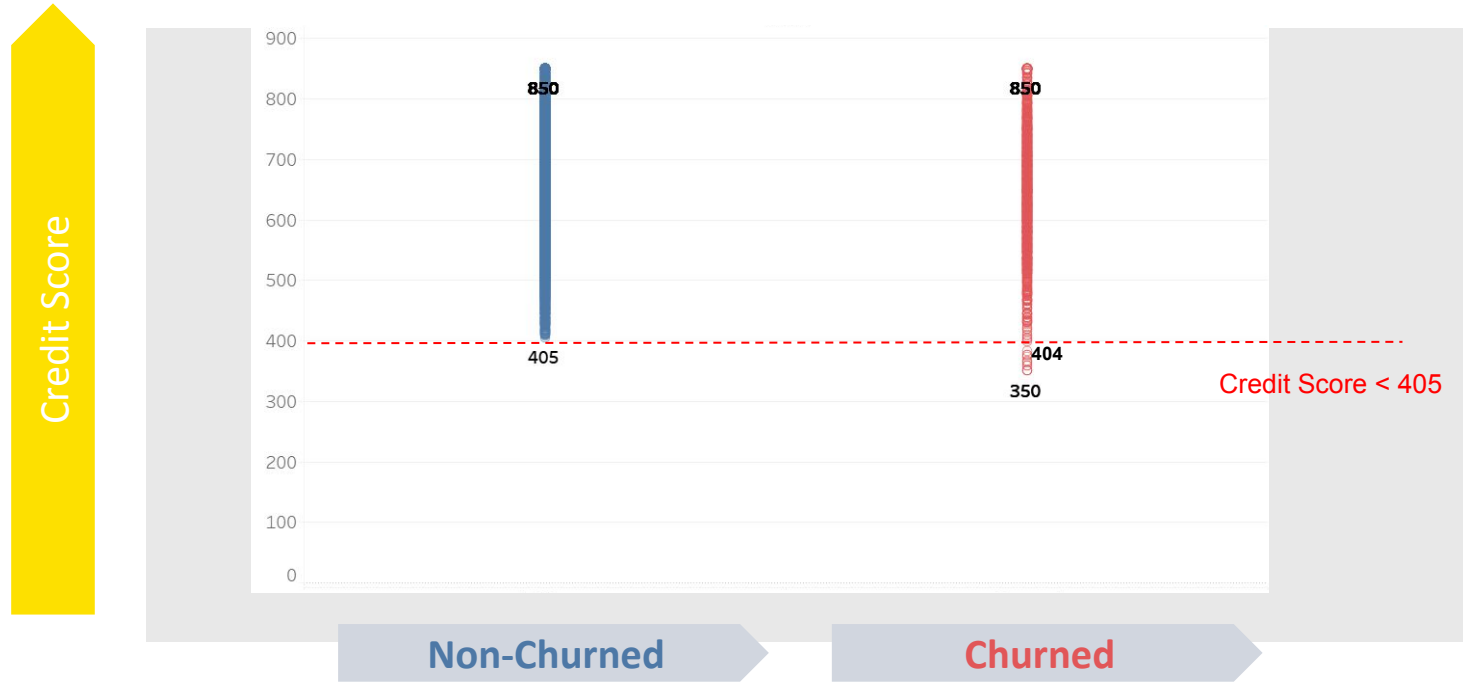


## For Churned Customers

- The customers who have more than 2 products are more likely to churn

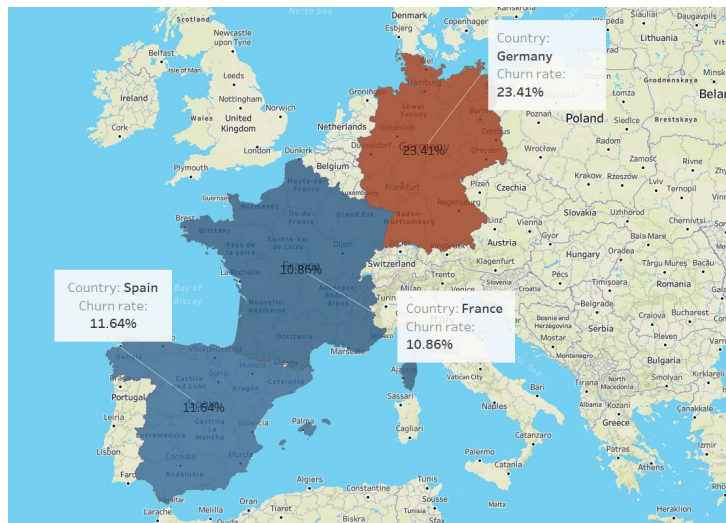


# Credit Score Comparison: Non-Churned vs. Churned Customers



- Similar Credit Score range between Non-churned & Churned customers
- Exercise caution concerning customers with Credit Score < 405

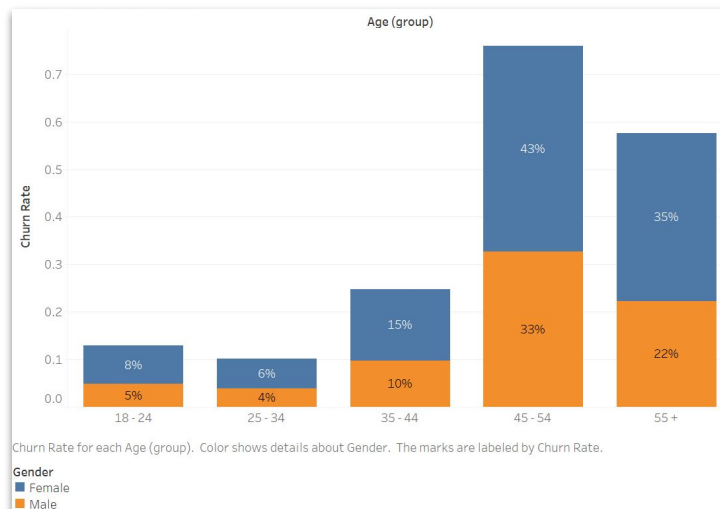
## Churn Rate Across Countries



Germany has the highest churn rate which is more than double of the other countries.

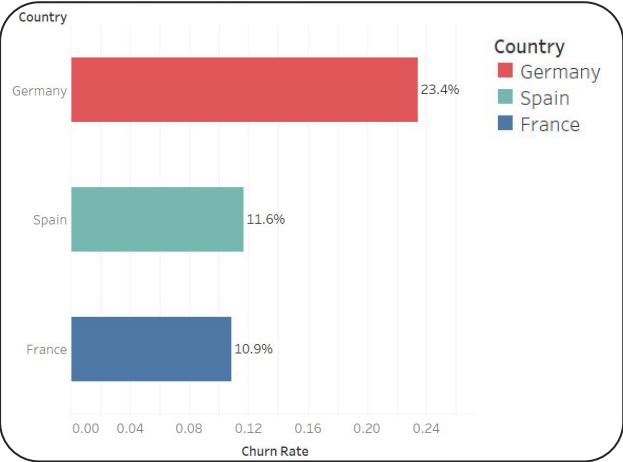
The group of age 45-54 has the highest churn rate, higher amongst female demography.

## Churn Rate grouped by Age & Gender



# Churn Rate Comparison Between Segments

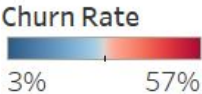
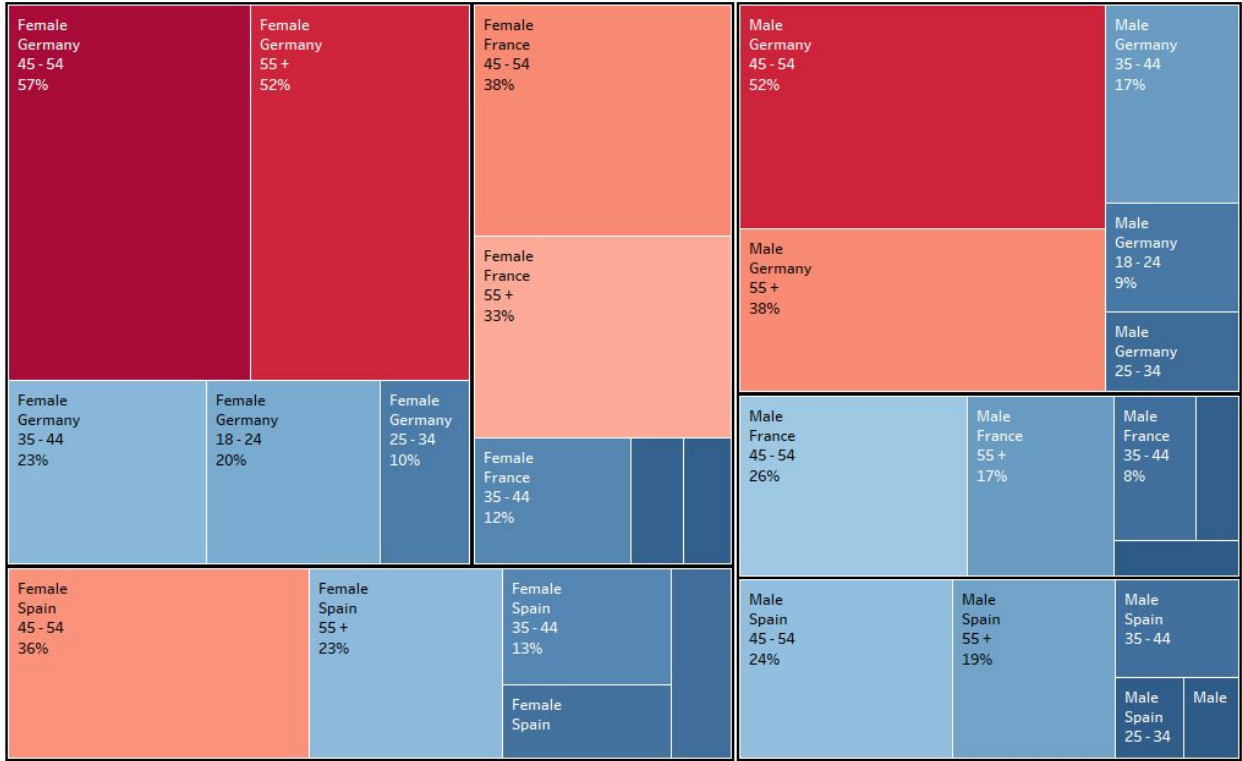
Overall Country Churn Rate



Top 5 Highest Churn Rate by Segment

Country	Gender	Age (group)	Churn Rate
Germany	Female	45 - 54	57%
		55 +	52%
	Male	45 - 54	52%
		55 +	38%
France	Female	45 - 54	38%

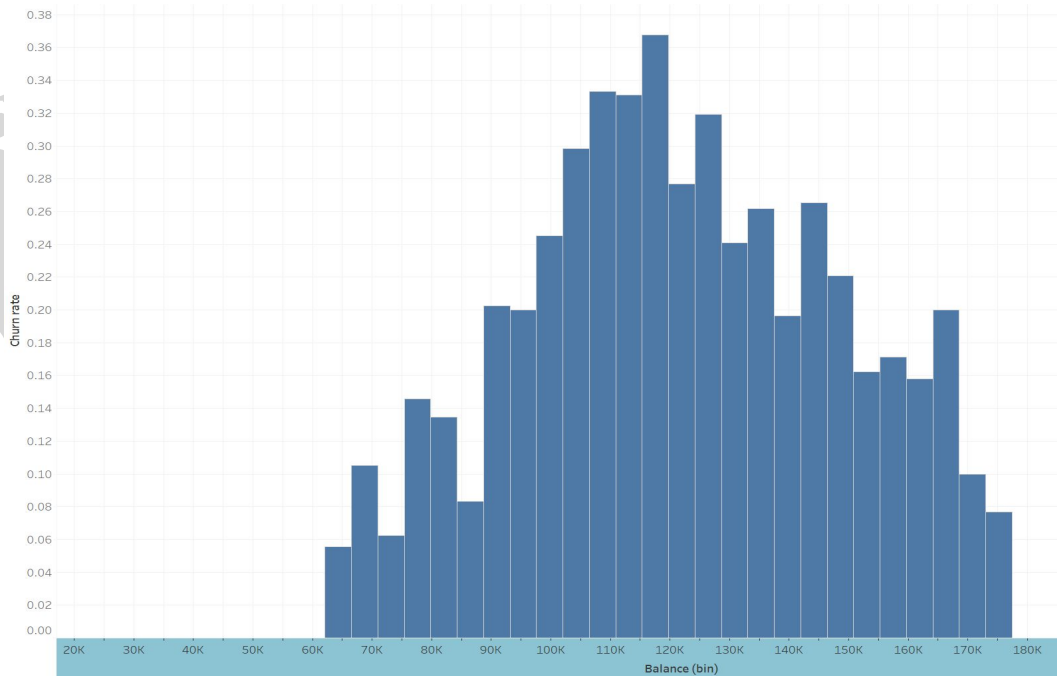
Heat Map



• Significant churn rate in Germany driven by Female aged 45 ≤

# Taking A Deeper Look At Germany

Churn Rate Across Balance for Germany



The balance range from 100k to 130k has the highest churn rate.



# Findings

# Recommendations



Product Subscription

Improving  
Products & Services



Customer Segments

Focusing on  
Middle Class & Generation X



Location Dynamics

Market Analytics &  
Business Expansion





# Q & A Session

Thank You!!!

