



CHURN ANALYTICS

CUSTOMER ATTRITION

PROJECT OUTLINE

- ❑ Telecom Companies and services they provide.
- ❑ What is Churn Analytics? And why is Customer Churn important to Telecom Companies?
- ❑ Examples of Telecom Churn
- ❑ Customer Segmentation Strategies for Telecom Companies
- ❑ Problem Statement
- ❑ Analyzing Vertex Mobile Net. Telecom Data to obtain insights on Customer Churn
- ❑ Recommendations
- ❑ Proposed Solutions and Conclusion

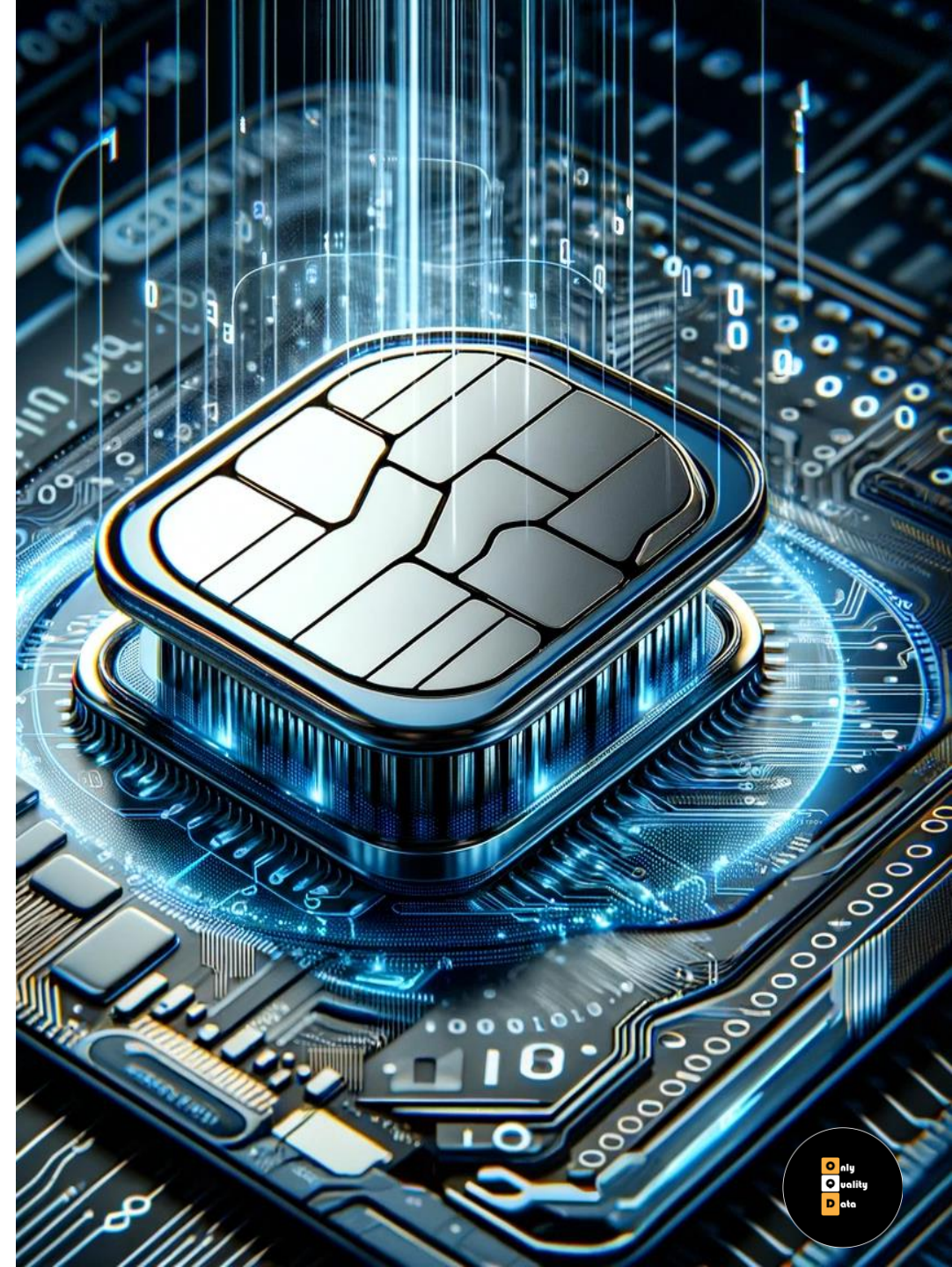


TELECOM COMPANIES

Telecom companies, are businesses that provide communication services to individuals and organizations.

These services include:

- ❑ **Telephone Services:** this includes both landline and mobile phone services. They provide the necessary infrastructure and services for voice calls, voicemail, and other related features.
- ❑ **Internet Services:** they offer broadband and dial-up internet access to consumers and businesses. This also includes providing the necessary infrastructure for high-speed internet connections.
- ❑ **Data Services:** many telecom companies provide data services, including SMS (Short Message Service) and MMS (Multimedia Messaging Service) for mobile phones.
- ❑ **Television Broadcasting:** some telecom companies also offer cable or satellite TV services, including digital television and streaming services.
- ❑ **Wireless Communication:** This includes Wi-Fi services and other wireless communication technologies.
- ❑ **Cloud Services and Networking:** With the advancement in technology, many telecom companies now provide cloud services, virtual networking, and other IT solutions for businesses.





CHURN ANALYTICS?

- Churn analytics refers to the process of analyzing and understanding the reasons why customers stop using a company's services or products, commonly known as "churning." In the context of businesses, especially those with subscription-based models like telecom, streaming services, or software as a service (SaaS), churn analytics is a critical component of customer retention strategies.
- Customer Churn is the rate at which customers stop doing business with an organization. Thus, Churn analysis is **the evaluation of a company's customer loss rate in order to reduce it.**
- Also referred to as customer attrition rate, churn can be minimized by assessing your product and how people use it.

WHY IT IS IMPORTANT FOR TELECOM COMPANIES?



Leaky Bucket Problem

- Telecom Churn is a problem for telecom companies because it is expensive to acquire a new customer and companies want to retain their existing customers. This is because revenue will not increase if you attract new customers but existing customers are leaving the company.



EXAMPLES OF TELECOM CHURN



❑ **Tariff Plan Churn:**

- Occurs when a **customer switches from one tariff plan to another due to changes in usage or pricing preferences.**
- Examples include switching to a lower-priced plan if not utilizing all features, or upgrading to a higher-priced plan for more data or features.
- Customers may also switch providers if they find a better deal.

❑ **Contract Expired Churn:**

Occurs when a customer's contract expires, and they choose not to renew it. Reasons include finding better deals elsewhere or dissatisfaction with the current service.

- ❑ **Price Increase Churn:** Happens when a provider raises prices, leading customers to cancel subscriptions to avoid higher costs.

- ❑ **Relocation Churn:** Occurs when a customer moves to an area with no coverage from their current provider, prompting them to switch.

Telecom companies analyze this churn to improve pricing, offer personalized deals, or introduce loyalty programs to retain customers and boost revenue.



EXAMPLES OF TELECOM CHURN



Product Churn: occurs when a customer switches to a different product, such as moving from postpaid to prepaid plans or switching providers based on cost effectiveness.

- Analysis helps companies understand why customers make such switches and adapt offerings accordingly.

Usage Churn: happens when a customer stops using a service or product, temporarily or permanently.

- Reduce usage of specific mobile plan features due to changes in habits (e.g., increased Wi-Fi use).
- Become inactive or abandon the service completely, possibly due to relocating.

Service Churn: happens when a customer cancels a specific service like a data or voice plan, or value-added services.

- **Cancelling data or voice plans** if alternative communication methods (e.g., Wi-Fi, VoIP like WhatsApp) become preferred.
- **Dropping value-added services like music or video streaming** if they no longer see a need or find a better option.
- Ending prepaid or postpaid plans if they're not meeting expectations or if a competing offer is more attractive.

Analyzing service churn helps companies adapt offerings to customer preferences and needs.

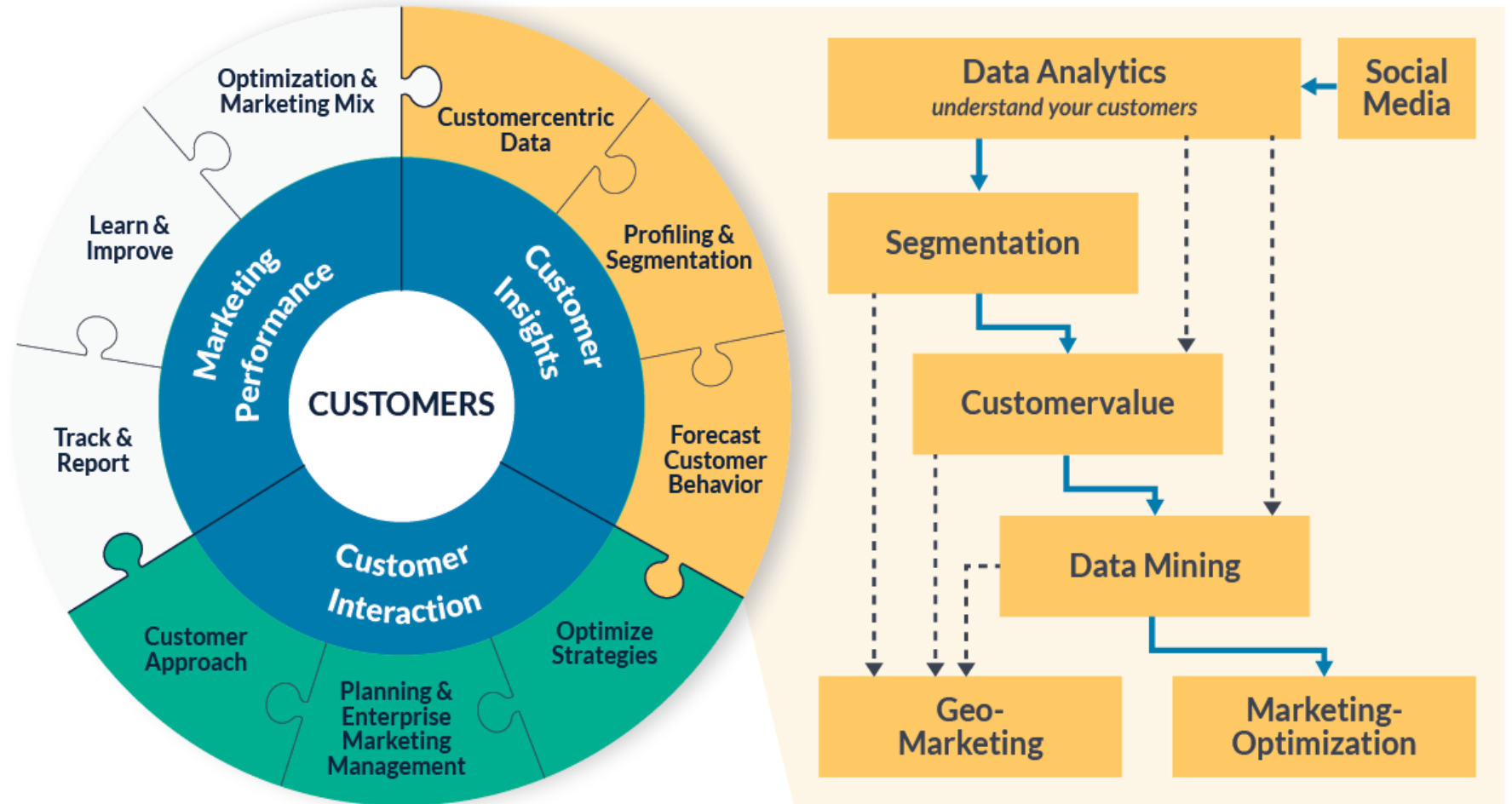
An isometric illustration on a dark blue background featuring various data visualization elements. In the center, a smartphone displays a pie chart. Surrounding it are other charts: a bar chart to the left, a line graph above it, and another pie chart to the right. Scattered around these are various geometric shapes like cubes, pyramids, and small bar charts, all rendered in shades of blue and purple. The overall theme is data analysis and technology.

CUSTOMER SEGMENTATION

Customer Segmentation

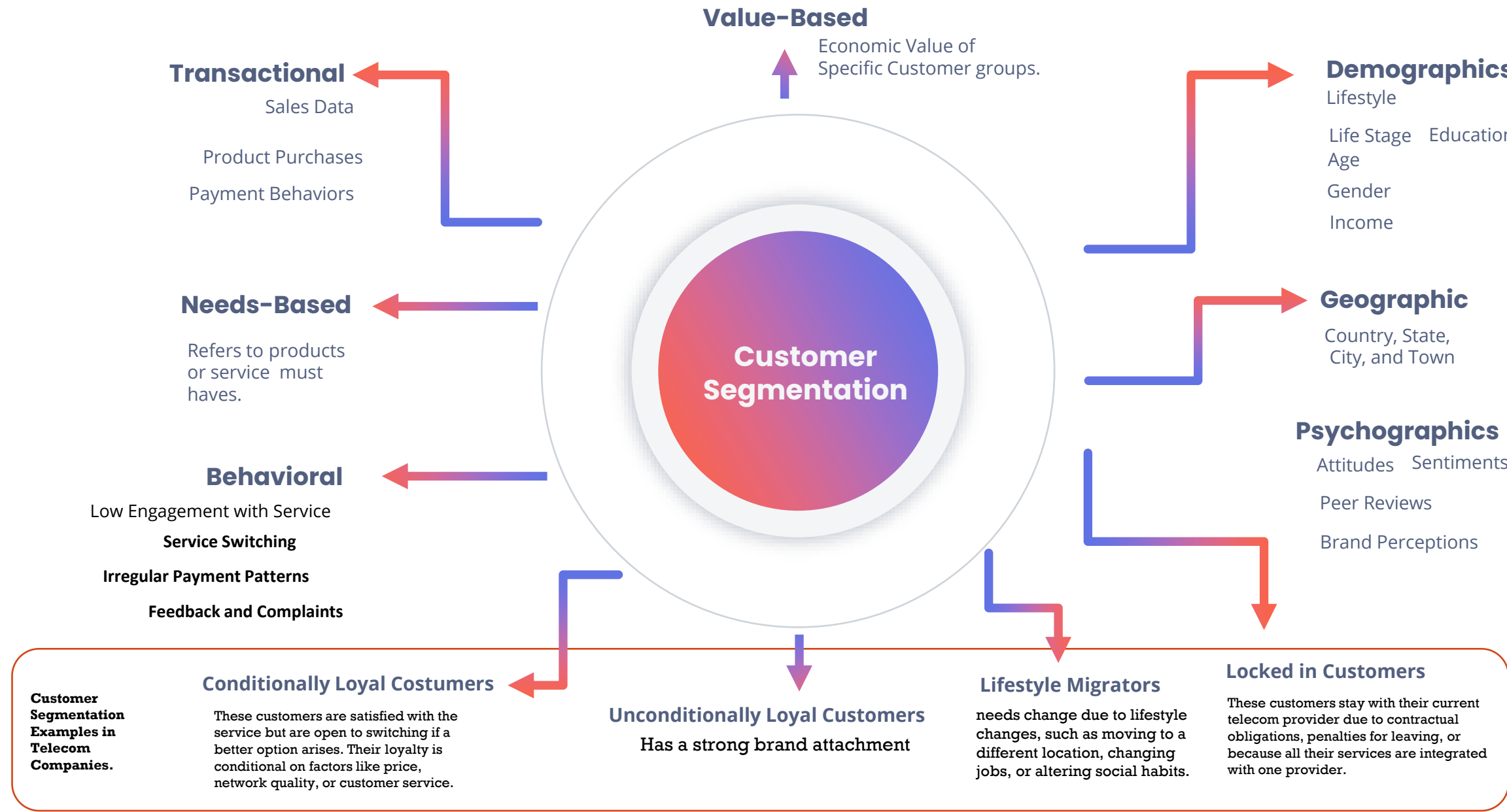
Why segment customers?

- **Segmentation supports** getting closer to your Customer.
- **Placing your customer at the heart of your business will help you drive and increase revenue.** Imagine the impact on your sales and customer loyalty if you could engage individual customers with targeted promotions through their preferred channels, offering a consistent and personalized experience.

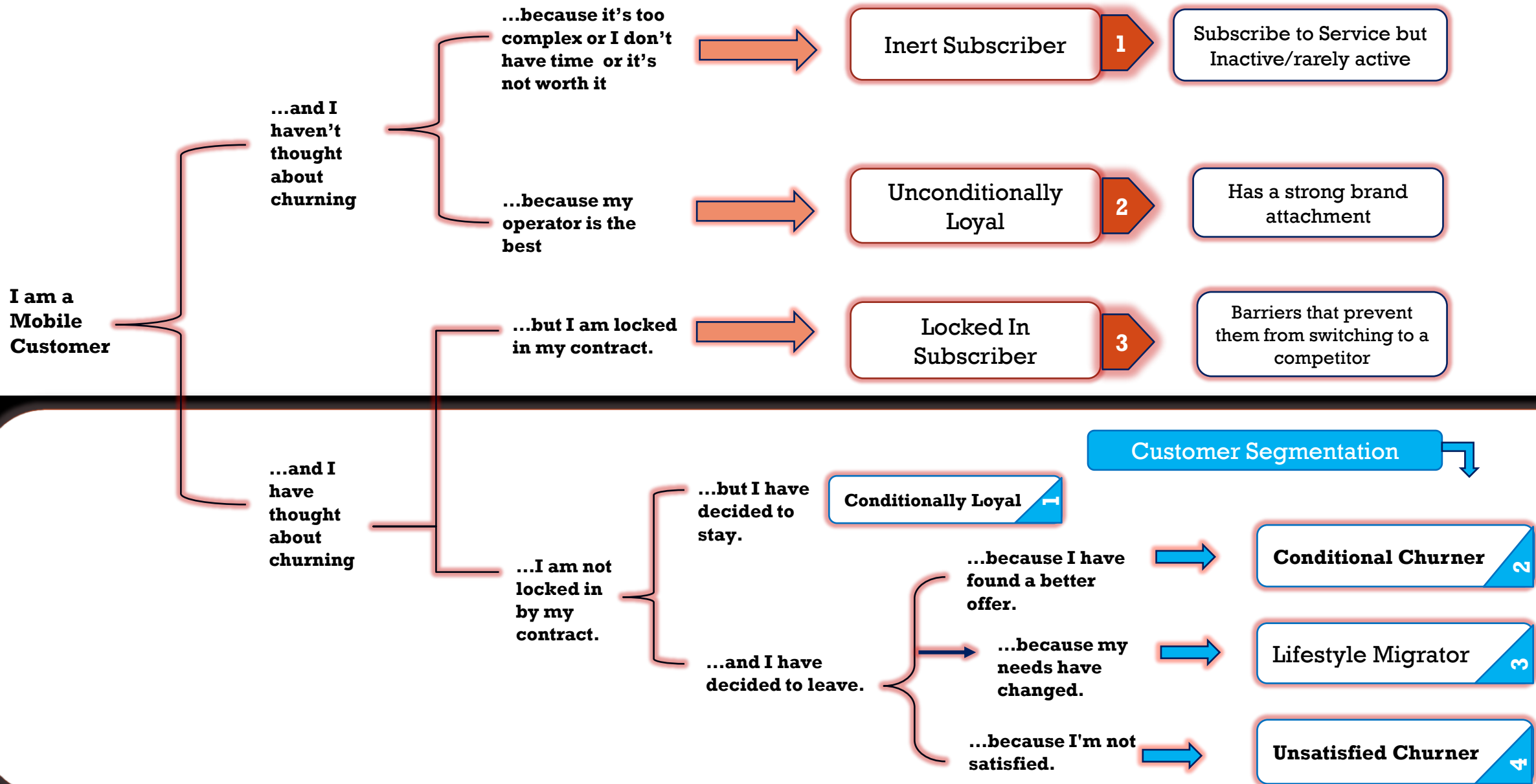


Customer Segmentation

Churn analytics can segment customers into various groups based on their likelihood of churning, value to the company, and other factors. This allows for more targeted and effective retention strategies.



Decision Cycle of a Subscriber: Changes as Per Needs and/or Experiences



BUSINESS TASK



- For subscription-based businesses, reducing customer churn is a top priority. **In this case study, you'll analyze a dataset from a telecom company called Vertex Mobile Net..**
- The manager has concluded that it is time to make fundamental changes in customer retention strategies and business operations due to a reduction in revenue over the few months.
- For these reasons, we will analyze customer data to track customer attrition rate so that we can help adjust the company policies and **thus keep the customers happy as they use the company's telecom services.**



Your Task: Using Power BI as the main BI tool:

- Analyze customer data to track customer attrition.
- Investigate churn reasons & understand why customers become churners
- Dig deeper into churn categories and identify the most prevalent churn category, followed by the percentage of total churners.
- Analyze the different demographic fields from the dataset
- Create a line and stacked column chart that shows the number of customers and churn rate for every age bracket.
- Vertex Mobile Net. offers group contracts to customers from the same household. The advantage for the customer is a discounted rate, while it's a great way for Vertex Mobile Net. to grow its customer base. Your task is to analyze if customers that are part of a group indeed have a lower phone bill and if it has an impact on the churn rate.



Only
Quality
Data



Your Task: Using Power BI as the main BI tool:

- Now observe how yearly and monthly contracts affect the churn rate. Next, create a clustered column chart to see how customers differ in terms of churn rate by looking at their contract categories and gender.
- Vertex Mobile Net. has a hypothesis that people who are not on an unlimited data plan are more likely to churn. Your task is to investigate how the Unlimited Data Plan influences the churn rate.
- The analysis requirement given by Vertex Mobile Net. includes a request to analyze the international activity of customers and its relationship to churn. They are curious about the behaviour of customers who call internationally, and if paying for an international plan influences their loyalty. Create a matrix that shows the churn rate by the variables IntlPlan and IntlActive, from the metadata sheet
- The report should cover insights about the Data and any relevant charges.





Your Task: Using Power BI as the main BI tool:

- Vertex Mobile Net. also wants to improve its customer service since there have been some reported issues. Your job is to investigate three important topics related to customers: they include payment method, contact type, and how many months a person is a customer. Evaluate if the churn rate decreases over time. Create a Line Chart using the account length and churn rate.
- Now it's a good idea to look at the data through a different lens to produce some more interesting insights. Check the characteristics of the states regarding the customer service calls and the churn label. Next, create a Line chart to show the Churn Label and the Avg Customer Service Calls from your data model. Add markers to your line chart, and place the visual to the bottom left corner of the page, under the cards. Investigate the relationships on your visualization.

NB: Further Instructions will be given to you.



DATASET INFO.

Customer status:

Customer ID	The unique ID that identifies a customer
Churn Label	Contains “Yes” or “No” to indicate if a customer churned
Churn Reason	The particular reason why the customer ended the contract
Churn Category	Groups multiple churn reasons together for analysis purposes

Demographics:

Gender	The gender of the customer, indicated by “Male”, “Female” or “Prefer not to say”
Under 30	Indicates if the customer is under 30 with “Yes” or “No”
Senior	Indicates if the customer is 65 or above with “Yes” or “No”
Age	The age of the customer

Contract information:

Contract Type	Contains “Month-to-Month”, “One Year” or “Two Year”
Payment Method	Preferred payment method of the customer indicated with “Credit Card”, “Direct Debit” or “Paper Check”
State	The code of the state where the customer lives
Phone Number	Phone number of the customer
Group	Indicates if the customer is part of a group contract. A group contract offers advantages and is generally cheaper. Contains “Yes” or “No”
Number of customers in a group	Number of customers part of the group

Subscription types & Charges:

Account Length (in months)	The number of months the customer has been with Databel	Customer Service Calls	The number of calls made to customer service
Local Calls	Amount of local (within the US) calls from the customer	Avg Monthly GB Download	Contains the average monthly download volume in gigabytes
Intl Calls	Amount of international (outside the US) calls from the customer	Unlimited Data Plan	Indicates if the customer has free unlimited download capacity with “Yes” or “No”. This premium is reflected in the amount of the monthly charge
Intl Mins	The number of minutes spent calling internationally. Intl Active: Indicates if the customer called internationally with a “Yes” or “No”	Extra Data Charges	Contains the extra charges for data downloads for customers who are not on an unlimited plan
Intl Plan	Indicates if the customer has a premium plan to call internationally for free with “Yes” or “No. This premium is reflected in the amount of the monthly charge	Monthly Charges	Average of all Monthly Charges to the customer
Extra International Charges	Contains the extra charges for international calls for customers who are not on an international plan	Total Charges	Sum of all monthly charges



**THANK
YOU**