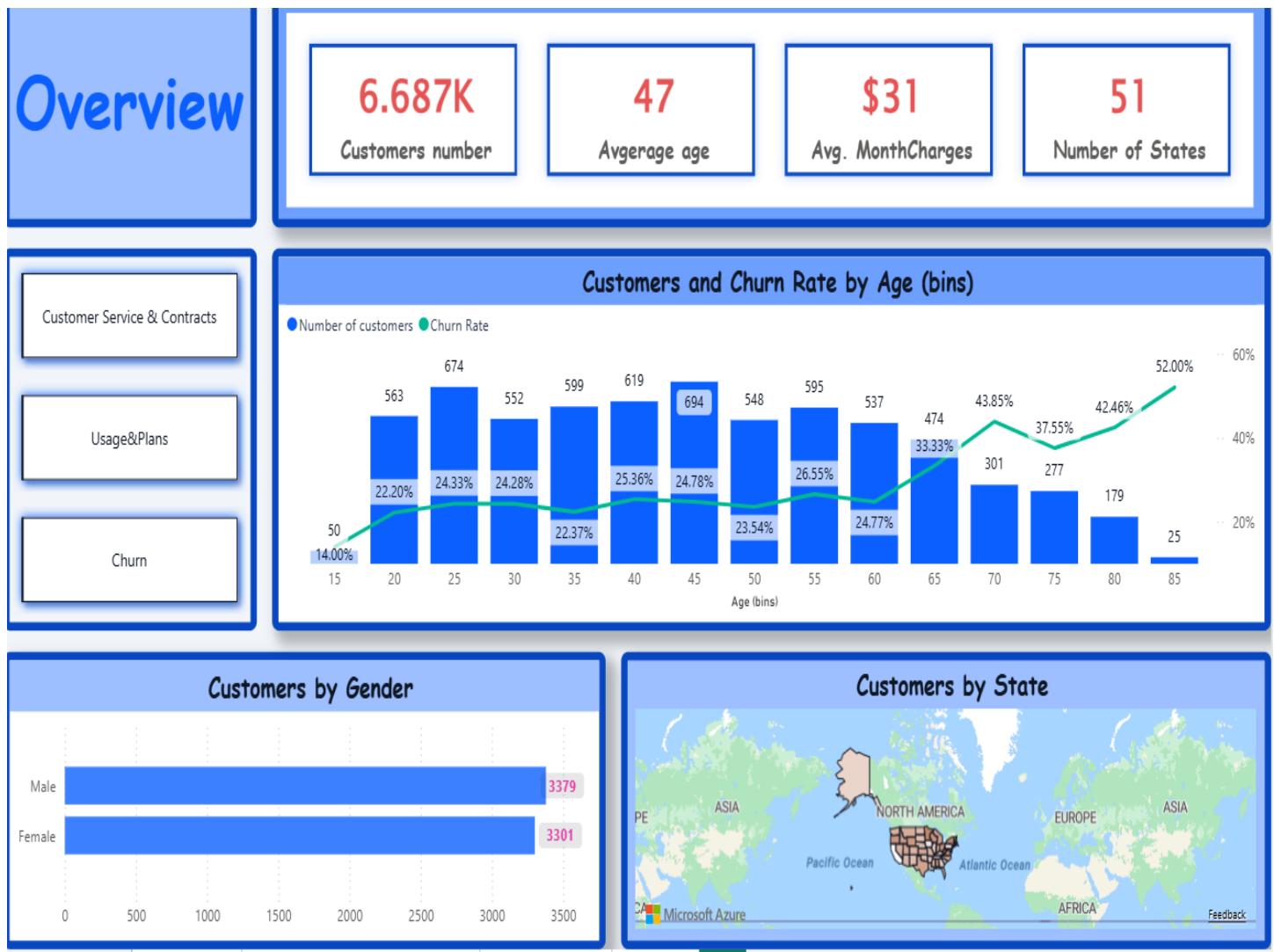


## Introduction :

Databel Telecom's Customer Analysis Report aims to understand customer characteristics and churn rates. By exploring demographic data (such as age and gender) and monthly subscription fees, we aim to create an initial overview of our customers, what they pay for, and whether certain segments experience higher churn rates than others. This preliminary overview serves as a foundational step before delving into deeper analyses of the reasons and motivations behind churn.

## Dashboard 1 — Overview Dashboard (Customer Profile & Churn Snapshot):

The first dashboard provides a high-level overview of Databel's customer base. Before analyzing the specific drivers of churn, it is essential to understand who the customers are, how much they pay, and how churn is distributed across basic demographic groups. This overview establishes the foundation for deeper exploration in the subsequent dashboards.



## **1. Purpose of the Dashboard**

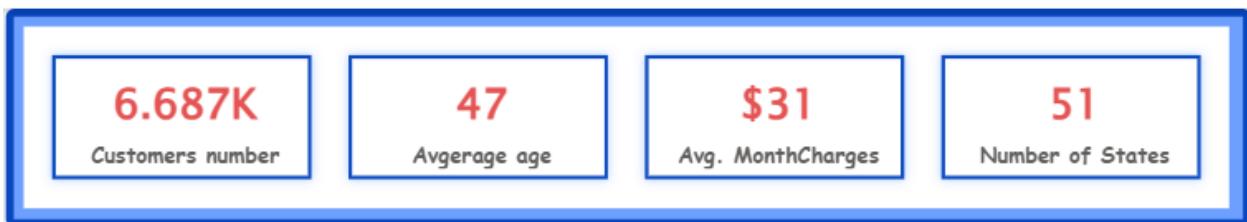
The purpose of this dashboard is to deliver a general summary of the customer dataset, focusing on:

- The size of the customer base
- Key demographic characteristics (age and gender)
- Financial behavior (average monthly charges)
- An initial view of churn distribution

This allows us to identify early patterns and prepare for more detailed churn investigations in the following dashboards.

---

## **2. Dashboard Components, Questions, and Insights**



### **A. Total Number of Customers — KPI Card**

**Reason:** card visuals were used to highlight the most important KPIs such as total customers, average age, and average monthly charges. Cards are ideal for single-number insights and help stakeholders quickly understand the scale and characteristics of the customer base.

**Question:** How many customers are included in the dataset?

**Insight:** Databel has approximately **6,687 customers**, which forms the population analyzed in the churn study.

---

### **B. Average Customer Age — KPI Card**

**Question:** What is the average age of customers?

**Insight:** The average age is around **47 years**, indicating that most customers fall within a middle-aged demographic.

### C. Average Monthly Charges — KPI Card

**Question:** How much do customers pay per month on average?

**Insight:** Customers pay approximately **\$53 per month**, offering context for understanding financial factors related to churn.

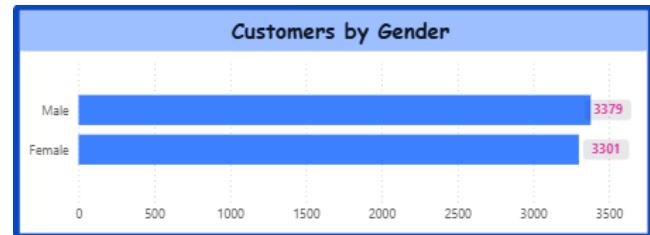
### D. Customers by Gender — Bar Chart (Clustered Bar Chart)

**Reason:** Used because it clearly compares two categorical groups side-by-side.

**Question:** Does gender distribution show any imbalance or early churn patterns?

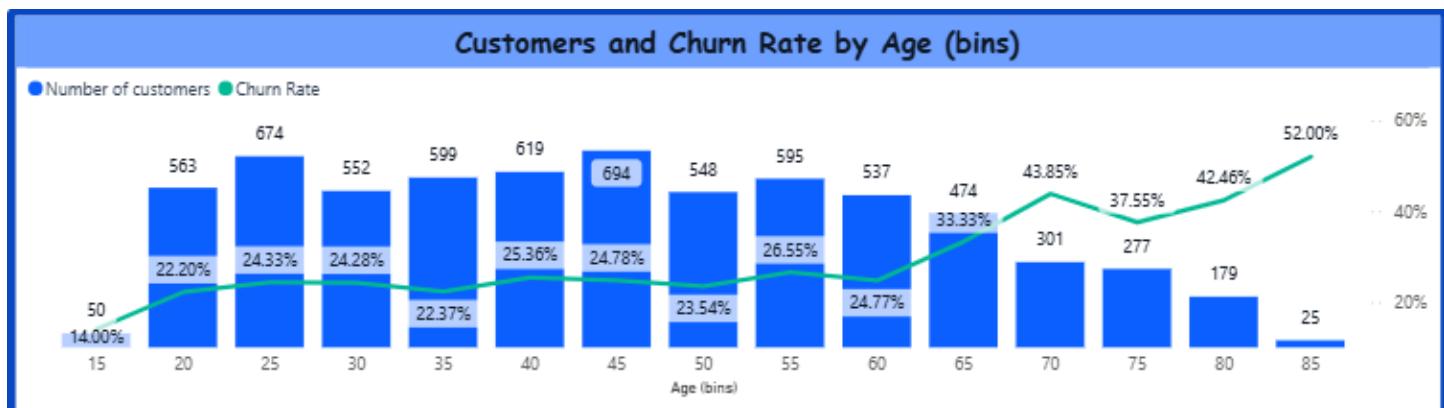
**Insight:** The number of male and female customers is almost equal.

→ This suggests that **gender alone is not a major driver of churn** at a high-level overview.



### E. Customers & Churn Rate by Age — A Clustered Column Chart

A Line and Clustered Column Chart was selected to present both the number of customers in each age bracket and their corresponding churn rates. This combination allows the viewer to interpret volume (columns) and risk (line) simultaneously, making it ideal for identifying high-risk segments such as seniors aged 65+.



Bars represent the number of customers in each age group.

The line represents the churn rate for each age group.

**Question:** Does age influence churn behavior?

**Insights:**

- Younger customers (aged 20–40) show **lower churn rates**.
- Senior customers (65+) exhibit **significantly higher churn rates**.

### **Interpretation:**

Older customers may:

- face more difficulties with technology
- require more customer support
- be more sensitive to price changes
- or respond more to competitor promotions

This makes them a **high-risk churn segment**.

---

### **F. Customers by State — Map Visual**



**Reason:** Used to show how customers are distributed geographically across states. Geographic visuals help identify regions with high or low customer concentration.

**Question:** Which states have the highest number of customers?

**Insight:**

Customer distribution varies across the U.S. states, helping identify potential regional churn patterns to explore later.

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### **3. Summary of Insights (from Dashboard 1)**

This dashboard offers a clear initial understanding of Databel's customer base.

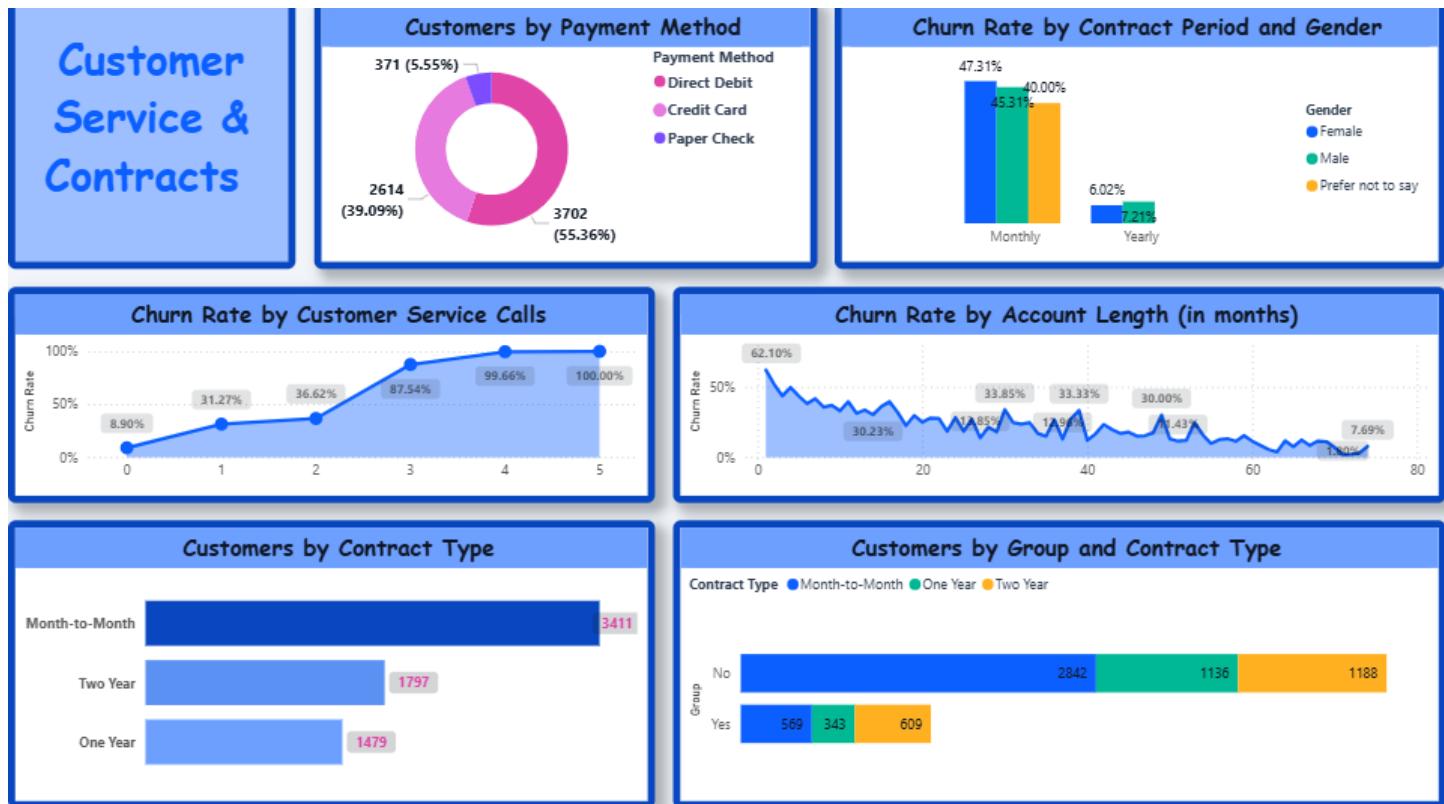
Key highlights include:

- Balanced gender distribution, indicating gender is **not** a churn driver.
- Average customer age (47) and monthly charges (~\$53) describe the typical user profile.
- The most critical insight: **Customers aged 65+ have the highest churn rate**, marking them as a high-risk segment.

This overview sets the foundation for exploring deeper churn factors in the next dashboards.

## Dashboard 2 — Customer Service & Contracts Analysis

This dashboard focuses on how customer service interactions, payment methods, and contract types influence customer churn. Understanding these operational factors is essential because customer experience and contract structure are among the strongest predictors of customer retention.



### 1. Purpose of the Dashboard

The purpose of this dashboard is to analyze service-related and contract-related variables, including:

- Payment method preferences
- Contract type distribution
- Grouped customers (shared contracts)
- Churn differences by gender and contract period
- The impact of customer service calls on churn

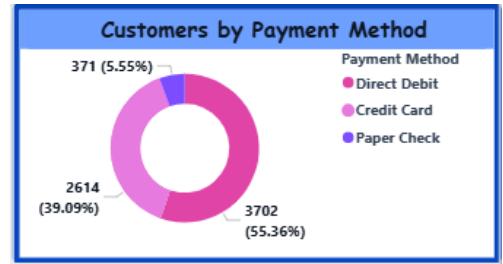
This dashboard helps identify which service and contract conditions contribute most to customer churn, allowing Databel Telecom to improve customer experience and reduce dropouts.

## 2. Dashboard Components, Questions & Insights

### A. Customers by Payment Method — Donut Chart

#### Why this chart was used:

A donut chart makes it easy to compare proportions across payment categories, especially when one method dominates significantly.



**Question:** Which payment method is most commonly used?

**Insight:**

- **Direct Debit** is the most frequently used payment method (55%).
- Paper Check and Credit Card are used much less frequently.

*This matters because payment method is strongly linked to churn risk (as explored in later dashboards).*

---

### B. Customers by Group & Contract Type — Stacked Column Chart

#### Why this chart was used:

This visual effectively shows how many customers have group (multiple-line) accounts, and how contract types differ inside each group.



**Question:** Are group (multi-line) customers different from single-line customers in terms of contract type?

**Insights:**

- Most customers **do not belong to a group plan**.
- Grouped customers are more likely to have **One-Year or Two-Year contracts**, while non-group customers have more flexible monthly contracts.

*Group accounts tend to be more stable and less likely to churn because multiple users rely on the same contract.*

---

### C. Churn Rate by Contract Period and Gender — Clustered Column Chart

#### Why this chart was used:

This chart clearly compares churn rates across



contract lengths and gender groups, allowing for easy side-by-side comparison.

#### Question:

How does contract period impact churn, and does gender change this relationship?

#### Insights:

- **Monthly contracts** have a very high churn rate (47%–53%).
- **Yearly contracts** have extremely low churn (~6%).
- Gender differences are small and not significant.

*Contract length is one of the strongest predictors of churn. Monthly users are far more likely to leave because they are not locked into long-term agreements.*

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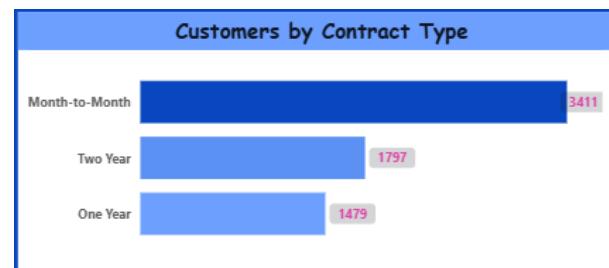
#### D. Customers by Contract Type — Bar Chart

##### Why this chart was used:

Bar charts are ideal for showing category counts, especially when there is a clear difference in group size.

Question: Which contract type is most

common?



##### Insight:

- **Month-to-Month** is by far the most common contract type (3411 users).
- One-Year and Two-Year contracts have significantly fewer customers.

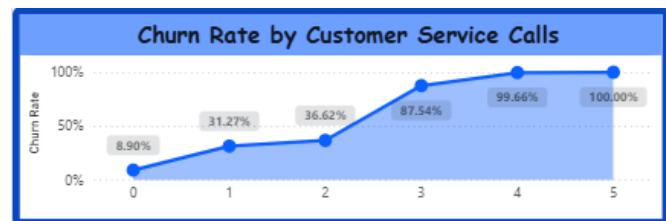
*This helps explain why churn is generally high—most customers are not tied to long-term commitments.*

---

#### E. Churn Rate by Customer Service Calls — Line Chart with Markers

##### Why this chart was used:

A line chart shows progression clearly and makes it easy to identify rising patterns in churn related to customer service issues.



**Question:** How does the number of customer service calls affect churn?

**Insights:**

- Churn rises sharply as customer service calls increase.
- Customers who make **4 or more service calls** have churn rates above **97%–100%**.
- Even at 1–2 calls, churn already starts increasing.

*This indicates severe dissatisfaction—customers who repeatedly contact customer service are almost guaranteed to churn.*

---

### **3. Summary of Insights (Dashboard 2)**

This dashboard reveals that customer service quality and contract structure have a major impact on churn:

- **Monthly contracts strongly increase churn**, while yearly contracts reduce it dramatically.
- **More customer service calls = higher churn**, suggesting unresolved issues or poor service experience.
- **Direct Debit** is the dominant payment method; payment method may link to convenience or churn risk.
- **Group plan customers** are more stable and less likely to churn.
- Gender does not significantly affect churn in service-related factors.

These insights highlight the importance of strengthening customer service quality and encouraging long-term contracts to reduce churn.

---

### **Dashboard 3 — Usage & Plans Analysis**

This dashboard analyzes customers' usage behavior and subscription plans, including international minutes, local minutes, data usage, and special plan subscriptions. By examining these usage patterns, we can understand how customers interact with Databel's services and whether specific plan types or usage levels may relate to churn behaviors examined in later dashboards.

## Usage & Plans

130

Avg. Intl Min.

323

Avg. local Min.

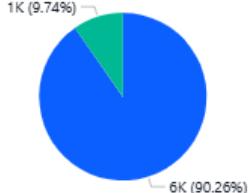
7

Avg. Monthly GB

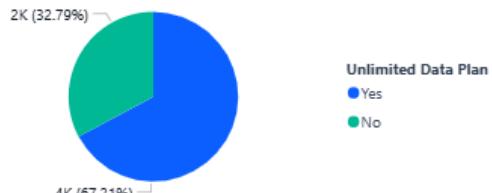
\$31

Average Month Charges

Customers by Intl Plan



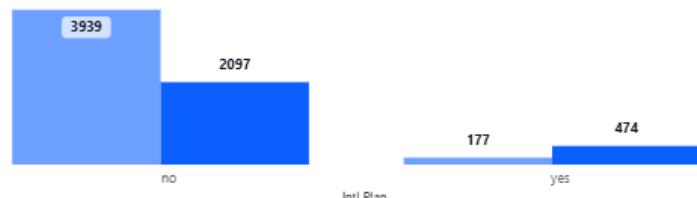
Customers by Unlimited Data Plan



Show Filters

Customers by Intl Plan and Intl Active

Intl Active ● No ● Yes



### 1. Purpose of the Dashboard

The purpose of this dashboard is to explore customer behavioral patterns through their telecom usage and subscribed plans. Specifically, it focuses on:

- Average international and local usage
- Data consumption patterns
- Subscription to international calling plans
- Subscription to unlimited data plans
- Relationship between plan subscriptions and activity levels

This overview helps identify which customer groups rely heavily on certain services and how this may be connected to service satisfaction and retention.

### 2. Dashboard Components, Questions & Insights

#### A. KPI Cards — Usage Overview

##### Metrics Included:

- 130 Avg. International Minutes
- 323 Avg. Local Minutes
- 7 Avg. Monthly GB

130

Avg. Intl Min.

323

Avg. local Min.

7

Avg. Monthly GB

\$31

Average Month Charges

- \$31 Average Monthly Charges

#### **Why KPIs were used:**

KPI Cards summarize high-value numeric insights in a clean and easily digestible format.

#### **Insights:**

- Customers make **130 minutes of international calls** on average.
- Local usage is much higher at **323 minutes**, showing local calls are the primary service.
- Average data consumption is **7 GB per month**, which aligns with moderate usage patterns.
- Monthly charges remain consistent with previous dashboards (~\$31).

*These KPIs create a baseline understanding of customer behavior before exploring plan subscriptions.*

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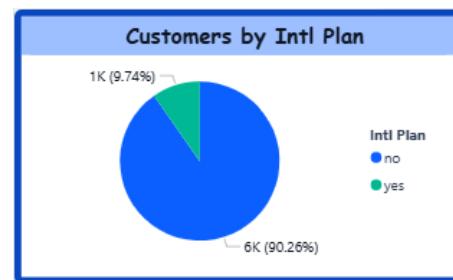
### **B. Customers by International Plan — Pie Chart**

#### **Why this chart was used:**

Used to show proportional distribution between customers who have an international calling plan versus those who don't.

#### **Question:**

How many customers have subscribed to the international plan?



#### **Insight:**

- About **90% of customers do NOT have an international plan**.
- Only **10% subscribe to the international plan**.

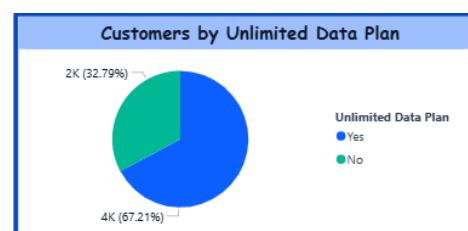
*This suggests that international calling is not a high-demand service among the majority.*

---

### **C. Customers by Unlimited Data Plan — Pie Chart**

#### **Why this chart was used:**

Pie charts clearly show the split between customers with or without an unlimited data plan.



**Question:**

How popular is the unlimited data plan?

**Insight:**

- **67%** of customers **do not** have an unlimited data plan.
- Only **33%** subscribe to unlimited data.

*This could influence churn if heavy data users feel restricted or overcharged.*

---

**D. Interactive Filters (Slicers) — Contract Type, Gender, State, and Demographics****Why used:**

Slicers provide an interactive way for users to filter the dashboard based on important customer attributes such as **Contract Type, Gender, State, and Demographics**. Instead of displaying static tables, slicers allow analysts to dynamically explore how churn metrics change across different customer segments. This enhances the dashboard's usability and makes the analysis more flexible and user-driven.

**Question:**

**How do churn patterns vary when filtering by different customer attributes?**

**Insights:**

- The slicers enable users to isolate specific groups—such as customers on Monthly contracts, customers from a certain state, or senior customers—and immediately observe how churn rate, reasons, and behaviors change across segments.
- Consistent with earlier dashboards, filtering by Gender shows minimal difference, confirming that gender is not a major churn driver.
- Filtering by Demographics highlights that Senior customers consistently show higher churn.

- Filtering by Contract Type reinforces that Month-to-Month customers churn at significantly higher rates.
- Geographic filtering (State Slicer) helps identify regions where competitor pressure or service dissatisfaction may be higher.

#### **Interpretation:**

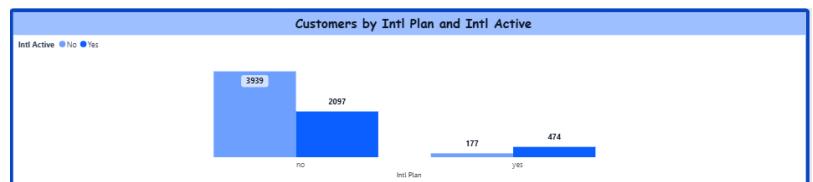
Using interactive slicers adds depth to the dashboard, allowing stakeholders to perform targeted exploration of churn patterns. This makes the dashboard more actionable and supports informed decision-making across customer segments.

---

### **E. Customers by Intl Plan and Intl Active — Stacked Bar Chart**

#### **Why this chart was used:**

Ideal for showing the relationship between two categorical variables (plan status and activity level).



#### **Question:**

Are customers with international plans actively using international minutes?

#### **Insights:**

- Among customers **without** an international plan:
  - **3939** are *inactive* (no intl usage)
  - **2097** still use international minutes occasionally
- Among customers **with** an international plan:
  - **177** are inactive
  - **474** are active users

#### **Key takeaway:**

Many customers **without an international plan still use international minutes**, suggesting:

- They may be paying higher per-minute rates
  - They could benefit from subscribing to the intl plan
  - There is an opportunity for **upselling** targeted plans
- 

### **3. Summary of Insights (Dashboard 3)**

This dashboard highlights important patterns in usage and plan adoption:

- Customers rely more on **local minutes** than international ones.
- Only a small percentage subscribe to the **international plan**, but many still use international minutes without a plan — indicating a revenue opportunity.
- **Unlimited data plans** are not dominant, meaning many users may be on limited plans despite growing data needs.
- Gender does not significantly influence usage or plan selection.
- The relationship between plan subscription and actual usage reveals potential areas for optimizing plan offerings.

These insights will be essential when examining how usage patterns relate to churn in later dashboards.

## Dashboard 4 — Customer Churn Reasons & Competitive Analysis



### 1. Purpose of the Dashboard

This dashboard focuses on understanding **why customers churn** and identifying the **external and internal factors** contributing to customer loss.

Unlike previous dashboards that analyzed customer profiles, contracts, and usage, this dashboard directly targets **the causes and motivations behind churn**, especially:

- Why customers leave Databel Telecom

- Whether competitors are influencing churn
- How demographics, plans, and geography affect churn probability
- What actionable areas the company should address immediately

This dashboard is considered the *most critical* because it explains **the reasons behind churn**, enabling Databel to implement retention strategies.

## 2. Dashboard Components, Questions, and Insights

### A. Overall Churn Rate — KPI Cards

**Reason:** Cards highlight key metrics at a glance.



#### Questions:

- How many customers churned?
- What is the overall churn rate?

#### Insights:

- **1,796 customers** churned from the dataset.
- The **overall churn rate is 26.86%**, which is considered high in telecom standards.

A churn rate above 20% signals serious competitive and service-related issues that require immediate attention.

### B. Churn by Unlimited Data Plan — Table & Bar Visual

#### Reason for Chart:

A table with bar indicators efficiently compares churn between “Yes” and “No”.

Unlimited Data Plan	Number of customers	Churn Ra
Yes	4494	32.11%
No	2193	16.10%
Total	6687	26.86%

#### Question:

Does subscribing to an Unlimited Data Plan influence churn?

#### Insights:

- Customers **with Unlimited Data Plans** → **32.11% churn**
- Customers **without the plan** → **16.10% churn**

### Interpretation:

The unlimited plan might be overpriced, low-value, or inferior compared to competitors. High churn here suggests dissatisfaction with the plan itself, not the service as a whole.

## C. Churned Customers by Churn Reason — Horizontal Bar Chart

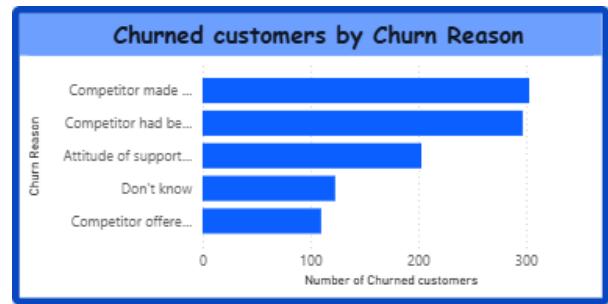
### Reason for Chart:

Horizontal bars are perfect for ranking qualitative reasons clearly.

**Question:** What are the main reasons customers leave Databel?

### Insights:

- **Competitor made a better offer** → *Top reason*
- **Competitor had better devices**
- **Attitude of support team**
- **Dissatisfaction with service**
- **Competitor offered better Internet/Data deals**



### Key Interpretation:

“Competitor” appears in multiple forms as the dominant reason for churn — indicating **direct competitive pressure**.

This is the most dangerous form of churn because customers are not passively dissatisfied — **they actively found a better alternative**.

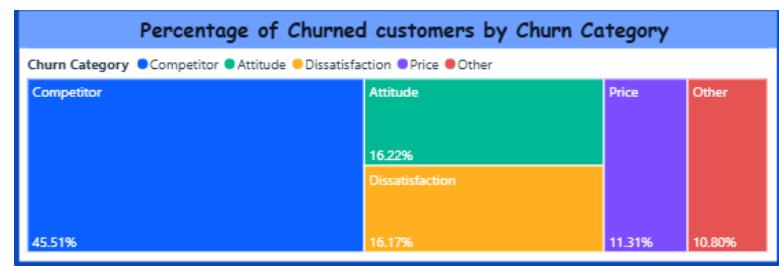
## D. Churn Categories — Tree Map

### Reason for Chart:

Tree maps are ideal for quick comparison of categories based on proportion.

### Question:

Which category contributes most to overall churn?



### Insights:

- **Competitor:** 45.51% (largest block)
- **Attitude:** 16.22%
- **Dissatisfaction:** 16.17%

- **Price:** 11.13%
- **Other:** 10.80%

### Interpretation:

Almost **half** of churn cases are competitor-driven — the strongest signal that Databel must improve value offerings immediately.

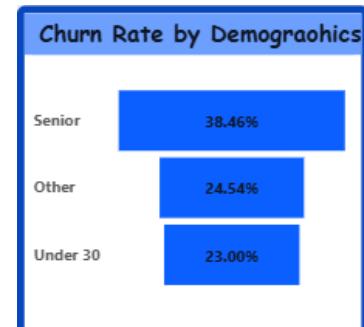
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### E. Churn Rate by Demographics — Bar Chart

#### Reason for Chart:

Simple, direct comparison between demographic segments.

**Question:** Which age segments have the highest churn?



#### Insights:

- **Senior customers:** 38.46% (highest)
- **Others:** 24.54%
- **Under 30:** 23.00%

### Interpretation:

Senior customers may struggle with tech support or may be targeted aggressively by competitors.

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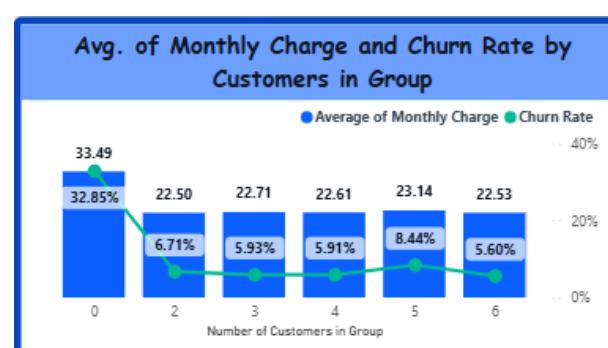
### F. Monthly Charges & Churn by Customer Group — Combo Chart

#### Reason for Chart:

The combination of bars and line charts shows both usage and risk.

#### Questions:

- How do monthly charges vary across customer groups?
- Do customers in larger groups churn less?



#### Insights:

- Customer groups with higher membership show **lower churn rates (5–9%)**.
- Solo customers have the highest churn rate (**32.85%**).

## Interpretation:

Group/Family plans reduce churn due to shared usage and stronger contract commitment.

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### G. Churn Rate by State — Map Visual

#### Reason for Chart:

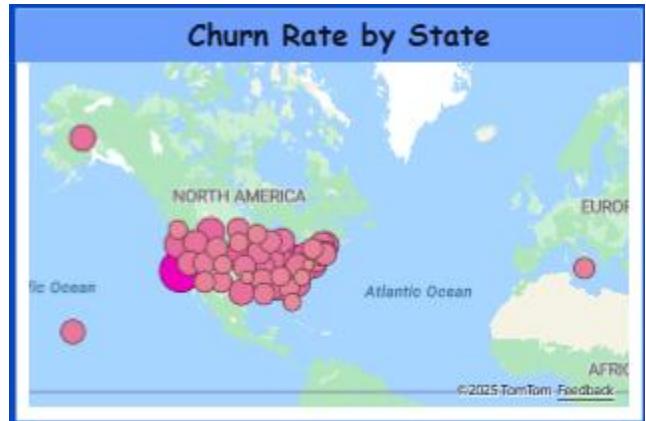
Geographical visuals allow quick spotting of high-churn regions.

#### Question:

Are certain states more affected by churn?

#### Insights:

- Several states in the U.S. show **high churn density**, especially in regions with heavy competitor presence.
- Shows potential locations for focused retention and promotional campaigns.



### 3. Summary of Insights (Dashboard 4)

This dashboard reveals **the core reasons Databel customers leave**, making it the most actionable dashboard in the analysis.

#### Key Takeaways:

##### **1. Competitors are the biggest threat.**

- 45%+ of churn is competitor-driven
- Customers consistently choose “better offers”, “better devices”, or “better prices”

This clearly indicates that Databel’s plans and value are not competitive enough.

##### **2. Unlimited Data Plan customers churn the most.**

This suggests dissatisfaction with pricing, speed, or plan features.

---

##### **3. Seniors are a high-risk segment.**

They experience:

- Higher churn
  - More service dissatisfaction
  - Higher sensitivity to offers
- 

#### **4. Group customers churn far less.**

Group plans are a proven retention mechanism — and Databel should expand them.

---

#### **5. Geographic churn differences suggest regional competitive pressure.**

### **Final Interpretation**

Dashboard 4 highlights the **strategic weaknesses** causing churn at Databel.

The strongest message is clear:

➤ **Competitor pressure is the primary driver of churn.**

Customers are actively leaving to seek:

- Better prices
- Better devices
- Better data plans
- Better overall value

To reduce churn, Databel must **immediately enhance pricing strategies, improve support experience, strengthen device offerings, and enhance plan competitiveness.**

---

### **Final Conclusion & Recommendations**

Across the four dashboards, the analysis clearly shows that churn at Databel is mainly driven by **competitor pressure, monthly contracts, and poor customer service experiences**. Seniors and customers on flexible monthly plans represent the highest-risk segments, while group plans significantly reduce churn.

Key patterns from the dashboards include:

- Balanced demographics (gender and age) but seniors churn more.
- Monthly contracts and frequent service calls strongly increase churn.

- Many customers use international or data services without suitable plans.
- Competitor-driven reasons represent the majority of churn cases.

## Recommendations

To reduce churn, Databel should focus on:

1. **Improving competitiveness** through better pricing, device offers, and data plans.
2. **Enhancing customer service**, especially for seniors and customers with repeated complaints.
3. **Promoting long-term and group contracts** to stabilize retention.
4. **Targeting high-risk users** with personalized offers.
5. **Optimizing plan structures** to match actual usage patterns.