



Customer Churn Analysis and Revenue Impact

End-to-end telecom churn analysis identifying patterns, quantifying revenue impact, and recommending retention strategies

EXECUTIVE SUMMARY

The Churn Challenge

7.0K

Total Customers

2K

Churned Customers

26.5%

Churn Rate

\$2.86M

Revenue Lost

Over a quarter of the customer base has churned, resulting in significant revenue loss and highlighting urgent need for retention strategies

Customer Distribution: The Big Picture

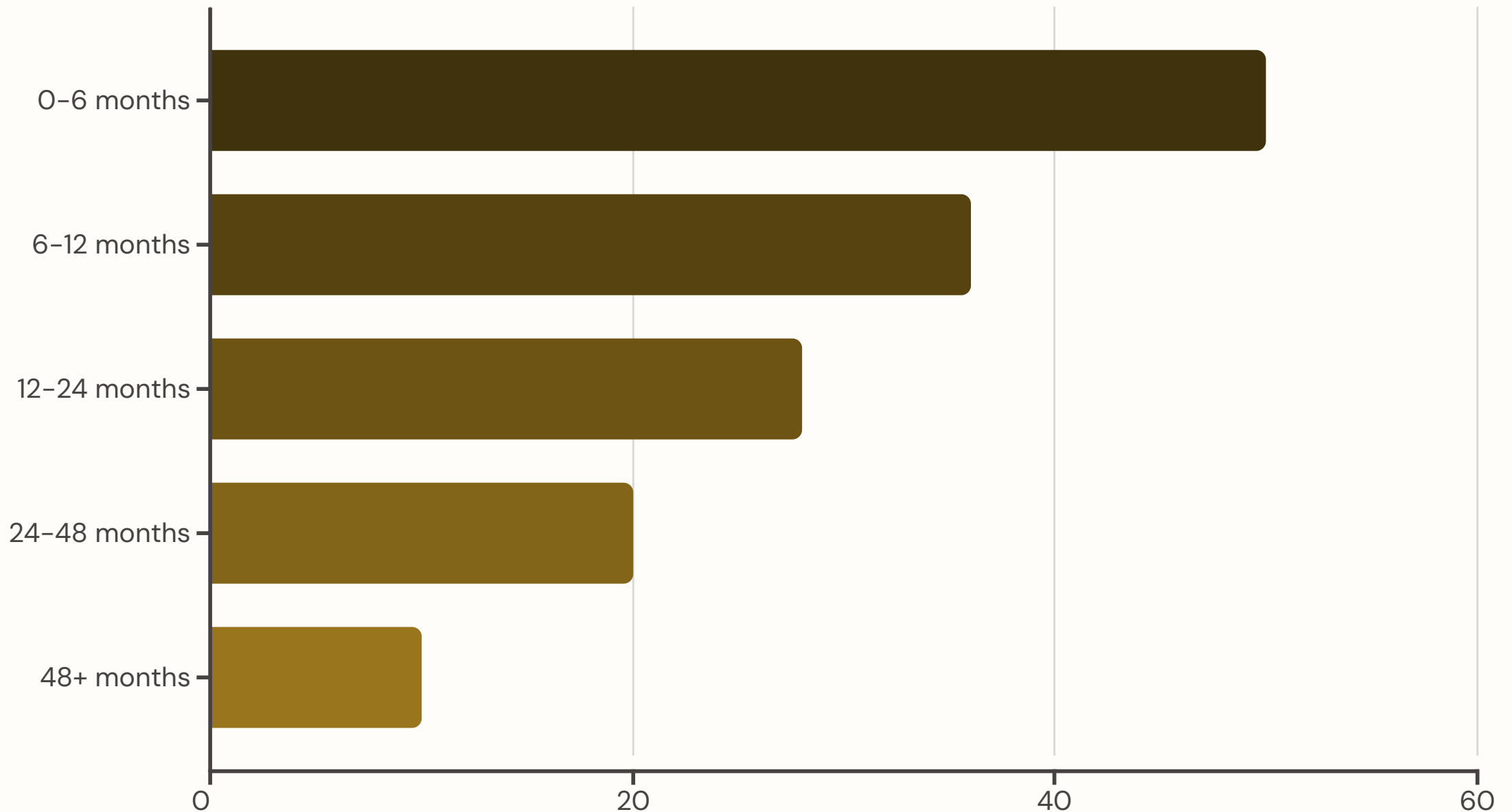


Key Insight

While majority of customers remain loyal, the 26.54% churn rate represents substantial revenue risk

Focus: Understanding why customers leave and when they're most vulnerable

Early Tenure = Highest Risk



📌 First 6 months are critical: 50% churn rate indicates onboarding and early experience gaps

CHURN DRIVERS

Behavior Matters More Than Demographics

Contract Type

Month-to-month: **45% churn**

One year: 12% churn

Two year: 5% churn

Payment Method

Electronic check: **45% churn**

Mailed check: 20% churn

Auto payments: 12-15% churn

Customer Value

Low value: **35% churn**

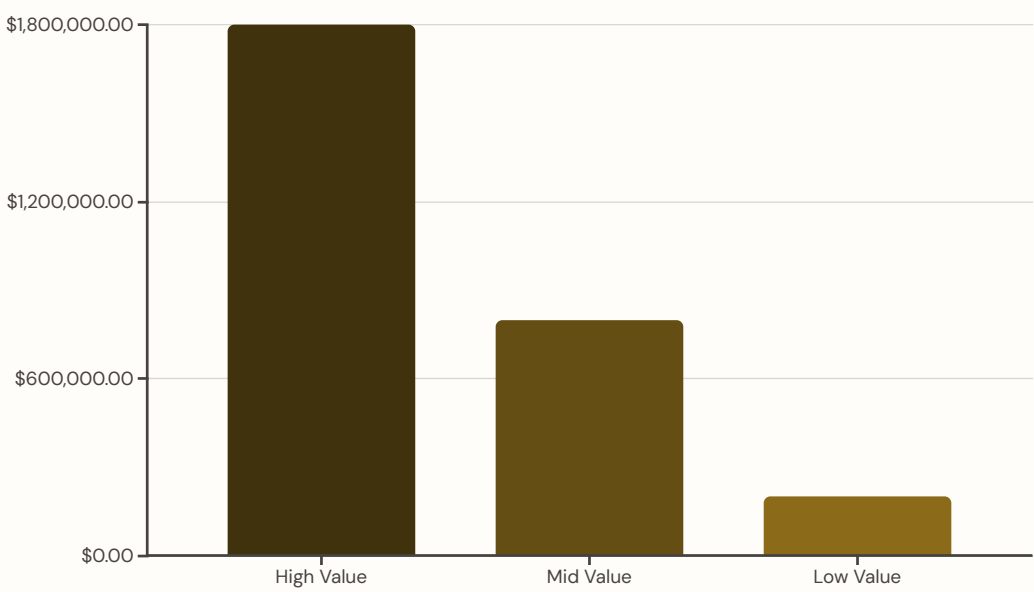
Mid value: 22% churn

High value: 15% churn

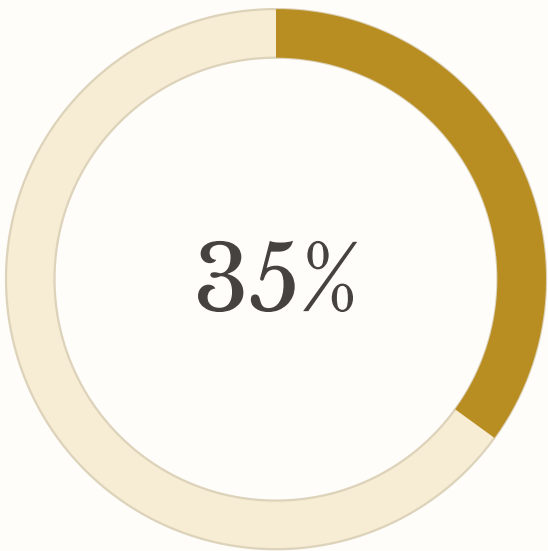
Low-commitment behaviors drive churn. Demographics like senior citizenship play smaller role (30% vs 18%)

The Revenue Impact Paradox

High-Value Churn =
Disproportionate Loss

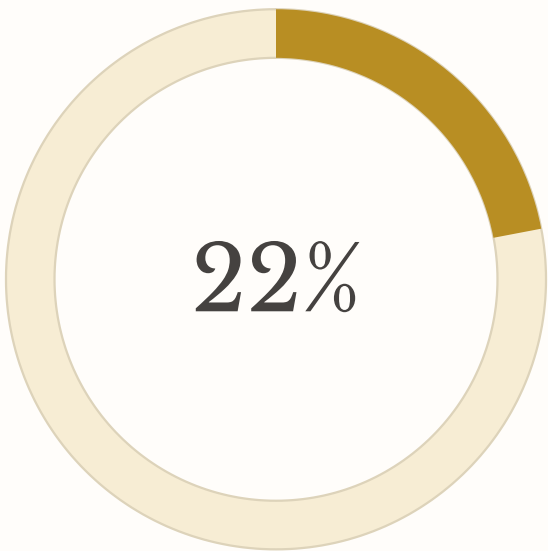


But Lower Segments Churn More



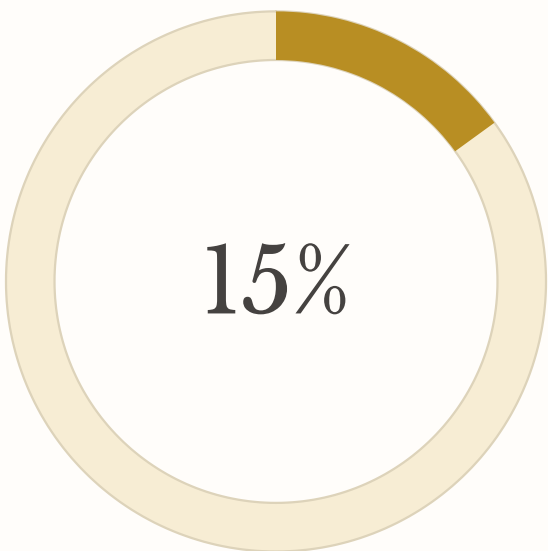
Low Value

Highest churn frequency



Mid Value

Moderate churn

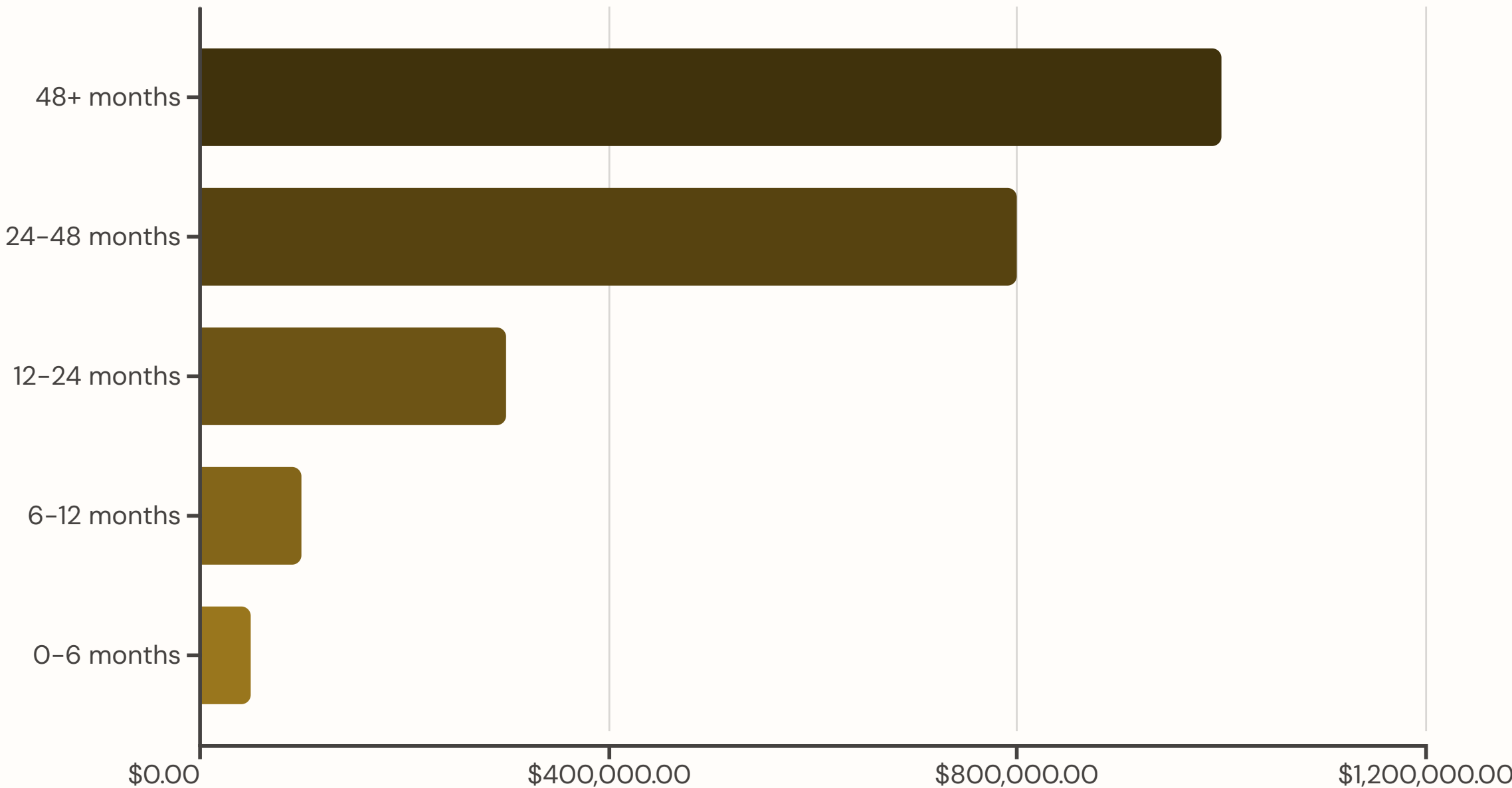


High Value

Lowest rate, highest cost

Long-Tenure Revenue Loss

Despite lower churn rates, long-tenure customers contribute significant revenue loss due to higher lifetime value



Strategic Retention Recommendations

01

Focus on Early Tenure

Prioritize retention efforts for 0–6 month customers with enhanced onboarding and engagement programs

02

Incentivize Long-Term Contracts

Reduce month-to-month churn (45%) by offering compelling annual/biennial contract benefits

03

Promote Automatic Payments

Shift customers from electronic/mailed checks (45%/20% churn) to auto-pay (12–15% churn)

04

Protect High-Value Segments

Deploy dedicated retention programs for high-value customers to minimize \$1.8M revenue loss

Methodology: Complete Analytics Workflow



Data Preparation

Python for cleaning and feature engineering

7,043 customer records analyzed



Analysis

PostgreSQL for business intelligence queries

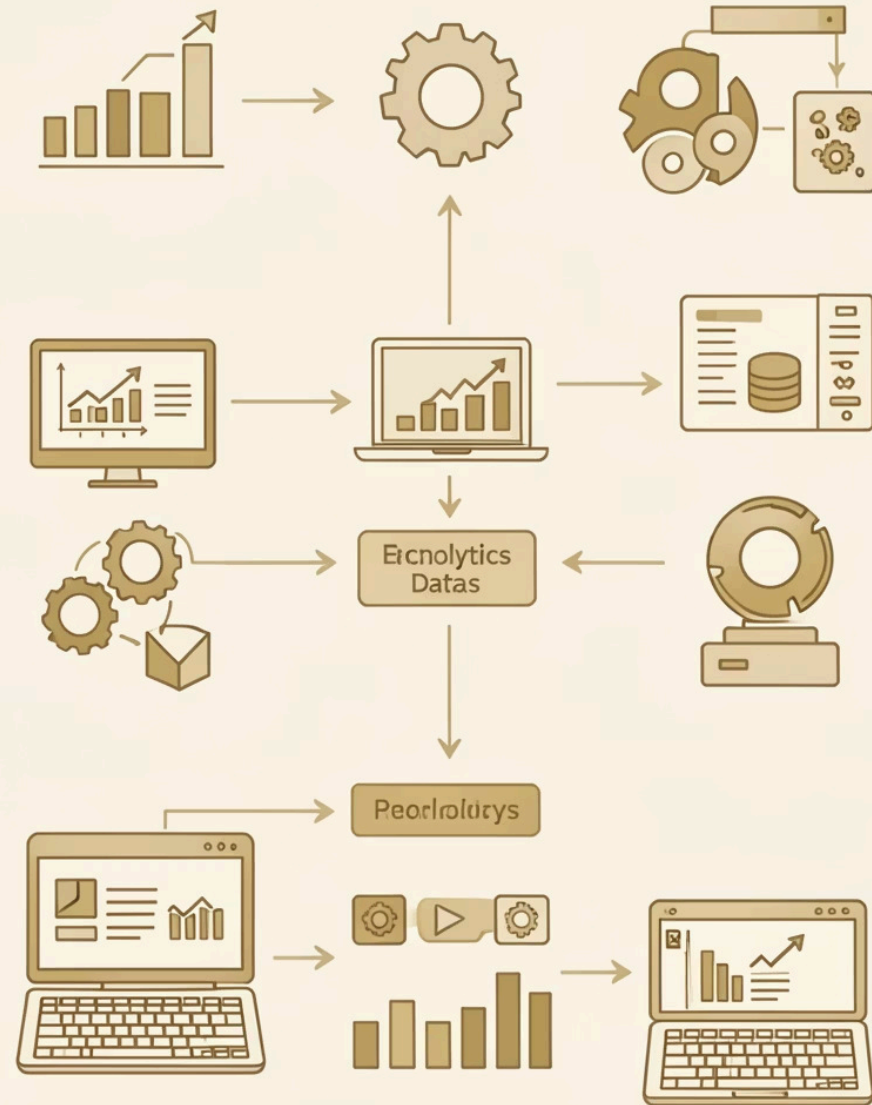
Pattern identification



Visualization

Power BI dashboard for executive storytelling

Actionable insights





CONCLUSION

Key Takeaways

Behavior Drives Churn

Low-commitment behaviors (month-to-month contracts, manual payments) are primary churn drivers, not demographics

Early Intervention Critical

50% churn in first 6 months demands immediate focus on onboarding and early customer experience

Dual Strategy Required

Address high-frequency low-value churn AND high-impact high-value churn simultaneously

Complete analytics workflow demonstrates path from raw data to executive insights, emphasizing behavioral retention strategies to minimize \$2.86M revenue loss