

Telecom Customer Churn

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01

The Data Set



Churn data for a fictional
Telecommunications company that
provides phone and internet services in
California, and includes details about
customer demographics, location,
services, and current status up to June
2022.

Over 7,000
Customers

Over
21.3M\$
In Revenue

US Telecom
Est. Market
Value 583B\$
(2021)*



02 Research Questions





Research Questions



01

Amount

How many customers have churned?

02

Value

What is the average value of a customer in relevant demographic groups and services?

03

Churn Rate

What is the churn rate across these groups and services?

04

Customers

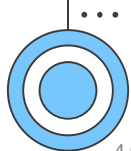
Why do customers churn, and how can the company prevent it?



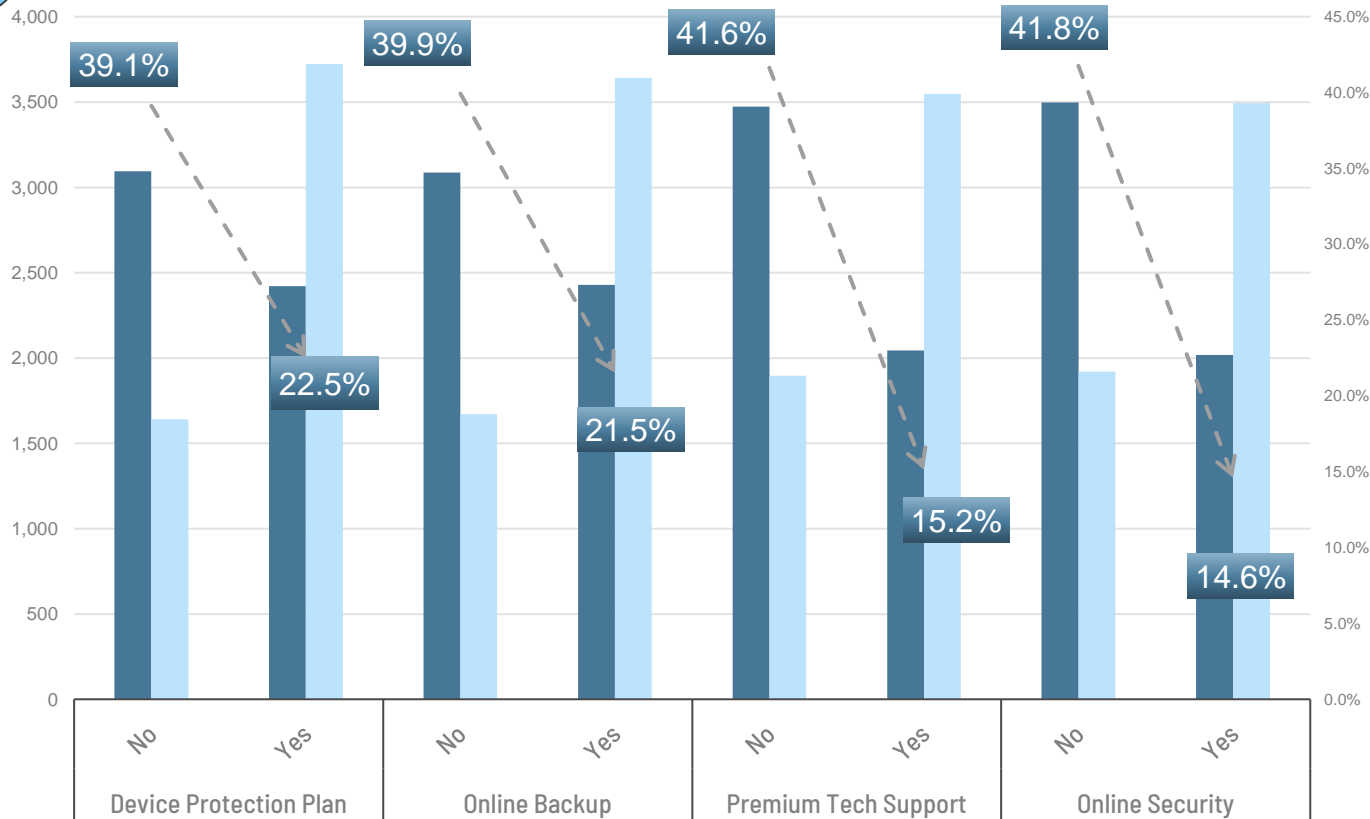
03

Analysis





Services Among Customers



■ Total Customers

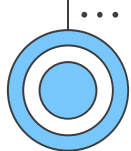
■ Avg Customer Value

— ➔ Churn Rate

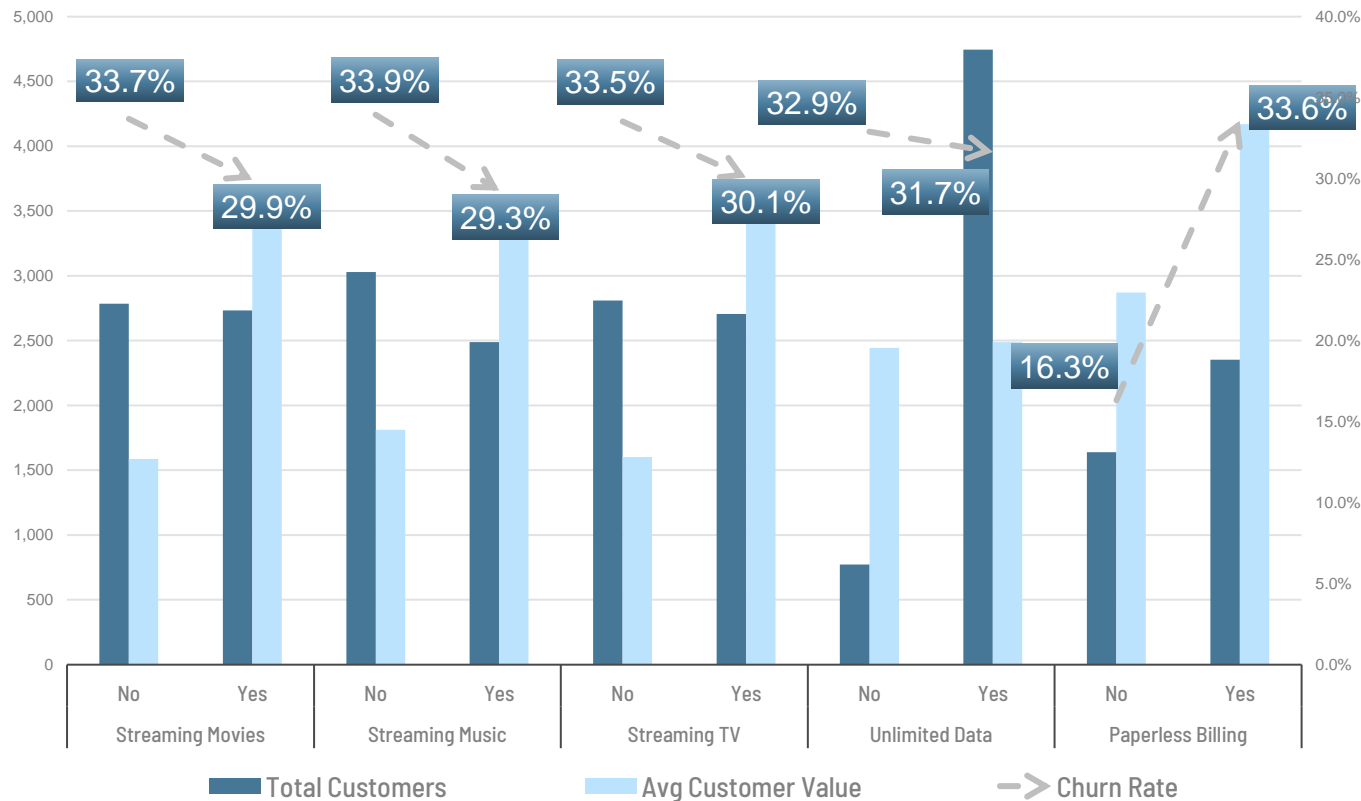
Tenure is
larger by
180% for
users

Average
customer
value is
larger by
200% for
users

Churn is
higher by
220% for
none users



Services Among Customers

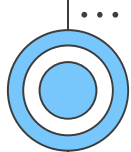


* Not including paperless billing

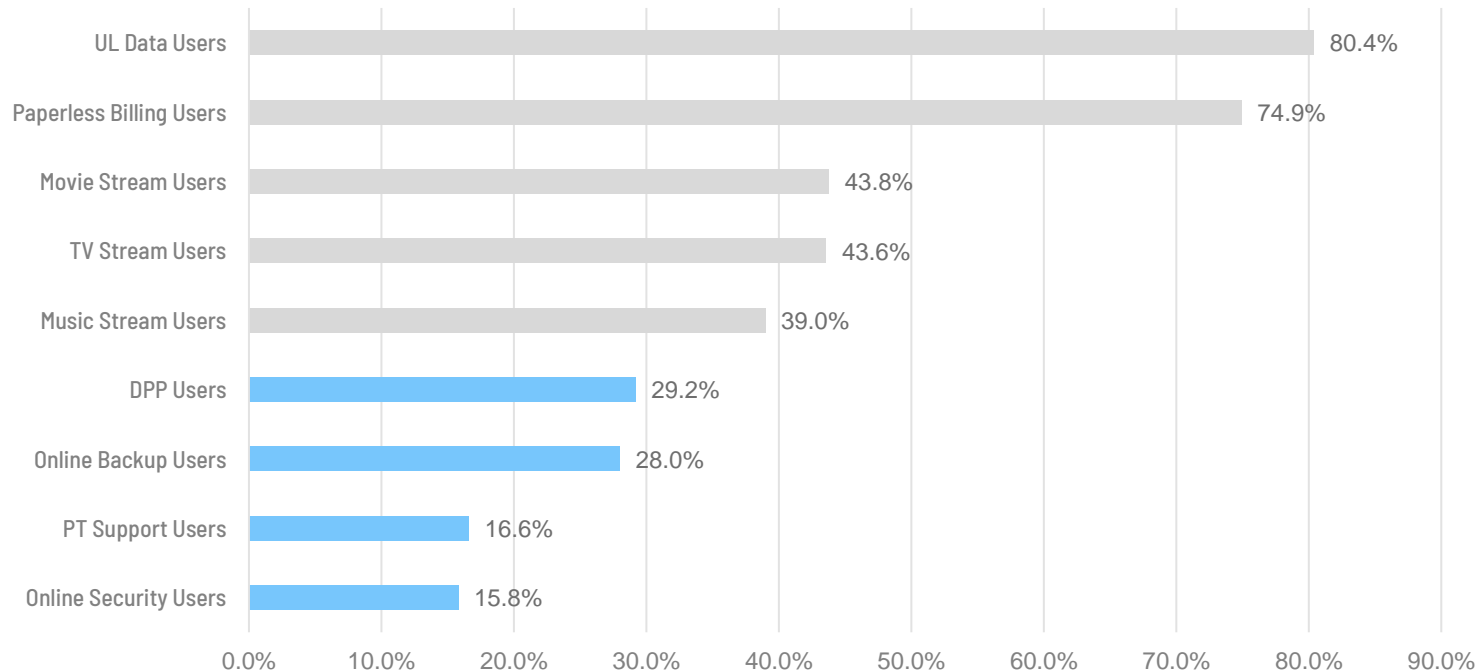
Tenure is larger by 142% for users*

Average customer value is larger by 175% for users*

Churn is higher by 111% for none users*



Services usage among churned customers



Lower percentage of usage for services that dramatically affect churn



Churned customers tenure

Min / Max

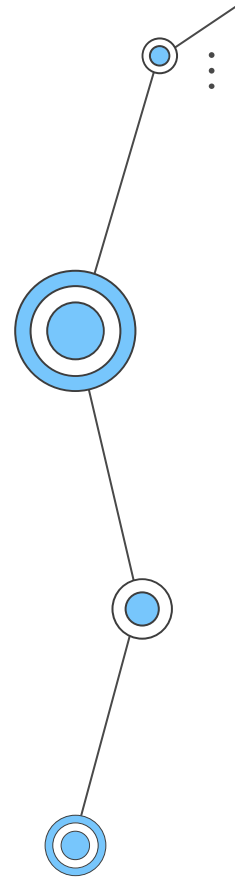
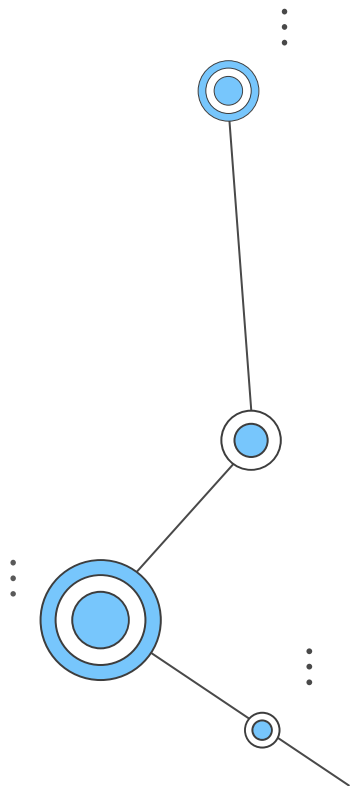
1 / 72

Average

17

Median

10



How can the company prevent churn?

Understanding
what are the
key services

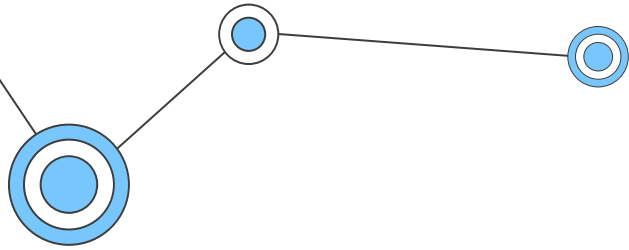
- Device Protection Plan
- Premium Tech Support
- Online Security
- Online Back up

Median tenure
for churned
users

- Ranged between 9 to 11.5 months

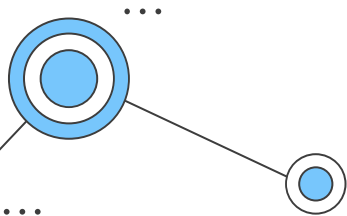
No customer
retention
system

Proposing a
formula for
churn detection



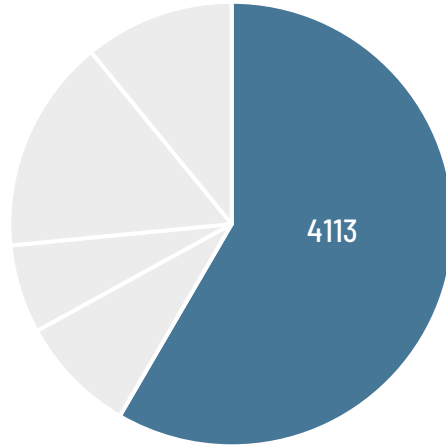
The formula proposed defines
"about to churn" customers if:

1. Customers are at least 6 months in
2. One of the key services is not in use by the customer



Reviewing the formula

Total Customers Segmentation



■ Stayed & Classified

■ Stayed & Not Classified

■ Joined & Not Classified

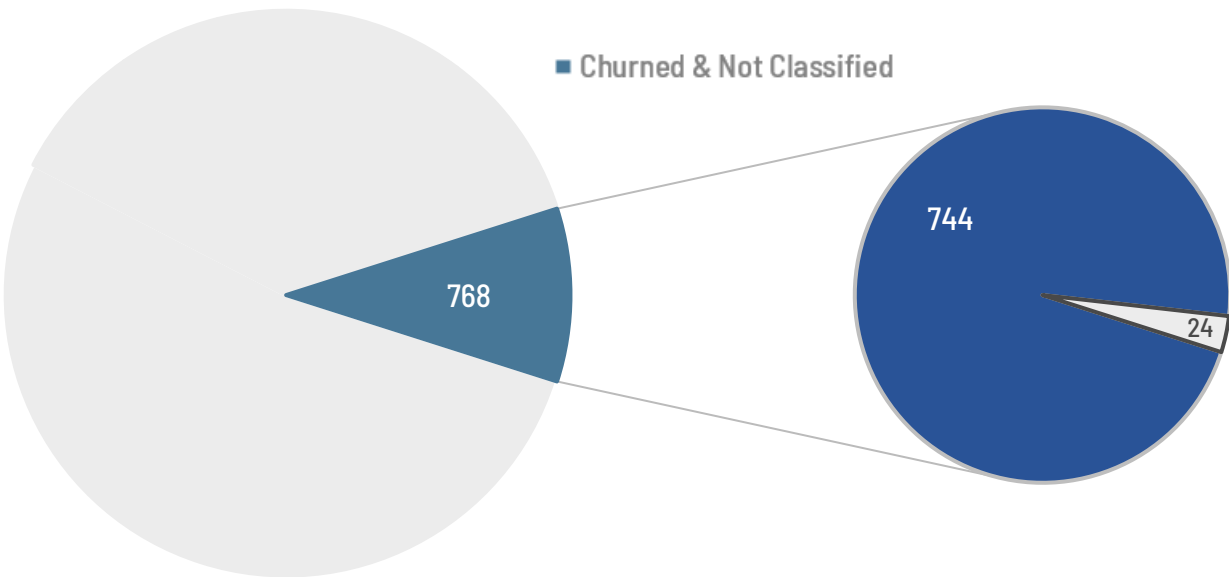
■ Churned & Classified

■ Churned & Not Classified

The formula detected 4,113 active customers who are defined as about to churn

Reviewing the formula

Total Customers Segmentation



Stayed & Classified

Stayed & Not Classified

Stayed & Not Classified

Churned & Classified

Below 6 Months

Outliers

The formula did not detect 768 customers who already churned

744 of them have churned under 6 months among all age groups

The rest are customers who held all key services and have been customers for 2 to 6 years



Conclusions & Recommendations

What can be done?

Offering new customers a 6 months trial of the key services – either free or in an attractive discount

Regulating offers for “about to churn” customers

Successful offers will increase value and decrease churn



Thanks!

Do you have any questions?



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