



# Customer Churn Analysis and Retention

Tools Used

Power BI

## Introduction

Databel, a telecom service provider, has been losing customers lately, and they want to figure out why and how to stop it. They need to understand why customers are leaving. There have been some reports regarding customer service and want insights into the issues.

## Dashboard Inquiries

1. Why are customers leaving Databel?
2. What are the characteristics of customers who leave?

## Assumptions

1. Promotions and offers by competitors influence the customers to churn.
2. Customers continue their telecom usage with Databel once they

## Hypothesis

1. People who are not on an unlimited data plan are more likely to churn.
2. Databel has allocated some of its revenue to make international plans promotion in some states and it believes it is for the good.

3. How often are customers leaving Databel on average?
4. Does the type of contract a customer has affect their decision to leave?
5. Which states have the most customers who are leaving?
6. How do Databel's competitors impact their business?
7. Should Databel improve their customer service?
8. Does the amount of data and the ability to make international calls affect why customers leave?
9. Can you offer suggestions to help Databel keep their customers?

## About the data

The dataset contains 29 columns. Each row represents information related to one customer.

### ▼ Metadata

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
Local Calls	Amount of local (within the US) calls from the customer
Intl Calls	Amount of international (outside the US) calls from the customer
Intl Mins	The number of minutes spent calling internationally. Intl Active: Indicates if the customer called internationally with a "Yes" or "No"
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
Extra International Charges	Contains the extra charges for international calls for customers who are not on an international plan
Customer Service Calls	The number of calls made to customer service
Avg Monthly GB Download	Contains the average monthly download volume in gigabytes
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
Extra Data Charges	Contains the extra charges for data downloads for customers who are not on an unlimited plan
Monthly Charges	Average of all Monthly Charges to the customer
Total Charges	Sum of all monthly charges

## About the dashboard

This dashboard contains 4 reports.

1. Overview page
2. Customer Demographics
3. Data & International Activity
4. Call Info

The Overview page gives an over all idea of the customer churn process. It mainly focuses on three factors: churn rate, churn reasons and in which places customers churn the most.

## Analysis

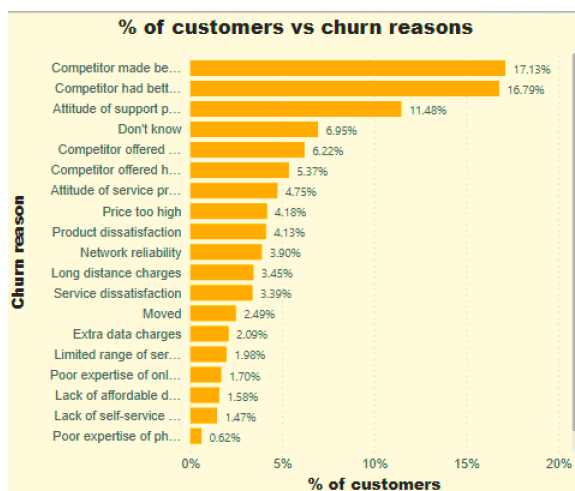
Overview of the customer churn analysis:

### Churn rate

Total no. of customers	No. of churned customers	% of churned customers
<b>6687</b>	<b>1796</b>	<b>26.9</b>

Analyzing the data, it was found that there are a total of 6687 customers for Databel. Out of them 1796 are the churned customers which represents almost 27% of the total customers.

### Churn Reasons



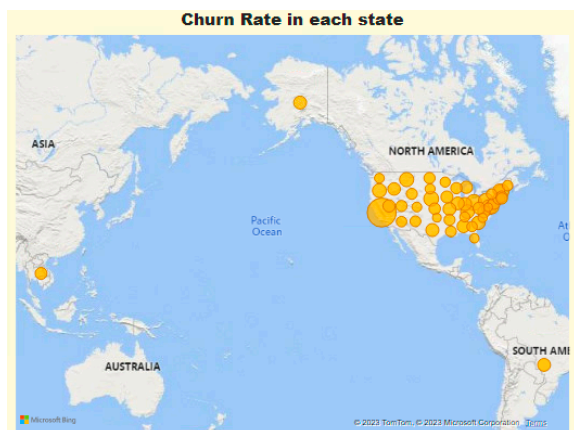
Top 3 reasons why the customers left Databel are:

1. Competitor made better devices
2. Competitor had better offers
3. Attitude of support people



Almost 37% of the customers churned from Databel due to the competitors.

### State wise customer churning

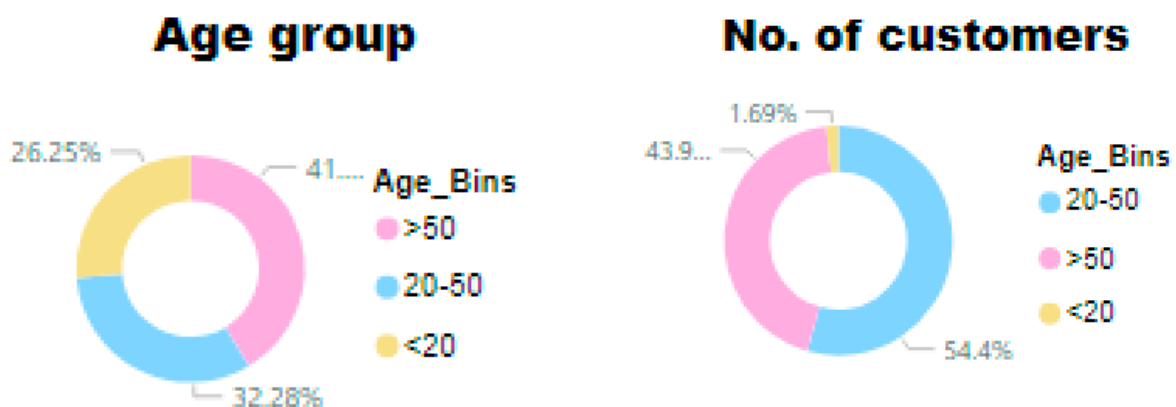


It was found during the initial analysis that almost a lot of customer who churned were from California and those from the eastern coast. There is a need to make good promotions and improve marketing in these areas.

### Customer Demographics:

Let's now look into the characteristics of the customers who churn. This includes their age, gender etc.,.

#### Age



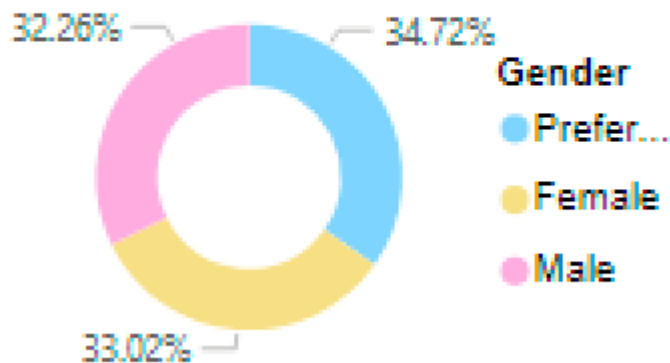
Almost 97% of the customers are ages more than 20. That is Databel has very few customers ages less than 20 years. Among the 20-50 age group, nearly 33% of the customers churned and those aged more than 50, 27% of them churned.



Databel should focus on retaining senior citizens and customers within the age group of 20-50. One way to retain them would be by launching attractive contract plans.

## Gender

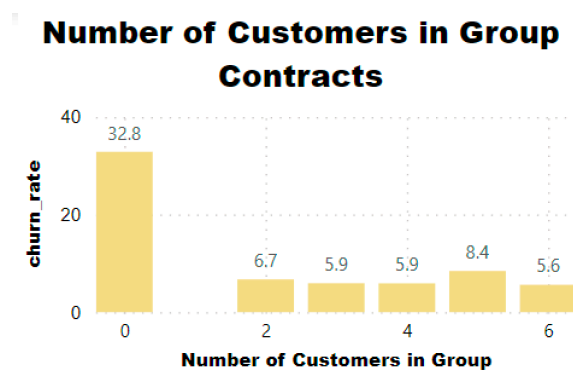
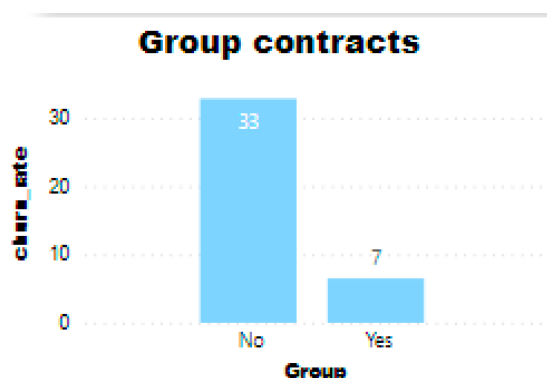
### Gender



There is no much difference in the percentage of males and females among the customers of Databel. So one can assume that gender does not directly influence the customer churn rate.

## Group plans and Contract Type

Databel offers its customer group plans and there are yearly and monthly contracts plans the customers can choose from.



It is a noticeable that the churn rate of customers in not a group plan is 33% while those involved in a group plan is only 7%.

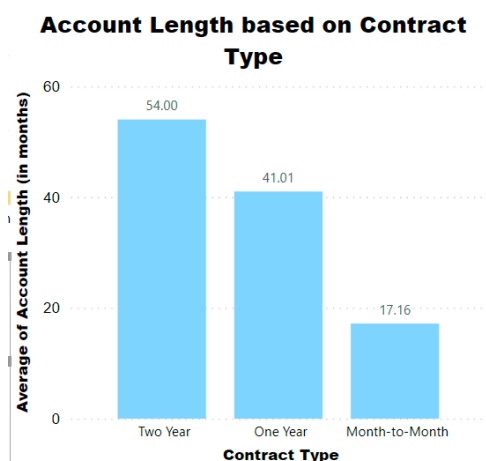
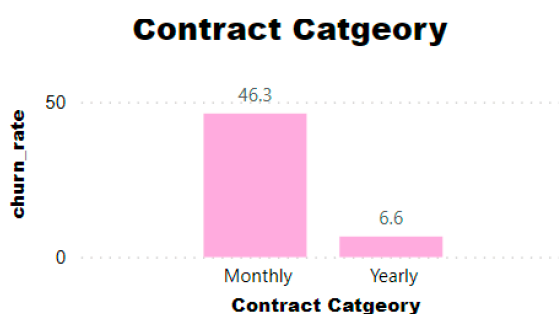
This implies that individual customers churn more than those in a group contract.



Since the churn rate of customer in a group contract is less, Databel should encourage its customers to enroll in a group contract service.

Apart from individual customers, the churn rate of customers in a group of 5 tend to churn more.

### Contract Category



As mentioned, Databel has monthly and yearly contract plans for its customers. From the above graphs, the churn rate of customers in a monthly contract plan is 46.3% as compared to 6.6% of those in yearly contracts.

Based on the account length, customers in two year and one year plans have an average account length of 54 and 41 months respectively in contrast to those in monthly plans who have an average account length of 17 months. This means that initial customers in yearly plans continued using Databel services for another two more years.

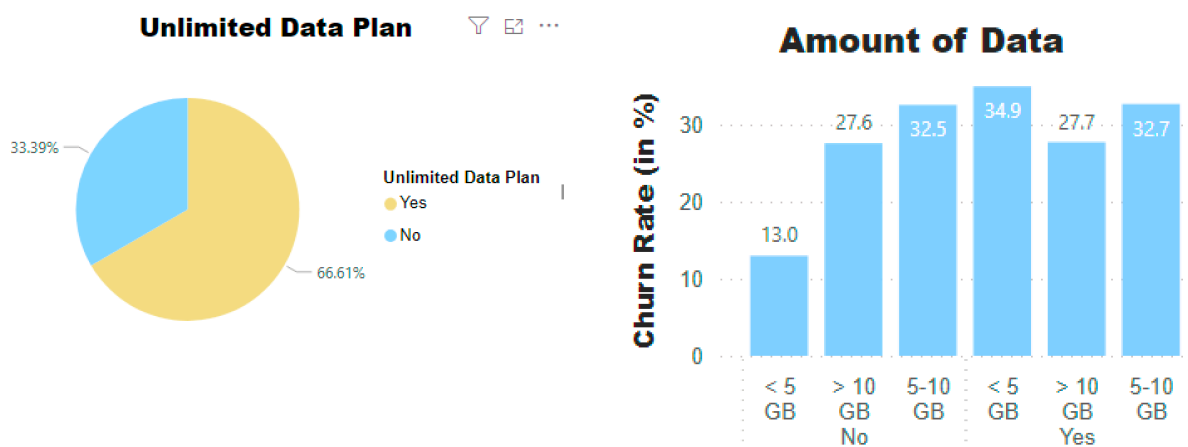


Databel should make more promotions about its yearly contract plans to attract new customer. It should also encourage its current monthly plan customers to shift to yearly plans by explaining them its advantages.

Group	Contract Catgeory	churn_rate
No	Monthly	52.15
Yes	Monthly	17.05
No	Yearly	9.25
Yes	Yearly	0.21
<b>Total</b>		<b>26.86</b>

It is observed that individual customers with monthly contract plans with Databel have the highest churning rate of 52% among customer with monthly and yearly contracts.

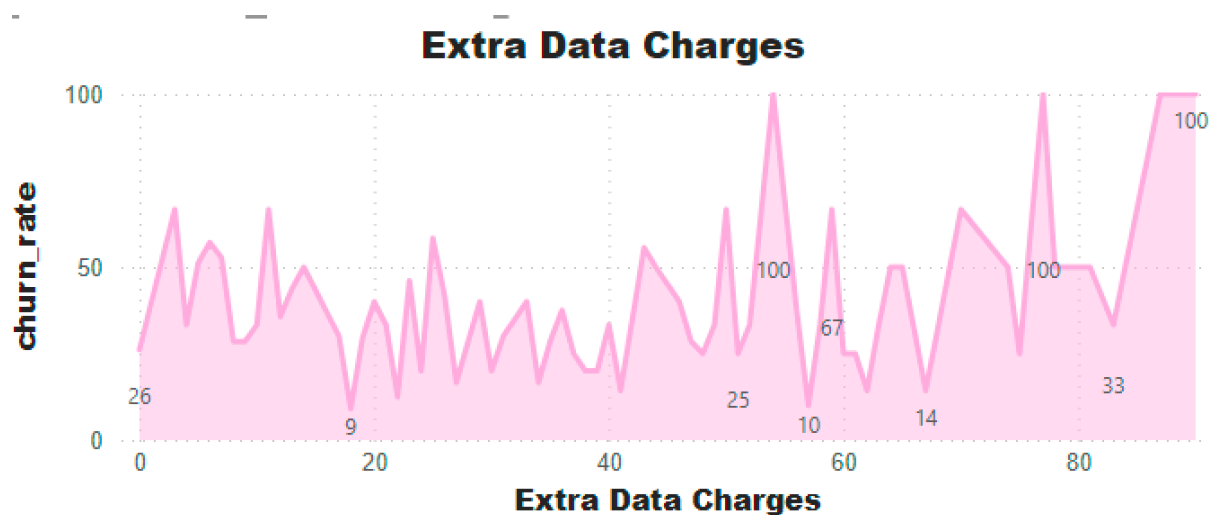
### Data Usability



Databel has a hypothesis that customers who do not have an unlimited data plan churn more. But this turns out to be false. Looking into how internet and data plans of the customers affect the churn rate, customers with unlimited data plan churn more than those with limited data plans. This can imply that Databel does not provide efficient internet availability. It can be due to poor network, slow buffering speed etc.,.



Checking if this has something to do with the amount of data (in GB) used by the customers, it was found that churn rate of people with unlimited data plan who consume less than 5GB data is 29.6% So churn rate is inversely proportional to the amount of data.



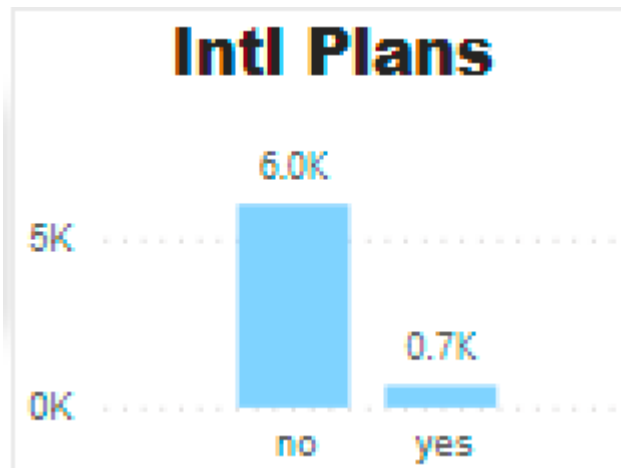
It is evident that as the extra data charges increase, more customers tend to churn and the churn rate increases.



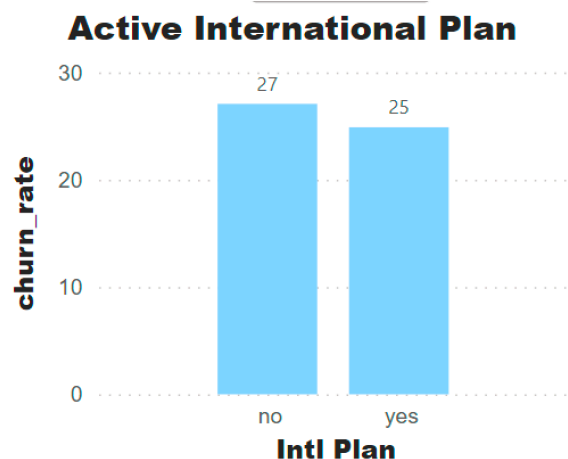
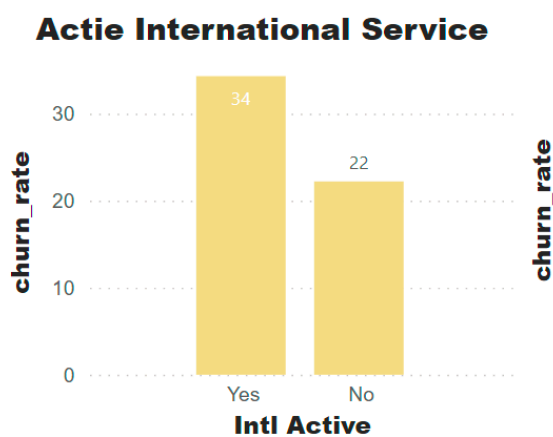
Extra data charges tend influence the customers to churn and also customers who have unlimited data plans churn more then those with limited data plans.

### International Activity

Being a telecom company, Databel provides international service plans to its customers.



Nearly 6000 customer out of the total 6687 customers do not have an international plan. So, Databels's decision to promote international plans is a good idea to increase number of customers and retain the existing ones.



Many customer who have an active international plan churn from Databel with a churn rate of 34%. However, there is no much difference in the churn rate of customers with and without any international plan service.



89% of the existing customers without an international plan can be potential for the new promotions of the international plans. Databel can propose to customers who are on international plans but do not actively use them to downgrade their plan. It can propose a cheaper plan and explain the rationale to increase customer satisfaction and stop customers from churning.

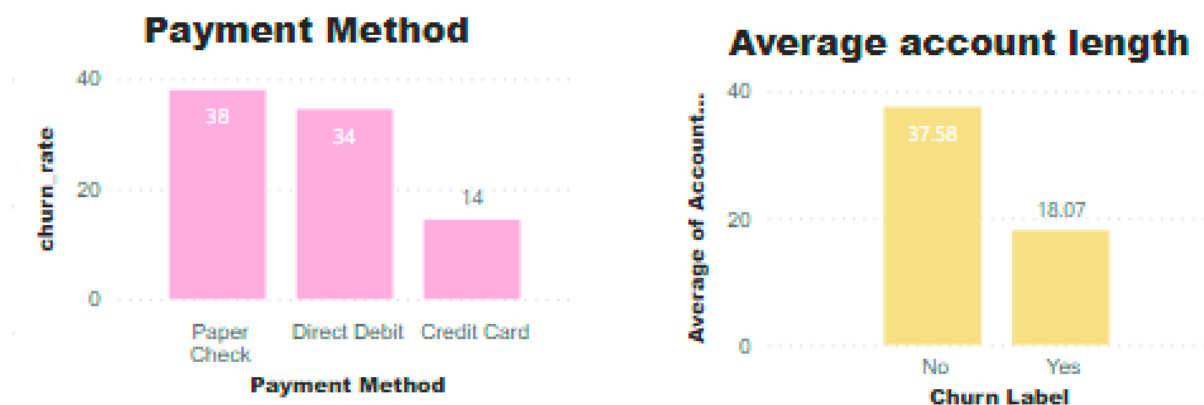
## Customer Service

Analyzing one of the most important factors that effects customer churning:

# 6123

Sum of Customer Service Calls

There were a total of 6123 customer service calls made to Databel. That is among 6687 customer, almost 91% of the customers have experienced some issues with Databel's service.



Problems during payments can be one of the reasons for customer churning. It is observed that very few people customers using credit cards churn less can compared to those using paper checks and debit cards. The average account length of customers who churn is 18 months while that of the existing customers is 37 months which is almost twice the former.



Customers using debit cards and paper checks for payments have a churn rate of 34 and 38 respectively. Average account length of existing customers is twice the account length of churned customers.

## Calls Information

# 130.97

Average of Local Calls

# 322.75

Average of Local Mins

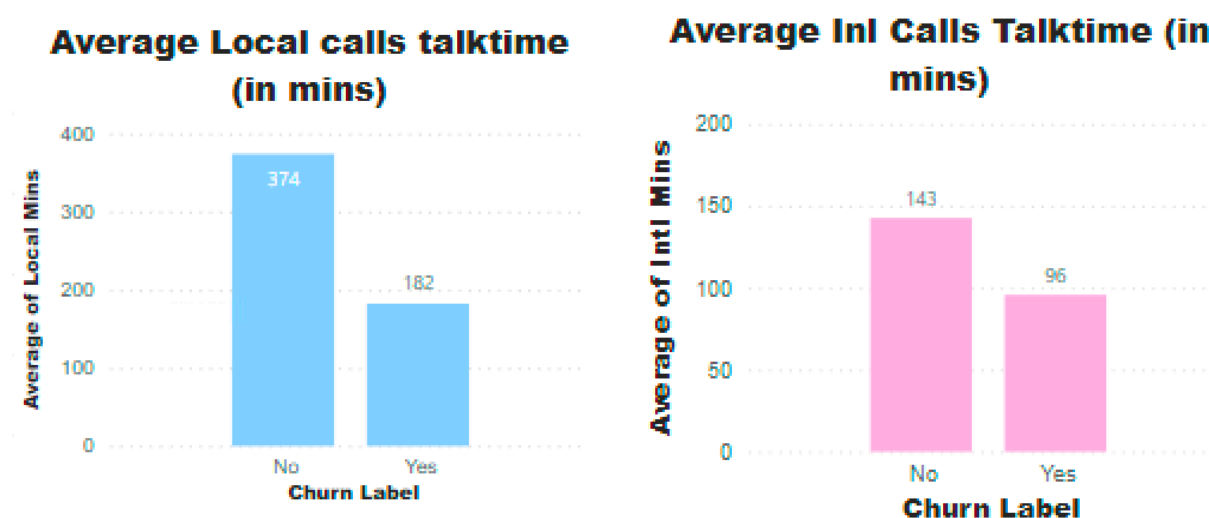
# 51.10

Average of Intl Calls

# 130.07

Average of Intl Mins

A customer at Databel makes an average of 131 local calls and 51 international calls.



Customer who do not churn have double the local calls talk time as that of those who churn. This is true even for the international talk time.

## Conclusions

- Databel should also provide better customer services and train their customer support team in a better manner to ensure customer satisfaction.
- Databel should take make marketing strategies, promote their services and devices, give offers and discounts and conduct promotions in various places across California and the east coast to reduce the churn rate.
- Attractive contract plans should be launched to retain existing customers, especially senior citizens.
- Customers should be encouraged to enroll as a group and use group plans. Additional benefits and information about the group plans should be explained.

- Existing customers can be told about the advantages of yearly contract plans and can be motivated to switch from monthly to yearly plans.
- Extra data charges should be reduced.
- 89% of the existing customers without an international plan can be potential for the new promotions of the international plans.  
Databel can propose to customers who are on international plans but do not actively use them to downgrade their plan. It can propose a cheaper plan and explain the rationale to increase customer satisfaction and stop customers from churning.
- Databel should provide better customer services via payment methods, answering customer calls, ensuring good functioning of the devices, etc.,.