

CUSTOMER CHURN ANALYSIS
Project Proposal

CONTEXT

A leading telecom company wants to avoid losing its customers to its competitors who are constantly trying to steal them. This company, wishing not to lose its customers and to connect with new customers, through its marketing and customer service department, would like us to help them solve this problem by focusing on churn.

1. Recognize the business problem

The problem our client is facing is that they are experiencing high customer churn and there are no significant opportunities for growth with new customers.

2. Research the organization

Customer acquisition, or customer conquest, is a process that consists of developing a company's customer portfolio. It is very important for any company because it allows them to ensure their perennity in the long term. If a company starts to lose customers or fails to attract new ones, it can be seen as a sign of decline or otherwise is in a bad position.

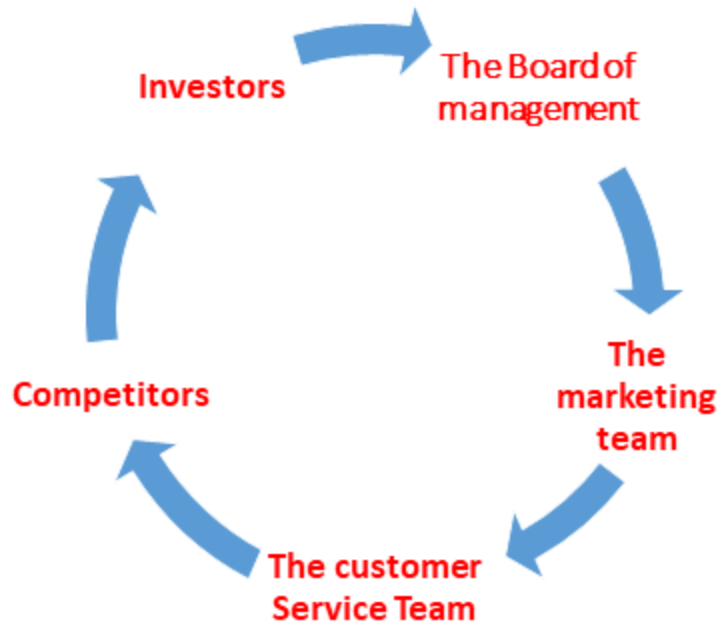
In the case of this telecom company, what they are looking for is to understand the reasons behind the churn in order to build loyalty and only by building loyalty can they attract new ones.

3. Client

Our client is a Telecommunication Company. We were asked by the Senior management board to provide insights and suggestions for two departement of their company : The Marketing Team and the Customer Service Team to help the company tackle churn.

4. Relevant stakeholders

The stakeholders are:



- Investors: They have no interest in investing their money in a company that can't keep their customers.
- The Board of management : Churn is a critical factor in how investors perceive your company. Venture capitalists look at customer churn to determine if your product has market value, which is why they need to adjust leadership and management techniques to optimize company performance and reduce churn.
- The marketing team : They need to redefine the product/service offering to retain these customers and create content tailored to their interests.
- The customer Service Team : The churn rate shows a lack of communication between the company and its customers and that the customer onboarding process is poor, which means that the department must make a greater effort to stay proactively close to the customer in order to know their expectations and interests.
- Competitors: They get back the lost customers and as long as the situation persists they will gain more market share.

5. Methodology

- WEEK 1

For the First part of the project, We will process with descriptive analysis of the variable in the Dataset that was provided using Python 3 for processing and data visualization.

We use a hypothesis test on difference of proportion to find if there is any difference between two groups of churners.

After a complete analysis by gender, demographic group and Services used. We will provide recommendations and start the discussion for the solutions.

6.

7. Solutions

Recommendations for the Marketing Team

Solution 1

Building Churners profiles using Machine Learning Algorithms

Build a classification model that will help determine the profile of potential customers who will churn, from which the management team can make the best decisions.

NB. We will provide profiles of the Churners in the second part of our presentation next week.

Strengths:

- *Speed:* As the churning of the client is increasing, it's very important to have a quicker solution to detect the profile of the next churners. **Machine learning especially a Classification algorithm** can evaluate huge numbers of transactions and predict it with a high accuracy.
- *Scale:* Machine learning algorithms and models become more effective with increasing data sets. Once told which set of variables lead to churn or not, the systems can work through them and begin to pick out those which fit either bucket.
- *Efficiency:* Contrary to humans, machines can perform repetitive tasks. ML can often be more effective than humans at detecting subtle or non-intuitive patterns to help identify who will churns

Weaknesses:

- *Lack of inspectability* : Even the most advanced technology cannot replace the expertise and judgment it takes to effectively filter and process data and evaluate the meaning of the risk score.
- *Cold start*: It takes a significant amount of data for machine learning models to become accurate.
- *Blind to connections in data*: Machine learning models work on actions, behavior, and activity. Initially, when the dataset is small, they are blind to connections in data.

Opportunities

- Opportunity for the telecommunication company to be one step ahead and be possible to churn.
- Opportunity for the telecommunication company to have a defense system that evolves and adapts . It will help prevent churn.

Threat

- There is always a risk due to bias, the time it takes to adapt our program and the lack of human expertise.

Alternative Solution

Reduce the price of support services

Services such as: online security, tech support etc are there to help customers, they can be assisted from several communication channels and offer end users more choices on how they can reach a company. Whether it is by phone, email, social media messaging, live chat or even SMS, these channels make it easy for customers to reach your business. Therefore, using IT services to increase customer satisfaction is a great way for companies to understand customer behavior.

Many of the customers who have churned, have not taken up support services. Is it because of the price? With the evolution of the totals fee paid by the clients who churned. We can affirm that price played a major role in their decision. We will still need to prove this affirmation with more information. So we need to reduce the price to make them more accessible for our clients

SWOT

Strengths	Weaknesses
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<ul style="list-style-type: none"> - Its implementation time - It will be easier to monitor and address recurring problems. 	<ul style="list-style-type: none"> - Reduces the profit margin on these services. - Support services are not the priority services for customers.
Opportunities	Threats
<ul style="list-style-type: none"> - The company can not only keep its customers but also attract new ones. - Develop a new advertising campaign about adapting its services to all budgets. 	<ul style="list-style-type: none"> - These services may not be profitable for the company as the risk of loss on these services increases with the reduced price. - If the support services are not up to scratch, due to the fact that they are not a priority, the customers can always abandon the company despite the price reduction.

Improve The Internet Connectivity

Many of the customers who churned had internet service, which is why we should increase the quality of internet services, especially fiber optics.

SWOT

Strengths	Weaknesses
<ul style="list-style-type: none"> - Better productivity for our users - Allowing better communications and collaborations 	<ul style="list-style-type: none"> - Its implementation time - The cost
Opportunities	Threats
<ul style="list-style-type: none"> - Better connectivity will retain more users and attract new ones. - More revenues for the company. 	<ul style="list-style-type: none"> - Rivals could get a head start during the upgrade process and during this time customers will continue to churn which is bad publicity for the company. . - Costs may require that we abandon some projects that

	could be just as lucrative for a while.
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Favour relatively long contracts

The customers with short contracts churned the most. By favoring long contracts ,we will have more time to anticipate the departure of the customer on the one hand and on the other hand the customer will have time to familiarize and appreciate as it should, the services that are offered.

Strengths	Weaknesses
<ul style="list-style-type: none"> - The customer will feel valued because he is favored in the long run. - 	<ul style="list-style-type: none"> - The customer can always cancel his contract. - Its implementation time -
Opportunities	Threats
<ul style="list-style-type: none"> - Opportunity for the telecommunication company to keep its customers long enough to appreciate its products at their true value. - The company will not only be able to anticipate future customer departures, but will also have enough time to initiate actions to retain them. 	<ul style="list-style-type: none"> - Rivals are likely to get a head start during the Internet upgrade period. - Unsatisfied customers will be trapped by a contract that is much too long, which will be a bad advertisement for the company.

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