



ADVANCED ANALYTICS

CASE STUDY

R SYSTEMS ANALYTICS

A Leading Telecom Operator Minimized  
Customer Churn With R Systems Analytics

[www.rsystems.com](http://www.rsystems.com)

# Client Overview

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Connecting millions of customers to each other with entertainment and information, the client is a leader in offering an array of communication products, viz. phone, cable-TV, voice, video and high-speed internet to businesses of all sizes. Operating through a network of call-centers the client delivers high quality customer service; their Top Priority being, Customer Satisfaction.

## Problem Statement

- High-intensity competition in the US telecom industry for customer acquisition and retention
- This posed a serious challenge to client's market share as dissatisfied customers were quickly switching to competitors
- The rising competition compelled the client to look for innovative ways to reduce customer churn, improve customer retention, satisfaction and loyalty

## Primary Client Objective

- Create an intuitive mechanism via deep analytical insights to prevent service cancellations, improve customer satisfaction and loyalty

## Our Solution: Analytics GYM®

### ► Data Science

Our Analytics Consulting Engagement

### The STEPS:

- a. Business Understanding/ Use
- b. Data Understanding/ Use
- c. Analytics and Assessment
- d. Implementation

### The Approach

Perform an in-depth analysis to help the client discover their process challenges. E.g. Ongoing unresolved technical issues, need for competitive pricing and improvements in their overall customer service operations

## The Approach

### Predictive Analytics in Action

- Predicted which customers may churn, including when and why
- Identified the most lucrative customers for focused retention campaigns
- Used our data analytics framework to extract and analyze diverse sets of data and predict possible cancellations
- Analyzed customer interactions (speech, text and social media), CSAT & NPS surveys, CRM, IVR and CDR
- Performed root cause analysis on all use-cases and prescribed effective solutions

### Informed Actions by R Systems

- Analysis: Data is extracted and analyzed from a variety of sources to identify customers with high-propensity to churn.
- Insights: An advanced drill down functionality allows diving deep into the reasons of customer attrition.
- Actions: Using Advanced analytics Retention Workflow, business users assign cases to the concerned teams for immediate actions.

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Total Records : **1396** Please take appropriate action

E-Mail

Workflow

Customer CRM

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- Evaluated customer interactions prior to customer disconnects to understand churn behavior patterns and the reasons for cancellations
- Used our Retention Model Builder to predict potential customer churn on variables like age, longevity, CLTV and tenure-based CLTV

Based on analysis of customer profiles, interactions, purchase history and current actions, we helped the client determine relevant offers for retention programs to retain high-churn probability customers. A measuring matrix was created by us, to identify customers to be contacted on top priority with customized treatments.

**Predictive machine learning algorithms** like random forest modelling, decision trees and uplift modeling were used to predict potential churn customers and identify the most savable segment from the potential churn customers. A team was deployed to reach out to customers who were more likely to cancel services and retain them with customized offers.

R Systems' proactive retention approach, along with the most suitable treatment options saved substantial **Costs** for the client.

## Key Solution Phases

### Project Inception:

#### The Empirical Analysis

Conversations around predicting churns started in July '13. We carved out a plan to create a predictive analytics solution that would improve client's churn predictability, i.e. predicting potential churn customers.

### R Systems' Action Plan

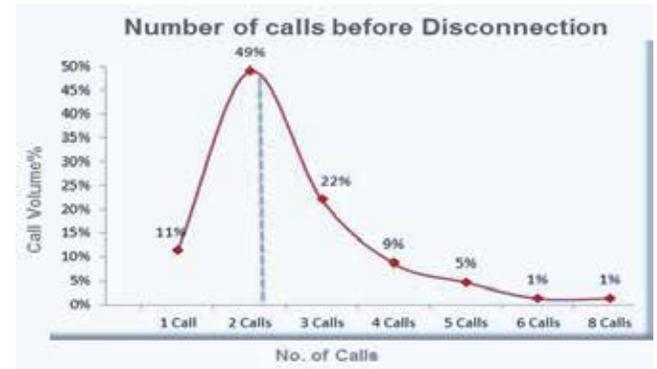
- Identify a set of recent customers who churned and analyze all their calls that are 45 days prior to their disconnection
- Identify a pattern of days taken/calls made by customers to cancel their services

Determine the behaviors and events that triggered their disconnections

- Conduct a statistical analysis to establish relationship between all key triggers
- Produce reports identifying customers who meet those behaviors
- Assess results for accuracy and efficiency
- Implement process to contact customers with customized offers/treatments

## Key Observations

Patterns of days & calls made by customers before disconnection:



- On average, customers made 2.6 calls in 45 days prior to the disconnection
- 60% of customers made Two calls or less before disconnecting their services
- Majority of customers called 11-20 days prior to disconnection



## Key Triggers Identified

Our analytical study uncovered a string of customer patterns based on these events:

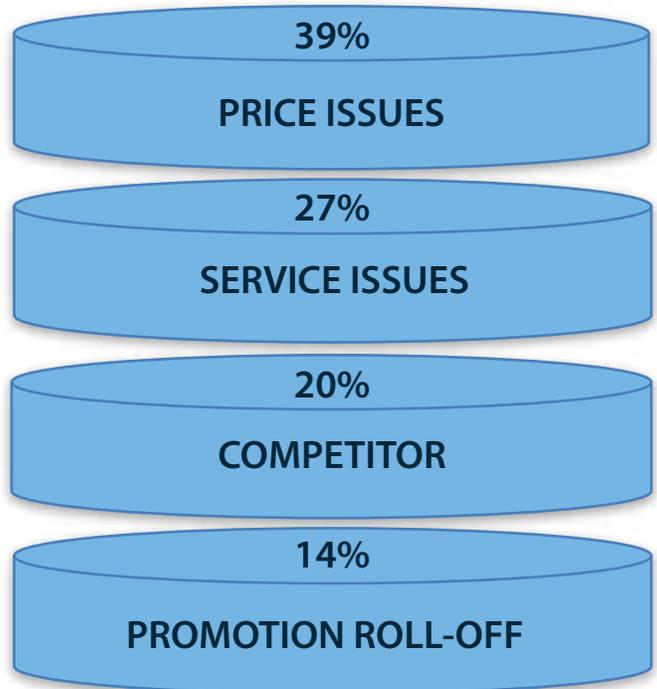
- **Multiple contacts** made by customers before disconnection
- **Ongoing Unresolved** issues stated by customers
- **Negative emotions** displayed
- **Competitor names** mentioned on calls
- **Disconnection** mentioned by customers • Customers Inquired about "contract expiration"
- **Phone No. portability** Inquired about
- **Irregularities** in making payments

Statistical relationship analysis between all key events showed that 5 off 8 had high statistical relevance/ contribution towards cancellations. Hence, it became vital for us to conduct a feasibility study on How to capture these data points on a regular intervals without having to listen to calls.

Stack-ranking the triggers based on the business impact and occurrence propensity, was one of the most important aspects of this feasibility study. Study results revealed the following triggers to have high impacts and data for analysis can be collected by integrating different channels.

## The Reasons

Here were some of the main reasons of service cancellation as identified during our study:



- **95%** of customers from the west region called in to cancel services, while **05%** customers wanted to downgrade Services
- **86%** of cancellations were caused by three main reasons – Price Issues, Service issues & Competitor
- **Price (21%) and Service issues (15%)** have relatively high save-rates, compared to **Competitor (0%)** and **Promotion roll-offs (13%)**
- **45%** of customers who cancelled due to Competitors had already switched their services

## Retention Efforts' Effectiveness Assessed

### KEY OBSERVATIONS

- **26%** of price issues were due to customers believing that they were getting a better price elsewhere. Agents usually addressed this by explaining demerits of other deals
- Agents addressing customer concerns by offering lower rates, promotions and bundle packages, had the best success rates for **saving customers**
- Overall, agents attempted to save **68%** of the service issue cancellations and were able to save **46%** of these calls
- **72%** customers mainly mentioned TWO competitors, that they were switching to
- Agents attempted to save **82%** of these customers, the main save technique was informing the disadvantages of other service providers rather using value statements
- **90%** of customers who switched believed they were getting a better deal in the market

## Statistical Analysis Results

By collecting data from various sources, we created a Measure Scale to identify the customers who should be contacted with a solution oriented approach, or with a customized treatment.

Correlation Metrics	Negative	Positive
Dissatisfied Customers		0.78
Contract Expiry & Dissatisfied Customer		0.62
Phone Number Portability & Dissatisfied Customer		0.33
Number Portability Contract Expiry		0.24

Key Events (Predictors)	Definition
Repeat Callers	Customers who called 5+ times in 7-days had ongoing unresolved issues
Dissatisfaction Displayed (CSAT / NPS Rating)	Customers who displayed dissatisfaction in CSAT or NPS surveys
Contract Expiry Information (Through CRM Metadata)	Customers who called in to know about when their contract is going to expire
Phone Number Portability Information (Through CRM Metadata)	Customers who called in to know about the phone number portability

## The Pilot Inception

We recommended deploying a team to contact potential churn customers with customized offerings. The Client utilized the Anagram workflow functionalities to assign cases to the operations team. A call back team was deployed to assist customers who were highly likely to cancel their services. This call back team showed significant improvements in customer retention.

## Business Outcomes

After a **successful** completion of Pilot, the client scaled up the call back plan where every potential churn customer was called. This effort showed very compelling and sustainable results:

After **Three months** of this retention program, the Client performed many internal calculations and confirmed **\$4.2 million annual cost savings** – based on **Realized Value!**

With R Systems' predictive analytics solution, the client realized a highly reliable and customizable platform for predictive analytics insights. The client can now easily and quickly diagnose potential reasons for customer churn and dissatisfaction, and take informed actions to address them in real time.

The Client is working with R Systems' analytics team to further improve their operational efficiency and the quality of customer service