Data Analytical Framework for ‘Customer Centric’ Solutions

Customer Savviness Index

Low
- Data Harmonization
- Data Validation
- Data Standardization
- Data Categorization

Medium
- Trend and Pattern Analysis
- MIS Reports and Dashboards
- Univariate, Bivariate, COHORT, etc.

High
- Univariate and Multivariate Forecasting
- Association Analysis
- Loyalty Analysis
- Text Mining and Sentiment Analysis
- Customer Lifetime Value

Visualizations

Spotfire
QlikView
Tableau
R
Framework for Relevant Targeting

Create Data Mart
- Transactional
- Product / Service
- Customer Service
- Behavioral
- Perception
- Feedback and Complaints
- Real-time from Clickstream

Perform Multi-Algorithm Segmentation
- Multivariate Regression
- k-Means Clustering
- CART / CHAID
- Latent Discriminant Analysis
- Random Forest
- Naive Bayes
- Gradient Boosting
- Vector Auto Regression
- Neural Network
- RFM Analysis

Derive Customer Segments
- Derive Homogenous Customer Segments
- Profile and Score Segments
- Rank Segments Based on Business Objective

Recommend
- Recommend Targeted Campaigns:
  - Cross-Sell / Up-Sell / Lateral-Sell
  - Promotion / Discount
  - Intensify Engagement
  - Interact with Lost Customers
- Recommend Process Updates and Changes:
  - Product / Service Correction
  - Address Complaints

Internal Data

External Data

Sparse Data
Multi-Source Analytics

Raw data is sourced from various systems

- Transactional Data
- Behavioral Data
- Sparse Data
- Real-Time Data
- Demographic Data
- Social Data

Data is harmonized using multiple analytical techniques.

- Cleanse
- Classify
- Profile

Analysis ready data sets

Benefits

- Holistic Analytics Using Multiple Sources
- Insight Generated from 360 Degree Customer View
- Hidden Insights Derived
- Utilization of Sparse Information for Directional Understanding
Effective customer acquisition strategies require a robust lead prioritization approach that functions even if sales potential and conversion probability data are limited.

**Client**

A leading provider of express logistics services

**Industry**

Logistics

**Business Challenge**

Using information from a third-party source, prioritize leads for customer acquisition despite limited sales potential and conversion probability data

**Evalueserve Solution**

To overcome the lack of sales potential data, our experts applied progressive customer analytics to the available information and created a robust lead prioritization algorithm.

Our method identified and ranked the top prospects. We also provided the client with an interactive and dynamic dashboard for the selection of leads in each country.

**Business Impact**

- Maximized use of the acquired information on 100,000 prospects in 10 countries
- Reduced sales cycle thanks to the successful identification of the highest-potential prospects
To overcome the lack of sales potential data, our experts applied progressive customer analytics to the available information and created a robust lead prioritization algorithm.

Business Challenge

The client had acquired information about more than 100,000 prospects spread across 10 countries from a third-party source. However, the data on sales potential and conversion probability were very limited, making ranking leads and planning the acquisition strategy more challenging.

Prioritization of leads based on historical customer information was essential to create effective acquisition strategy. The client needed support with both the analysis of the data and the creation of an interactive dashboard for the sales and marketing teams.

Evalueserve Solution

Since key data were missing, our experts determined other means of assessing potential customer performance, such as shipping behavior and demographic information. Progressive customer analytics methods were applied as they allow dynamic assessments of such behavioral information.

Our Data Scientist team worked with the client for three months. A robust lead prioritization algorithm was created using multiple analytic algorithms. The approach involved:

- Identifying KPIs for evaluating customer performance
- Creating a single truth version data mart of all current customers and prospects
- Executing multiple models, such as logistic regression and latent discriminant analysis, to predict the sales potential for each lead
- Scoring and ranking leads for each country using the calculated sales potentials

As the final stage of the project, our team constructed an interactive and dynamic dashboard that the client’s marketing and sales teams could use to access information about their opportunity pipeline in each of the 10 countries.

Benefits Achieved

Applying progressive customer analytics to the dataset meant that despite the lack of sales potential and conversion potential data, the client could get maximum use of the acquired dataset.

- The highest-potential prospects per country were identified
- The dynamic dashboard still supports the sales and marketing teams
- The identified KPIs can still be applied to assess customer performance

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A comprehensive cross-sell model is a key part of increasing market share. Matching the right cross-sell products to existing and prospective customers requires rigorous analysis of the available data.

**Client**
A global provider of managed communications services

**Industry**
Telecommunications

**Business Challenge**
Assess existing and prospective customers and increase market share through a comprehensive cross-sell strategy

**Evalueserve Solution**
By applying progressive customer analytics to the customer KPI data, we identified customer segments. This segmentation was correlated with product purchase propensity, allowing clear identification of cross-sell opportunities for existing and potential customers.

Finally, we created a recommendation engine to efficiently predict the next best product across regions and industries.

**Business Impact**
- Accurate recommendations of products for both existing customers and prospects
- Clearer understanding of customer segments in terms of performance, potential and churn
- Increased market share thanks to optimized sales capacity
- Mitigation of churn risk
“The solution has been used to identify high opportunity and high churn segments, resulting a worldwide increase in sales and enabling proper mitigation of churn risk.”

**Business Challenge**
As part of a market share expansion strategy, the client wanted to understand cross-sell opportunities for both existing and prospective customers.

The client had gathered ample data on various KPIs (including revenue growth, churn rate, and products and services used). However, it proved challenging for the client to identify the most valuable target groups and match products to those customers.

**Evalueserve Solution**
The customer KPI data was subjected to rigorous multi-algorithm analysis that enabled the identification of customer segments for both existing and prospective customers. It also helped in identifying relevant products for a given customer.

The method used is referred to as progressive customer analytics and it allows the dynamic assessment of large datasets of variable information about customer behavior and demographics.

The process involved:
- Dividing existing customers and prospects into different segments with different behavioral traits to ensure customized solutions for each segment
- Identifying the most valuable segments, target groups and opportunity areas, and the popular products and services that tend to be purchased together
- Ascertaining how product association varies across regions and industries, and how product purchase propensity varies among customers
- Creating a holistic dynamic business view that would allow the tracking of essential KPIs

In addition to segment identification and recommendations of cross-sell opportunities for each segment, the output from the analyses was used in the creation of a recommendation engine to predict the next best products across regions and industries.

**Benefits Achieved**
The client was very satisfied with the outcome and decided to replicate the analysis for all of its business units globally using customized business KPIs.

The solution has been used to identify high opportunity and high churn segments, resulting a worldwide increase in sales and enabling proper mitigation of churn risk.

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Progressive customer analytics helps make the leap from having data on customer behavior to having insight that can properly inform a successful cross-sell strategy.

**Client**
A leading electronics and networking company

**Industry**
Electronics

**Business Challenge**
Analysis of 10 years' worth of customer transactional data to enable the creation of a successful cross-sell strategy

**Evalueserve Solution**
Our experts applied progressive customer analytics to the client’s considerable database of transactional, behavioral, product and demographic data. Methodologies included RFM and Market Basket analyses. We developed a customer segmentation model and identified relevant products for each segment. The interactive dashboard we created gave the client full access to the insights needed for successful cross-sell strategic planning.

**Business Impact**
- Improved access to customer and product intelligence
- Creation of successful, customized cross-sell strategies for each segment
- Expanded market penetration and presence
“We developed a customer segmentation model and identified relevant products for each segment. The interactive dashboard we created gave the client full access to the insights needed for successful cross-sell strategic planning.”

Business Challenge

The client had collected a huge amount of data related to customer purchase behavior over a 10-year period. However, the analysis of such large sets of data and the translation of that analysis into strategic insights proved challenging.

Evalueserve Solution

Customer segmentation based on sales value and the frequency and recentness of purchase is extremely useful in identifying a directional strategy for effective sales planning.

Using predictive customer analytics to translate the client’s vast database into an understanding of real-world customer behavior and product preferences, our experts created both a customer segmentation model and identified the relevant products for each segment.

The granular analysis at the customer level involved the following steps:

- Assessment of 10-year transaction history, which consisted of data sets with inconsistent variables (non-homogeneous data)
- Correlation and principle component analysis to select the most relevant variables
- RFM analysis to create customer segmentation and profiles
- Identification of prospective cross-sell products for each customer set via Market Basket and association analyses

Our team also created an interactive dashboard to ensure that the client’s sales and marketing teams have easy access to the insights generated.

Benefits Achieved

The client now has a better understanding of its diverse customer segments. In addition, the generated product intelligence framework means improved targeting and deeper insight into the client’s own offering.

This has enabled the creation of a customized cross-sell and marketing strategy. Market penetration and presence have expanded and the client predicts a better return on investment from marketing campaigns.

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Many businesses collect data on customer behavior, preferences and demographics. How best to use this wealth of information to identify customer segments and define comprehensive go-to-market strategies?

**Client**
A leading online retailer of alcoholic beverages

**Industry**
E-commerce; Alcoholic Beverages

**Business Challenge**
Gaining a better understanding of customer segments and behavior to:
- Increase revenue
- Decrease customer churn

**Evalueserve Solution**
To maximize the insight into the customer data, we recommended a progressive customer analytics approach that combines transactional, behavioral, product, demographic and click-stream data.

This involved preparing a data mart highlighting a single truth version of all customers and performing exploratory data analysis. Applying hierarchical and non-hierarchical clustering helped to create customer segments and classify insights into customized views.

**Business Impact**
- The client now has a clear understanding of its customer segments and their revenue contribution.
- Customized and targeted go-to-market strategies are now easier to define, meaning marketing budget is more efficiently used.
“Our progressive customer analytics approach makes it possible to take a holistic look at the customer segments, thus strengthening the decision-making process.”

Business Challenge

The client collected a wealth of information about its customers regarding their transactional activity, online behavior, product preferences and demographic information. Their challenge lay in practical use of all of the information.

They wished to create customer segments based on revenue and churn behavior. Such segmentation was essential to the creation of customized marketing strategies. Besides the desire to generate more revenue, the customer also wanted to reduce attrition.

Evalueserve Solution

Our progressive customer analytics approach makes it possible to take a holistic look at the customer segments, thus strengthening the decision-making process.

First, to better understand the client’s business and data architecture, our Solution Architects conducted an onsite Agile D³ (Diagnose–Design–Delivery) workshop*.

Based on the results from this workshop, we recommended customer segmentation combining multiple data sources. This involved:

- Mapping data from multiple sources to prepare a data mart highlighting a single truth version of the customers.
- Performing variable reduction using correlation and principle component analysis.
- Using hierarchical and non-hierarchical clustering to create customer segments.
- Running multiple algorithms to map the best operating business segment.
- Classifying the insights into customized views to create interactive dashboards.

Benefits Achieved

Understanding the distinct characteristics of each segment helped to create a relevant go-to-market strategy. Evalueserve’s solution helped the client to:

- Track and monitor the performance of each newly defined customer segment
- Capture and measure key performance indicators
- Identify gaps and improvement opportunities in their engagement processes
- Assess the evolution of customer segments and align business decisions accordingly

*Agile D³ is a proprietary engagement model designed and practiced by Evalueserve. The three-step engagement model focuses on comparing existing knowledge processes of an organization to best practices, conducting diagnostics and designing process improvements.

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Unstructured customer data can be an obstacle to effective customer engagement, making the invaluable asset of fully engaged customers difficult to attain.

**Client**
A leading global logistics firm

**Industry**
Logistics

**Business Challenge**
An inability to effectively engage customers with targeted marketing campaigns due to unstructured, non-homogeneous customer data

**Evaluseserve Solution**
Our data experts consolidated and normalized the client’s data in a single data mart. By using a progressive customer analytics framework, insight was gained that allowed the generation of properly targeted marketing campaigns.

The results also allowed the setup of a truly robust customer relationship management (CRM) system that facilitated ongoing analyses at multiple stages of the customer lifecycle.

**Business Impact**
- Improved return on investment from targeted marketing campaigns
- More robust customer engagement with a stronger customer relationship
- In-depth understanding of the customer life cycle
“Evalueserve used progressive customer analytics to create the best CRM solution. This solution was used in effective and targeted marketing campaigns, which increased ROI for the client.”

Business Challenge

The client was struggling with their customer engagement strategy, mainly due to having a very large pool of unstructured, non-homogenous data from multiple sources (shipping data, customer information, etc.). Furthermore, the lack of a proper CRM system had led to misdirected marketing campaigns. With customer experiences suffering from overly general campaigns, the return on investment of the marketing efforts was low.

In addition to a proper CRM system, the client needed support to gain insight into the data they already had.

Evalueserve Solution

Consolidating and completing the data required a holistic analytical approach. A dedicated team conducted an in-depth study, using a progressive customer analytics framework.

The steps were:

- A single data mart with a single truth version of the customers was created from all the available sources.
- Exploratory data analysis was performed on customers at different levels to fill in gaps in the client’s customer knowledge.
- Existing cross-sell, up-sell and customer lifetime value information was assessed.

Thanks to the comprehensive results that progressive customer analytics yields, our experts could work with the client to generate targeted marketing campaigns that would better inspire and engage customers.

Return on investment from these campaigns was tracked with key performance indicators that could be used moving forward. Finally, we ensured that the client had a fully functioning CRM system that would properly support their future customer engagement efforts.

Benefits Achieved

The client was very satisfied with the initial results of the project, having seen an improved return on investment from the targeted marketing campaigns and a better relationship with their customers.

Evalueserve and the client engaged in a long-term partnership with a dedicated offshore data analytics team. The team has successfully delivered multiple projects and introduced innovations to improve the CRM framework that was set up.

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Case Study – Customer Engagement

Value Proposition - CPG Company

A value proposition with clear communication of brand offerings is a cornerstone of customer engagement. Is it possible to create an in-depth value proposition based solely on transactional and perception data?

Client

The shaving care brand of a leading consumer packaged goods company

Industry

Consumer goods: grooming and cosmetics industry

Business Challenge

Based on a limited range of data, identify the key elements that customers find valuable in choosing their brand of shaving care goods.

Evalueserve Solution

As the client’s pool of data was relatively narrow and non-homogenous, our experts first performed a consolidation and completion project.

Applying progressive customer analytics allowed the identification of the key drivers for equity, price perception and value ratings at the country and brand level for the client and its competitors. Dynamic visualization tools would then provide the client with the means for ongoing monitoring of brand performance.

Business Impact

- A clear understanding of key consumer-centric drivers affecting brand positioning
- Increased customer value
- Well-defined key performance indicators to monitor future brand performance
“Progressive customer analytics involves multiple modelling techniques, which made it possible to consolidate the disparate information and fill the gaps in the data.”

Business Challenge

The client had transactional and perception data (i.e., hard and soft metrics) for customers of its shaving care brand in 15 countries. This is actually a relatively narrow range of data for standard analytical techniques. In addition, there were gaps in the data and some variation in the parameters from country to country.

The aim of the project was to identify drivers for equity, value rating and price perception so that an in-depth customer-facing value proposition could be developed. The scope of the project included identifying key performance indicators so that brand performance could be monitored long term.

Evalueserve Solution

Our data experts recommended a holistic solution that applied progressive customer analytics to gain the greatest insight into the available data followed by the use of dynamic visualization tools to make those insights accessible.

Using progressive customer analytics made it possible to consolidate the disparate information and fill the gaps in the data.

In detail, the steps of the project were:

- Preparation of a consolidated data mart by merging the data from the various sources in the 15 countries
- Completion of the sparse data sets using multiple modeling techniques
- Reduction of the number of variables using correlation techniques
- Construction of multiple regression models to understand the impact of soft and hard metrics on equity, perception and value rating
- Creation of dynamic visualization dashboards that allow the client to see global and regional equity and value assessments for their brand and competitor brands
- Identification of key performance indicators to allow ongoing monitoring of brand health

Benefits Achieved

Thanks to the creating of dynamic visualization dashboards, the client has a user-friendly way for its marketing, sales and branding teams to access the insights created through this project.

The client has a much clearer understanding of the factors that affect the value of their product to customers and thus have been able to create the desired in-depth value propositions.

The identification of the key performance indicators will further the understanding of the brand and its performance globally.

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Case Study – Customer Retention

Churn Prediction Model - Telecommunications Company

Identifying drivers of churn is an essential step in planning strategies to improve customer retention and optimize customer relationship management systems.

Client
A leading telecommunications operator

Industry
Telecommunications

Business Challenge
Identify the factors that have caused high churn and create a comprehensive preventive strategy.

Evalueserve Solution
Using our progressive customer analytics framework, our team helped to determine the best marketing strategy for customer retention. The focus was to identify the most likely customers to churn and the most valuable subscribers.

This differentiation helped the client to optimize its customer relationship management (CRM) system and find innovative ways to build relationships with subscribers and reduce churn.

Business Impact
• Optimized CRM system
• Improved customer relationships
• Reduced churn from 8.6% to 4.2%
Classifying the customers and predicting the ones with highest value and highest churn risk gave the client the insight that had previously been lacking.

**Business Challenge**

Over the preceding two years, the client had recorded high churn but had not identified the factors that were driving that subscriber attrition. In order to create strategies that would prevent churn, they needed to analyze very complex customer data to understand those drivers.

**Evalueserve Solution**

The initial task was to identify and segment the subscribers based on the customer life cycle. Then, the churn prediction model needed to be created and tested.

Our progressive customer analytics experts selected logistics regression as the best method to create the model.

The process involved:

- Exploratory data analysis to understand the data trends and patterns
- Creation and transformation of multiple variables to achieve high correlation with the actual churn rates
- Variable reduction techniques to select important factors effecting churn
- A multi-algorithm approach to select the best prediction model
- Validation of the model results on a test sample to confirm model accuracy

**Benefits Achieved**

Our solution enabled the client to be more proactive in churn prevention. The insight into the subscriber base made it easier to plan innovative strategies to keep subscribers loyal. These strategies included a loyalty point system, a daily alert to prevent bill shock, and special offers for subscribers during renewal periods.

The client reported that churn reduced from 8.6% to 4.2% and felt that there was an overall improvement in customer relationships.
In highly competitive consumer industries, only robust churn prediction models can inform effective retention strategies that reduce voluntary churn and improve the return on investment from marketing programs.

**Client**
A leading European telecommunications operator

**Industry**
Telecommunications

**Business Challenge**
Reducing the currently high voluntary churn through the creation of properly targeted retention campaigns

**Evalueserve Solution**
After working with the client to understand their business problem, our experts created a comprehensive customer churn model to classify customers based on their risk and value. This allowed us to recommend marketing strategies that matched methods to the risk and value of a given customer.

**Business Impact**
- Reduced broadband churn by 50% and overall account churn by 30%.
- Improved return on investment from targeted marketing programs and accountability measures
- Gained a deeper understanding of customer segmentation and life cycle
“Thanks to Evalueserve’s ongoing relationship with the client, our team was able to help monitor responses to campaigns and refine the strategies further.”

Business Challenge

Telecommunications is an increasingly competitive market, as reflected in the client’s voluntary churn rate, which was at an all-time high.

The client was keen to take proactive measures to reduce account churn, particularly among its broadband customers. However, the customer data the client had did not lend itself to a straightforward analysis, as the churn profiles were vastly different at various stages of the contract life cycle.

Evalueserve Solution

Our progressive customer analytics experts had several interactive sessions with the client to gain a better understanding of the business issues. They ascertained that the variability in the churn profiles would require customized treatment.

The following steps were performed to create the most suitable churn model:

- The overall broadband base was split into groups, e.g., re-contacts and out of contacts, based on the churn rates.
- Data was prepared and transformed.
- Various modeling techniques were used to select the best-performing algorithm.
- Churn prediction models were validated on an out-of-time population, measured for their performance, and refined until the best-performing model was found.
- That churn model’s output were compared with the output of customer lifetime value models to classify customers into segments such as high risk/high value, medium risk/medium value, and high risk/low value.

Using the insight obtained via progressive customer analytics, our experts created a detailed plan for targeted marketing designed for optimal return on investment. For example, telemarketing channels, which are more costly, were used to target the high risk/high value segment, while less expensive email marketing was used for high risk/low value customers.

Benefits Achieved

Initial reports from the client stated a clear improvement in the return on investment from the new marketing strategy and reductions in churn. Thanks to Evalueserve’s ongoing relationship with the client, our team was able to help monitor responses to campaigns and refine the strategies further.

After the last sales cycle, the client reported an impressive decline in voluntary churn (by 50% for broadband customers and by 30% overall). Furthermore, the client was able to plan and implement more successful up-sell and cross-sell strategies.

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