



Insurance

**Effectively prioritize and deploy analytics initiatives**

## The Big Picture

A leading financial services and insurance company had limited knowledge in cutting-edge insurance analytics. The company wanted to address two key challenges:

First, the company did not know how to prioritize its analytics initiatives. The company had difficulty accurately estimating their own analytics readiness, in terms of talent, infrastructure, and mind-set change. It also needed to accurately estimate the long-term business impact of analytics initiatives.

Second, the company was not sure if its organization was ready to deliver analytics models that would incorporate industry best practices and use the most advanced machine-learning techniques.

## Transformative Solution

To solve the client's first challenge of estimating its analytics readiness and the long-term impact of analytics initiatives, Fractal helped the client develop an analytical roadmap based on quantified estimates of effort and business impact.

Fractal interviewed more than 100 business and data SMEs to exhaustively understand the client's key challenges, as well as the client's data and infrastructure readiness. Fractal built three roadmaps for the client's teams: Claims analytics, product management, and billing experience. A fourth roadmap started in January 2018 for Experience management.

Fractal helped address the client's second challenge of ensuring the solutions (developed from the roadmap) were built following industry best practices and used the most advanced machine-learning techniques.

- This challenge would be resolved by directly collaborating with Fractal in developing the most prioritized solutions. Two specific challenges were addressed from the roadmap:
  - How to identify key drivers of customer satisfaction and quantify the impact of the inter-relationship of these drivers?
  - How to accurately predict customer attrition and understand key actionable drivers?

To get there, the client needed to address a lack of internal expertise and solution benchmarks. It didn't have a standard definition of satisfaction or attrition. So, before getting into the modelling aspect, Fractal helped the client define member satisfaction and attrition. This exercise was then followed by alignments of these definitions by various business teams.

The data used in these projects varied from claims, policy, billing, competitor premium, banking, marketing spends, employee performance, call center, customer demographics, social media, click stream, and survey data, to name some. This was the first time that all these types of data were analyzed together to generate models and insights for the client. The analytical data-mart created by harmonizing varied data sources was a reusable asset for the client.

Advanced machine-learning techniques were used to address the two prioritized solutions of A) identifying customer satisfaction drivers and B) accurately predicting attrition. For the analytical use cases, Fractal used advanced machine-learning techniques, such as extreme gradient boosting (xgboost) and Bayesian belief network (BBN), to identify drivers of member satisfaction and attrition.

These techniques enabled the client to understand hidden data patterns and identify intrinsic and extrinsic drivers. This helped in comprehending satisfaction and attrition at a much deeper level. Understanding the drivers of satisfaction and attrition involved analyzing the relationships of many customer and company factors, such as digital preference, number of calls, settlement duration, and adjuster workload.

## The Change

As a result of the engagement, the data algorithms that were developed by Fractal are being used by the client in many other solutions. This has really helped the client in recognizing the value of data collaboration.

The engagement also helped the client identify customer satisfaction drivers, which inspired the creation of a business intelligence solution to track these factors. Attrition model outputs are also being consumed by retention teams to act proactively for the first time.

Fractal has been a part of a great transformational story for the client towards data-driven decision making. We could significantly enable speed to value for the client by getting to insights and recommendations much faster compared to the client's internal teams, and at the same time, by using the most innovative approaches and industry best practices.