



Big Data Helps Improve Customer Satisfaction

Organization Profile and Business Challenge

With more than 5,000 employees, this Financial Institution is one of the largest sources of financing for multifamily housing. It stabilizes residential mortgage markets and expands opportunities for home ownership and affordable rental housing. It participates in the secondary mortgage market by purchasing mortgage loans and mortgage-related securities for investment and by issuing guaranteed mortgage-related securities. The secondary mortgage market consists of institutions engaged in buying and selling mortgages in the form of whole loans (i.e., mortgages that have not been securitized) and mortgage-related securities.

At the current rate at which the data is growing the volume of data at this Company is expected to reach 75 petabytes by the end of 2016. The Company is also faced with challenges related to the management of this large data to be in compliance with regulatory demands in a cost effective manner. The lack of process and data standards, combined with outdated consolidation and management reporting systems, prevented leadership to gain insights they required to manage their business effectively. Achieving a single view of customer behavior across multiple channels and touch points would require changes to how data is collected, analyzed and used across the organization. Key to success of this customer master data investment would be input from multiple groups of stakeholders representing marketing, operations, services, and IT.

Centennial Solution

Centennial teamed with the Company to develop a 'Vision' of how customer and mortgage data from various channels could be used to predict buying behavior. With working hypothesis established, a team of Centennial professionals was assembled with experience in the finance and consumer business, information management, IT architecture and strategy, program and portfolio management and project management. Business requirements and technical assessment were conducted that included multiple interviews with a variety of stakeholder groups spanning across sales and marketing, operations, supply chain and others with a vested interest in the success of the proposed solution.

The assessment identified opportunities to capture, analyze and leverage data to create a single view of the customer experience. Pain points and challenges in the current system were identified and defined, and key capabilities were also defined, ranging from data capture, access and analysis to decision support. The assessment also delivered a



mapping of various alternative "Big Data" technologies to support the reconciliation of inconsistent customer data formats. With this analysis, a proposed architecture for people, process and technology was developed, along with an implementation roadmap that was reviewed with the stakeholder groups.

To validate the proposed plan, Centennial conducted an eight week analytics proof-of-concept pilot focused on two industry-leading parallel database platforms. The pilot resulted in an evaluation of each platform's strengths and weaknesses. Stakeholders made the final selection of the platform that would appropriately support their needs and operating environment. Centennial worked very closely with IT and various Stakeholders in implementing the Big Data Platform. This includes identifying various data sources, creating routines by combining traditional structured data with unstructured data, performing data quality checks, and deploying predictive analytics. The new solution enabled performing data analysis using data mining and visualization techniques that allow for a detailed review of business processes, key reports and KPIs.



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Impact on Company's business

By analyzing the data and providing actionable intelligence, executives are able to better assess and anticipate changes in customer behavior there by improving effectiveness of business processes and enhance customer satisfaction. The new solution provided customer insights for executives, enabling them to capture and store customer interactions across multiple channels in a single data repository. The Company now benefits from the business intelligence and analytical use cases associated with the end user data consumption requirements necessary to achieve business benefits or satisfy mandates.

- Improved ability to comply, timely compliance to mandates/regulations
- Reduced time to detect and resolve
- Ability to control the variance and thus reduce costs
- Increased customer satisfaction
- Ease of running what-if scenarios to calculate risks
- Safeguarding reputation

The process now has the capability to control the variance in costs, durations and customer interactions. This has resulted in a 33% faster resolution process. The handler (whose assignment is based on the analytics that Centennial delivered) is now fully informed of the predicted key metrics and is able to keep the customer duly informed. This has resulted in higher levels of customer satisfaction – 28% reduction in customer complaints, and a steady fall in attrition. Overall, the initiative has led to a 20% reduction in cost.



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