



HARNESSING DATA TO BETTER SERVE CUSTOMERS WITH A 360-DEGREE VIEW

IMPACT

- Enhance an end-to-end customer experience
- Drive customer retention and lower the churn
- Decommissioning EDW enabled overall cost saving of 20-25%
- More holistic understanding of customer journey

The data-driven transformation for telecommunication organizations hinges on being able to manage the wealth of data coming in from various channels. This includes analyzing call center records, processing billions of events daily to improve network performance, and launching new services based on analysis of sensor data from IoT and connected devices. With the onset of 5G, the next generation of mobile broadband, these networks will power devices and send data as the next level of transformation for telecommunications organizations.

Challenge

Telecommunications companies have the ability to do predictive reporting, but they don't always have a comprehensive machine-learning strategy to enable and understand the impact of change for their company and customers. From client changes, outages, and feature implementation, they had a need to understand the impact to the network systems and the customer experience.

Data was exploding and traditional data warehouses were no longer sustainable. The company required a platform that could scale easily, is based on open-source technology, and has a rich ecosystem that allows leveraging existing tools and technologies as well as supports the creation of a governed data lake. The data modernization goals are to focus on business imperatives that provide a richer, more personalized customer experience (CX) in order to improve business operations, and gain better insight into customers' needs and requirements. This led to the organization embarking on a machine learning and artificial intelligence initiative.

Solution

This company was looking to transform itself and the marketplace by aligning its mission and vision, thereby creating a clear strategy, plan and goals for each employee. They were also embarking on a 5G journey to provide constant connections from low, mid, and high-band frequencies with greater bandwidth and to enable more data to access and share especially in rural areas. This provided the company with a quick and easy way to compile and compute all the data coming in, and managing the complexities.

The company needed the ability to "stitch a story together" to include disparate sources, technologies, data warehouses and databases everywhere. Consolidating the ecosystem is where it started and Cloudera's enterprise platform provided one single place - where all data comes together - and builds insights. One of the biggest responsibilities the company had was to collect data from network towers which were performance indicators and device data all streaming into their systems.

Predictive analytics and machine learning to gain insights

The company was looking to do more predictive analytics and implement machine learning based on data that describes how customers interacted with the network; for example, whether making a phone call, surfing the web, or streaming videos. Additionally, the company collected customer experience data, front-line service, and customer care data, and put all these together to reveal a customer 360-degree story.

70%

Reduced conflicts and lower churn

“The Cloudera enterprise data platform has helped us understand the value of data and how we can leverage tools to quickly glean intelligent insights. We have an IT data lake, a data monetization platform, multi-platform, and mission critical carrier analytics deployment that is focused on core performance management solutions for the network forecast analytics. We are ingesting and analyzing call records into the enterprise data platform with our overall goals to reduce churn. We have successfully made significant progress towards this endeavor.”

Head of Network Operations

Beginning with the network KPI to billing service, action and survey results allow the company to provide a more holistic understanding of where the customer is in their journey. If a customer is experiencing issues, it helps to identify key actions required to turn the situation around - this is paramount for the customer and company. Cloudera's platform is the backbone for all the company's data needs.

The Telecommunications company evaluated which use cases it wanted to migrate to the public cloud versus on-premises. For example, anything that is non-critical like machine and log data can live in the cloud on Amazon Web Services (AWS). Whereas, if it touches the customer records or customer experience like billing (i.e. CPNI or PCI) communication, that data is kept on-premise. With 5G, going to the cloud has to be a reality as there will be a hundred times more volume and having that elastic ability to spin off new servers and storage places are vital.

Complying with Data Governance

As part of a regulated industry, this Telco maintains strict data governance because of organizational-level data policies. As a whole, the company is looking to put in place universal data governance across the entire organization. This will span from the network team, customer care, marketing and enterprise teams to have similar access controls and metadata searching.

As part of Cloudera's platform, they utilize several components from a data governance standpoint. Atlas provides metadata cataloging, Ranger provides the ability to restrict user access for government data or customer-level data, and Spark enables downloads.

Enabling a 360-degree view of the customer

Before, it was difficult to do correlative reporting, capturing a customer 360-degree view, without doing a lot of data transfers and processing at various places, and a lot of ETL development. Now with the Cloudera enterprise platform, all types of customer data (service issues, customer details) are being efficiently managed in a single source of truth, allowing for previously hidden insights. The company is able to make better decisions to improve overall CX and business operations. This consolidation of data provides the ability to correlate a customer journey from network KPI, to billing issues, and experience indicators. Customers who have a good experience with the company, remain loyal and don't jump to another provider. In adopting this new way of doing business, the Telco company has been able to reduce unnecessary customer conflicts.

The company is able to quantify and measure the customer experience of all subscribers. In a given month, if the experience dips down, they can better understand what drove the rating. Identifying where this has occurred at the network and billing level, or at the customer interaction level, allows the agent to look up the customer and have a complete story of their activity. With a 360-degree view, the company is able to mitigate issues in the future and reduce customer churn.

Transforming the Business

The cost-savings for the company was significant, and by decommissioning traditional EDW's they were able to save 20-25% overall. On the business level and with engagement across the customer experience, the company saw churn levels decrease by implementing these new initiatives. Being able to leverage network data was huge as they analyze billions of network events on a daily basis.

About Cloudera

At Cloudera, we believe that data can make what is impossible today, possible tomorrow. We empower people to transform complex data into clear and actionable insights. Cloudera delivers an enterprise data cloud for any data, anywhere, from the Edge to AI. Powered by the relentless innovation of the open source community, Cloudera advances digital transformation for the world's largest enterprises.
Learn more at cloudera.com

Lastly, the consolidation of data has enabled them to correlate the customer journey from network KPI's to billing issues and experience indicators. Adapting this new way, the company has been able to lower customer churn and reduce conflicts by 70%.

The company is collecting data from various channels to unearth intelligent insights impacting customers. By providing a better experience to their existing customers, while taking on more subscribers, they are able to proactively eliminate issues before they arise. Managing all the data seamlessly within Cloudera's enterprise data platform helps them to harness the wealth of data to better serve customers and improve business operations.

The Telecommunications company also saw value through partnering with the Cloudera Professional Services team.

"The Professional Services team delivered architectural guidance and training initially as we went throughout the data lake design. They were very helpful and came in with experts to provide a road map. We have seen a need to get started with a comprehensive machine-learning initiative, and we anticipate their expertise to play a critical role."