

INCREASING CUSTOMER CONVERSION RATES BY MORE THAN 300 PERCENT

300%

Increase in customer conversion

Industry

– Financial Services

Location

– Headquarters: Jakarta, Indonesia

“We’ve increased the conversion rate by more than 300 percent for our marketing campaigns, improved customer retention, and reduced the number of fraud incidents by 30 percent, all while significantly lowering costs.”

Billie Setiawan, Head, Decision Management Data and Analytics, Bank Danamon Indonesia

Bank Danamon is one of Indonesia’s largest financial institutions, offering corporate and small business banking, consumer banking, trade finance, cash management, treasury and capital markets.

Challenge

Financial service institutions globally are under immense pressure from a new generation of tech-savvy customers to deliver consumer-centric digital services. These new services represent a massive opportunity as well as a massive risk as more consumers connect to products and services digitally. For Bank Danamon, like many other institutions, one of the key challenges in advancing this digital transformation is the ability to gain a single enterprise view of customer data.

“Each line of business has their own data mart so there are a lot of data silos,” said Billie Setiawan, head, Decision Management Data and Analytics for Bank Danamon Indonesia. “By having a holistic view of the customer behavior across the bank, we can offer the right product for the right customers.”

Solution

Bank Danamon uses a machine learning platform powered by Cloudera for real-time customer marketing, fraud detection, and anti-money laundering (AML) activities. The platform integrates data from about 50 different systems and drives machine learning applications to:

- Predict customer needs and determine in real time which offers to give each customer.
- Uncover new suspected fraud patterns and develop preventive triggers to identify fraud incidents.
- Send alerts to customers in real time about potential fraud to improve customer experience and reduce customer complaints.

More than one terabyte (TB) of unstructured and structured data is ingested and analyzed daily, both in batch mode and via live streaming. Data includes transactional, product, internet banking, mobile banking, credit card, customer care, voice, digital log, social media, social economic, and other third-party and external data.

“A key focus for our digital transformation at Danamon is to improve customer service while eliminating fraud risks and compliance cost,” said Mary Bernadette James, chief information officer for Bank Danamon. “Big data technology has enabled us to better manage customer data, while enhancing data protection and managing compliance. Cloudera’s modern data management platform empowers us to achieve our digitalization goals at a lower capital expenditure per terabyte compared to traditional data management mechanisms, giving us the ability to serve our customers better and remain competitive in today’s uncertain economic climate.”

Solution highlights

- Modern Data Platform: Cloudera Enterprise
- Workloads: Analytic Database, Operational Database, Data Science, Data Engineering
- Key Components: Apache HBase®, Apache Impala®, Apache Kafka®, Apache Sentry, Apache Spark™, Cloudera Navigator
- Advanced Analytics Tool: Kogentix AMP

Applications supported

- Real-time recommendation engine
- Business intelligence
- Fraud detection
- Anti-money laundering

Impact

- 300 percent increase in conversion rate and increased customer retention
- 30 percent reduction in number of fraud incidents
- Reduced marketing costs
- Identified new fraud patterns for improved fraud detection
- Lowered capital expense cost per terabyte

Big data scale

- 1 TB ingested/analyzed daily

Implementation

As it implemented a modern data platform, Bank Danamon wanted a full range of analytic capabilities, from descriptive to prescriptive. It used the Kogentix Automated Machine Learning Platform (AMP) to help it effectively create the advanced machine learning models needed to improve business outcomes. "With Cloudera and Kogentix, we have the tools to help us test, train, and validate models, and analyze model performance over time and improve cost efficiency," said Setiawan.

Results

Bank Danamon now has the insights to interact with customers in a meaningful way. For example, staff can deliver real-time, localized, and personalized interactions to each customer at the right time, with the right content, and using the right channel. The bank can also observe the performance of interactions in real time, and, based on feedback, self-correct and learn.

In addition to deepening customer relationships, aggregating behavior and transaction data in real time and using machine learning has helped Bank Danamon identify new patterns of fraud. This enables the bank to detect potential fraud sooner and contact customers for clarification to reduce losses.

"Using Cloudera, we can improve our customer experiences," said Setiawan. "We've increased the conversion rate by more than 300 percent for our marketing campaigns, improved customer retention, and reduced the number of fraud incidents by 30 percent, all while significantly lowering costs."