PT Bank Danamon is Indonesia’s sixth-largest bank, with four million customers and a network that stretches across the archipelago.

Competition for customers in the Indonesian market is especially fierce, with 115 banks to choose from, according to recent government statistics. Finding a way to stand out is crucial. Indonesia’s banks - like many others - are currently focusing their investments on improving the customer experience. The idea is to increase the customer’s loyalty and ‘stickiness’ to the brand, and to do this as close to real-time as possible. It’s about providing the ‘right product to the right customer at the right time’, and data is widely recognised as the key to unlocking these kinds of growth possibilities. Banks have long been custodians of large amounts of customer data, and they are increasingly putting it to use to satisfy customers’ needs - before a competitor can.

A shift by Indonesian banks towards real-time customer engagement became a catalyst for the PT Bank Danamon project. That meant overhauling the bank’s existing static digital channels to allow for two-way communication with customers and overhauling the data infrastructure underpinning those channels that allow opportunities for engagement to be recognised so that a personalised ‘next-best action’ can be recommended for each customer.

Differentiate on customer experience in a crowded marketplace

Though the bank has a lot of data, until recently it was held in around ten siloed data marts. There were ten silos at the head office alone. In addition, every line of businesses, support function, and branch had its own data store. Analysis was often performed in each silo and it could be difficult to understand how particular decisions had been reached.

That led to a lot of misunderstandings and arguments because everybody had independently developed their own ways of reading and understanding data. There were no universally accepted definitions or governance arrangements for data, making even simple activities like determining how many small-to-medium enterprise (SME) customers the bank had were needlessly complex.

The bank also used an ETL tool that was slow going. Some bank-wide reports took half a day to produce as data was compiled from across the bank. This created unacceptable lags in decision-making and did not provide a platform upon which PT Bank Danamon could build the competitive edge it desired.

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Why Talend?

Talend won the bank over. “Talend is flexible and easy to use. It is also always being upgraded to support the latest technologies and to connect to new source systems. I’m very happy with Talend and have no regrets in choosing it,” said the bank’s Billie Setiawan, Head of Decision Management for Data & Analytics.

The new big data infrastructure consists of an on-premises Hadoop cluster and Talend, which ingests more than 40+ source systems, including its core banking and credit card systems, and sets governance standards across the bank on how data is to be organised and used.
Reports now take far less time to be created in the new big data environment. What used to take half a day to produce can now be done in under two hours; in other words, it now takes half the time it previously did, saving PT Bank Danamon additional time and money.

PT Bank Danamon liked that Talend could run on-premises or in the cloud. Though the bank is currently using an on premise data ingestion architecture, Talend hybrid architecture is one of the alternative solution in future to allow for more flexibility, save up on the maintenance cost and, at the same time, comply with Indonesian financial regulations. Additionally, Talend has extensive data governance capabilities, such as Data Catalog and Data Quality that the bank has already acquired and plans to take advantage of in subsequent phases of its big data program.

The bank used services from channel partner, Artha Solutions, to support its data integration, data quality and data governance work. Artha Solutions has also helped in implementing newer use cases using Talend Big Data platform, which has now been in use at the bank for two years and conversion of integration jobs from legacy systems to Talend is under way.

Real-time engagement drives change

The bank is using the big data platform for two initial use cases - customer behaviour and fraud detection - though it has additional use cases in the works.

Under the first use case, the platform is being used to build a 360-degree profile of customers in a bid to better understand their behaviour and recommend products or services they might like based on propensity modelling. “We are working on how to give the ‘next best offer’ to customers,” Setiawan said, referring to a technique whereby customers are theoretically recommended the right product at the right time. This converts a customer’s real time activity into real-time marketing opportunities for the bank and is already paying dividends. “Our take-up rate - that is, the number of customers offered a new product that then decide to use it - is five times higher than under the old system,” Setiawan said.

The second use case for big data at the bank is detecting suspected fraudulent incidents much faster. Setiawan said that internal processes have improved here to the point where the fraud team can now quickly generate a list of customers “who we think are conducting fraudulent activity” for further investigation. The bank believes it can further improve fraud detection with big data, moving towards more proactive detection. “We are now working to make sure that we can detect fraud before the activity even occurs,” Setiawan said.

In addition, Bank Danamon is working with Talend’s partner, iZeno, to support the organisation’s compliance with the International Financial Reporting Standard 9, including a monthly requirement for accounting reporting to the company Singapore regional headquarters. iZeno was selected as the partner of choice for this initiative due to its proven experience in the financial services sector and it has now helped the bank to deploy Talend resulting in functionality which seamlessly transfers data from the source data into the big data platform. The key benefits are data accuracy, system stability and platform scalability, all critical ingredients for complying with the IFRS 9 standards.

Further use cases are under development. PT Bank Danamon is also looking for partnership with 3rd party external data aggregators such as from social media to build deeper and even more accurate analytics.

For now, work is ongoing to bring all data users across the bank onto the new big data governed platform that gives IT administrators control over data, reports, roles and functionality permissions for all users. It will ultimately be a single source of truth for all data held by PT Bank Danamon. “Eventually, all our divisions will be accessing the same data from a single repository. From the data analytics team to finance, risk management, operations and even our branch network, everyone will be using it,” Setiawan said.