

CREATING DATA-DRIVEN DASHBOARDS TO DRIVE CRITICAL BUSINESS DECISIONS

IMPACT

- Processing 10 million records per day
- Established 3 critical dashboards within 24 hours to mitigate risks of COVID pandemic
- Shortened time to process data from 7 days to a few hours
- Prevented potential losses of 7.3 million transactions per week at each of the bank's branches
- Reduced loan qualifications from 5 days to one day

As the largest financial institution in Indonesia, Bank Mandiri is committed to being attentive, proactive, and innovative in delivering financial solutions to every customer. Its vision is to be a preferred financial partner delivering simple, fast, digital banking solutions that seamlessly integrate financial products.

The bank has gone beyond lending to become the premier wholesale and digital retail bank of Indonesia with a passion for sustainable growth. With many subsidiaries across Asia, Bank Mandiri has a broad range of products in their portfolio providing savings, current and fixed deposit accounts, home loans, working capital, and investment loans.

Managing government restrictions on mobility during a pandemic

With the onset of Covid-19 across Indonesia, the government immediately restricted citizen mobility across the country. This caused lock downs, curfews, and restrictions around border crossings, disrupting long-established habits and patterns of movement for all citizens.

The virus outbreak weakened global demand and increased disruption to domestic economic activity. For financial institutions, like Bank Mandiri, this means the number of customers who have trouble repaying their loans to the bank is increasing, placing customers' livelihoods—and the bank's performance—at risk.

For the bank's internal operations, the new landscape meant the workforce had to be agile and adopt flexible working practices such as remote working. IT teams had to ensure systems could support these practices, while safeguarding the security and governance of data. The legacy environment was costly and rigid, struggling to ingest unstructured data from sources resulting in limited actionable decisions based on current, comprehensive information. Bank Mandiri's management had to plan for contingencies and continuity scenarios while at the same time keeping regulators and government stakeholders up to date. These initiatives required integration of data sources to generate insights and make decisions happen more quickly and effectively for the bank.

Analytic dashboards provide quick insights for decision making

Bank Mandiri anticipated and quickly prepared for the impact of the virus by developing several key dashboards in order to mitigate risk. The bank's single source of truth is the Enterprise Information & Decision Platform (EIDP) which runs data integration on the Cloudera platform. The bank was able to ramp up their daily data processing to address the need, 10 million records per day, because of the scalability and agility in the platform.

With the platform in place, the bank had the foundation, tools, and resources to build three dashboards within a day. Furthermore, with Cloudera Data Science Workbench (CDSW), self-service data analytics capabilities and automation could be integrated into the dashboards efficiently. CDSW streamlined the deployment of models and visual applications, needed by teams to monitor the business. These dashboards quickly added value to users and stakeholders that needed to proactively address pandemic-related developments.



Avoided loss with real-time monitoring

“Cloudera’s data platform supports Bank Mandiri’s digital transformation. The platform allows us to gain data-driven insights to adapt to changing situations quickly. At the same time, we can best care for and service our customers and our tens of thousands of employees in terms of the virus exposure. This pandemic has created such significant pressure to the economy and the banking business. Yet, it has also brought about the new normal, which includes a change in customer behaviors and expectations.”

Billie Setiawan, Head of Enterprise Data Management, Bank Mandiri

Cloudera’s data lake and CDSW enabled analytics capabilities on COVID-19 situations and challenges for employees and customers. This was accomplished in less than 24 hours. The three critical dashboards enabling the bank to access the right data for actionable decisions were:

- **Monitoring performance** - The first dashboard enables real-time monitoring of liquidity and daily branch transactions - critical and fundamental information for financial institutions to ensure the bank has enough assets and cash for customers and day-to-day operations. While providing government required reporting quickly, the bank is also monitoring branch performance to ensure minimal customer disruption.
- **Employee health** - With the aggressive and unpredictable spread of the COVID-19 virus, the bank needed to monitor employee health due to public interactions. The second dashboard tracks staff working locations and health status across all branches and regions. This helps ensure employee safety as well as business continuity.
- **Changing the rules** - Lastly, a loan restructuring dashboard program was needed as the pandemic changed the rules of business. The bank needed to grant flexibility to debtors, so the third dashboard included analytics to power the selection process and analysis of previous loan behavior to assess if customers were suitable for loan restructuring.

“With our dashboards, we can secure our liquidity above the safety level. The real time monitoring helped avoid estimated losses of IDR 15 trillion (USD 1 billion), which would have happened due to lack of visibility into our liquidity status. Secondly, safeguarding our employees to help us understand if they are at risk of exposure. We are monitoring employees’ health on a daily basis in real-time. The Cloudera platform gives us the response speed we need, shortening the time to process data from 7 days to just hours,” said Billie Setiawan, Head of Enterprise Data Management at Bank Mandiri.

Ensuring seamless customer experiences

To deliver seamless customer experiences, the dashboards help the bank monitor branches tracking data such as footfall, volume and value of transactions, frequency of transactions, as well as the changes in geographic zones designated by the government as high or low risks. The bank can dynamically open or close branches as needed and proactively inform customers accordingly. With such an agile response, customers can transact with minimal disruptions. This helped prevent potential losses of around IDR 105 billion (USD 7.3 million) of transactions per week at each of the bank’s branches.

For the loan restructuring program, the platform has enabled Bank Mandiri to maintain service level agreements (SLAs) to customers. Cloudera’s enterprise platform helps the bank to consistently maintain its loan processing time of 14 days. Qualifications can be done within a day when it previously took 5 days.

Delivering on digital experience

This current Enterprise Information & Decision Platform is the result of a 3-year journey to digitally transform the bank to serve customers better and enrich the digital ecosystem of Indonesia. Cloudera’s platform and CDSW were crucial to the success of managing unstructured data sources. The gradual transformation enabled Bank Mandiri to unlock data and its value from more than 50 different legacy core systems. They were also able to consolidate data into a single data lake, updated daily, and easily enabled increased volumes of data as the business grew. This was critical to help data engineers avoid system resource and manpower scarcity.

Cloudera’s platform now ingests data from many sources, including social media, customer databases, operational software, and branch management systems, streamlining internal banking operations and accelerating processes such as management reports.

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

Furthermore, the platform also stores and processes such as customer transactions, customer demographics, profile information, and external data more effectively. Leveraging the Cloudera platform has helped the bank deploy new and support existing risk analysis and churn prevention analytics.

"Bank Mandiri has proven that taking a data-driven approach is crucial in addressing the impact of COVID-19 on the banking business and customers. Cloudera's enterprise data platform has assisted Bank Mandiri in handling the complexities of data management and supporting multi-function analytics amidst changing situations, without compromising on security, governance, and compliance with the prevailing regulations," says Setiawan.

Adapting to the fast-changing landscape for employees and customers

The Enterprise Information & Decision Platform processes data, delivering information across the bank and subsidiaries, channeling actionable insights through dashboards to the following groups:

- **The Board of Directors** have the information needed to grow the business amid the crisis by monitoring bank-wide performance. By taking an agile approach to managing team and department performance, they can ensure performance by business segment, assess insights, and make better decisions.
- **Human Capital teams** access information about the health of the Bank Mandiri workforce. By understanding where employees are working (at home or the office) the bank can make data-driven decisions on how to organize teams and minimize COVID-19 exposure.
- **Distribution, Branch, and Network Strategy (DSG) teams** help support the direct execution for any bank policy regarding the pandemic. Through insights, they help identify branches which should be opened or closed driving towards a better customer experience.
- **Business Continuity Management (BCM) teams** share information with decision makers regarding employees and business units affected due to COVID-19 infections.
- **Loans and risk teams** are able to perform faster reporting and accelerate loan restructuring approvals. The restructuring loan program was very important to support customers since some had loss of income due to job loss.

The dashboards have allowed the loans' teams to be much more productive and efficient. Previously customers went into the branches but now they can work directly and virtually with their relationship managers for approvals. Furthermore, they can now submit reports to Indonesia's Financial Services Authority (OJK) more efficiently by generating monitoring reports daily. The bank can store full fidelity data for longer periods of time versus daily and month-end snapshots. The insights helps teams improve performance across business segments, cutting manual processes like reporting from two days to a few hours.

Preparing for the future

Indonesia is gearing up to become one of Asia's economic powerhouses. Harnessing the digital economy and ecosystem will meet the needs from individuals to large corporations - revolutionizing the customer experience. Given Bank Mandiri is one of Indonesia's most established banks, this digital transformation will strengthen the backbone of the country's economy with data becoming the fuel for long-term transformation. The digital transformation, based on Cloudera's platform, helped break down data silos, reduce costs and improve the productivity and efficiency of the bank's business units. The bank's vision, to be customers' preferred financial partner, recognizes the need to modernize the infrastructure and tap into the power of data, center of excellence for data analytics capabilities, streamline operations and facilitate a better customer experience.