

# UOB: BUILDING A BIG DATA PLATFORM TO TRANSFORM PEOPLE, PROCESS AND TECHNOLOGY

**Impact**

- Cloudera-enabled datamart has supported 400 users with data analytics and delivers 150 reports per month.
- UOB's new deposit analytics solution, built on the Cloudera platform, has led to higher revenues, improved risk control and 20% more productivity.

**Solutions**

- Enterprise Data Hub
- Cloudera Data Science Workbench

**Data Architecture**

- Data Lakehouse

**Industry**

- Financial Services

**Country**

- Singapore

**Website**

- <https://www.uobgroup.com>

UOB is one of the most recognized financial institutions in Asia, with a global network of around 500 offices. Its extensive regional franchise serves customers ranging from individuals to large multinational corporations and addresses the cross-border needs of companies doing business in this region.

### Transforming people, processes and technology to better leverage data

With the acceleration of digitalization, UOB was facing rising volumes of digital transactions and data from its growing regional customer base. To ensure it was able to leverage data as a strategic asset, the bank knew it had to transform its people, processes and technology. Through the bank's ongoing commitment to being a data-driven organization, it sought to empower employees to achieve data monetization through higher revenues, increased productivity and lower risk.

UOB had to overcome several hurdles to achieve its big data goals. One area the bank was looking to address was a big data solution that offered high data availability to enable self-service analytics and artificial intelligence and machine learning (AI/ML) use cases. "With data being collected at an unprecedented speed and volume, we needed a data solution capable of handling massive volumes of financial and operational data. The solution should also allow self-service analytics at scale, which would provide us with a distinct competitive advantage. In this manner, our business units will become more data-driven and be able to understand and meet customer needs with better outcomes," said Susan Hwee, Head, Group Technology and Operations, UOB.

The bank's data sources were also siloed, limiting the proliferation of analytics as well as available insights. For example, prior to the development of the deposit analytics solution, there was a discrepancy between the regulatory and business units' more granular view of the bank's deposits. This difference, coupled with the lack of consistency, resulted in a lengthy reconciliation process. The siloed data sources also slowed the decision-making process, delaying the bank from taking prompt and targeted actions in the management and pricing of its deposits.

### Building a data analytics platform to drive all-around banking transformation

Recognizing the importance of data and analytics as the key enabler to drive strategic transformation, UOB has embarked on its big data journey with Cloudera. To harness the power of data and analytics, the bank set up the "Enterprise Data Architecture and Governance" (EDAG) transformation program. The EDAG program is executed through a holistic approach focusing on technology, data, processes, people and analytics.

“With Cloudera’s data lake, we have managed to derive actionable insights that are used across the bank to translate data into real benefits for our customers. The analytics have positively impacted all facets of our business, from enhancing our digital customer touchpoints to compliance in regulatory aspects. We are looking forward to exploring other Cloudera solutions and services that can give us an edge in our cloud endeavors.”

- Susan Hwee, Head, Group Technology and Operations, UOB.

#### 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](https://cloudera.com)

The program involved UOB working with Cloudera to create the EDAG analytics platform to manage data collection, storage, analysis and visualization. Built on a data lake that centralizes all data across UOB business units and countries, the platform manages more than 95 systems across the bank, from loans and credit cards to trade finance and customer relationship management. The other key components include the data warehouse, data marts and data discovery sandboxes. The platform also capitalizes on Cloudera’s Data Science Workbench to provide self-service analytics powered by machine learning.

“This centralized EDAG platform has eliminated data silos and facilitated a proliferation of new initiatives through easy access to data and sandbox environments. This has provided UOB with the capability to build analytics and data solutions quickly via test and learn/iterate methodologies,” said Hwee.

#### Turning banking data into a business advantage

With the enterprise-level EDAG platform, the bank now has a single big data source of truth that will become the strategic advantage for the bank going forward.

With a new data mart, the Finance and Risk teams have enhanced their productivity by 10% and enabled timelier insights to be delivered to the organization. The “Finance Risk and Return (FRR) datamart”, UOB’s first data mart on the EDAG platform currently processes data from more than 40 source systems, including customer information, accounts, financial and product dimensions. The data mart has approximately 400 users and delivers roughly 150 reports per month. The platform also hosts more than 150 data discovery sandboxes across the region, with more than 300 users utilizing the sandboxes.

Through the discovery sandbox – a data monetization enabler – UOB also launched a deposit analytics solution to ensure it can build stable deposits with optimal pricing and provide consistent and accurate views of deposits. The solution led to higher revenues, increased productivity by 20% and improved risk control. Benefits of the solution include higher uptake of operational services, which has led to an increase in operational balances and client deposit wallet size, improvements in deposit stickiness that help improve UOB’s liquidity and finally more streamlined monitoring of forecasted regulatory ratio that help improve regulatory compliance. The solution was built in less than four months and leveraged existing data assets in the EDAG platform ranging from the data lake to the data marts, which are integrated and then visualized into innovative metrics to help achieve data monetization.

The EDAG program also helped improve the overall data literacy of UOB staff to fully leverage data for decision making. As a result, the bank has made a huge leap towards its goal of being a data-driven organization and maintaining competitiveness. Supported by the platform, UOB has established analytics teams within non-technical business functions such as Finance, Risk, Audit, Compliance, Retail and Wholesale. This cultural transformation has also enabled data democratization within UOB, providing more users with organization-wide self-service analytics capabilities.

UOB aims to build on the success of its data analytics initiatives. As a next step from its successful roll-out of EDAG’s first data mart, the bank’s next key focus would be a transaction-level data mart designed to support UOB anti-money laundering efforts and drive more data analytics capabilities throughout the organization. By exploring potential solutions like Cloudera Data Platform to manage and secure big data lifecycles in any cloud or data center, UOB is confident it can leverage data further to trigger the next wave of transformation for its people, processes and technology.