

**CLOUDERA**

WHITE PAPER

# Time to Grow

Unique Opportunities  
for the Banking and  
Financial Services  
Industry



THE ONLY GUARANTEE? CHANGE.  
AMBIGUITY. UNCERTAINTY.

Or opportunity  
to grow. 

Your clients have changed. Customers who never logged onto their online accounts have done so for the first time, accelerating the demand for an exceptional customer experience. Consumers are purchasing more financial products online, giving you more data and greater insight into engagement trends. There is an exploding demand for eCommerce, increasing the competition for banks.

**EVERYWHERE ACROSS THE FINANCIAL  
LANDSCAPE, CHANGE REIGNS. AS DOES  
OPPORTUNITY.**

Your customers—corporate or individual—want real-time business intelligence, personalised interaction, and a broad variety of financial products to meet their needs. The opportunity has never been greater to differentiate against the competition, to demonstrate the business agility and imagination that addresses these needs.

Cloudera gives its clients the unique power to drive positive business outcomes, providing the enterprise data cloud that allows them to quickly and easily access data-driven information and insights. See how Cloudera customers realise growth across their organisations, even in times of great change.

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- Enhancing customer experience and personalisation (Page 4)
- Increasing lifetime value (Page 5)
- Improving speed and agility (Page 6)

The world has changed. Financial markets and the banking industry must change as well. Let Cloudera demonstrate how this new world also produces tremendous opportunity—and how you can adapt, thrive, and grow, meeting the ongoing challenges and providing your clients with the tools for them to succeed.

## GROWTH THROUGH NEW CUSTOMERS AND MARKETS

**Acquiring credit worthy customers has been a mainstay of the financial industry, requiring lower capital investments than more underserved segments. The cumbersome and costly process of assessing credit quality for such market segments, it was argued, did not justify the return.**

Cloudera works with clients to produce significant efficiencies, allowing banks to tap into new markets. By employing the Cloudera Data Platform (CDP), customers can assess more credit data points efficiently, allowing for better returns while prudently managing risk and compliance.

With lower costs and greater data processing, Cloudera customers can increase their customer acquisition and enter new markets with confidence.



### IMPROVING CORPORATE ACCOUNT GROWTH

Santander UK was awash in data—but needed a platform to process it effectively, allowing the company to take full advantage of the vast amount of information.

Santander Bank deployed Cloudera's single data platform, a robust solution that supported all its workloads. Now the Bank could process 10 million transactions daily—up to 30,000 transactions per second at peak times—providing essential self-service and operational analytics as well as data science results. Handling nearly two petabytes of data, the Cloudera platform delivered the customer insights and the business intelligence required to identify 7,000 new prospective corporate customers.

In addition to growing their business, Santander Bank reduced capital expenditures by \$3.2 million and decreased operating expenses by \$650,000.



### REDUCING LOSS AND BUILDING THE FOUNDATION FOR GROWTH

BRI, the oldest bank in Indonesia, wanted to address the roughly half of Indonesians without a bank account. With an estimated \$8.3 billion of Indonesia's currency held outside the banking system, BRI was keen to recapture part of that market while minimising risk.

Before addressing such potential customers, however, BRI looked to maximise its investment in its current customers. It needed a powerful foundation to analyse massive amounts of data, using artificial intelligence (AI) and machine learning (ML) to glean new insights and drive business decisions.

Leveraging the Cloudera Enterprise Data Platform, BRI were able to build a five-layer IT architecture featuring vast AI and ML capabilities. The bank could store, consolidate, and process information from multiple data streams. This single platform, with its agile and reliable AI system, allows BRI to

- Analyse customer transaction data
- Predict payment defaults one month early
- Reduce fraud by 40%
- Improve credit scoring (AUC increased by 8%)

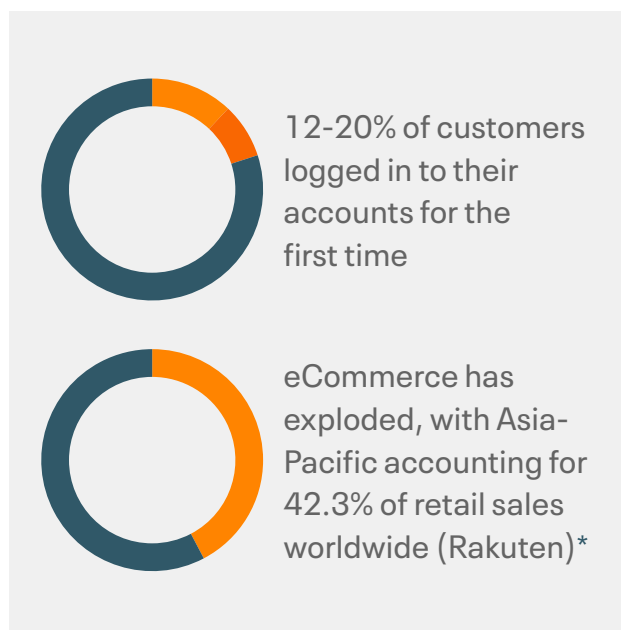
**The Cloudera Enterprise Data Platform not only alerts BRI loan officers of at-risk customers, prompting them to take mitigating action, it provided the business intelligence that prompted development of a new digital microfinancing product for customers previously assumed too risky to serve.**

**Lessening risk. Addressing new markets. Sounds like opportunity. So what new customers and markets can you target?**

# GROWTH THROUGH IMPROVED CUSTOMER EXPERIENCE (CX) AND PERSONALISATION

**While banks everywhere look to expand into new markets, it remains essential to provide an improved experience to retain current customers. Developing brand loyalty requires addressing this need and allows for cross- and upselling new products and services.**

The global pandemic birthed new behaviours, producing a vast amount of customer data:



To improve customer retention, banks and financial services firms must deliver increasingly personalised and low friction engagements, all while minimising risk and reducing costs. Awash in this new customer data, how can banks take advantage of the opportunity?

## LARGE BANKS DELIVER KEY CUSTOMER INSIGHTS

One large Australian bank is doing just that. Using the Cloudera Data Platform, they aggregate data from over 100 different systems and sources.

By applying advanced analytics and machine learning to the data, they create comprehensive profiles of their customers. These insights then prompt “next best conversation,” such as product offers, into customer interaction workflows. Customers receive timely and relevant communications leading to greater satisfaction and the bank receives incremental revenue and accrues good will and brand loyalty.

### Rabobank

Likewise, Rabobank deploys Cloudera’s Data Platform to improve its customers’ financial intelligence. By analysing loan repayment patterns and real-time transaction records, Rabobank provides customers with insights into their financial situation and can recommend personalised, relevant products to assist them with their financial goals.

By integrating data from a variety of sources and applying machine learning, one UK bank has transformed its business. Using the business intelligence gleaned from the Cloudera Data Platform, this bank increased the number of its customers approved for credit card offers by 15%, providing new financing opportunities while managing its risk profile.

**Improving the customer experience. Building brand loyalty. Sounds like opportunity... to grow. How can personalisation and enhanced CX build a deeper engagement with your customers?**

\*<https://www.emarketer.com/content/global-ecommerce-2020>

## GROWTH THROUGH INCREASED LIFETIME VALUE

**As changing customer behaviour provides increasingly complex data, new opportunities to meet customer needs emerge. Collecting, managing, and analysing this data, however, becomes ever more difficult. Gleaning business insights that allow for new approaches is even more challenging.**

Yet accurately and quickly assessing customer behaviour across a variety of business units or accounts can provide financial institutions with the precision required to understand customer needs, launch new products, and deepen customer engagement.

Deepened customer engagement equals increased lifetime value.

### **NOVANTAS** **DERIVING VALUE FROM DATA**

Novantas, a leading fintech provider of advanced decision support systems and data, built their self-service customer journey analytics solution (MetricScape) on the Cloudera modern data platform. Integrating customer accounts and transaction data from over 30 institutions with third party data, the platform analyses over 1,000 business metrics per customer—with sub-second response time. The machine learning models produce customer potential value (CPV) scores for a variety of use cases, prompting customer retention and cross- and upsell activities.

Such speed and massive analytical capability allow Novantas to help its banking and finance customers consistently identify more than \$15 million in opportunities for every \$1 billion in bank deposits.

### **OVO** **MARKETING EFFICIENCY AND EFFECTIVENESS**

OVO (PT Visionet International) supplies a digital payment service used on 115 million devices across Indonesia, collecting tens of millions of data points each day. The opportunity to market across merchants, partners, and members continues to grow—yet traditional mass marketing is cumbersome and resource intensive.

Using the Cloudera Data Platform and its robust ML and AI capabilities, OVO embarked on a bold approach to apply ultra-personalisation to its offers across its entire ecosystem.

OVO built OVO UnCover, its first contextual offer engine, processing real-time customer data using advanced analytics and machine learning to personalise customer product interaction. By identifying and analysing customer behaviour and needs, OVO UnCover defines and refines its product offerings, and delivers customers ultra-personalised notifications and banner ads through its application. Such personalisation reduces irrelevant marketing approaches and prompts OVO partners to design effective, targeted marketing campaigns that foster action.

**In its first six months of operation, OVO UnCover has proven to be 7.9 times more effective than traditional mass marketing, delivering a 15% increase in revenue for partners. Moreover, through automation, engineers' workloads have decreased by 30%, with an attendant reduction in human error.**

**Enabling efficiencies while building effectiveness. Sounds like opportunity. Where can you uncover greater value from current customers?**



# GROWTH THROUGH SPEED AND AGILITY

**Banks and financial services institutions face increasing pressure to address changing consumer behaviour, banking operations, and digital adoption—all while maintaining appropriate risk profiles and managing compliance. New fintech competitors enter the market regularly, increasing the pressure to perform.**

While the global pandemic has prompted innovative approaches, competition and opportunity has increased the need for agility and speed to market. Cloud technology, with its ability to process and analyze vast amounts of data, offers the financial industry essential operational capabilities to meet customer needs, build loyalty, and broaden reach.

With hybrid and multi-cloud data architecture, teams can rapidly deploy applications anywhere without disrupting existing applications. New applications mean greater ability to process, analyse, and put data to immediate use for customers. Speed means improved time to market and greater top line growth.



## MEETING CUSTOMER AND EMPLOYEE NEEDS

The global pandemic affected every behaviour, including where and how people banked. Bank Mandiri, with over 2500 branch offices and over 2200 micro-networks, wanted to ensure it delivered excellent customer service without keeping open locations unnecessarily. The bank used the Cloudera Enterprise Information & Decision platform to manage more than 100 million data points each day, allowing it to adapt quickly to changing customer circumstances while monitoring the health of its employees.

The Cloudera platform provides Bank Mandiri real-time monitoring of key data in all its locations.

- Liquidity and daily transactions
- Footfall
- Volume
- Value and frequency of transactions
- COVID-19 exposure zone mapping

With this breadth of data and the associated business intelligence, Bank Mandiri can decide which branches should remain operational to deliver excellent customer service. Moreover, they can rapidly deliver that information to customers and stakeholders such as the Financial Services Authority (OJK).

*“Cloudera’s data platform supports Bank Mandiri’s digital transformation. This pandemic has created such significant pressure to the economy and the banking business. The platform allows us to gain data-driven insights to adapt to changing situations quickly. At the same time, we can look after our customers and our tens of thousands of employees in terms of COVID-19 exposure.”*

*- Billie Setiawan, Head of Enterprise Data Management, Bank Mandiri*

Further to monitoring and assessing locations for customers, the Cloudera Enterprise Information & Decision platform tracks the health of Bank Mandiri’s 76,477 employees working in over 2,600 offices every day. The platform can determine if an employee is at risk for COVID-19 exposure by recording and analysing

- Work location (in the office or at home)
- Type of transportation used
- Movement patterns

These insights allow Bank Mandiri to arrange its teams and minimise COVID-19 exposure for its employees.

**Protecting employees and minimising unnecessary expense. Sounds like opportunity. How can you leverage cloud technology to improve speed and agility, today and in future?**

# THE SITUATION

Massive societal changes offer great opportunities, and the banking and financial services industry is uniquely positioned to evolve.

- Entering new markets
- Building customer loyalty through improved customisation
- Increasing the lifetime value of customers
- Improving speed and agility

Yet these opportunities provide unique challenges (see below) as organisations must balance growth against risk, regulatory compliance, cost of acquisition, and risk-capital deployment. Particularly for banking and finance, growth in new markets will also mean new regulatory environments and operating conditions. Multi-cloud and hybrid-cloud environments can provide the agility, flexibility, and reliability to optimally address these concerns.

## CHALLENGES AND OPPORTUNITIES



### Regulatory Compliance

Data Privacy (GDPR)  
Counter-terrorism/  
Sanctions  
Open Banking/Open  
API (PSD2)



### Customer Expectations

Personalisation  
Mobile first  
Instant payments  
and confirmation



### Criminal Activities

Fraud  
AML  
Cybersecurity  
Surveillance



### Risk Management

Risk management  
(CCAR, LCR, FRTB)  
Stress testing  
Regtech



### Competitive Pressures

Fintech  
BigTech

## Digital Transformation



## Technology Advancements

Analytics | Artificial Intelligence | Machine Learning | Block chain/DLT | Public, Private, Hybrid Cloud, On-Premise

Multiple, complex analyses—such as high-level aggregate cost, service levels, and customer experience—require a highly scalable IT infrastructure. Cloud technology (whether public, private, multi-cloud or hybrid-cloud) ensures higher performance and effectiveness of IT budgets, leading to improved business intelligence and decision-making.

**Mergers and acquisitions frequently accompany banking and finance growth and expansion, adding further complications of data integration. Employing a flexible cloud architecture to incorporate new assets, eliminate data silos, and identify new opportunities can make the integration more efficient and lead to quicker profitability.**

## THE SOLUTION

**Cloudera Data Platform (CDP) is a hybrid data cloud that manages the end-to-end data lifecycle and drives actionable insights and use cases. The CDP, with its data engineering capabilities, offers cloud-native service built specifically for enterprise data engineering teams. Data engineers receive an all-inclusive toolset that enables**

- Data pipeline orchestration
- Automation
- Advanced monitoring
- Visual profiling
- Comprehensive management toolset for streamlining ETL processes and making complex data actionable across analytic teams

Cloudera DataFlow (CDF) facilitates real-time analytics and stream processing, regardless of customer segmentation or markets. CDF stream processing enables real-time analysis, identification of key event patterns, and escalation of key alerts based on predictive insights and actionable intelligence. Better business decisions result from better business data provided across the organisation, putting insight into the right hands at the right time.

With the Cloudera Data Warehouse, such insights can lead to business enhancements across the enterprise. Hundreds of users can provision their own resources, analysing data together, whether on premise or in the cloud. Providing analytics to a broader ecosystem means more people able to leverage the information to enhance current customer experience, build out new products and services, recruit new business, and improve time to market.

### CLUDERA DATA PLATFORM: ENABLING AGILITY AND GROWTH

Cloudera Data Platform (CDP) addresses both the challenges and opportunities of the banking and financial industry. Regardless of the IT environment, perhaps post merger or acquisition, or a growing and changing customer base, CDP eliminates data silos and allows an organisation to realise the full potential of diverse and distributed data sets to drive business value.

No matter the environment (private, public, multi-cloud or hybrid cloud) or enormity of the data sets, CDP uses powerful, best-in-class analytics and machine learning to give you control and management over data throughout its lifecycle. With the power of Cloudera Data Platform, the full analytical potential your data is laid bare, proffering the business intelligence essential to profitable, effective decision-making.



## CLOUDERA DATA PLATFORM: PROVIDING FLEXIBILITY AND CONTROL

CDP runs on any infrastructure, from on premises private cloud to multiple public cloud, or in any hybrid cloud combination. Users enjoy the flexibility and autonomy to select the infrastructure that best drives their data processing and analytics needs. Self-service access means users and groups across the organisation access and analyse data across its full lifecycle, uncovering value and recognising insights to build a stronger, more profitable business.

Transform your organisation into a data-driven enterprise. With the strength of artificial intelligence and machine learning, the breadth of any infrastructure, and the power of advanced analytics, you can create greater customer engagement and experience, develop innovative products and services, enter new markets, and beat the competition.

## CLOUDERA DATA PLATFORM: DELIVERING DATA SECURITY

Cloudera's SDX (Shared Data Experience) enables safe and compliant self-service access to data and analytics. It delivers transparent data security and governance policy management across environments.

Security and privacy are critically important to Financial Services providers. CDP enables the choice of maintaining certain data on premise for security or regulatory reasons while still using a hybrid data cloud environment.

***Sounds like opportunity. Take the CDP trial or talk to us today.***

**Learn more about how Cloudera supports Financial Services.**