Our geeks get big data.
So will yours.

CONTENT

It's happening now.

Machine learning has left the hype cycle and leapt into real world business applications.

Every day, the science of big data cuts through raw information to make things more efficient, increase cost savings and provide actionable insights.

Don't you wish you had someone on the inside to help you achieve the impossible?

Meet the Data Geeks at Cloudera's Fast Forward Labs. We get that the truly exciting thing about big data and machine learning is what it can do for businesses: reduce complex data into valuable solutions.

In fact, we have helped regional and Fortune 500 businesses like DBS Bank, PwC, Marks & Spencer and Bank Mandiri save up to 90% on costs and streamline processes from 2 days to just an hour.

With our data geeks advising you, our cutting edge research in machine learning effectively lets you peer around the corner of impossibility to the imminent future of growth.

Building a Fantastic Customer Experience

DBS, one of Asia's leading banks, worked with Cloudera to create a data-driven organization in which staff could gain better understanding of the customer experience. With the ability to easily store and analyze billions of events, DBS could anticipate customer needs and engage them more effectively. Furthermore, operations have improved significantly across the organization. The company's data-driven approach has helped it deliver improved services while significantly reducing costs.

CHALLENGE

The drive to deliver a superior customer experience led DBS to become more data driven and better predict customer needs across channels. However, the company's traditional technology stack for supporting advanced analytics was expensive to scale and not flexible enough to support this work.

SOLUTION

DBS built a central data team and enterprise data hub that enables staff to experiment more and be on the forefront of innovation when it comes to understanding the customer experience and applying human-centered design to its services.

"We can scale out more economically, we can experiment more, and we can think about the types of data in terms of billions of events rather than millions of events," said David Gledhill, head of Group Technology and Operations at DBS. "Cloudera has been a great partner for us, and will help us continue on our journey."

RESULTS

With the ability to more easily store and analyze billions of events in a modern data platform, DBS can answer questions before they're asked to more effectively engage customers and deliver better service. "We've applied it to a whole range of different use cases and, every single one, we see a massive uplift in terms of the base case that we normally do," said Gledhill.

Additionally, the transformation to a data-driven organization has significantly improved operations across the organization. For example, HR staff can understand and predict why an employee might leave so they can take action early to retain employees. Audit can staff predict which branch might have the next audit issue. Risk management staff can better detect fraudulent transactions. And operational staff can understand and predict customer flows, ATM load, and call center volumes.

DBS

The company's data-driven approach has helped it improve services while reducing costs. "We've seen anything in the region of 80 percent reduction in operating cost in a much shorter build time," said Gledhill. "The real big benefit lift though is the benefit it provides to the business. If you look at our digitally engaged customers, we see material lift in how much revenue a digital customer brings to the bank."

WHY CLOUDERA?

Cloudera delivers the modern platform for machine learning and advanced analytics built on the latest open source technologies. The world's leading organizations trust Cloudera to help solve their most challenging business problems by efficiently capturing, storing, processing and analyzing vast amounts of data. Learn more at cloudera.com.

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   Operations, DBS

Helping a Global Food Retailer Increase Purchasing Baskets by 23 Percent

PwC CEE partnered with Cloudera to help a global food retailer implement a customized big data analytics platform to increase revenue and lower warehouse costs. By making it possible to analyze customer behaviour and advertising effectiveness, department heads at the food retailer could now include budget, seasonality and other factors to make better and more timely decisions for advertising and shelf placement strategies. Customer satisfaction and sales orders have both increased by about 20 percent.

PricewaterhouseCoopers (PwC) is a leading professional services firm offering audit and consulting services to clients from all sectors in 157 countries around the world. PwC Central and Eastern Europe (CEE) is made up of 8,500 employees across 29 countries. PwC CEE is helping a global food retailer implement a customized big data analytics platform based on Cloudera's modern data platform and Apache Hadoop to drive revenue and lower warehouse costs.

The Cloudera solution makes it possible to analyze customer behavior and advertising effectiveness for the global food retailer. Previously, this food retailer did not have this visibility. Now they can now coordinate their advertising campaigns and shelf placement strategies perfectly to meet customer needs. The results are higher revenues, lower warehouse costs, and more intensive customer communication.

IMPACT

In the past, department heads at this global food retailer had to rely on their instinct and experience to plan their advertising use. With the new platform, they can now include a variety of factors, such as budget, seasonality, price fluctuations, and specific targets, in their considerations for making better and more comprehensive decisions. For example, they can now determine the most promising time to advertise a specific product.

Using the PwC-delivered Cloudera platform, the food giant has achieved rapid results. The average end-consumer purchasing volume, in key product groups, rose by up to 23 percent within six months. During the same period, warehousing costs sank by 15 percent. Response rates from end consumers to marketing actions jumped impressively by as much as 150 percent.

"The analysis involves minimal effort for the client," said Aleksander Fafula, manager, Data Science at PwC Poland, who implemented the Cloudera solution for the global food retailer with his team. "The only data that needs to be processed is already stored in the IT systems in the form of electronic receipts, where the format, quantity, and scope are irrelevant."

Dashboards enable department managers to distill this data and easily view who bought what items, when, where, at what price, and under what conditions. "Asking questions is really easy and reports are generated so fast that the managers now use the dashboard every day," said Fafula. "They can also access these dashboard on their mobile devices."

This speed and flexibility enables the retailer to test consumer behavior, such as whether a customer's purchase of a brand of chocolate increases overall sales and the impact on the sales of the chain's own brand. This insight positively influences negotiations with manufacturers and future advertising campaigns.

By matching product advertising and the in-store assortment to the purchasing behavior of the consumer, the retailer can now address customer needs more efficiently. Customer satisfaction and sales orders have both increased by about 20 percent.

BUSINESS DRIVERS

Large quantities of data need to be analyzed before a department head can make informed decisions about the composition of their product range and the advertising campaign budgets. PwC found that its conventional database platforms could not provide this analytics power at a reasonable speed or cost.

"Cloudera's Modern Data platform based on Apache Hadoop is the first framework that allows us to analyze existing client information quickly and inexpensively," explained Fafula. "The whole project is hosted on PwC CEE premises, but can also be migrated to the cloud at any time if need be. For the client, this means the cost-effective provision of big data analysis, and, for us, a model for future installations."

SOLUTION

PwC CEE selected Cloudera as a foundation for their solution based on its market maturity and performance. Thanks to the Cloudera open architecture, it is now easy for PWC CEE to create their own powerful software solution and products. "Cloudera offers the best Hadoop platform around and works seamlessly with tools like Impala, Spark, and Flume. Its ease of use and multiple interfaces also set it apart," explained Fafula.

"Big data is becoming the basis for a better understanding and assessment of the market and consumers. Our Cloudera solution with this global retailer illustrates how getting an edge over the competition is as easy as analyzing existing data."

– Aleksander Fafula, Manager, Data Science, PwC Poland

The customer supplies PwC CEE with receipts for analysis. Data from sales and marketing actions are added to analysis to gain a full understanding of customer behavior and advertising effectiveness. "A year's receipts in CSV format corresponds to to a few billion rows per country," stated Fafula. "However, the real explosion in data is in building different scenarios. Thanks to Cloudera and Impala, however, we can analyze quantities of data of this magnitude in fractions of a second."

Based on the results, the heads of each department can quickly see what customers searched for, and what products they bought together on what day, at what time of day or year. They can also compare the impact certain campaigns had on other related products outside of their own assortment. This information then allows them to optimize timing and location of in-store product placement, as well as the promotional activities that go with it.

WHY CLOUDERA?

"Big data is becoming the basis for a better understanding and assessment of the market and consumers," said Fafula. "Our Cloudera solution with this global retailer illustrates how getting an edge over the competition is as easy as analyzing existing data."

MARKS&SPENCER

Developing Next Generation Analytics Capabilities with Cloudera

Marks & Spencer (M&S) , one of the UK's leading retailers, chose Cloudera to help with its data analytics, based on criteria that included the need for strategic partnership, ecosystem integration, enterprise scalability and security. Cloudera helps M&S to analyse all kinds of data from multiple sources such as campaign management, customer loyalty data, and data from digital assets. This allows M&S to develop a 360-degree customer view that offers better understanding of purchase patterns and shopping behaviors across channels.

Cloudera, the leader in enterprise analytic data management powered by Apache™ Hadoop®, today announced that Marks & Spencer (M&S), one of the UK's leading retailers, has adopted Cloudera Enterprise, Data Hub Edition to help with its data analytics. The Cloudera platform is aiding M&S in analysing all kinds of data from multiple sources, adding data driven value across the business. The analytics system is providing a better understanding of consumer behaviour in a multichannel environment and improved device attribution modelling, helping M&S to continue improving its digital platform.

Founded in 1884, M&S has grown from a single market stall to an international, multi-channel retailer. M&S today has around 850 UK stores, 480 international stores in 54 territories, and more than 85,000 employees. The company sells stylish, high value clothing and home products, as well as outstanding quality food that is responsibly sourced from about 3,000 suppliers globally.

Jagpal Jheeta, head of Business Information and Customer Insight at M&S, said, "We evaluated potential partners that could help us build an analytics hub and complement our in-house capabilities to make data-driven decisions across the business. Smart and efficient data usage is a key focus at M&S, as it ultimately fuels better customer insight, engagement, and loyalty. We needed a scalable, robust and future-proof strategic partner. Cloudera is aiding us in leveraging analytics to better serve the business now and in the future."

M&S put together a cross functional team from Marketing, Finance, E-commerce, and IT to select a big data provider based on the following criteria:

- **Ability to execute** -- determined by client referenceability, successful and collaborative POC delivery, and quality of technical solutions, training, support, and professional services

- **Strategic partnership opportunity** -- based on ecosystem leadership, global presence (particularly in Europe), and willingness to collaborate

- **Technology approach and ecosystem integration** -- seeking an open, flexible, and customizable platform with a suite of built-in

data ingest and analytics tools plus integrations with third party tools already in use at M&S

+ **Enterprise management and security** –– providing an efficient, secure way to scale the big data environment to support numerous lines of business in a centralized analytics environment

Jason Foster, business solutions manager for Big Data, Analytics and Marketing at M&S, added, "Essential to M&S was the ability to work with a strategic technology partner that would help to build our big data platform alongside our in-house team. We used Cloudera University and Cloudera's Professional Services to accelerate our progress in creating a great enterprise analytics capability."

To date, M&S' main use case for big data analytics has been to develop a 360-degree customer view offering better understanding of purchase patterns and shopping behaviors across channels. The end goal: to design the perfect customer experience.

Dave Shuman, consumer products and retail subject matter expert at Cloudera, said, "M&S is a shining example of a retailer who is embracing the opportunity of big data to perfect the customer experience across all channels. Cloudera is honoured to partner with them while they expand the depth and breadth of use cases supported by the enterprise data hub, such as plugging in campaign management, customer loyalty data, and data from digital assets to help create more personalized and targeted communications."

WHY CLOUDERA?

Cloudera is revolutionizing enterprise data management by offering the first unified Platform for big data, an enterprise data hub built on Apache Hadoop. Cloudera offers enterprises one place to store, access, process, secure, and analyze all their data, empowering them to extend the value of existing investments while enabling fundamental new ways to derive value from their data. Cloudera's open source big data platform is the most widely adopted in the world, and Cloudera is the most prolific contributor to the open source Hadoop ecosystem. As the leading educator of Hadoop professionals, Cloudera has trained over 40,000 individuals worldwide. Over 1,700 partners and a seasoned professional services team help deliver greater time to value. Leading organizations in every industry plus top public sector organizations globally run Cloudera in production.

Delivering Tailored Customer Offerings at 1 Percent of the Cost

Bank Mandiri, the largest bank in Indonesia, relies on Cloudera Enterprise analytics to maintain its competitive edge, facilitating the delivery of a data-driven, personalized customer experience while reducing IT infrastructure costs by 99 percent. By shifting its marketing to a targeted and tailored approach, Bank Mandiri has achieved higher returns from its campaigns, new customer acquisition programs and retention efforts while lowering the cost of execution and enhancing operational efficiencies.

OVERVIEW

Bank Mandiri is the largest bank in Indonesia and aims to keep it that way--the company aspires to be not just the biggest, but the best bank in Indonesia, with prominence across Southeast Asia as well.

The firm relies on a Cloudera analytic database to maintain its competitive edge, facilitating the delivery of a data-driven, personalized customer experience while reducing IT infrastructure costs by 99 percent.

IMPACT

With Cloudera Enterprise, Bank Mandiri has shifted its marketing approach from sending broad-base communications to delivering tailored messages to targeted groups of customers. Customers benefit from a better experience with the Bank Mandiri brand and are more likely to respond, which drives higher returns from cross sell and upsell campaigns, new customer acquisition programs, and retention efforts. Meanwhile, the costs to execute campaigns are much lower since each recipient list is smaller and precisely focused.

The Cloudera platform also delivers operational efficiencies to Bank Mandiri, reducing overall TCO of its IT infrastructure.

BUSINESS DRIVERS

On its mission to be the best Indonesian bank, Bank Mandiri recognized the need to modernize its infrastructure with more cost-efficient technologies that would facilitate a better customer experience.Its legacy environment was comprised of 27 different systems that were costly and rigid, struggling to ingest unstructured data from sources like social media and prohibiting actionable decisioning based on current, comprehensive information. To save on costs, the bank would only save daily and month-end snapshots of data rather than storing full fidelity data for long periods of time. Performance was also lacking; data preparation alone for management reports took two days to deliver. The company wanted to collect multi-structured data from new sources and store it for longer periods of time, but could not afford to do so in the current environment.

SOLUTION

Bank Mandiri's Cloudera analytic database empowers targeted marketing campaigns (including cross sell, upsell, acquisition, and product holding) through a variety of communication channels such as the internet, mobile, and interactions with Customer Service. Key factors influencing the specific offers that are delivered to clients include credit card transactions, customer demographics and profile information, and social media data. Risk analysis and churn prevention analytics are also supported by the Cloudera platform.

WHY CLOUDERA?

Two primary reasons drove the bank's selection of Cloudera:

✚ Its maturity and reputation in the Southeast Asian market, serving large enterprises including the region's largest telecommunications firms. With a substantial local community offering best practices and validating Cloudera's enterprise-readiness and high quality support, Bank Mandiri was confident that it too would be successful with the modern data platform.

✚ Alignment as a strategic partner rather than as a software vendor, which Cloudera demonstrated through many interactions with Bank Mandiri.

"Before Cloudera, it could take two days to prepare data, but with Cloudera, within 60 minutes it can be ready for our management," said Muhamad Guntur, SVP of enterprise data management at Bank Mandiri. "And the cost, compared to using a relational database, is about 1 to 100; that's 99 percent cost savings versus other systems."

Send your geek to meet ours.

Simply nominate your CTO or tech manager for a free briefing with our Data Geeks. We promise to return him (or her) full of enthusiasm to take on the most challenging requests you can think of, and then some.

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. We deliver the modern platform for machine learning and analytics optimized for the cloud. The world's largest enterprises trust Cloudera to help solve their most challenging business problems. Learn more at cloudera.com.

Scan this code or click here to go directly to the nomination form.

POWERING
POSSIBILITY

cloudera