Anheuser-Busch InBev SA/NV (AB InBev) is a Belgian publicly traded transnational beverage and brewing company, with a heritage that dates back more than 600 years, spanning continents and generations. It is considered one of the largest fast-moving consumer goods (FMCG) companies in the world. AB InBev has a diverse portfolio of well over 500 beer brands, including Budweiser, Corona, Stella Artois, Beck’s, Hoegaarden and Leffe.

Integrating systems and data from acquired companies

When companies grow via external acquisitions, integrating the systems and data from acquired companies is always a challenge. For AB InBev, that challenge included a hybrid environment with both on-premises and cloud systems such as Salesforce, 15 SAP instances, 27 ERP systems, 23 ETL tools, and a host of brewers operating as independent entities with their own internal systems. “As you can imagine, that made it extremely difficult to obtain a single, unified view of our business, and there was no single source of truth,” says Harinder Singh, Global Director of Data Strategy & Solution Architecture at AB InBev. “Also, we’re operating on six continents and we needed to become GDPR-compliant, and that required global visibility into all our data assets.”

Brewing up the best consumer experience

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Because executives at the company couldn’t readily get access to the enterprise-wide information necessary for strategic decisions, Singh says he knew AB InBev had to take a different approach. “We recognized that we needed one central repository for our data assets,” he says. “Our internal customers—like data scientists, operations teams and business teams—were struggling to pull together data from over 100 source systems, analyze it, and make timely decisions on product development, supply chains, marketing campaigns and more.”

Also, like other alcoholic beverage producers, AB InBev must abide by strict regulations regarding gathering consumer information. “So, we collect external data, such as geographical data and purchasing trends,” says Singh. “But we still need to standardize and integrate that data, which was another aspect of our data challenge.”

Why Talend?

As part of its process to evaluate potential solutions, AB InBev conducted a months-long proof of concept (POC) with Talend. “We knew we wanted to embark on a cloud journey, and Talend was built in that world, enabling cloud and on-premises systems to talk to each other in a secure manner,” says Singh. “During the POC, Talend performed the way we wanted and expected it to, and it was clearly the best product for our need. In addition, Talend pricing was more competitive than that of other options.”

At the moment, says Singh, AB InBev is primarily using Talend Data Integration to bring together the disparate data sources inside and outside the company, and using Talend Data Preparation for data discovery. “We’re a multiple company, that is, all our data management work has to be done for multiple companies under the AB InBev umbrella, so we’ve built a reusable framework using Talend,” says Singh. “That way, when we pull data from one brewery, we can reuse the code we created and save a great deal of time.”

In the architecture AB InBev has built, Talend extracts data from a range of sources—real-time and batch, cloud and on-premises,
ERP systems, data from IoT devices—and stores it in a landing zone, which is part of a data lake, or data hub, that resides in the cloud on Microsoft Azure. That data is then processed and archived before going into a golden layer, from where it’s consumed by AB InBev internal users. Talend also powers a sandbox for data scientists, which they use to test various data models. In addition, the AB InBev architecture includes Hortonworks for Hadoop, and related technologies such as Hive, Spark, Hbase and Kafka.

“Among the biggest benefits of the new IT architecture are simplification of the infrastructure, and reusability of processes to rapidly extract and provide access to data,” says Singh. “Because we have reusable code, what used to take us six months now takes us six weeks. That translates into faster decisions and reduced time to market for decisions, campaigns, products and more.”

Singh cites cost savings as another major benefit. “Now, instead of paying for and managing 23 different ETL tools, we’re moving towards managing only one by standardizing on Talend.”

Selling the best beers and making people happy
AB InBev uses its revamped IT architecture to enable a variety of use cases, all in service of the company’s stated goals of selling the best beers and making people happy. Several projects have been deployed in the first year that we launched the data platform and hundreds of new data projects are in the pipeline.

It all starts with better product development. Data helps AB InBev understand how it can help farmers grow the best crops that are used to produce the best beers. For example, says Singh: “Water is a critical component. How much water should farmers put in the soil? If there’s a major climate risk in a region, it’s our social responsibility to stop brewing beer and instead deliver water to people.”

Data also helps the company understand drinker tastes and behaviors better. For example, AB InBev uses it to analyze new demands from consumers for low-calorie beers and determine preferences for beers according to seasonality. AB InBev collects and aggregates consumer data from Nielsen and market surveys, and near-real-time data from social media, to analyze trends and deliver the right beers and more highly targeted marketing campaigns, such as real-time coupons at point of purchase tailored to the right consumers.

“Our customers are shops and bars,” says Singh. “Data helps improve their experience with our brand. Before, working with each store to get data wasn’t possible. Now, they can order beers through mobile apps, and we can see data in real time to optimize demand forecasting and assortments. Data-driven marketing also means we can analyze the behavior of shoppers in stores, and use the metrics gathered to identify the best location in the store to sell beers, as well as how to create real-time events to drive more conversion.”

According to Singh, data is also important for supply chain optimization. “How can we make sure deliveries arrive on time, with the right quality, and at the right cost? How can we make more deliveries?” To find those answers, AB InBev ingests IoT data from RFID devices to track the full lifecycle of “connected packages” from brewery to delivery in order to find the best routes for delivery drivers. AB InBev also uses IoT technology to monitor the temperature in millions of beer coolers around the world to ensure their product is being stored and served at the optimum temperature. And they make quick decisions on how many pallets of beer to send to a specific sporting event based on historical data now stored in the data hub.

“We believe data discovery is important,” says Singh. “Previously, internal users had to spend some 80 percent of their time locating and consolidating relevant data, which left only 20 percent for analyzing it and making a decision. Now, using Talend Data Preparation, they spend only about 30 percent of their time gathering data and can spend 70 percent analyzing it and making better-informed decisions.”