Qlik

DATA QUALITY

Globe

Creating wonderful experiences for mobile subscribers

"Talend allowed us to automate our data quality scoring. This has been a critical determinant to the success of our marketing campaigns."

John Bibal II, Director of Data Engineering and Data Quality

Over the years, Globe has been at the forefront of enabling digital inclusion and empowering Filipinos with connectivity. In 2019, the company catered to over 94.2 million mobile customers and 2 million home broadband customers, a notable 25% increase compared to the year 2018.

However, opportunities to expand market share are limited, since one player's growth comes largely at the expense of the other. To counteract this effect, it's vital to understand one's existing customer base to grow the lifetime value of each relationship. At the same time, both incumbents face competition from a third mobile operator, which is set to launch services in the Philippines by mid-2020. Against that backdrop, knowing customers and their needs is even more critical to doing business.

Telecoms operators produce terabytes of data each day. Converting that to a steady stream of clean and reliable source data that is of sufficient quality to power advanced analytics efforts is a goal for many operators worldwide.

Providing a steady stream of clean and reliable source data

Customer experience transformations are synonymous with service industries like telecommunications. Globe Telecom's President and CEO, Ernest Cu, is a driving force behind the company's own philosophy of putting the customer first and at the center of everything Globe Telecom does.

For the past five years, Globe Telecom has run a center of excellence for big data known as the Enterprise Data Office (EDO). EDO has domains of expertise encompassing data quality, data engineering and data governance, and has a big role to play in Globe Telecom's customer experience transformation.

Today, becoming a postpaid customer of Globe Telecom requires the completion of a paper-based application form. Information on this form is keyed into Globe Telecom's systems by human agents. This can introduce errors, due to the manual nature of the encoding process, leading to a risk of decreasing information accuracy.

INDUSTRY
Telecommunications

INFORMATION
- HQ: Manila, the Philippines
- 5,001-10,000 employees

USE CASE
- Customer experience
- Sales and Marketing efficiency

CHALLENGE
Providing a steady stream of clean and reliable source data

TALEND SOLUTION
- Talend Big Data
- Talend Data Quality

RESULTS
- **400% increase** in trusted email addresses
- **Availability of daily data quality scores,** instead of once a month
- **Higher ROI per campaign:**
  -30% cost per lead
  +13% conversion rate
  +80% click-through rate

Globe Telecom has collected large amounts of data about customers, network and billing transactions but has also taken a great deal of effort to cleanse it in order to be considered consumable. Customer contact information like email addresses had a very low completeness and accuracy percentage, which put Globe Telecom's marketing efforts at an immediate disadvantage. An additional step of cleansing data needed to be done prior to running campaigns. Business confidence in running effective campaigns was also impacted, and that led to a lot of effort expended by operations to pinpoint the root cause of problems in the data.

Scoring data was also a largely manual activity, entailing use of spreadsheets and offline databases to apply validation and business rules to existing data. The manual process meant that data quality scores were run only once a month, resulting in using data outdated by the time it was exploited for a campaign.

When Director of Data Engineering and Data Quality John Bibal joined EDO, his first major initiative was to automate data quality scoring to be able to cover more data sources and attributes and not just customer demographics.

Why Talend?

EDO is now home to a hybrid data lake ecosystem housing hundreds of nodes running on Cloudera. Around 15 terabytes of data of raw customer data is processed daily through the cluster. It is extracted from source systems across the business using Talend Big Data for batch processing and Apache Kafka where real-time streaming into the lake is required.

Talend won Globe Telecom over because it was already in use in different parts of the company's big data ecosystem.

Two key areas for improvement were identified: first, automating the data scoring process, freeing up analysts' time to investigate data quality issues; and second, enabling business users to have confidence in the data by having access to the data quality dashboards on demand.

"We tried to assess the different business units by maturity. There are business units that need just basic access to data for reports; business units that are at that stage in which they can actually crunch and process data themselves; and business units with analysts or data scientists who require more compute power because they are doing predictive analytics already. As a result, we have different groups with different maturity levels and we tried to cater to the different maturity levels by providing tools to make access to data easier for them," says Bibal.
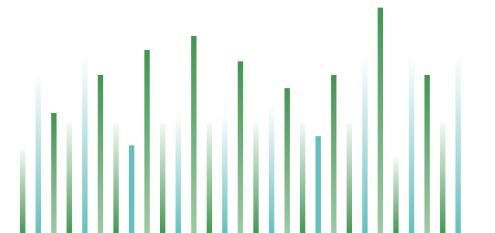
Given Talend had proven itself in other use cases, it made sense to apply Talend Data Quality to solve Globe Telecom's data quality challenges.

"Today, we ensure data quality meets six dimensions: accuracy, completeness, consistency, timeliness, validity, and uniqueness. We have a data governance team which establishes all business rules for each dimension and these customized business rules are then developed with Talend Big Data Studio to build the data quality scores," explains Bibal.

Automated data scoring is performed and stored into a data quality data mart using Talend Big Data Studio, while data profiling is done through Talend Data Quality.

Talend Data Quality automatically checks data compliance with different business rules. As this all happens automatically, the process can be run every day, allowing data quality analysts, the operations team and even business users to know if the data they are using is accurate and valid.

Talend Data Quality measures the current state of data quality in business datasets which allows data quality analysts to come up with recommendations on preventive and corrective actions that data owners out in the business can take to improve their source data. Data cleansing is done right from the source. It can be as simple as whether the contact information held on customers - such as their email address - is complete and unaffected by typos or other data entry errors.

Growing the lifetime value of each mobile subscriber

Using both Talend Big Data and Talend Data Quality, Globe Telecom is able to consolidate different data into a centralized repository, allowing data scientists, data analysts and business analysts to be data driven in gaining insights. Marketing is more targeted, tailoring its spend and efforts to customers with the right offers sent at the right time. In Bibal's words, this kind of personalization requires a "scientific approach" that is best achieved by "investing more on big data".

Upon using Talend to automate the calculation of data quality scores, Globe Telecom's speed to cover more data sources and attributes has increased exponentially. The team was able to reduce the effort by 60 percent thereby allowing them to cover more attributes. Business units have access to a Tableau daily updated dashboard where they can check the accuracy of an email address or other data points instantly. "It helps different business units see what data they can use and what data should be used with caution," Bibal says.

Globe Telecom is now able to expand the number and range of data attributes it scores for quality, something that was impossible when everything was performed manually. "By using Talend Big Data and Data Quality to automate the checks, it allows us to cover more attributes in a faster time and with a limited number of people in our team. It's the convenience of Talend's performance, and at the same time the ready availability of daily data quality scores, instead of insight once a month. This gives the business teams confidence that data they're using now is accurate because without the data quality score, there's always this question of 'Is the data that we're using right?'"

For Bibal's lean data quality team, Talend also means a 40 percent reduction in effort that would otherwise be spent trying to investigate why certain data points or KPIs scored poorly on quality.

"Just recently we were asked to investigate a downward trend from a specific KPI. Because we're consistently scoring data on a daily basis, we're able to quickly and easily identify data issues, which saves on unnecessary investigations. It's probably around a 60 percent reduction in terms of the issues we're receiving from the business. Since we can detect issues, we can proactively investigate them as well."

"Data quality is our internal advocacy for having an accurate, valid and timely data. And using Talend allowed us to level up this advocacy with automated daily data quality scoring. This gives our users more confidence in the data they use."

John Bibal II, Director of Data Engineering and Data Quality

Qlik

About Qlik

Qlik transforms complex data landscapes into actionable insights, driving strategic business outcomes. Serving over 40,000 global customers, our portfolio leverages advanced, enterprise-grade AI/ML and pervasive data quality. We excel in data integration and governance, offering comprehensive solutions that work with diverse data sources. Intuitive and real-time analytics from Qlik uncover hidden patterns, empowering teams to address complex challenges and seize new opportunities. Our AI/ML tools, both practical and scalable, lead to better decisions, faster. As strategic partners, our platform-agnostic technology and expertise make our customers more competitive.

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