

Canadian clothing retailer accelerates data insights with Enterprise Data Platform QuickStart for Google Cloud

Industry
Retail

Location(s)
Canada

Technologies

- Google BigQuery
- Google Cloud Build
- Google Cloud Composer
- Google Cloud Functions
- Google Cloud SQL
- Google Cloud Storage
- Google Dataproc
- Google Pub/Sub

Enterprise Technology Areas

- Analytics; Marketing Analytics
- Data Lakes

Overview

A Canadian clothing retailer needed more robust analytics to guide its strategy during the pandemic, but its legacy SQL Server environment made accessing data from multiple sources difficult. Using a proprietary Enterprise Data Platform QuickStart for Google Cloud framework, Pythian fast-tracked the retailer's move to the cloud. In a matter of weeks, Pythian deployed a data lake in Google Cloud and Google BigQuery, created ETL pipelines, and built custom reports and dashboards to analyze two years of customer, location, and purchase data. The internal marketing and BI teams can now "self-serve" the insights they need; the retailer has the right foundation to expand data access and leverage machine learning and AI capabilities.

In just weeks, Pythian deploys cloud data lake, ETL pipelines, and custom dashboards to power time-sensitive business decisions.

The COVID-19 pandemic has prompted numerous changes for consumer businesses. Like many retailers, it needed to adapt to respond to the ongoing impact of the virus.

Executives at a Canadian clothing company could see shopper behaviors and purchase patterns changing but lacked the analytics to quantify the shifts or target new strategies. While this company captured valuable data across their retail and online footprint, their legacy system—an on-premises SQL Server—made it nearly impossible to achieve its business intelligence and marketing analytics goals.

The company's Chief Technology Officer and their team searched for solutions that could make an immediate impact. They knew migrating to the cloud was essential, but they feared a lengthy and expensive implementation.

Fortunately, Pythian had the answer: its Enterprise Data Platform (EDP) QuickStart on Google Cloud solution. This proprietary framework established an enterprise analytics platform in Google BigQuery in just weeks, with customized ETL (extract, transform and load) pipelines and analytics available in seven weeks. This accelerated approach was the perfect way for the clothing retailer to launch modern analytics and fuel stronger decision-making.

Business need

As the COVID-19 pandemic impacted its supply chain and slowed foot traffic at its stores, the Canadian clothing retailer realized it needed stronger analytics to guide its strategy. However, its legacy system—an on-premises SQL Server environment—made it nearly impossible to achieve its business intelligence goals.

Legacy SQL Server limits retailer's analytic options

The clothing retailer needed to:

- **Address new challenges.** Company leaders lacked easy access to data to help them navigate the ever-changing conditions of the pandemic.
- **Move beyond SQL Server.** The retailer's on-premises technology lacked the processing power to integrate large volumes of data or support efficient analytics.
- **Quickly stand up a new solution.** It knew a cloud platform was the answer but worried that the solution would require many months and a six-figure investment.

Throughout the pandemic, company executives monitored conditions and kept pace with a rapidly changing environment. When COVID infection rates spiked, they saw foot traffic in its over 300 retail stores slow. They tracked sizable increases in e-commerce purchases as more consumers shop online. Behind the scenes, global disruptions in the supply chain created additional worries about inventory and shipping.

Corporate stakeholders were eager to help them strengthen their operations, improve the customer experience and increase sales. Relying on an SQL Server, however, significantly limited their analytic options. Their legacy platform could not efficiently ingest data from multiple sources or process queries.

The Canadian retailer needed to combine both structured and unstructured data from a variety of sources including:

- Point-of-sale (POS) transactions at individual stores
- E-commerce purchases from its website
- Back-office inventory and shipping data
- Customer demographics and locations

The CTO knew Google Cloud and Google BigQuery could handle these demands (and more). But, the retailer worried that the time and cost of migrating to the cloud would be too costly and time-consuming.

Solution/What We Did

Pythian fast-tracked important store analytics with a proprietary Enterprise Data Platform QuickStart for Google Cloud solution. In just a few weeks, the Pythian team:

- Deployed a cloud-based data lake using Google Cloud and Google Big Query
- Created a series of pipelines to support client data sets from multiple sources
- Built custom reports and dashboards to analyze important metrics

Pythian's accelerator delivers meaningful insights in just weeks

The Enterprise Data Platform QuickStart for Google Cloud provided:

- **A scalable framework on Google BigQuery.** The clothing retailer fast-tracked its move to the cloud with a pilot that can easily expand to additional datasets and even advanced machine learning capabilities.
- **Integrated data from multiple sources.** In just days, Pythian set up a data lake to ingest and house two years of purchase data and customer details—more than 100 million records.
- **Custom reports and dashboards.** Pythian developed use case-specific visualizations using Microsoft Power BI, the retailer's preferred tool.

The clothing retailer was delighted to find an expert resource with Canadian roots. Even better was the prospect of accelerating time-to-value with Pythian's Enterprise Data Platform QuickStart for Google Cloud solution.

Work began immediately on the rapid seven-week project. Pythian deployed a team of certified Google Cloud experts to launch an end-to-end system that includes a Google BigQuery data lake, appropriate data pipelines to support data from multiple sources, and a customized dashboard. In the first two weeks, the team aligned on a use case and developed a high-level data model and reference architecture to show the value of a data platform. They built a production-ready solution over the next five weeks.

Once the retailer realized the new system's impact, they expanded the project's scope to encompass a larger, more complicated set of data.

The result was a flexible cloud data platform that now includes:

- Over 100 million records
- Eight tables and 230 columns of data
- Approximately two years of customer, store and purchase information

The project culminated in several custom reports and dashboards created with Microsoft Power BI, the retailer's preferred tool. These visualizations provided immediate value for stakeholders across the company.

Result/Key Outcomes

This successful pilot gives this retailer access to two years of customer, location, and purchasing data to drive immediate decision-making. It establishes a strong foundation for future data analytics, including the retailer's goal of leveraging machine learning and artificial intelligence capabilities from Google for marketing analytics.

Internal teams can 'self-serve' business intelligence; retailer has foundation to leverage machine learning in future

Now, the retailer can:

- **Make actionable business decisions.** No longer limited by its legacy systems, the retailer can react quickly to changing conditions and even take a proactive approach to its marketing, strategy, and operations.
- **Self-serve analytics.** The flexible Google BigQuery structure makes it easy for all staff to use their preferred BI and reporting tools for analysis.
- **Leverage more data and machine learning.** The retailer looks forward to tapping into Google's extensive AI and predictive capabilities to derive even greater insights from its data.

The Enterprise Data Platform QuickStart framework delivered several quick wins. By starting with a rapid pilot, the clothing retailer demonstrated the value of cloud analytics in several weeks. Company stakeholders saw tangible results in supporting their marketing analytics requirements to help the CTO and his team obtain buy-in for future initiatives.


This solution also protects the retailer's investment because Pythian's initial work can scale to a minimum viable product (MVP) and even a full production system; there's no need to start from scratch with future development efforts.

Pythian's collaborative and transparent approach impressed the internal IT team. They appreciated the willingness to answer questions, share information, and provide best practice recommendations.

Greater cloud computing lies ahead for the Canadian clothing retailer. It is now planning to replace its legacy systems with cloud solutions and expand its Enterprise Data Platform QuickStart solution to include more data sources. Migrating to Google Cloud and Google BigQuery will vastly improve its analytic capabilities and decrease expenses. It is also looking forward to leveraging the advanced machine learning and AI capabilities offered by Google.

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ABOUT PYTHIAN

Founded in 1997, Pythian is a global IT services company that helps organizations transform how they compete and win by helping them turn data into valuable insights, predictions and products. From cloud automation to machine learning, Pythian designs, implements and supports customized solutions to the toughest data challenges.

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