

Global Auto Performance Manufacturer Sets Scalable Foundations for Digital Transformation with Snowflake Analytics Platform

Pythian implemented an Enterprise Data Platform (EDP) for Snowflake on Azure in under one month to drive rapid business insights in the cloud with PowerBI.

The Client

The client is a global automotive performance manufacturer with industry-leading brands. Founded over a century ago, the organization has a long history of continuous innovation and manufacturing excellence. Generation after generation of auto enthusiasts trust the company to deliver robust performance solutions worldwide for racers, builders, and drivers.

They looked to their data estate and analytics capabilities to accelerate business growth and drive digital transformation. Their leadership knew that tapping into their growing repositories of product, customer, sales, marketing, and logistics data would unlock analytic insights capable of driving innovation across all aspects of their business. By increasing data availability and decreasing data complexity, internal teams and departments could move faster and discover vital relationships across the organization.

However, a legacy on-premise warehouse, a data structure with untapped potential, and data silos between departments presented serious roadblocks toward their transformation goals.

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Industry

Manufacturing

Location(s)

Kentucky, United States

Technologies

- Snowflake
- Microsoft Azure
- PowerBI
- Terraform

Overview

A global automotive performance manufacturer sought to drive digital transformation by leveraging their large customer, sales, marketing, and warehousing data repositories. Hindered by outdated on-prem infrastructure and growing data silos, they sought an experienced analytics and data management partner. Pythian recommended a data discovery workshop and Enterprise Data Platform (EDP) implementation using Azure Cloud and Snowflake, with PowerBI for analytics.

The Challenge

The manufacturer's decision-makers and business intelligence (BI) teams rely on available and accurate data to make informed operational decisions across the business. Their analytics platform promised to extract organizational insights capable of accelerating business transformation and innovation, tapping into their robust product, customer, logistics, sales, and marketing data pipelines. However, a series of challenges slowed their digital modernization.

A legacy on-prem data warehouse

The organization managed a legacy on-prem SQL Server data warehouse with SQL Server Report Services (SSRS) for analytics. Unfortunately, the warehouse's low data availability and the slow analytics reports created bottlenecks for stakeholders and the BI team. Unreliable access to data and business intelligence hampered their ability to make more informed business decisions related to revenue, warehousing, product development, marketing, and sales.

Inefficient data structure with departmental silos

The manufacturer's data structure presented another set of transformation challenges: their reporting database on SQL Server lacked dimensional modeling and mainly relied on views and custom flat tables to drive analytics. This data format resulted in a complex data model that was slow and challenging to manage and maintain.

Additionally, this structure reduced future scalability and led to growing operational overhead and silos across departments. These challenges further complicated the discovery of important data relationships between logistics, sales, marketing, and product teams.

Analytics integration issues

In the face of these mounting challenges, the global automotive performance manufacturer sought a proactive approach. To make data and their many relationships more available and better understood, the company implemented PowerBI for advanced analytics. However, unforeseen implementation issues impacted usability and made it challenging for teams to add new data sources for in-depth analysis.

The manufacturer had previously invested in Microsoft's ecosystem and knew migrating from on-prem to Azure Cloud—and optimizing their existing PowerBI integration—would address several scaling, cost, analytics, availability, and business transformation concerns. For trustworthy technical expertise on their data warehouse and analytics journey, the organization turned to Pythian.

We recommended a data discovery workshop to assess the customer's existing data, reports, pipelines, and business objectives. Next, our team provided a simpler and more effective EDP using Azure, Snowflake, and PowerBI—transitioning the organization from their data on-prem systems into a scalable, cloud-first platform.

Business Need

The manufacturer encountered several challenges as they sought to extract more value from their data. They faced limited data access, data silos, a data structure with untapped potential, and a non-scalable platform with operational issues. The organization needed a modern, scalable, and cost-effective data platform as they continued to grow.

The Solutions

The manufacturer's decision-makers and business intelligence (BI) teams rely on available and accurate data to make informed operational decisions across the business. Their analytics platform promised to extract organizational insights capable of accelerating business transformation and innovation, tapping into their robust product, customer, logistics, sales, and marketing data pipelines. However, a series of challenges slowed their digital modernization.

Analysis and design

In the analysis and design phase, Pythian assessed the organization's infrastructure requirements, generated an Azure infrastructure blueprint, and devised a series of security measures that include identity and access management (IAM) and role-based access control (RBAC). Additionally, we designed schemas for data storage and transformation, data pipeline services architecture, and monitoring and logging systems for a robust data ingestion platform.

Development

During the development phase, Pythian used a custom Terraform solution to deploy the platform for Azure and Snowflake. Terraform enabled an optimal balance of speed and reliability, ultimately allowing our team to deliver the EDP in just one month, from development to implementation. We implemented security IAM roles, policies, and other project components according to the original blueprint—including the data tables, warehouse engine, and ingestion pipelines.

Testing

In the testing phase, our team conducted a series of knowledge transfer sessions to ensure the manufacturer's internal teams were comfortable using the platform to derive analytics reports with PowerBI. We meticulously audited and validated the datasets in the data warehouse, ensuring data quality and integrity. A data pipeline test using marketing data was completed, highlighting the speed and efficiency of the new platform and data warehouse on Azure with Snowflake.

Implementation

In the final implementation phase, we rolled out the EDP to the customer's production environment. Pythian conducted a final comprehensive evaluation of the environment and transitioned the new analytics platform to the customer. The EDP aligned with the client's requirements and was built to accommodate their internal teams' future and existing skill sets. This minimized training overhead for staff and allowed for easier onboarding of new sales, marketing, logistics, and product data sources immediately—and into the future.

In just one month, we worked with the customer to successfully implement a cutting-edge Enterprise Data Platform tailored to their unique needs. This robust, scalable, and efficient platform now helps the decision-makers manage the business with greater precision and insight, leveraging the power of Azure, Snowflake, PowerBI, and Azure Data Factory.

Solution

Pythian thoroughly examined the client's infrastructure and objectives, leading to a four-phase approach, from design to implementation. We recommended an approach similar to our EDP QuickStart: a data platform on Azure Cloud using Snowflake and Azure Data Factory using Terraform as a cost-effective solution. The architecture would simplify data management while enabling greater insights with PowerBI.

The Result

The customer now benefits from a modern data warehouse architecture designed to scale with their business and future integrations. This allows the organization to seamlessly integrate sales, marketing, logistics, customer, and product data into one centralized analytics platform.

As a result, stakeholders and the BI team can make well-informed decisions with fewer silos and optimal data structure. An analytics dashboard now makes the customer's data more available and accessible across the business.

Additionally, the shift to the cloud has substantially reduced the client's on-premises expenses, freeing up budget resources for allocation and reinvestment in other business areas. The new data platform empowers the organization to sustain growth and bolster their competitive edge through data-driven decision-making across all company levels.

The client's digital transformation journey with Pythian has provided a modern, scalable, cost-effective data platform that meets their business requirements and fosters future growth.

Result/Key Outcomes

The manufacturer now has a modern, scalable data warehouse architecture integrating many data pipelines.

The organization can centralize sales, marketing, logistics, customer, and product data, empowering decision-making since there are fewer silos.

Moving to the cloud cut costs and allowed more resources for reinvestment. Partnering with Pythian sped up the company's digital transformation with a new data platform built for growth.

Get Started with Pythian

[Download our eBook](#) to learn more about how Snowflake can advance your organization's understanding of its consumer base—and how Pythian can guide you along that path.

About Pythian

Founded in 1997, Pythian is a data and analytics 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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