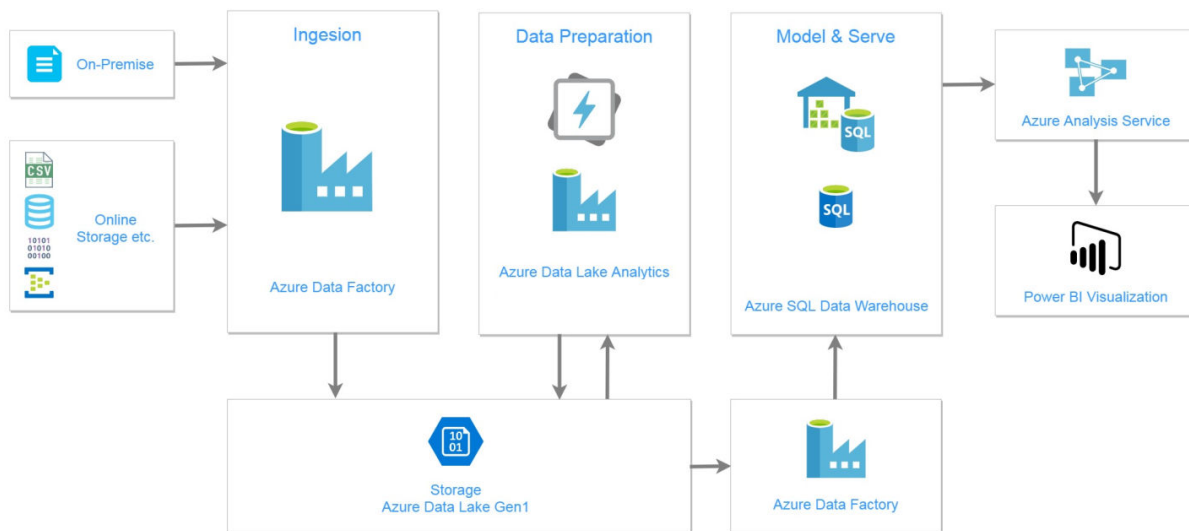# Bike Industry Insights for Retailers & Suppliers

California based bike industry insights for retailers and suppliers
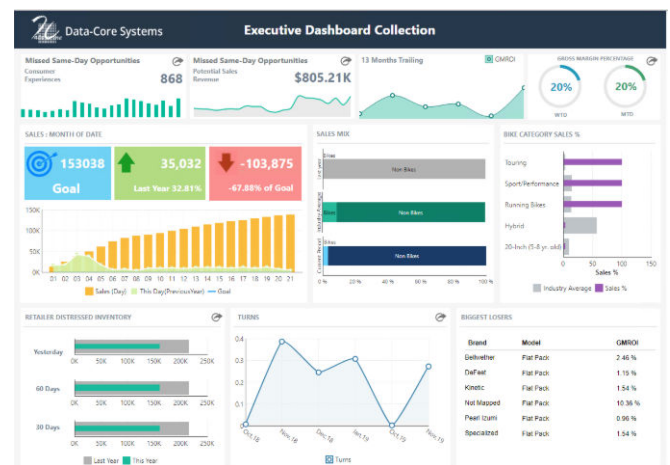
Who is the Client?

The client is a prominent company in the U.S. based in California who developed a unique platform for the bike industry to integrate retailers, suppliers and customers in one place. They created a smooth blend of traditional in-store sales and business operations with a state-of-the-art digital transformation through online sales and operations. With the growth of this platform, the company generated a huge volume of POS, inventory and customer search data and plan to use the same for descriptive, diagnostic analysis.

What was the client's need?

The objective was to develop an end-to-end data automation process to create multiple Power-BI dashboards with data visualizations for retailers and suppliers from their source data which would run periodically without any manual intervention and provide insights of business to various retailers and suppliers in the bike industry.

What steps were involved?

The process entailed incrementally loading raw data needed from the client's on-premise server/stream data location to the cloud location. Then, new raw data needed to be cleaned and transformed based on approved/provided logic so that the data can be utilized easily for BI dashboards.

What services did Data-Core provide?

Data Ingestion: On-premise files were uploaded into Azure Data Lake Storage (Gen1) using **Azure Data Factory**. Raw data were dumped in the "**dump**" folder location.

Data Preparation: Data cleaning, validation, transformations were done using **Azure Data Lake Analytics**. Several U-SQL queries were prepared in this process. After sanitizing (data preparation), refined data would be kept in the "refined" folder of Azure Data Lake Storage (Gen1).

Model & Serve: Azure Data Factory - Copy Data activity was used to move the refined data from **ADLS Gen1** to **Azure SQL data warehouse**.

Data Archiving: After processing the full data pipeline, the dump data was moved to archive folder using **Azure Data Factory**.
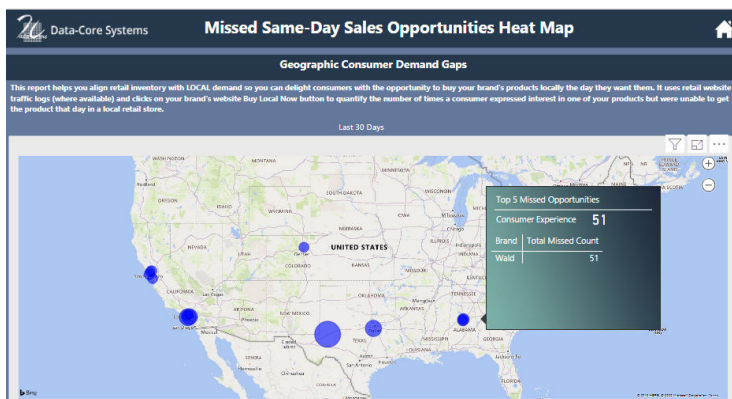
Audit log: Audit table was maintained in Azure Data Lake Analytics Catalog table. Total no. of records, error records and valid records count was maintained in Audit table.

Creating tabular model: All the facts and dimensions were created using **Azure Analysis Service**. The tabular (in-memory) data model provides an easier and faster way for users to perform ad hoc data analysis using tools like Power BI and Excel. This tabular model was created in azure cloud.

Power BI: Business required dashboards were created using Power BI. Here Azure Analysis Service was used as a data source for faster access.

Notification: Specified users were being informed automatically via email after completion of all processes or after getting any issue/error during this automation process.

The biggest challenge of this project was to achieve the clients request of a loading time less than 5 seconds for each dashboard. We used SSAS Azure Tabular (in-memory) concept to speed up the whole process and succeeded in loading the dashboard in 3-5 seconds.

In Summary

Data-Core's Power-BI dashboards for retailer and supplier were instrumental in providing effective insights for their business growth. Retailers are getting huge sales growth by using different visualizations on missed opportunities, distressed inventory details, sales, GMROI, turns with industry average comparison, transaction trends, and product trends where suppliers were benefited from visualizations on missed opportunities heat map, consumer demand graph, product suggestions for retailers, distressed inventory, sales team and goals etc.

Discover the Data-Core Advantage.
Learn how we can help your company be more relevant, effective and efficient.

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