

CASE STUDY



TOYOTA

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Industry

Automobile

Profile

TAM is a distributor of Toyota vehicles in Indonesia. It is a joint venture company between Toyota Motor Corporation and PT Astra International, with a distribution of shares of 50% and 50% respectively. TAM is headquartered in Sunter, Jakarta.



Toyota-Astra Motor Leveraged the Denodo Platform to Simplify its Data Landscape and Achieve a Single Version of the Truth

PT Toyota-Astra Motor (TAM) is a distributor of Toyota vehicles in Indonesia and currently the market leader in the Indonesian automotive industry. TAM wanted to simplify its complex data management landscape, reduce the time-to-data for its multiple operational reporting requirements, and eliminate the need for shadow IT.

Business Need

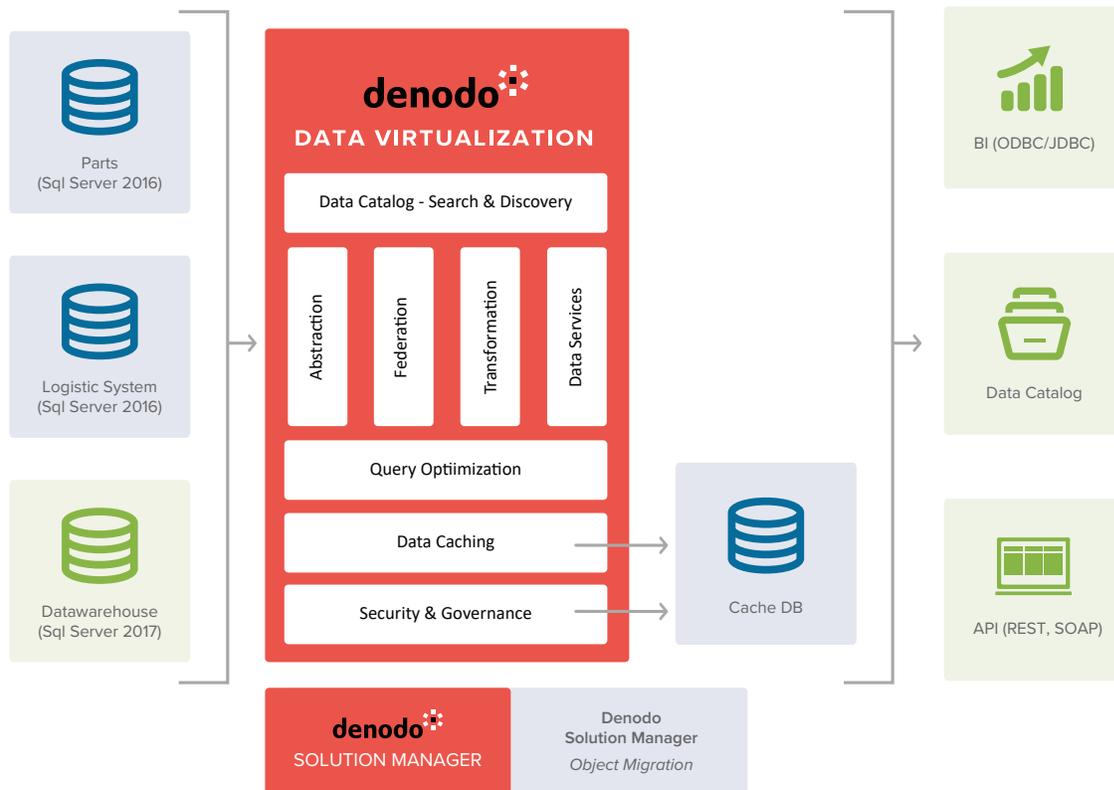
TAM had a fragmented data architecture, with data trapped in different business silos. The company relied primarily on extract, transform, and load (ETL) processes to integrate data from its enterprise data warehouse and transactional databases on SQL Server. This data warehouse was loaded in batches using SQL Server Integration Services (SSIS) ETL sessions, and then multiple data marts were created on top of this data warehouse, again using SSIS ETL sessions, which provided data for business reporting through Power BI. This process was extremely slow, manual in nature, and difficult to govern. Moreover, the ETL sessions increased the overall maintenance cost of the data architecture as data was replicated across layers. In addition, multiple operational teams within TAM performed their own analytics and generated business reports. In the absence of an enterprise semantic layer, this led to multiple connections to different data sources, complicating the data architecture, and making maintenance even more difficult. Data latency was also a challenge, as business users did not always receive the most recent data. These issues resulted in multiple inaccurate definitions of core business metrics. There was no single version of the truth, and top management did not get the most accurate picture of the business. All of these challenges overburdened the IT team and slowed down the adoption of new BI solutions.

The Solution

TAM implemented the Denodo Platform above the company's enterprise data warehouse and the transactional databases, seamlessly integrating several different source systems to create a logical data warehouse. This enabled multiple reporting tools to now connect only to the virtual layer, eliminating the need to individually connect with multiple data sources. The Denodo Platform is implemented as a unified data access layer between the data consumers and the data sources, and because it acts as a single point of entry to all enterprise data, it enables an enterprise-wide centralized implementation of data governance and

security. The data catalog built into the Denodo Platform made data search and exploration extremely easy even for non-technical users, and it also doubled down as an ad hoc query engine. The Denodo Platform enabled the democratization of the data in TAM's data ecosystem, enabling different business user groups to find the right dataset and use it for their own analysis.

Architecture Diagram



Benefits

A flexible data architecture - The Denodo Platform made TAM's data architecture more agile. Data sources can now be integrated much more quickly without causing any business downtime. For improved performance in processing large data sets, TAM was able to leverage the caching database, to avoid impacting the source system.

Data democratization and self-service - Other than making data discovery and search very easy, the data catalog functionality in the Denodo Platform helped users to analyze the data lineage of various data sets while also improving the overall trust and confidence in the data that they were using. This enabled a certain degree of self-service among the business users and eliminated the need for shadow IT.

Data governance and security - By providing a single point of entry to enterprise data, the Denodo Platform enabled TAM to create centralized data access, data governance, and security policies across all of TAM's data sources. This also made it convenient for the IT team to audit user activities, and enabled real-time monitoring.

