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Toyota Astra Motor Achieves 95% Faster Data Preparation

Enhancing Operational Agility and Self-Service Analytics

Overview

Toyota-Astra Motor (TAM) is the sole distributor of Toyota vehicles in Indonesia, the largest economy in ASEAN. With over 30% market share, TAM leads the Indonesian automotive industry, selling more than 335,000 vehicles annually through 38 dealers and 350 outlets. Beyond sales, TAM also delivers comprehensive after-sales and vehicle-service operations across the country.

As its business grew in scale and data complexity, TAM embarked on a digital transformation journey to achieve real-time, governed access to enterprise data and empower business users through self-service analytics.

Challenge

TAM's operations generate vast volumes of data from sales, logistics, manufacturing, and after-sales services. However, this data was scattered across multiple systems and environments, leading to inefficiencies and delayed insights.

The IT team relied heavily on ETL pipelines, SQL Server Integration Services (SSIS), and numerous data marts, each containing duplicated or inconsistent data. These processes were time intensive and difficult to maintain, often requiring hours of manual work to refresh or reconcile reports.

As a result:
- Business teams faced long wait times for analytics updates.
- Key operational metrics lacked consistency across departments.
- IT resources were consumed by data preparation instead of innovation.

TAM sought a modern approach that would simplify data access, unify governance, and accelerate decision-making — without overhauling existing systems or duplicating data.
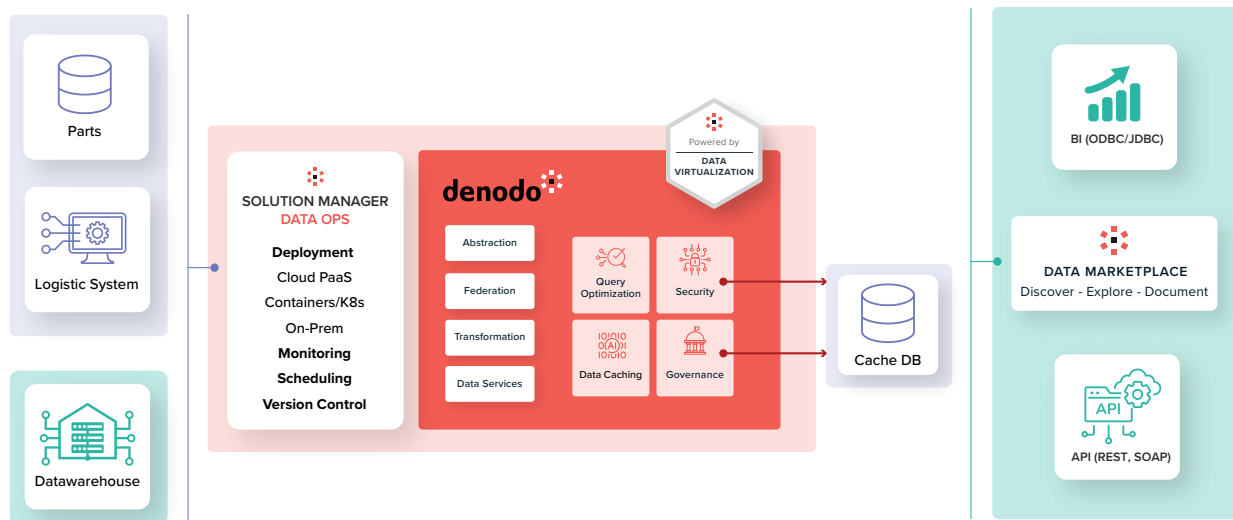
Solution

TAM implemented the Denodo Platform as a Logical Data Management (LDM) solution above its enterprise data warehouse and transactional databases. This unified disparate systems into a single governed data-access layer, enabling the organization to integrate, manage, and deliver data in real time without replication.

The Denodo Platform offered:
- Real-time data integration and active metadata management, reducing latency and ensuring data consistency.
- A built-in Denodo Data Marketplace where business users can easily search and access trusted datasets for analytics and reporting.
- A universal semantic layer that improved lineage visibility, enabled self-service analytics, and simplified data discovery for non-technical users.
- A centralized governance framework ensuring consistent access controls, auditing, and security through a single point of entry.

Together, these capabilities allowed TAM to transition from a fragmented data architecture to a flexible, virtualized environment that delivers faster insights with full control and compliance.

Benefits

✓ **Enhanced Supply-Chain Resilience**

TAM's Technical Services division developed an Early Detection and Resolution dashboard using Denodo's unified data layer.

- This dashboard provides real-time visibility across dealer networks, enabling proactive identification of parts or service issues.
- The Vehicle Logistics division gained accurate forecasting of vehicle deliveries from manufacturing to pre-delivery centers and outlets, reducing lead time variability and improving customer satisfaction.
- TAM's leadership now monitors key performance indicators across regions by make, model, color, dealer, and sales representative to quickly identify and resolve operational issues.

By virtualizing data access and eliminating latency, TAM achieved greater agility and transparency across its nationwide supply chain.

✓ **Accelerated Analytics and Operational Efficiency**

With Denodo, TAM's business units gained self-service access to integrated, governed data, removing dependence on IT for report generation.

- Data-preparation effort dropped by up to 95%, allowing teams to deliver insights in hours instead of days.
- Automation costs fell: TAM avoided a US $50K RPA implementation for Technical Sales Analysis by leveraging Denodo's real-time data connectivity.
- Simplified infrastructure reduced licensing, server, and maintenance costs, freeing IT resources for higher-value projects.

The result: faster analytics delivery, lower operational costs, and a more empowered data culture across the organization.

✓ **Centralized Security and Governance**

Denodo established a single point of entry to TAM's enterprise data, strengthening security and compliance.

- Unified policies now govern user access, dynamic data masking, and audit trails across all systems.
- Real-time monitoring of user activities enhances visibility and control over data usage.
- The architecture ensures consistent enforcement of governance standards while maintaining agility and performance.

Through this logical layer, TAM successfully balanced data democratization with enterprise-grade governance.

Why Denodo

Denodo's Logical Data Management approach empowered TAM to modernize data delivery without disrupting existing systems. Its virtual data access layer, semantic model, and active metadata framework provided agility, governance, and scalability, enabling TAM to meet its transformation goals faster and more efficiently than traditional data integration methods.