

## CASE STUDY

# KION Group Accelerates Data Access on Near Real-Time Supply Chain Analytics with Dremio's Data Lakehouse

## At a Glance

### The Customer



### Challenge

The Warranty division measured data from production plants, warehouses, and distribution centers to improve equipment and components costs. They needed to enhance the quality of their data across their supply chain analytics while accelerating data access.

### Solution

The team chose Dremio to deliver high-performance analytics over Microsoft Azure data lake. Dremio's semantic layer made it easy for teams to govern data access across critical business divisions.

### Results

- The latency of analytics-ready data products was reduced from 30 minutes to 3 seconds over Azure data lake storage.
- Real-time data provides timely insights into problems and root causes. Teams can respond promptly, saving time and reducing costs.
- All employees can interact with the data in their preferred way and use their findings to add value to the business.

## The Business

KION Group AG is the largest manufacturer of forklift trucks and warehouse equipment in Europe. The company was founded in 2006, and the history of the companies and brands that were brought together under one umbrella dates back to 1819.

Today, KION Group deploys over 1.7 million trucks worldwide across various industries in over 100 countries and 6 continents.

## The Challenge

When Linde AG and its forklift business became part of the KION Group, the result was a monolithic IT infrastructure made up of different systems. Data silos made company-wide analysis difficult, and making data-based decisions had become increasingly challenging, with discussions more focused on the accuracy of the information than on operational intelligence. In addition, many existing solutions offered only a limited scope for analysis. Massive amounts of data from various SAP apps and other sources could not be combined, resulting in a high risk of overlooking operational data.

### Use Case: The Warranty Division

The IT department undertook a challenging task: creating a unified analytics foundation. This involved dismantling data silos and migrating all data to a central architecture on Microsoft Azure. The solution needed to provide easy data access for business users in over 50 use cases while minimizing the impact on the business.

The Warranty Division aimed to improve equipment and components by analyzing data from repairs that occurred during the warranty period, a major cost factor. They also analyzed the quality of parts produced by suppliers and identified cost-saving opportunities. Service technicians' reports were another crucial source of quality information. However, data supporting their assessments did not exist.

## The Solution

In 2020, KION began looking for a solution that could meet the requirements of all their business units and use cases. The result was the KION Analytics Strategy and the KION Analytics Platform (KAP), a cloud-based platform based on Microsoft Azure.

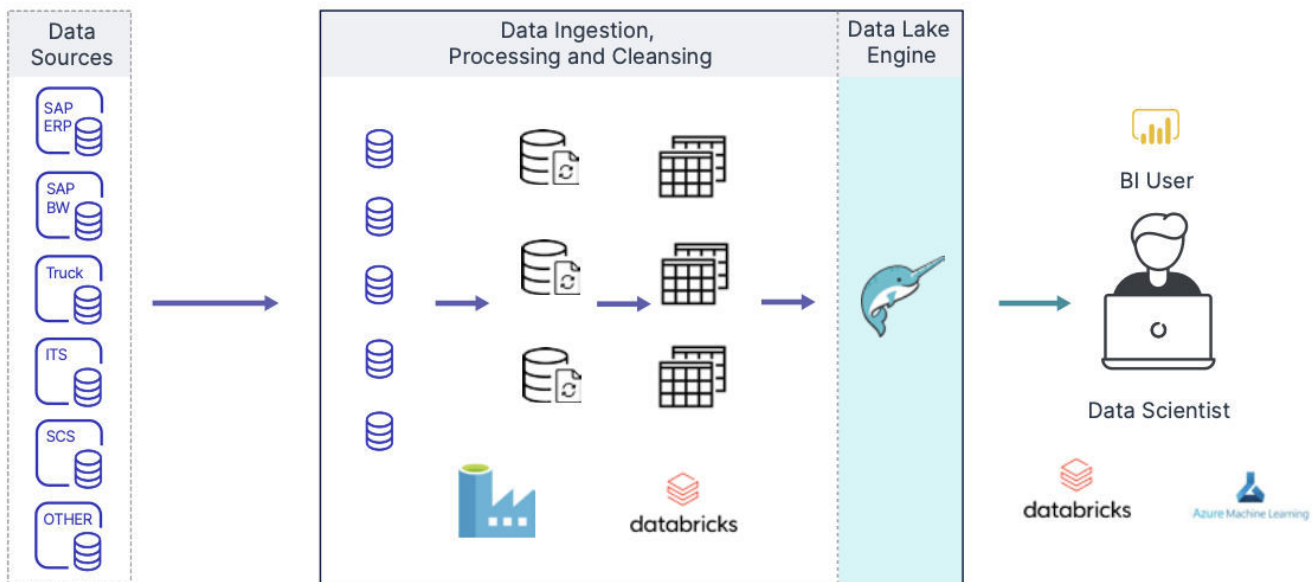
With a growing number of data and users, the existing Azure Synapse data warehouse and Analysis Service cubes could not scale in terms of performance and cost. As a result, Power BI dashboards took over 30 minutes to refresh. Tim Kappel, IT Business Partner Digital & E-Commerce (global) at KION, discovered Dremio during his search for faster alternatives for executing queries over their Azure data lake and for supporting data delivery to their various analytical tools. Kappel says, "We were looking for a solution that could provide users with all the information they required near real-time. In a proof-of-concept between Dremio and Azure Synapse, Dremio was superior in terms of performance – and the costs were reasonable, too. Plus, we could avoid vendor lock-in."

## Results

The KION Group ultimately selected Dremio as their data lakehouse engine for the KION Analytics Platform because it enabled self-service for all business units in the Azure data lake.

In the KION Analytics Platform, data flows from SAP systems (ERP, BW), trucks, and production systems (ITS, SCS, etc.) into an Oracle database. Using Azure Data Factory (ADF) and Azure Databricks for data engineering, the data is saved as Parquet files in Azure Data Lake Storage (ADLS Gen2). Powered by Dremio, the KION Analytics Platform integrates live queries into everyday work, allowing users to switch product families, models, or locations, making information tangible. For employees, the analytics make it immediately visible where fine-tuning or course correction has become necessary.

By accessing data directly from ADLS with Dremio, KION Group employees can now analyze more than 200 million data records to receive responses to queries in just three seconds, compared to the previous runtime of 30 minutes. Today, data is available in near real-time, and live queries are the rule. With Reflections - Dremio's query acceleration technology, users can switch product family, model, or location from their dashboard in an instant.



KION Analytics Platform reference architecture

Manufacturing forklift data is now easier, thanks to complete transparency in all processes and components. Dremio prepares data in a way that all employees can explore their data lake as needed. The team can now see for the first time when a defect has been eliminated for good.

Kappel adds, "Our users can freely pick and choose the tools they want to work with. For example: For their machine learning projects, our data scientists usually work with Azure Machine Learning or Databricks. And for use cases with a focus on reporting, we nearly always rely on Dremio and Power BI. Naturally, this depends on the individual users and applications. We call this our Analytics Toolbox because users can help themselves with the tools of their choice. But as most use cases focus predominantly on reporting, Dremio is engaged in most cases."

## Conclusion

Dremio on Azure reduces the complexity of data copying for analysts to access data, providing an optimal and transparent total cost of ownership (TCO) while future-proofing KION Group's data architecture for growth. Building a data lakehouse with Dremio means that non-technical users, such as product owners or service leads, can now run complex data queries without the assistance of IT. Reports that used to take hours to run can now be refreshed in seconds. These types of insights allow end users to quickly analyze their data in Azure across several use cases today and in the future.

### ABOUT DREMIO

Dremio is the unified lakehouse platform for self-service analytics and AI, serving hundreds of global enterprises, including Maersk, Amazon, Regeneron, NetApp, and S&P Global. Customers rely on Dremio for cloud, hybrid, and on-prem lakehouses to power their data mesh, data warehouse migration, data virtualization, and unified data access use cases. Based on open source technologies, including Apache Iceberg and Apache Arrow, Dremio provides an open lakehouse architecture enabling the fastest time to insight and platform flexibility at a fraction of the cost. Learn more at [www.Dremio.com](http://www.Dremio.com).

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