Maximizing Efficiency in Container Allocation

Case Study

Business Challenges and Objectives

- In the existing system, the client had to manually detect and address inconsistencies resulting from various exceptions and variations in data sources.
- The client needed a system to perform a weekly analysis of container allocation in Forty-Foot-Equivalent (FEU) units.
- They sought a solution that could smoothly transition between two distinct views, providing two different viewpoints.
- The solution needed to examine container allocation and utilization across multiple dimensions, offering user-friendly filtering options for planners.
- Their goal was to automate the generation of PO-level reports without needing direct SAP Connectivity, eliminating manual intervention.

Client

- Our client is an American manufacturer, marketer, and distributor of consumer and commercial products with an extensive portfolio of brands. They employ over 30,000 people globally with a distribution network that caters to the world.

Industry

- Manufacturing

Function

- Shipping

Technology

- Azure

The Solution

- To address dynamic allocation category switching, the team performed Gap analysis and Data Mapping, leveraging DAX capabilities.
- Calculation groups were implemented with custom summarization logic for various granularity levels (vendor, Plant, Destination, Brand, Division, PO).
- Data Mapping and Data Modeling through SQL were used to categorize forecasts based on exceptions with added conditional logic.
- Multiple SAP BW-derived PO and PREQ tables were migrated to Azure using Azure Data Factory, impacting transformation.
- To meet business requirements for data granularity and filtering, relevant facts and master data were enhanced through Data Modeling.
- Efficiency and automation were achieved by introducing a Dynamic ADF pipeline, facilitating the loading of Excel files into a data lake and SQL Data Warehouse.
- To meet unit-related business needs, Data Mapping and Data Modeling expanded material and material unit dimensions, incorporating unit conversion logic for UNT, Pallet, and Case values, simplifying planning.

Outcomes and Benefits

- Enhanced the operational efficiency of container allocation processes.
- Empowered the business to make informed decisions while reducing manual issue resolution requirements.
- Implemented a more robust and user-friendly system for analyzing container allocation and utilization.
- Streamlined reporting through technical enhancements, resulting in quicker access to accurate PO-level data.
- Improved unit compatibility, simplifying vendor communication, streamlining forecasting, and enabling comprehensive analysis.
- Enhanced automation and integration efforts, boosting report generation efficiency, reducing errors, and improving data relevance for informed decision-making.