DRIVING AUTOMATION IN DATA COLLECTION & REPORTING FOR AN AUTOMOBILE MANUFACTURER

Achieved faster report generation of complex data from 3 weeks to a single day

Client Background

Our customer is a global industry leader providing world-class quality ignition and sensor products to the automotive, motorcycle, marine and power segments for decades. Their ignition ranges include spark plugs, glow plugs, ignition coils, and ignition leads.

Our client used two sets of reporting for business purposes – internal and external. The internal reports would come from sources that included SAP ECC (ERP Central Component). The external reports would come from the client's partner ecosystems like Epicor, SCM (Supply Chain Management) for the client. This was via email communication from partners, web scraping and SharePoint Files (spreadsheets).

The Objective

The above data collation and reporting process was manual and time-consuming. Human errors were manifold, and it used to take anything between 2-3 weeks for the entire process of data collection to making sense of the collected data. In addition, they were witnessing late report delivery via email. The client wanted a transformation in the complete data collection and business reporting system.

The ideal client scenario was to collect the data and present it to the team in the form of reports that would help them get a curated result as per their requirement after detailed analysis.

Their aim was to implement a solution across the teams, but by first beginning with the "After Market" Business unit.

Xoriant Solution | Key Contributions

Demonstrating a technology pedigree with Microsoft services and two decades of strong partnership enabled the client to choose Xoriant as their technology services partner. Our expert team of technical and business experts laid the groundwork to understand the client's business requirements. We made use of the Xoriant Analytics solution that enabled the client with an interface to access unified reports and show them the visual representation of the sales.

Our Analytics solution helped the client to transport the data optimally from different enterprise applications and third-party integrations to the Microsoft Azure Cloud. To achieve this objective, we planned to deploy a few data acquisition pipelines through a combination of Microsoft Azure Services – Azure Storage, Azure Synapse, Azure Function, Azure Linked Services, Azure Key Vault. These services ran across the desired frequencies in order to extract business-unit-specific entities from the sources.

The client shared mock-ups of reporting dashboards with us as per their requirements. Our engineering team generated Power BI reports and dashboards which would refresh automatically daily for the proof of concepts within the client's team. We chalked out certain scenarios and worked to achieve the goals. Our engineering contributions include:

- Creating a centralized data warehouse and other additional scripts to pull data from multiple sources.
- Creating BI reports to help the client analyze the data of the "After Market" business unit.
- Implementing Row-Level Security and secure the critical reports, avoiding exposure of financial data to everyone in the organization while catering to a specific business requirement.
- Creating the Power Apps portal for Power BI reports to implement the access matrix that provides different levels of access based on their departments.

KEY BENEFITS

- Eliminated manual processes in business reporting
- Automated the entire data collection process from various external sources like SAP ERP and ECC
- Reduced the time taken for report generation to the immediate day from 2 to 3 weeks

- Developing a robust system devoid of any manual process across data acquisition and sending appropriate notifications.

We used Xoriant Analytics Solution and integrated the same with third-party applications such as

- SAP ERP and ECC of the client
- All the partner platforms that were running on Epicor
- Emails
- Customer portals used for scrapping
- SharePoint files (Excel format)

For storing structured data with appropriate transformations, Xoriant utilized Azure Data Warehouse as the prime option. We used two storage layers from the Azure Data Warehouse

- **Azure Synapse:** This is the single source of truth containing data originated from various platforms.

- **Azure Data Lake Storage:** Lookup data which would be periodically updated by the customer without altering formats. This may also be used as a staging store for performing ETL / ELT Jobs.

Technology Stack

Azure Automation Scripts | Synapse Pipelines | Serverless Data Acquisition | Selenium Driven Automation | Synapse ETL / ELT Pipelines | Power Apps | Power BI | SAP ECC | C# Automation Scripts