Professional Related Challenge

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The Truck Tires Competitor Pricing for the US market project was the most challenging project I have had in the last five years from the business and technology perspectives. The Continental pricing team is responsible for the design, implementation, and reinforcement of pricing strategies in the US market, for all product areas. The Competitor pricing intelligence is a crucial part of remaining competitive in the marketplace, but all the information is only available via the sales team or sources in the market. The intel comes in various formats: emails, excel files, internal data flows (SAP-based K2 workflow), and, on occasions, pictures or screen shots. In 2022, 15,000 competitor data points were collected. The legacy process was very manual and due to lack of capacity, there was no end-to-end process with regular recommendations on pricing adjustments based on market sensing.

I led the design and development of a single source for gathering and processing data, gaining insights, and making recommendations on adjustments to our pricing. The industrialized application provides an efficient process and system by which the pricing team incorporates, processes, analyzes, and creates pricing recommendations in a systematic way to maximize Continental's competitive position in the market.

The challenges to develop this application were multiple and diverse:

- Data were required from multiple sources and formats (including pictures, pdf files, emails). A single source database with large amounts of data was required with the corresponding data maintenance and ETL mechanisms to accommodate changes in the market (new competitor marketing lines and products, potential addition/deletion of criteria).
- A Dashboard was required with analytics coming from the intel gathered.
- Regularly scheduled (eventually monthly) recommendations were required coming from the pricing team on adjustments to price based on intel gathering.

My decision was to use the Pergola Platform to manage stages, releases and configurations. Pergola is an application delivery platform and provides developers an easy and non-intrusive way of building, deploying and operating their applications. It enables their users and customers instant and secure access to these applications. I deployed Pergola in one of Continental's AWS accounts to take advantage of AWS's computing, storage, network and IAM services. Pergola sits on top of a Kubernetes (K8s) cluster to orchestrate the automation of software deployment, scaling, and management. The new code developments from the version control system (GitHub) are triggered by Pergola to deploy new versions of the app in the selected stage (dev, qa, or prod). The application consists of Docker containerized components to extract data from the main data sources, a dashboard with analytics, a single source database and a scheduled job to execute the extractors.

The most difficult problems to solve were related to access to the existing multiple data sources. I was required to integrate multiple data sources. Continental sales system (MARKIS) is an

application for Analysis of Actual Sales, Forecast and Budget Sales figures derived from SAP ERP and Cosimo (Budget/Forecast). To connect to it from the new Pricing application, it was necessary to use the Continental SAP virtualization platform, or Virtual Data Integration Layer (VDIL). VDIL is a platform that provides interfaces for direct data access with a variety of front-end tools (e.g. Power BI, Tableau, KNIME, Python etc.) as well as for cross-platform data exchange (e.g. with Amazon AWS) for existing SAP solutions. Continental Customers Request database is a legacy Microsoft SQL Server database and the use of JDBC drivers with proper authentication using Active Directory was required. As a contrast, the new resulting database I deployed is a containerized PostgreSQL database with multiple advantages such as rapid deployment (I can deploy my PostgreSQL database anywhere), data separation (in case the application fails, data is not harmed), flexibility, cost savings, on demand utility and multi-cloud compatibility.

This application has helped Continental increase our revenue by saving time and resources in the process of premium pricing. Continental produces top tier tires only, and currently the market is putting us pressure by offering lower cost products. Continental uses this tool to optimize premium pricing to meet our volume targets.