

Dynamic Oil Pricing System Enabled Faster Market Reaction Time



SITUATION

Outdated technology based on which the client had developed its downstream retail oil pricing system proved to be inefficient in handling the highly fluctuating oil pricing structure. Tracking and informing its channels on constant price fluctuations became a tough challenge.

IMPACT

It became increasingly difficult for the client to keep in pace with the highly fluctuating nature of its business in terms of oil pricing, hence creating unwanted advantage for its competitors.

RESOLUTION

A completely revamped architecture developed by ITC Infotech based on latest tech platform, delivered an integrated and automated system that is intuitive, highly adaptable as well as scalable.

The Customer

The client is an international fully integrated Oil and Energy company. Having ventures in more than 30 countries, it is the largest Energy and Oil company in the United States and is the 4th largest refiner in the world. It is involved in end-to-end activities in the oil and natural gas sector, comprising of worldwide exploration, production and transportation, marketing, refining and power generation.

The company operates globally based out of four key locations - North America, Northern South America, North Western Europe and South East Asia. Its core business activities are divided into four divisions – Petroleum exploration and production, Petroleum refining, marketing, supply and transportation, Natural Gas extraction, processing and marketing and Chemicals and Plastics production and distribution. Its production streams include light oil, heavy oil, oil sands, natural gas liquids, conventional natural gas (CNG), liquefied natural gas (LNG), etc.

The Need

The client had an existing application running for the past 15 years, helping it to track and determine retail oil pricing based on market conditions. The downstream retail oil pricing system was custom developed and implemented to keep in pace with the dynamic and fluctuating oil pricing structure that exists in Europe and is being fixed by the local Oil regulatory bodies.

However, the customer was facing acute challenges in terms of tracking and informing its channels, on time, on constant price fluctuations. This in return was affecting its revenues as its competitors, taking advantage of the client's operational challenges, gained better control over market share.

To keep pace with changing times and technology progression, the company felt an urgent need to integrate and streamline the application to make the existing downstream/retail oil pricing system more intuitive, fully automated as well as scalable.

The existing downstream/retail oil pricing system was developed on Java. With changing market dynamics, the company felt the need to upgrade its technology platform in order to sustain its business growth and edge past its competitors. Also being a semi automated system, manual intervention was required to feed data or generate related reports, which was delaying the entire process.

The requirement was to completely automate the application in order to remain on top of the price war against its competitors by objectively working on to arrive at the suggested price amendments, and quickly disseminate the changes to its retailers. It was also required to build a database to actively track, analyze and monitor the price changes, which takes place almost every couple of hours.

The company also felt the need to streamline its existing IT infrastructure and integrate all legacy applications which had been running so far in silos, under one integrated platform and connect it with the point-of-sale system based out of its European HO in Germany. This would enable the company to improve its downstream/ retail oil pricing system and operational efficiency that would ultimately result in future business growth and development.

Additionally the client required various enhancements and new features and functionalities to be added within the system, in alignment with its business as well as current market needs.

Challenges

- The new and revamped application needed to be high on availability with 99% uptime, since it is the most critical contributor towards the client's business growth. Load balancing between all the key applications was important to ensure high availability of the downstream/retail oil pricing system



- A number of corrective measures needed to be taken, given the complex nature of the application as well as to accommodate multiple market dynamics, currencies and taxation structures applicable in the countries of operation
- Absence of experienced resources for the Dot Net technology (first framework) on which the new version of the application was to be re-designed made the job all the more challenging for ITC Infotech
- Integration of the new system with multiple ERP and legacy applications such as SAP, AS400, CYRRUS, etc running within the organization and ensure seamless compatibility with each other
- ITC Infotech had to work on a tight schedule keeping in mind the intricacy and criticality of the application

Solution

To meet the business requirements of the client, Dot Net was selected as the right technology platform for the migration. The new application for downstream/retail oil pricing system was designed on the first framework of Dot Net. It was customized to accommodate various additional features and functionalities based on client needs and were deployed across eight Central Eastern European countries.

The re-developed application delivered effective results creating a seamless and proactive 2-way communication system between the client and its retailers. This newly built 2-way communication system enabled instant decision making on fuel price changes, in line with that of the competitors and instantly communicate to the respective gas stations.

The system also supported multiple currencies existing in different geographies wherein the client operates. Considering the critical nature of the application, the centrally administered system was ensured of a secured framework in line with various audit requirements.

Further, using modern day practices, the price and information flow through the application was made available through email, fax and SMS for the users. MIS capability has also been incorporated to generate relevant reports and analytics.

Business Benefits

- The customer can now dynamically change retail prices every 2 minutes, thereby enabling a faster reaction time to market fluctuations and a coordinated decision on price determination
- A 2-way communication process between the HO and the gas stations/retailers ensuring full audit trail of price changes. To create this new functionality, the downstream/retail oil pricing system had to be integrated with different legacy systems running within the organization like SAP, CYRRUS, AS400 and PoS
- Being highly adaptable in nature, the re-designed system is equipped to handle multi-currency pricing and tax computations applicable in the respective eight countries of operation
- User defined dynamic pricing strategies at any level of organizational hierarchy (country/region/gas station wise, etc) with flexible cost, commission and taxation structures
- The new application version is equipped to generate business critical dashboards, reports and analytics (like price fluctuation details, pick-time pricing, margin analysis, identification of the competitor driving a price change, competitor brand analysis, etc) for the users (in this case the pricing analysts) enabling faster decision making
- Strong algorithms supporting the application that made it a highly adaptable system to continuous market changes. This produces faster reaction and automated mechanism to derive the formula to generate latest pricing based on current market conditions
- The solution also provides certain value added services like regular technology upgrades based on requirements



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Our IT services & Solutions includes Business Process Consulting, Product Lifecycle Management, Bespoke Applications Development and Maintenance, Manufacturing Execution System (MES), Customer Relationship Management (CRM), and Enterprise Resource Planning (ERP), Business Intelligence to a wide spectrum of continuous and discrete manufacturing industries globally.

Our thrust is on developing solutions and services that help improve our customers' operations and drive improved efficiencies across the value stream of the enterprise.

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