



## Case Study

# Enabling Gas Station Maintenance with IoT and Analytics for the 3rd Largest Convenience Store Chain in the US

Built an enterprise digital platform using IoT and advanced analytics to unlock upkeep and operational transformation, thereby reducing operational costs.

## Case Summary

The third largest leading convenience store chain in the Mid-west and Southern US operating 10000+ fuel pumps wanted to minimize operational costs and enable upkeep towards operational efficiency. The manual processing led to high response and resolution time. SLK leveraged a custom digital IoT platform to predict machine downtime while providing insights and foresight towards a competitive edge. We built a unified data repository for digital channels for analysis, automated workflows & triggers.



## The Challenge

The client uses Gilbarco gas dispensers in their fuel pumps at convenience stores across the US. Gas station maintenance is complex and requires a lot of manpower and effort to manage those stations. For safety and compliance, a continuous maintenance effort is needed to ensure the safe functioning of the equipment. A significant amount of time and money is spent on the process.

Any unwanted downtime impacts the bottom-line costs directly. These fuel pumps and other devices on the forecourt have been managed and maintained manually, meaning that a failure in a part of the system resulted in an interruption in service and functionality. This hampers customer satisfaction and overall service experience.



## The Solution

To prevent costly downtimes and improve customer experience, the customer turned to SLK for a digital solution. SLK collaborated with IoT platform vendors to provide an end-to-end solution to the client. IoT devices were installed and telemetry data was integrated from over 2000 sites. For AI analytics and machine learning, the Microsoft Azure platform was used. The solution by SLK has been built and deployed in the Azure environment and will help detect issues before they occur and take preventive action while aiding swift repairs. Considering 20 spillages per year, the estimated preventative savings from that one use case alone is more than \$2 Million/Year.

Our solution helps monitor equipment to identify issues while they are still small and address them proactively. We wanted to deliver the ability to monitor those issues remotely. It allows the fuel stations to increase their efficiencies and provide insights through a central monitoring system for the retailer. Key tenets of our IoT on Cloud Solution:

- Functionality to monitor temperature, density, moisture and light level of lamp and download the sales report.
- Predictive & Advanced analytics – Customer analytics and customer 360° insights, pricing analytics, etc.
- Gain Insights, Foresight & Competitive Edge Faster: Data Availability at the fingertips to enable decision-making & data science systems to gain insights and foresight towards a competitive edge.
- Data consolidation for better customer insights and improved performance of fuel pumps to deliver a better customer experience.
- Unified data repository for digital channels for analysis, automated workflows & triggers.
- Built and standardized the distributed streaming and real-time streaming process.
- Self-Service Rules Engine was built for business users to create and apply business rules from UI directly. This resulted in a 75% faster implementation of new business rules for the client.
- API Strategy and Visualization were developed to improve self-service capabilities and automation.
- Integrated IoT system with downstream applications to aggregate data from in-store devices to analyze and process aggregated data into the central repository
- Automated proactive & preventive monitoring sending notifications and alerts to the helpdesk.



## Business Impact

**\$2 Mn+**

Cost savings yearly

**40%**

Performance improvement

**98%**

Accuracy in predictions

## SLK's Efforts Showed Quick Results:

- Reduced equipment downtime and manual checks
- Enhanced operational safety & compliance
- Faster issue resolutions & accurate predictions of downtime
- Reduced operational cost and increased operational efficiency
- Single platform for a 360° view enabling enhanced customer experience
- Single source of truth - Cloud Democratization with all data available in one place for faster processing and better business decisions

Together SLK and the client addressed the business and operational transformation and customer experience need using SLK's experience and capabilities in building IoT solutions on the cloud.

Write to us at [hello@slkgroup.com](mailto:hello@slkgroup.com)

SLK is a global technology services provider focused on bringing AI, intelligent automation, and analytics together to create leading-edge technology solutions for our customers through a culture of partnership, led by an evolutionary mindset. For over 20 years, we've helped organizations across diverse industries - insurance providers, financial service organizations, investment management companies, and manufacturers - reimagine their business and solve their present and future needs. Being A Great Place To Work Certified, we encourage an approach of constructively challenging the status quo in all that we do to enable peak business performance for our customers and for ourselves, through disruptive technologies, applied innovation, and purposeful automation. Find out how we help leading organizations reimagine their business at <https://www.slksoftware.com/>



[www.slksoftware.com](http://www.slksoftware.com)

© SLK Software Pvt. Ltd. 2023