

SPAR Enhances Efficiency and Safety with AI-Driven Predictive Maintenance for Leading Retailer

For more information and additional use case visit our [Microsoft Practice](#)

About the Customer

Our client is a leading provider of store management technology focused on fresh foods, with a robust presence across 120+ retail chain accounts and 20,000+ stores globally. Their multi-tenant SAS platform supports operations across nine countries and three continents, emphasizing real-time analytics and advanced inventory management.

Technology stack

We utilized Azure ML & Power BI as key components of our technology stack. This combination enabled advanced analytics and machine learning capabilities for our solutions.



80%

Improvement in Stockouts



70%

Control on Wastage



[LinkedIn](#)



www.sparinfosys.com/microsoft



info@sparinfosys.com

BUSINESS CHALLENGE

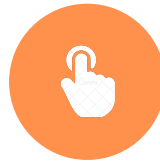


Operating in a sector where product shelf-life averages between 2-5 days, the client faced a significant challenge to minimize waste and optimize profitability. They sought to enhance inventory management through an AI-driven solution to maintain product safety, reduce waste, and improve overall operational efficiency.

BUSINESS SOLUTION



We developed an AI-driven Predictive Maintenance System tailored to meet the client's specific needs:



Real-Time Analytics



Ensemble ML Models



End-to-end food traceability

BENEFITS



1

Interface Application

Leveraging Azure Cloud infrastructure, we integrated external data sources such as seasonal data, demographic insights, and promotions data into an UI application to enhance decision-making capabilities.

2

Retraining

MLOps on Azure were deployed to reduce manual dependencies & project lifecycle time. We also implemented an auto-training feature that critically reduced the occurrence of challenges like data drifting and prediction inaccuracies.

3

End-to-end food traceability

Implemented comprehensive tracking and tracing functionalities with technical documentation to ensure compliance with food safety regulations and help the customer understand the framework effectively.

The solution is adaptable and can be customized to suit the needs of retail technology providers, food manufacturers & retailers.