



## Case Study

# Knock the Door in Advance for Preventive Maintenance of HVAC Systems at Industrial Plants

Preventive maintenance of HVAC systems at industrial plants reduces food losses by 67%

## Case Summary

A large fortune 100 manufacturer was dealing with the HVAC malfunction issues due to non-standard maintenance schedule and usage resulting in operational losses at customer stores due to various issues like perishable food items.

SLK co-innovated with the customer to identify the top critical alarms and failure points by utilizing sensors and previous failure data to predict HVAC machine failures ahead of time.



## The Challenge

The client was tackling increased losses from perishable shrinkage due to malfunctioning HVAC systems. Though their facilities had an existing installed E2 energy management system that generated alarms, the store personnel often did not have the expertise or time to analyze the alarms and respond appropriately. They wanted a system that could help them proactively maintain their HVAC systems without having to increase their workforce. The new system had to predict a failure in advance and trigger an alarm at least two days before it for timely and economical maintenance. They partnered with SLK to co-create this solution.



## The Solution

The SLK team identified the ten most critical alarms for HVAC systems and built a system to predict failures two days in advance. The system was built on the Microsoft Azure Services Platform with end-to-end solution ownership. The platform uses transmitter and sensor log data to identify constraints and influencing factors and has inbuilt algorithms to predict faults before an alarm triggers. This predictive analysis is done through Supervised Learning Multi-Class classification model. Connecting over two million devices, the system highlights 10+ critical alerts and factors on real-time intuitive dashboards.



## Business Impact

**67%**

Reduction in food  
loss expenses

**99%**

Unkeep

**35%**

Reduction in  
operational costs

## SLK's Efforts Showed Quick Results:

The new system helped the client predict maintenance needs and keep the HVAC systems running smoothly.

- The system connected two million devices for 24/7 monitoring and triage of alarms
- Pre-empting maintenance needs helped the client optimize the maintenance schedule and reduce costs by 35%
- A well-running HVAC system reduced loss due to perishable shrinkage by 67%

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. 2022