

Case Study



A supermarket chain enhances store operations with predictive insights and proactive actions

The retailer experienced energy and operational savings while improving food storage safety compliance.



The Customer

A supermarket chain operating 400 stores, each averaging 20,000 sq. ft. The stores are equipped with Heating, Ventilation, and Air Conditioning (HVAC) systems, fire protection systems, server rooms, Uninterrupted Power Supply (UPS) systems, diesel generators, utility supply systems, and refrigeration systems.

The Challenge

The retailer set out to improve operational efficiency and strengthen compliance with its internal temperature policies through proactive monitoring and maintenance across key systems. Key objectives included:

- i) Reducing energy waste throughout store operations to lower costs and support sustainability efforts.
- ii) Increasing uptime for fire safety equipment to ensure uninterrupted protection and regulatory readiness.
- iii) Enhancing food safety compliance by improving the monitoring of refrigeration systems, including chillers and freezers.

The Solution

The retailer engaged Carrier ABOUND to meet their objectives. The stores were connected to the ABOUND™ Insights platform to identify opportunities to optimize energy consumption, improve equipment health and enhance food safety monitoring. A team of experts at our Carrier Customer Command Center collaborated with the retailer's technical staff to assess store equipment and operations. The platform coupled with the command centers enabled:

- i) Data-driven insights: Store equipment data was analyzed to generate predictive insights and actionable recommendations.
- ii) Proactive interventions: Action plans were shared through regular reporting, and store managers received expert support for tracking and completing field actions.

Key Benefits Delivered:

- i) Optimized energy consumption
We identified excess energy usage during unoccupied hours through data analysis. These insights were regularly reported to the retailer, prompting them to implement effective energy conservation measures.
- ii) Improved fire safety equipment compliance
We scheduled audits, conducted mock drills, and assisted with fire safety equipment maintenance in alignment with the local regulations.
- iii) Improved refrigeration efficiency
Targeted cooling adjustments and proactive maintenance helped reduce energy use and improve uptime. These actions were driven by timely worklists, weekly deviation reports, and monthly analytics provided to the retailer.
- iv) Enhanced food safety monitoring
Refrigeration equipment was continuously monitored to maintain OEM-recommended settings. Temperature deviations triggered root cause analysis and corrective actions to safeguard food quality and reduce waste.

The Result

From June 2024 to May 2025, internal monitoring and key performance indicators showed:

- i) **19% reduction in energy consumption** across all stores.
- ii) Consistent alignment with the retailer's chiller temperature standards — **averaging 77% compliance** over time.
- iii) Consistent alignment with the retailer's freezer temperature standards — **averaging 61% compliance** over time.

These figures reflect measurable improvement compared to prior conditions, where temperature compliance was inconsistent.

This initiative contributed to measurable savings, helped meet food safety efforts, and enabled consistent adherence to operational policies — both during store hours and after hours.

Note: Results are based on internal data and may vary depending on store conditions and implementation. No regulatory endorsement is implied.

Write to us at abound@carrier.com for more on how we can help your company achieve its business and sustainability goals.

About Carrier Abound

Carrier Abound provides digitally connected lifecycle solutions and services for diverse building portfolios. The solutions and services enable building management to see deeply and broadly across their assets, prioritize and act on real-time insights, and refine, adapt, and scale on a continual basis to improve energy efficiency and asset performance, enhance occupant comfort and productivity, and streamline compliance reporting. Carrier Abound is part of Carrier Global Corporation, global leader in intelligent climate and energy solutions.

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