Stores of an athletic footwear brand get fit with AI & IoT

The retailer saved costs by adopting predictive maintenance of store equipment and increasing energy efficiency through optimized operations.

The Client	An American lifestyle and performance footwear company with more than 4,000 stores worldwide. It is one of the largest athletic footwear brands in the USA.
The Challenge	The retailer sought to leverage cutting-edge technologies such as the Internet of Things (IoT), and Artificial Intelligence (AI) to automate store operations, reduce energy consumption, and enhance adherence to enterprise-wide operating policies. Furthermore, they aimed to optimize the number of technician visits through remote commissioning, monitoring, and troubleshooting of Heating, Ventilation, and Air Conditioning (HVAC) equipment across their network of stores in the USA.

Their objectives included:
1. Enhancing occupant comfort through improved temperature compliance across all stores.
2. Improving energy efficiency of the stores through better Monitoring and Controlling of store equipment.
3. Optimizing store equipment operations and maintenance processes to minimize carbon emissions.

The Solution	The retailer partnered with Carrier Abound for its expertise in achieving these objectives for multi-site organizations. The plan involved rolling out its AI-driven solution and remote service across 500 stores in the USA in a phased manner. Carrier Abound deployed its Energy Efficiency and Energy Management services to drive operational transformation at the enterprise level. The integrated services combine the use of store energy data, equipment behavior analytics, and field service management to enhance savings.

After the initial study and analysis, the Carrier Abound team arranged and installed the open protocol site hardware kit – which included Building Automation System (BAS) controllers, room comfort controllers, sensors, and central supervisors – and then commissioned them in a timely manner. Thereafter, all the stores of the retailer were on-boarded onto the Abound™ Insights platform, thus integrating all the HVAC units onto a digital platform.

The Abound Insights platform facilitated the implementation of predictive maintenance for the stores' equipment, providing insights into enterprise-wide store operations. Centralized analytics and reporting through the Abound Insights platform improved how the retailer could plan maintenance activities and minimize equipment downtime. The platform also identified malfunctioning and non-functional equipment, allowing for proactive resolution and, consequently, enhancing store uptime.

The retailer's teams and their vendor partners were supported by the BluEdge™ Command

Centers. The centers are made up of specialized teams of domain experts and data scientists. They study the predictive insights from the platform to define action plans and ensure their completion on time. They work 24/7 to proactively manage equipment operations and maintenance as well as provide quick responses and remote support to store managers. The centers support the retailer's stores by handling store and technician calls, proactively acting on recommendations from the Abound Insights platform, and monitoring equipment performance across the connected stores.

The model of engagement helped the retailer increase awareness among employees on energy conservation and made them more proactive in handling equipment operations.

The Result

The retailer was able to make store operations more proactive and achieve its objectives of improving temperature compliance, saving energy, and optimizing the equipment maintenance process.

Key results for over 175 connected stores:

- Over 19% average energy savings from January 2019 to July 2023.
- Over 76% average remote resolutions of HVAC issues from January 2019 to July 2023.
- Over 42% reduction in the number of incidents per store per month in the period of January - July 2023, compared to the corresponding period in 2021.
- An average service level of 92% for calls addressed by the BluEdge Command Centers, with the average call abandonment rate of 0.8%, for the period January 2021 to July 2023.

"We have seen a significant decrease in the store issues from the time the engagement began. We can manage our store environments better now, thus providing a healthier in-store experience to our customers and our employees. The centralized analytics & reporting is great, allowing us to plan our maintenance activities better and reduce downtime. In fact, the average remote resolutions of HVAC issues has helped significantly reduce technician visits. This saves us not only cost, but also the associated emissions from truck rolls to our stores, allowing us to contribute to fighting climate change. This helps us reduce our carbon footprint and meet our sustainability goals."

Director of Facilities at the Retailer

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.

For more information, please visit abound.carrier.com. Join the conversation on LinkedIn.