

Case Study



A Retailer Digitally Transforms 2,100+ Stores with AI and Remote Services

Over a decade, the retailer achieved approximately 14.5% average energy savings, enhanced occupant comfort and launched predictive maintenance.



The Customer

A large home improvement chain with more than 2,300 stores across North America, each averaging over 100,000 sq. ft.

The Challenge

The retailer aimed to take a proactive approach to store operations. They wanted to leverage cutting edge technologies, such as Artificial Intelligence (AI) and Internet of Things (IoT), to address Heating, Ventilation and Air Conditioning (HVAC), lighting issues, optimize demand charges, and remotely manage equipment commissioning and troubleshooting.

Their objectives included:

- i) Improving energy savings
- ii) Improving occupant comfort
- iii) Improving maintenance effectiveness and reducing maintenance
- iv) Engaging in active demand management

To achieve these objectives and transform store operations, the retailer worked with Carrier ABOUND.

The Solution

Carrier ABOUND deployed a suite of services across over 2,100 stores in the USA & Canada, enabling enterprise-level operational transformation for the retailer. By integrating energy data, equipment analytics, and field service management, we delivered significant energy savings and reduced operational costs.

We onboarded all the stores onto the ABOUND™ Insights platform by integrating HVAC, lighting, and other equipment via existing Building Automation Systems (BAS) — creating a connected, intelligent infrastructure.

The platform continuously analyzes equipment data to generate predictive, actionable insights and prescriptive recommendations aimed at reducing energy use, improving equipment uptime, lowering maintenance costs, and managing demand.

The stores were supported by Carrier's Command Centers, which are staffed with domain experts and data scientists who interpret insights, define action plans, and ensure their timely execution. The centers run 24/7 and offer real-time support to store managers.

The Abound Insights platform enabled proactive actions to be taken in three modes:



Autonomous Actions – Based on prior approvals from the retailer, certain defined actions were executed directly and autonomously by the platform through a store automation software package. This software, integrated with the Abound Insights platform, enabled store-level intelligence with auto-act capabilities. It resides on the base control program of BAS in each store and deploys multiple savings strategies and comfort features without conflict. It could act autonomously across various equipment types, including rooftop units, lighting systems, and sensors.



Remote Actions – Certain predictive actionable insights from the platform were acted on remotely by the teams at the Carrier's Command Centers by logging into the store BAS. These actions were either pre-approved for implementation by the retailer, or carried out after consulting with them.



Field Actions – For insights that couldn't be addressed remotely, the command center teams converted them into truck rolls by entering work orders in the customer's Work Order Management System. Wherever possible, issues were grouped so that multiple fixes could be carried out during a single technician visit. The work orders were also updated with recommendations from the platform, enabling more first-time right fixes. This saved the customer maintenance costs, reduced downtime and lowered the number of emissions from truck rolls that would be caused by multiple issues and repeat visits.

The Result

The combination of the Abound Insights platform and Carrier's Command Centers enabled the retailer to drive proactive operations, consistently save more energy per year and improve maintenance processes over the engagement duration.

This long-term partnership with Carrier Abound helped the retailer save approximately 24.8% of energy in the 12th year of the engagement.

Here is a look at the results across 2,000+ connected stores for the period Feb 2024 – Jan 2025:

- i) Average 94% temperature compliance maintained across stores
- ii) Average 92% work order and service calls were remotely resolved
- iii) 2.4 work orders per store were reduced vs the baseline of 2015, thereby increasing the mean time between HVAC equipment failure by over 51%
- iv) Approximately 7.6% reduction in peak demand charges, on average

This engagement also won a 2017 Environmental Leader Top Project of the Year award and was a finalist at the OPEX Awards 2022 in the category of "Best Digital Transformation Project".

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.

For more information, please visit abound.carrier.com and join the conversation on [LinkedIn](#).

