

Axiom Enabled Sprouts to Lower Refrigerant Leaks by 40.1% using AI-Based Automated Leak Detection

THE SITUATION

Food and grocery operators are facing escalating financial, operational, sustainability and compliance pressures to reduce refrigerant leak rates:

- Skyrocketing costs of HFC refrigerants (2-3x in recent years)
- Tightening state and federal regulations (e.g. CARB, EPA)
- Increased focus on greenhouse gas (GHG) emissions (refrigerant leaks are typically the #1 driver of Scope 1 emissions)
- Rising rate of cooling outages due to undetected refrigerant leaks (due to aging systems)

Customers like Sprouts respond to these challenges by leveraging Axiom’s Early Leak Detection (ELD) capabilities, which are recognized by the U.S. EPA and the California Air Resource Board. This proactive approach not only mitigates environmental impact but also safeguards operational efficiency and the bottom line.

Facility operators now need to prioritize the adoption of Automatic Leak Detection (ALD) across their portfolio of sites.

THE TEST

Sprouts implemented Axiom Cloud's ELD Module in 115 California stores in April 2023. Sprouts Farmers Market had previously installed a different software-based refrigerant leak detection solution in the same stores. This enabled a clear “head-to-head” comparison of performance from April through December 2023.

CASE STUDY

Number of Locations

- 115 stores

Subscribed Modules

- Early Leak Detection (**Featured**)
- Predictive Maintenance
- Enterprise Visibility



“We are taking steps toward lowering our carbon footprint ... [including implementation of] refrigeration leak detection technology to more quickly and efficiently detect and mitigate fugitive emissions.”

- Sprouts’ 2023 Impact Report

RESULTS

- In the first nine months, Axiom identified **32** leaks early (**84%** faster than alternative measures)
- Enabled Sprouts to save **8,303** lbs of refrigerant (**259** lbs/leak on average)
- An alternative ALD solution - operating in the same stores during the same period - entirely missed **66%** of the leaks detected by Axiom
- Axiom enabled Sprouts to reduce their annual refrigerant leak rate by **40.1%**, eliminating **11,886** metric tons of GHG emissions
 - Enabled Sprouts to save over **\$354,000** in refrigerant costs, with total savings (including lower maintenance costs) exceeding **\$460,000**
- Enabled Sprouts to pass **100%** of audits performed by the California Air Resource Board (CARB) in 2023, avoiding potential six-figure fines and compliance costs
- Enabled Sprouts to save **\$400,000** by canceling manual quarterly leak inspection service

CONCLUSION

Axiom Cloud's ELD module has emerged as a vital tool for the grocery industry in addressing the challenges posed by refrigerant leaks. Grocers like Sprouts choose Axiom because it can be remotely deployed across many sites rapidly - *no onsite hardware or site visits required*. It can also be deployed across sites with or without receiver level sensors.

By combining advanced AI-driven technology with real-time monitoring and early detection capabilities, Axiom offers grocery retailers a scalable and cost-effective solution to mitigate environmental impact, comply with regulations, save money, and avoid disruptive cooling outages.

As the grocery industry continues to prioritize sustainability and cost optimization, Axiom's ELD module stands out against the more common sensor-based alternatives as a more cost-effective, scalable, and powerful solution.

BENEFITS

1. Reduced refrigerant leaks by as much as 40%.
2. Reduced refrigeration maintenance spend by hundreds of thousands of dollars.
3. Complied with ever-stricter federal and state regulations regarding autonomous leak detection.
4. Minimized one of the largest sources of Scope 1 GHG emissions.
5. Minimized the incident rate of high case temperature events and associated food loss.

Refrigerant Lost Before Notification (2023 Results Annualized)

