

Project details

- **Project start date:** June, 2023
- **Completion date:** Ongoing
- **Location:** 10 sites across the U.S.
- **Goals:** Cost saving, energy efficiency, service optimization, occupant comfort
- **Technologies:** Adaptive Setpoints



Five-figure savings at two Macerich malls with more on the way

Project overview

Macerich, a leading real estate investment trust, faced challenges in reducing energy consumption without impacting guest comfort at properties across the country. Working through its longtime integration and controls partner, OTI, Macerich utilized the Buildings IOT adaptive buildings suite for automated demand management (ADM) and achieved more than \$10,000 in energy savings at a single property within the first month of deployment. And the savings haven't stopped there.

The following case study explores immediate successes achieved at two Macerich locations. This program is currently being rolled out across 10 sites with several more planned.



We found Buildings IOT to be highly experienced in providing us a truly unified platform that brings all our systems together and achieves a single harmonious output. Together, we're improving building performance and standardizing operations.

Ryan Knudson, Macerich

Challenges

To initiate the portfolio-wide energy savings program, Macerich and OTI presented Building IOT with a small group of sites, including one with a lot of ongoing and unresolved issues.

Upon deploying the ADM program through the Buildings IOT technology onPoint, it became clear that energy savings were not going to reach the projected amount because there were too many problems across too many of the airside equipment at the million-sq-ft property.

The challenges were twofold: first, 17 units were immediately disqualified because their fans were running 24/7 and they were still unable to maintain a setpoint. And this had been happening for more than a year. Second, even on the seven units that were ready for action, there was room for improvement across the operations and controls strategy in order to reap the full benefits of the ADM program.

Moreover, there was a historical lack of awareness regarding certain issues affecting their buildings. Despite data being available, it had not been presented in a way that made it easy to act quickly, and the incentive for resolution wasn't always clear.

The Buildings IOT adaptive buildings suite is delivered alongside its leading fault detection and diagnostics engine, which clearly identifies issues that impact an equipment's ability to participate in the demand management program.

Using the FDD as their guide, the ops team at this Macerich mall was able to clearly see where the issues were, and the executive team who spearheaded the program as part of their sustainability initiatives were able to provide swift approval to complete the work necessary to achieve the results they expected.

What Buildings IOT did

The Building IOT analytics technology dove deep into the real-time and historical data of the airside equipment at this property and in so doing, automatically identified and categorized the issues against the requirements for participation in the ADM program.

The onPoint user interface clearly and visually relates the top issues to the equipment that is meant to be enrolled in the ADM program. For equipment that has too many breaking issues, the UI presents a direct link to a Disqualified list which details the problems that are preventing each equipment from participating.

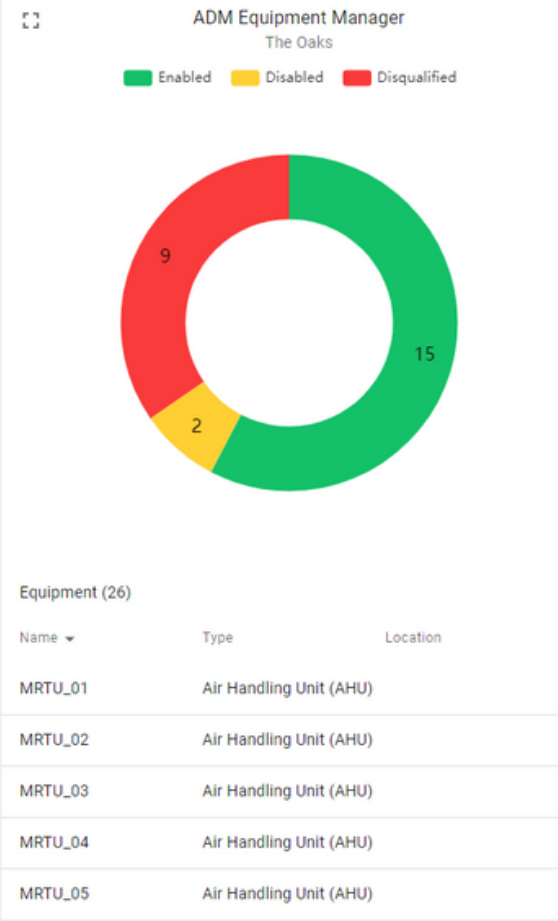
The executive dashboard allowed Macerich management to quickly see that 70% of their airside equipment was disqualified from the demand management program, thereby severely limiting their potential for savings.

Results

The Buildings IOT adaptive buildings suite provided the incentive Macerich needed to resolve ongoing issues at this site and across their portfolio. As a result, Macerich has achieved 84% enrollment of eligible equipment at this site.

The resolution of just one disqualifying issue resulted in more than \$10,000 in energy savings within the first month of deployment, with savings ongoing from there. Costs avoided on equipment failures could reach up to \$48,000 in the first year.

The proactive approach to presenting equipment operating data as a barrier to savings proved highly effective. Macerich, now motivated by the potential return on their investment, not only rectified immediate issues but also demonstrated a willingness to engage in ongoing energy efficiency initiatives.



Expanding success

Another recent site deployment by Macerich, Green Acres, is a testament to the immediate impact of onPoint technology. Before Buildings IOT handed over this site to its operators, we reviewed the Insights and pulled aside several high-priority issues affecting energy consumption of 15 RTUs.

Further due diligence by OTI enabled our teams to pinpoint the necessary modifications in the site JACEs and achieve resolution across all 15 RTUs.

While we are still awaiting additional meta data for accurate energy and cost savings calculation for this site, initial estimates suggest potential annual savings of \$50,000 on electricity bills which equates to a significant 5% reduction on their total electricity bill after just one day in the automated demand management program with a quick payback period of just six months. Additionally, the useful life of each of the 15 RTUs that were affected by this issue is expected to double, which equals hundreds of thousands of dollars in maintenance costs avoided for Macerich.

This collaboration showcases the power of delivering insights in a way that engages and motivates ops teams to resolve issues that are keeping owners from achieving cost reductions. When resolution is incentivized, clearly articulated, easy to track and automated, energy savings and op-ex reductions are easy.

Challenges

1

Macerich faced difficulties in achieving the projected energy savings due to a substantial number of ongoing and unresolved issues with their airside equipment.

2

Even on the seven units ready for action, there was room for improvement in the operations and controls strategy to maximize the benefits of the ADM program.

3

Macerich had a lack of awareness of certain issues affecting their buildings. Despite data availability, quick action was hindered, and incentives for resolution were not always clear.

Successes

1

The resolution of just one disqualifying issue resulting in more than \$10,000 in energy savings within the first month of deployment

2

onPoint ADM program served as an incentive for Macerich to resolve ongoing issues, resulting in an impressive 84% enrolment of eligible equipment.

3

The proactive approach of presenting information as a barrier to savings proved highly effective, encouraging Macerich to engage in issue resolution and energy efficiency initiatives.

Are you ready to turn
your building data into **action**?



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