



KAIZEN FDD PLATFORM AND IMPLEMENTATION FOR AN OFFICE BUILDING

CLIENT OVERVIEW

A renowned pump manufacturer partnered with CopperTree analytics to provide building analytics services for one of their office buildings. Kaizen FDD platform was used to identify HVAC component faults, help with preventative maintenance, and compliance reporting. Analytics implementation monitored equipment performance, comfort issues, and energy impact. Findings from CopperTree were prioritized based on different parameters like Health Impact, Potential Savings, Avoidable Cost, etc.

BENEFITS



In a span of just four months, Kaizen FDD has detected a variety of faulty operations occurring in the building. These findings resulted in energy savings of 296,000 kWh, which translates to approximately \$17,907 annual potential savings.



THE PROJECT

Kaizen FDD platform was used to identify HVAC component faults, help with preventative maintenance, and compliance reporting. Analytics implementation monitored equipment performance, comfort issues, and energy impact.

THE CHALLENGE

It was observed that the hot water pumps were cycling excessively, thereby reducing the pump lifetimes. This also resulted in excess fluctuation in the discharge air temperature (DAT) within the building's airside systems. Another issue that was observed was with the control valves, which were found closed during the operation of circulation pumps, resulting in undesirable pressure build up in the valves. CopperTree recommended the client check the controls sequence and ensure that any manual override was changed back to follow the intended controls.

THE SOLUTION

CopperTree recommended the client to check the controls sequence and ensure that any manual overwrite was changed back to follow the intended controls. An increase in the deadband before pump operation was recommended to reduce excess pump cycling. CopperTree also recommended that control valve operation and circulation pump operation has matching control sequence.