



## KAIZEN FDD FOR A LOCAL POLICE DEPARTMENT

### CLIENT OVERVIEW

Located in the United States, our client is a well-respected, professional and ethical police department with a diverse workforce of sworn officers and full-time civilian members. In order to better use their finances for more critical aspects of their mission, our client hired CopperTree to take advantage of its Kaizen FDD platform with a goal of cost savings where possible, in this case from their HVAC system, and in-turn reduce carbon emissions.

### BENEFITS



By following CopperTree's recommendations, the client could realize a yearly savings of more than \$21,000 and an emissions reduction of approximately 33,000 kg of CO<sub>2</sub>e.

This optimization prevents the same amount of greenhouse gas emissions as driving an average gas-powered car in the US for over 81,000 miles.



### THE PROJECT

A municipal government client hired CopperTree to use Kaizen FDD platform to analyze their HVAC systems and find potential savings and emissions reductions. In a police station building, Kaizen showed various insights to indicate where the building could improve.

### THE CHALLENGE

After investigating, a common insight was found for three of the building's boilers. The boilers were cycling too much, which could harm the equipment and its lifespan. It could also increase the operational costs and energy use.

### THE SOLUTION

Once Kaizen detected a problem with the boiler cycling too much, it then recommended some steps to fix it. First, Kaizen suggested checking and revising the boiler control program and the operation sequence to see if they were causing the boiler to cycle unnecessarily. The boiler control program is the set of instructions that tells the boiler when and how to operate. The operation sequence is the order in which the boiler and other components of the HVAC system work together. Second, Kaizen suggested analyzing the temperature demand at the zone level to see if it was influencing the boiler cycling. The zone level is the area of the building that is served by a specific thermostat or controller.