



## KAIZEN FDD AHU OPTIMIZATION FOR A MEDICAL CENTRE

### CLIENT OVERVIEW

Providing health care to a very large community in the United States, this Medical Center also serves as a base for research into major medical areas such as Alzheimer's Disease and Post-Traumatic Stress Disorder. The HVAC system is critical for a medical facility's success, which is why our client decided to hire CopperTree and use its Kaizen FDD platform to supervise the HVAC system in the building and ensure optimal operation as well as explore areas of cost-savings and reduced carbon emissions.

### BENEFITS



The solutions proposed by Kaizen would result in the following benefits:

- An annual potential savings of around \$44,000.
- A corresponding emissions savings of about 312,000 (kgCO<sub>2</sub>)e.
- This carbon emission is the equivalent to CO<sub>2</sub> gas emissions from about 345,001 pounds of coal burned in the United States.

### THE PROJECT

CopperTree was hired by the client to carry out a standard Kaizen implementation on their building, within their United States facility, to better improve the HVAC system in the building and explore areas of potential savings and reduced emissions. The goal of this analysis is to help the client evaluate the different areas where either preventative maintenance is required or system optimization is possible, as well as in some cases an equipment schedule change.

### THE CHALLENGE

The standard implementation resulted in Kaizen generating various insights to highlight areas of improvement within the building. One of the top insights generated was an Air-Handling Unit (AHU) continuing to heat while the supply air temperature was above the setpoint threshold. This causes the AHU to over-heat the unit and would result in more operational costs to the client as well as potential discomfort to the patients in the space supplied by the aforementioned AHU.

### THE SOLUTION

To overcome this issue, it was advised by Kaizen to closely monitor the heating valve control and ensure that it is not open when the zones being supplied require no heat. Despite this being a simple fix, over-heating from equipment the size of an AHU would significantly increase the energy consumption by the unit and cause the client unnecessary reparations.