CASE STUDY

CopperTree Analytics

Connecting **Buildings** | Connecting **People**

ACHIEVING CHILLER SAVINGS IN A 24/7 CALL CENTER OPERATION IN THE PHILIPPINES

CLIENT **OVERVIEW**

Our client is a leading technology-enabled global business services company based in the Philippines. Specializing in customer e ngagement and enhancing business performance for renowned brands worldwide, the company operates with a focus on delivering exceptional customer experiences. With operations spanning across more than 40 countries and covering six continents, the company's workforce of over 400 dedicated professionals remains committed to facilitating seamless connections between businesses and their customers. Leveraging innovative technologies and industry expertise, the company serves as a trusted partner for brands seeking to optimize customer engagement strategies and drive sustainable growth in today's dynamic marketplace.

BENEFITS

Following the recommendation, the client transitioned to operating two chillers, eventually reducing to just one chiller in operation. Surprisingly, despite the reduction in the number of chillers, cooling output increased by approximately 10%. The COP surged significantly from 1.2 to 8, indicating enhanced efficiency. Kaizen facilitated a comparison of electrical consumption, revealing a remarkable reduction of over 66% when transitioning from three chillers running in September to one chiller in November.

The realized savings amount to over **4 million Peso (approximately USD $71,000) per year** from all fan coil units. This translates to an energy reduction of about **710,000 kWh**, equivalent to a decrease of approximately **580,000 lbs. of CO2 emissions.** To provide context, this reduction in CO2 emissions is equivalent to the emissions from burning **795,000 pounds of coal** in the Philippines. All estimates are based on on-site electrical meters utilized for utility measurement.

THE PROJECT

The call center, operating in the Philippines' tropical climate, necessitates continuous cooling provided by three chillers, operating 24/7 throughout the year. This demand for cooling is essential to maintain optimal working conditions within the facility, ensuring uninterrupted operations to support its global clientele.

THE CHALLENGE

Operating in the tropical climate of the Philippines, the call center faces significant cooling demands necessitating continuous operation of its three chillers throughout the year. Despite this constant need for cooling, the existing setup poses several challenges:

Suboptimal Chiller Operation: All three chillers have been consistently operating simultaneously, even during periods of low cooling load. This inefficient operation results in decreased performance and energy wastage.

Low Coefficient of Performance (COP): The chillers exhibit a low COP, with efficiency levels ranging from 1 to 2, particularly when operating at around 40 percent load. This inefficiency further exacerbates energy consumption and operational costs.

Addressing these challenges is imperative to improve energy efficiency, reduce operational costs, and enhance the sustainability of the call center's cooling infrastructure

THE SOLUTION

Leveraging Kaizen, the optimal number of chillers required to meet cooling demand is estimated. Kaizen's analysis reveals that operating just one chiller could suffice over 90 percent of the time.