



CHALLENGE

A shopping mall needed a convenient, secure, and dependable solution to control its HVAC system, keeping equipment functioning optimally and customers and employees comfortable when shopping or working.

The customer requirements include:

- HVAC system deployed in a shopping mall must maintain air quality
- · Must seamlessly integrate important KPIs in real-time
- Needs to support a large variety of equipment, sensors, and controllers
- Must prevent unnoticed anomalies from halting the HVAC resulting in excess downtime with lower AQI

SOLUTION

The best solution for this customer proved to be BBX VISIBLE. It does the following:

 Acquires real-time data from different sensors, relays, and controllers through BACNET over TCP

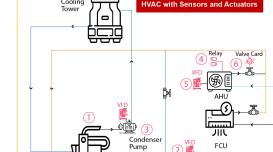
Solution Architecture

- Displays data in real-time on a dashboard and controls AHU, valves, and pumps
- Determines energy efficiency of HVAC system and generates alarms/events for AQI
- Predictive analysis overcomes faults based on historical values about reasons for downtime

RESULTS

The customer now enjoys the results delivered by the BBX VISIBLE IoT Platform, detailed below. Today, equipment operation and maintenance in the mall is trouble-free, and the ambient climate throughout the mall is comfortable for both shoppers and employees.

- $\boldsymbol{\cdot}$ Intuitive and intelligent dashboard monitors KPIs in real-time
- · Monitors HVAC remotely
- Schedules and performs duty cycling of the AHUs based on temperature sensor measurements
- Takes precautionary measures based on predictive maintenance advice





Secondary Pump