citizenM, an affordable luxury hotel brand with a mission to promote environmental responsibility, deploys a building management system (BMS) that maximizes guest comfort with minimal energy use.
“We want to have a positive influence on this world in which we are simply guests.”—citizenM

THE NEEDS

Maintain guest comfort
Reduce energy use to achieve best-in-class results and drive a return on investment (ROI) of 3 years or less
Ensure properties can be monitored remotely, and issues are resolved before guest comfort is impacted

THE SOLUTION

TSI Group (TSI) specializes in hotel BMS systems and custom built the citizenM hotel on Bowery Street NYC using advanced chilled beams for guest rooms. citizenM called on TSI to upgrade their original US property in Times Square for improved energy and operational efficiency. TSI relied on both Honeywell and Universal Supply as their trusted suppliers for the Times Square project as both had been partners on previous successful hotel BMS systems.

A fully programmable system was required to obtain the best performance with the existing four-pipe system, chillers, cooling towers, and boilers.

A Honeywell JACE system acts as the central control coordinating individual controllers and communicates with the chillers, boilers, and air handling units. Honeywell variable frequency drives were added to increase the efficiency of water flow for the cooling system. As cooling is greater than 60% of the electric load, the primary focus is always on cooling efficiency.

The programmable nature of the Honeywell system enables TSI to use their advanced algorithms to minimize energy use with changing weather and occupancy. The hotel’s BMS uses dynamic set-points for the chillers, pumps, and boiler systems versus the static set-points used by 99% of simple systems. It’s this approach that allows increased efficiency with no change of existing building equipment.

Internet connectivity allows remote monitoring and proactive email and text alerts to the engineering staff for prompt problem resolution.

THE BENEFITS

And what a standard citizenM has set! In new developments, citizenM requires BREEAM-NC Excellent or LEED-BD+C Gold accreditation to achieve an Outstanding or Platinum rating. In contrast, they target Very Good or Silver ratings in their redevelopments and existing buildings.

THE RESULTS

The energy savings are exceeding the original 3-year hurdle rate and is expected to be a 1.5 year ROI.

citizenM exceeded its goals with no guest impact during the transition, showing the world how a young, visionary hospitality brand can set a new standard for an industry.

“We work hard to minimise our environmental impact and maximise our social impact. citizenM makes an unwavering effort in obtaining sustainable building credentials...”

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