White Paper 7: Seven Use Cases for Smart Buildings

When we think about smart buildings, we often think about energy efficiency and environmental sustainability. However, there are many other benefits a smart building can offer, especially around tenant health and wellbeing. In this document we explore 10 cases for smart buildings.

Improved Productivity:

Studies have shown that workers in smart buildings are more productive than those in traditional buildings. This is because these buildings are designed to enhance cognitive function, reduce stress, and improve sleep. For example, smart lighting systems can mimic the natural light cycle to promote better sleep and wake cycles, while noise-reducing materials can help reduce distractions and increase focus. With a smart lighting system, it's easy to operate the lights in a circadian rhythm mode. This means that the lights produce warm low-kelvin (color temperature) in the morning and afternoon while providing high intensity blue light mid-day. This ensures that building visitors and tenants keep their body clock in synch with natural sun light color-temperatures.

Enhanced Indoor Air Quality:

Indoor air quality is a crucial factor in promoting health and well-being. Smart buildings are designed to improve indoor air quality through advanced ventilation systems, filtration systems, and other technologies. With a Cinch IoT system, the building can constantly monitor CO, CO2, Temperature, Humidity and particulate volumes in real-time. This can help reduce the risk of respiratory illnesses, allergies, and other health problems associated with poor indoor air quality.

Increased Energy Efficiency:

Smart buildings are designed for energy efficiency. This can reduce operational costs and environmental impact. For example, daylight harvesting is activated on all lighting near windows to ensure they only

operate when necessary. Motion control is activated for hallway and other area lighting for the same reason. When people are absent, lighting should be off or greatly reduced.

Better Comfort and Satisfaction for Occupants:

Smart buildings are designed to prioritize the comfort and satisfaction of their occupants. This can include features like ergonomic furniture, adjustable desks, lighting output, lighting color temperature, and air temperature control. By creating a comfortable and enjoyable environment, these buildings can help improve the overall health and wellbeing of their occupants.

Improved Safety and Security:

Smart buildings are designed to be secure and safe for their occupants. This can include features like keyless entry systems, security cameras, and emergency response systems and emergency wayfinding. By including advanced safety applications, smart buildings can help reduce the risk of accidents, injuries, and other security issues.

Environmental Sustainability:

Smart buildings are often designed to be environmentally sustainable, which can help reduce the overall environmental impact of the built environment. This can include features like energy-efficient lighting, renewable energy systems, and sustainable and local building materials. By promoting environmental sustainability, these buildings can help reduce the impact of human activity on the planet.

Advancements in Building Analytics:

Smart building programs like WELL certification, requires detailed data collection and analysis to track the performance of the building and its impact on its occupants. This data can be used to improve the building's design, operations, and maintenance. By collecting and analyzing this data, building owners and operators can make informed decisions that promote health, well-being, and sustainability.

Conclusion:

Smart buildings, whether built to LEED, Well or other certification protocols, offer a variety of benefits beyond their core functions of tenant shelter. The hundreds of smart buildings constructed using LEED and Well practices demonstrate that it's possible to improve tenant health, well-being, and productivity while reducing energy use and making the space more enjoyable. Whether in hospitals, schools, commercial offices, or residential developments, smart buildings are important for those looking to create the best possible environments for their occupants.

Next Steps

At Cinch IoT we're committed to helping companies optimize building operations, reduce costs and improve the safety, health, comfort and productivity of building occupants. If you still have questions, call us, we're happy to have a conversation about how we can help you. Our team has worked on hundreds of smart building projects with many of the leading architects, designers, engineers, technology consultants, GCs and EC's in the world. No matter where your project is located, we can find the right people and partners to help. Cinchiot.com