

# The Benefits of Artificial Intelligence in Buildings:

## ENERGY EFFICIENCY & SUSTAINABILITY

Improves energy efficiency in buildings by optimizing energy usage, predicting and preventing inefficiencies, and enabling smarter decision-making for energy management.

**Optimizes energy consumption** by analyzing data from sensors and smart devices within a building, reducing waste and carbon footprint and optimizing energy usage.

**Predicts maintenance needs and potential failures.** By proactively identifying and fixing issues, buildings can reduce energy waste and improve the efficiency of their systems.

Conducts **lifecycle assessments** of building materials and products to identify more sustainable options and guide decision-making in construction and renovation projects.

## SPACE, WELLBEING & PRODUCTIVITY

Creates healthier environments that enhance occupant well-being and productivity.

Enables sensors to monitor **indoor air quality** parameters to detect air quality issues and recommend actions like adjusting ventilation systems or changing building operating setpoints.

Powers digital building systems to create **comfortable, optimized indoor environments.** This can include recommendations to adjust temperature, humidity, and other building parameters that in turn maximize occupant health, wellness, and productivity.

Contributes to **decarbonization commitments** by optimizing the energy usage required to ensure indoor spaces are healthy and risk of airborne infectious disease spread is low.

## OPERATIONAL EFFICIENCY & EQUIPMENT OPTIMIZATION

Delivers smarter, more efficient, and cost-effective in-building operations through optimization of equipment, energy usage, occupancy awareness, and automation.

**Optimizes energy usage** in buildings, optimizing the operation of systems to minimize energy waste while maintaining occupant comfort and productivity.

**Optimizes space utilization** in buildings and provide insights on peak usage times, identify underutilized areas, and optimize resources, leading to energy savings and improved operational efficiency.

**Detects faults or inefficiencies** in building systems to identify deviations from normal operation, diagnose the root causes and provide insights for corrective actions, optimizing equipment performance and reducing energy waste.

### K-12 SCHOOLS

K-12 schools can become safer, more resourceful and provide an improved educational experience for students and teachers.

- Student safety
- Indoor air quality
- Energy efficiency
- Classroom design

### HIGHER EDUCATION

Campuses can become more efficient, safe and student focused, providing a better learning and living environment.

- Resource management
- Student safety
- Campus navigation
- Intelligent campus services

### HEALTHCARE

Healthcare facilities can become smarter, more efficient and safer, enhancing the experience for patients, staff and visitors.

- Building automation
- Predictive maintenance
- Space utilization
- Navigation

### GOVERNMENT

Government buildings can become more secure, efficient and service-oriented, enabling increased focus on the needs of its constituents.

- Resource management
- Workflow optimization
- Space design
- Visitor management