**Smart Building Solutions**

A smart building leverages HVAC expertise and advanced integrated systems to help optimize building performance and energy efficiency.

Interconnecting building utilities like HVAC, lighting and other facilities with a cutting-edge building automation system makes monitoring and adjusting operations easier and more efficient than ever before.

**How Do Building Automation Systems Work?**

Building automation systems operate as a single computer networking unit to control and monitor building-wide assets. To facilitate this, they collect, process and adjust information using five main components:

Sensors: input devices that measure data like humidity or room occupancy

Communication Protocols: the language used for each part of the system to “speak” to each other

Controller: the “decision maker” that takes data from the sensors and determines how to respond

User Interface: dashboards, screens or other interfaces that allow users to interact with the BAS and view building data reports

Output Devices: a key part that carries out the controller’s commands

These parts communicate across platforms, languages and software to perform a desired action. For example, if a building’s sensors detect humidity in the office, the controller would process this data and communicate to the output device to lower the temperature. Once the BAS adjusted the building’s temperature, the user interface would update to display data visually so occupants could review and optimize the building’s assets.

**Benefits of a Smarter Building**

Building connectivity enables owners, operators, managers and even occupants to optimize facilities from a data-informed, streamlined perspective. While exact benefits depend on your unique needs and circumstances, connected services primarily help to positively impact and achieve the “4 C’s” of buildings:

Costs: More resilient facilities with lower energy and operating expenses

Control: More efficient building performance through automated management of HVAC, lighting and other building systems

Confidence: More dependable remote monitoring capabilities and data for smarter maintenance, repair, and upgrade decisions.

Consistency: More reliable reporting, performance and vendor experiences.

With the growing demand for energy efficiency and sustainability, optimizing your HVAC systems has never been more important.