



# Intelligent Buildings

## The Challenge

The construction industry is facing a series of fundamental challenges that affect every player in the building lifecycle – from architects to owners to tenants. Despite technology advances, the majority of new commercial facilities in North America are not stepping up to the changing business needs of their occupants. Owners continue to focus their attention on up-front costs, without adequately considering the inevitability of mounting building operating expenditures.

Existing buildings are undergoing similar challenges. Internal control systems for heating, ventilation, air-conditioning (HVAC), fire and safety (video surveillance and access control), lighting, elevators, parking systems, and other industry specific sensors and controls are historically standalone and proprietary in nature. Communication and IT infrastructures such as telephones, computer networks (both wired and wireless), and location tracking systems are often on discrete networks. In the absence of a centralized infrastructure, these individual systems “can’t hear – nor understand – each other.” The result: multiple inefficiencies and expensive cost of installation, operations and maintenance.

## The Solution

Zones can help you address the challenges of rising facilities costs and create long term sustainable solutions that deliver positive business outcomes with attractive return on investment (ROI). By integrating all of the previously disparate systems onto a high speed, centralized, wired and wireless Internet Protocol (IP) network core, Zones can create an environment where all of the previously disparate systems can “hear each other.” Zones can bring together all the building’s systems into an IoT Gateway Platform (IGP), where various



protocols, wiring types, and languages will be converted to IP, be translated into a common language, and be normalized from a data perspective. Additional sensors are added to ensure availability of the data needed to manage and control the environment. Analytics software will interpret the information for additional levels of automation and control.

The new fully converged environment transforms the facility into a fully secure, intelligent building. Interoperability across all systems creates options for the systems to interact and work together in ways that improve operations, management, reduce energy cost, and enhance safety and security. Just as important, it allows for the addition of new interactive services in the building that create a more productive, responsive building environment for everyone involved.



### How secure is your building's Security System?

If they're like most building today, not nearly as secure as they could be. With intelligent building automation systems, you'll integrate and manage core systems that can ...

- Trigger actions such as automatically lock doors or illuminate targeted areas
- Increase video surveillance with sharp resolution cameras positioned strategically around the premises
- Provide sharper analytic capabilities (E.g., facial recognition) to better pinpoint and identify

## Time to act: Putting the Intelligent Building to work for you

The transformation to Intelligent Facilities is underway. Organizations are already reaping the value promised by the Internet of Things (IoT) and Intelligent Buildings. Why risk losing competitive advantage as costs continue to rise and change continues to accelerate? Focus on moving forward with the implementation of proven IoT solutions.

## Zones offers cost effective implementation of Intelligent Buildings

### The Envisioning Session

We recommend that every organization start with an Envisioning Session. It's a white boarding session facilitated by Zones IoT solution specialists and industry experts who will work directly with your key stakeholders to develop an understanding of how these solutions can solve your problems. The Envisioning Session also helps you create a high level strategic roadmap.

### The Readiness Assessment

The Readiness Assessment follows the envisioning session. It's performed by Zones IoT solution specialists and engineers and runs up to one week. The Readiness Assessment creates a well thought-out plan and a detailed investment strategy that will:

- Create a single comprehensive solution to implement at once for maximum benefit.
- Provide a roadmap of multiple phases and projects that meet investment/ROI strategy and budget constraints.
- Address a specific project to resolve an urgent need, and helps you develop a long term transformation strategy.



In addition to providing an on-site evaluation to determine capability and readiness for new IoT solutions, the Readiness Assessment is primarily a technological assessment that will address current capabilities and capacity, but takes goals, objectives, budget constraints, and high-level changes applicable to process and staff into account.

### Accelerated Prototype

Our Accelerated Prototype service combines an Envisioning Session, a Readiness Assessment, and a proof of concept prototype. Following the Envisioning Session, our specialists will join you in selecting a single IoT project that will address a specific business need. The Zones team then performs a Readiness Assessment to ensure compatibility and will deploy the IoT Gateway Platform as part of your selected solution to prove the goals of the project will be achieved when placed into production. This entire process – from concept to measurable results – is typically accomplished within two months, and is designed to confirm the solution meets long-term objectives.

## Case Study:

**Pennzoil Place creates dramatic cost savings by integrating building systems onto a single network.**

### The Challenge:

- Reduce energy costs in the two 35-story glass tower buildings
- Provide better visibility and control of energy loads and usage for management
- Free-up staff time for higher-value work by eliminating the need to monitor and maintain multiple systems

### The Solution:

- Facility-wide single wired and wireless converged IP network
- Over 100,000 sensors collected from all building systems presented for monitoring and analysis
- A single dashboard for round-the-clock management of building systems from a single location

### The Benefits:

- Reduced energy costs from \$4.2 million per year to \$2.0 million per year (\$2.2 million savings in yearly energy costs)
- Increased staff efficiency and building management
- A future-proof foundation where incremental building services are continually added to incremental revenue streams for the building owners



See our Pennzoil Place YouTube video.

## Intelligent Building Benefits

### Energy costs are reduced

By connecting all systems and buildings into a centralized management system, your facilities staff can provide more comprehensive monitoring and management of the environment from a single pane of glass. The additional data collection and analysis of energy demand and load provide important insight into how to adjust and tune the systems for the greatest efficiency. This information provides valuable insight into how to reduce costly operating costs and scheduled run times. Greater control and reduced response time allow staff to reduce operating costs for energy by taking advantage of utility rebates – and generate a revenue stream from common utility-driven demand side management programs.

### Building safety and security are increased

Intelligent buildings provide better, cost effective video surveillance that can monitor the environment from anywhere in the world, and converged solutions provide greater access control. For example, when a security or safety event occurs, security staff can have the system automatically trigger additional lighting, open and lock doors, ground elevators, and automatically communicate status and instructions to occupants through digital signage, intercoms, or IP-based telephones – all automatically or from a single centralized location.

### Work environments are more productive and efficient

The time and cost required to locate an individual is reduced when a worker's location is tracked based on where they access the network, or through integrated building sensors. The intelligent building can automatically respond, shifting phone numbers to new locations, granting authorized access to resources, adjusting lighting and temperature outside normal schedules, and automatically providing instructions or notifications via communication systems. Automatic moves, add-ons, and changes will reduce work flow and response, and help eliminate manual reconfiguration and management across any system tied into the intelligent building infrastructure.

## Why Zones is your go-to source for IT solutions

- Zones is a recognized leader in IoT and in implementing Intelligent Buildings with the experience, expertise and the proven success necessary to let you partner with Zones with confidence in transforming your building into a world class, future proof, intelligent facility.
- We develop long-term strategic partnerships focused on delivering proven value and excellent return on investment.
- Zones offers a comprehensive set of life cycle services to help our clients with intelligent building strategy, architecture, design, implementation, and support.
- While other suppliers focus on a single technology or building system, and deliver only a portion of the solution, Zones delivers an integrated intelligent facility where the value of the entire solution greatly exceeds the sum of stand-alone systems and components.
- Our approach takes a holistic view of the building including the facility owner's business goals, objectives and investment strategy, historical data, age and condition of the facility, budget limitations and operating requirements, and geographical and local utility variations.
- Our Interconnect IoT Gateway Platform will integrate all disparate systems onto a single IP enabled network, and translate all protocols and languages into a common data structure. Zones will create interactive scenarios across and between all building systems to create incremental value, cost savings, safety, and build experiences to improve productivity and efficiency.
- Zones leverages technology from strategic partnerships with every leading OEM manufacturer. We've built an extensive ecosystem of partners who provide the best of breed components, equipment, and services required for integrated IT and building solutions.



## Get Connected!

For more information about Zones IoT and Intelligent Buildings, visit [zones.com/IoT](https://zones.com/IoT) or contact your local Zones solutions specialist or account executive.