

Internet of Everything

Case Study

Customer Name: Transwestern and Metropolis Investment Holdings
Industry: Property Management
Location: Pennzoil Place Building in Houston, Texas
Employees: 16 Employees in Building; 1800 in Company

Property Management Firm Creates Energy-Efficient Smart Building

Transwestern and Metropolis Investment Holdings connected people, process, data, and things to building-wide IP network, transforming building efficiency and tenant experience.

Challenge

- Attract tenants in competitive real estate market
- Lower energy costs
- Increase staff efficiency

Solution

- Took advantage of Internet of Everything to connect all building systems, as well as Cisco video surveillance, physical access control, unified communications, and digital signage solutions

Results

- Increased building efficiency by centrally monitoring and managing all 95,000 network-connected building points
- Improved tenant experience by responding to requests in real time and providing innovative services
- Unlocked business intelligence in energy-use patterns to lower energy costs by 21 percent in first year

We are entering the next big phase of the Internet, the Internet of Everything, in which people, process, data, and things are connecting at unprecedented scope and scale, making network connections more relevant than ever before. Transwestern and Metropolis Investment Holdings are leading the way in taking advantage of increased connectivity to create value for the building owner and tenants.

Challenge

Transwestern is a privately held real estate firm whose many specialties include property and facilities management and sustainability. Among its management properties is the award-winning Pennzoil Place, two 36-story towers in Houston, Texas, built in 1975. Owned by Metropolis Investment Holdings, the building has 1.4 million square feet of rentable space, currently occupied by 37 tenants.

“To compete in the Houston real estate market, we need to keep costs down

and differentiate ourselves by providing innovative services,” says Roger Vasquez, director of engineering for Transwestern. But efficient building management presented a challenge because of the number and diversity of network-connected points. Pennzoil Place has 95,000 sensors and data points connected to the network, including fire alarms, wireless access points, video surveillance cameras, temperature sensors, air conditioning units, and monitoring points for British Thermal Unit (BTU) consumption and full-building electric energy consumption.



“Property management is a service-oriented business. Happy tenants are more likely to renew their leases with us and pay their rent and operating charges on time. Embracing the Internet of Everything has increased tenant satisfaction while also lowering operating costs.”

– **Roger Vasquez**, Director of Engineering, Transwestern



Solution

The Internet has entered a new phase, the Internet of Everything, referring to burgeoning numbers of connected people, processes, data, and things. Transwestern and Metropolis Investment Holdings realized that connecting everyone and everything in Pennzoil Place to a building-wide network would transform the 38-year-old structure into a “smart building.” Their vision: to transform property management by automating processes from temperature controls to work-order management, helping to increase tenant satisfaction, lower energy costs, and make more efficient use of staff time by speeding up response to tenant requests.

Transwestern and Metropolis Investment Holdings engaged Zones, a Cisco Gold Certified Partner, to connect every one of the 95,000 building points and systems at Pennzoil Place to a Cisco® fibre-optic network. The network also connects every endpoint and application in the building, including Cisco solutions for unified communications and collaboration, video surveillance, physical access control, digital signage, and high-definition videoconferencing.

Results

Connecting more people, process, data, and things to the Internet of Everything is benefitting Transwestern, Metropolis Investment Holdings, and tenants:

- Improved tenant experience: “Our tenants now receive network services in days, not the many weeks they would have to wait in most office buildings,” says Vasquez. “When an existing tenant needed to extend its network to newly leased space in another tower, the service provider was going to charge \$25,000 to complete the project in about six weeks. We were able to provide the same result service in two days, for less than one-tenth the cost.” To further increase the appeal of the building, Transwestern and Metropolis Investment Holdings plan to provide unified communications, wireless, and physical security as a service, saving tenants the expense of purchasing and managing their own solutions.
- Unlocked business intelligence to lower energy costs by 21 percent the first year: Connecting all building points to the IP network helps Transwestern and Metropolis Investment Holdings to analyze energy consumption on a real-time basis. The company quickly discovered that certain air-handling units had been operating 24 hours a day, possibly for years. “Gaining visibility into energy consumption helped us decrease energy costs by 21 percent from 2011 to 2012, and by another 11 percent in the first eight months of 2013,” Vasquez says.
- Fueled innovation: Joining all building systems together has created a wealth of possibilities for new services to increase tenant satisfaction and to further increase building and staff efficiency. For example, Transwestern and Metropolis Investment Holdings analyzed information from more than 1700 temperature sensors to discover that air conditioners can be started later in the day at certain times of the year.
- Increased building efficiency and staff efficiency: Building engineers now monitor and manage air conditioning, lighting, and other building systems from wireless tablets. This capability enables them to adjust the schedule to automatically turn off lights instead of walking back and forth to a management console, for example. Mobile employees can reach each other anywhere in the building at their usual number, using Cisco Unified Wireless IP Phones.

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Next Steps

Transwestern and Metropolis Investment Holdings expect to successively increase the value of the Internet of Everything by collecting, analyzing, and communicating information in innovative ways. For example, the companies are collaborating with the local energy company to design a contest for tenants to reduce energy consumption and carbon emissions. In addition, tenants will soon be able to visit a website to enter requests such as adjusting temperature, fixing leaks, and so on. Building engineers will receive the requests right away on their tablets so that they can acknowledge them promptly.

Vasquez concludes, “Property management is a service-oriented business. Happy tenants are more likely to renew their leases with us and pay their rent and operating charges on time. Embracing the Internet of Everything has increased tenant satisfaction while also lowering operating costs.”

Products and Services List

Routers and Switches

- Cisco Catalyst® 2960 Switch
- Cisco 3825 Integrated Services Router (ISR)

Wireless

- Cisco Aironet® Wireless Access Points
- Cisco Wireless Control System

Unified Communications and Collaboration

- Cisco Business Edition 6000
 - Cisco Jabber™
 - Cisco Unity® Connection
- Cisco Unified IP Phones 7945
- Cisco Unified Wireless IP Phones 7925G

Physical Security

- Cisco Video Surveillance Manager
- Cisco Video Surveillance Analog Encoder Card
- Cisco Physical Access Control Manager

TelePresence

- Cisco TelePresence® EX-90
- Cisco TelePresence Video Communication System (VCS) Expressway

Data Center

- Cisco UCS® C220 M3 Rack Servers

Services

- Cisco SMARTnet®
- Zones Design and Implementation



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