ENHANCING REAL ESTATE VALUE WITH CISCO SYSTEMS

The Cisco Connected Real Estate Initiative

CONNECTED REAL ESTATE

When Joe Vinci set out to find a new location for his company's office, Vincorp, the only real criteria he had in mind was that it had to be cheap, impressive and versatile.

That, though, was before he discovered Smart Office™ by Office Squared: a next-generation workspace solution that aggregates and manages the needs of all the tenants in one location and passes on significant cost savings to users. The system streamlines information systems, office supplies management and facilities bookings. It is used by over 10,000 people in 74 locations spanning 14 countries.

With Cisco Systems' Connected Real Estate technologies powering the core of the Smart Office™ suite, Mr Vinci was suddenly able to think about a lot more than just saving money. The 'plug and play' possibilities extended the reach of his hard-earned business dollars to include several value-add benefits he'd never seen before, such as facilities and building management. If he wanted to, he could even have enterprise-class services such as VPN-style mobile access and collaboration tools and technologies that would otherwise only be affordable by large enterprises. And, of course, a world-class telecommunications system served by Cisco.

For Mr Vinci, it was no longer just a question of how much money he could save, but also how much more he could get out of every dollar he was prepared to spend. So he ordered an in-depth cost comparison between his current premises and Office Squared's proposal. The results were not surprising.

After an in-depth comparison between his current premises and Office Squared's proposal, Joe Vinci found that the Cisco-enabled Smart Office™ workspace solution would cut his premise expenses by more than 50%.

Mr Vinci found that the Cisco-enabled Smart Office™ workspace solution would cut his premise expenses by more than 50%. It would also offer significant operational advantages in terms of state-of-the-art, pay-per-use facilities and on-demand business services. And, with Cisco's undisputed IP technology leadership at the heart of the building's infrastructure, Mr Vinci would finally be able to enjoy the advantages a world-class telecommunication system without uncomfortably stretching his finances. All that besides the prestige of a corporate office at one of Sydney's trendiest business addresses, Norwest Business Park.

With Cisco developing new applications for IP technology and connectivity everyday, Mr Vinci's growing company will enjoy the business advantages that Connected Real Estate will offer for many years to come. Because for Mr Vinci and the rest of the tenants of Sydney's Norwest Business Park, the Cisco-enabled Smart Office™ solution is not just a modern convenience. It is a competitive advantage.

NETWORK VALUE

Mr Vinci may not know it yet, but he has become part of a fast-growing crowd of discerning tenants who recognise that location is not the only factor to consider when evaluating modern office space. Even high-tech features or services can only take it so far. A building can offer everything from virtual receptionists to smart card security, but if it is not run efficiently, then all of it means nothing. These days, Mr Vinci has learned, it is the people who manage that space who determine its value.

For tenants like Mr Vinci, value means being able to pay only for what you use. Connected Real Estate technology enables this by transferring the ownership of critical business applications like internet connectivity and network services from traditional third-party vendors to managed services providers like Office Squared. This allows Office Squared to aggregate the total demand of the property for telecommunications and data services and obtain bulk discounts from service providers, which are then passed on to tenants. Tenants also do not have to engage in fussy, long-term contracts with third-party vendors that push up their operating costs. Instead, Office Squared offers tenants the services they need, when they need it, and if they need it.

"Build a network, build a management system and any community stands to gain from the benefits of aggregation," says Mr Moufarrige, CEO of Office Squared. He cites telecommunication costs as an obvious example: "In an IP-based deregulated telecommunications market — which is where most markets are headed these days — telecommunications companies are looking for partners to service their end users in the 'last mile' of their networks. They are willing to offer large volume discounts to these partners, which Office Squared can then pass on to our customers."

For other business owners, value means being able start-up operations as soon as possible after moving in. A Connected Real Estate-enabled building with Office Squared lets landlords offer new tenants the ability to commence operations almost immediately upon occupying their new office. Besides avoiding the costs of downtime altogether, these tenants also save by not having to pay for and install new infrastructure in the first place.

"Any organisation, large or small, stands to save as much as 30-55 percent in per-workstation costs by choosing locations with a preinstalled infrastructure and a managed network", says Mr Moufarrige.
For properties with multiple buildings — say, university campuses and industrial parks — value means being able to reduce energy and security costs. Because the build-

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ings are spread geographically, site management can be a nightmare in itself. Without having an army of maintenance and security personnel to dilligently inspect the buildings on the hour, every hour, it is impossible to "see" wasted air-conditioning and lighting and yet still monitor all the entry and exit points to each building.

Connected Real Estate technology makes this possible. With it, site managers can monitor and manage all aspects of building systems — energy, security and safety — from a single, central location.

CISCO-POWERED REAL ESTATE
The Crowne Plaza Hotel, Dublin, Ireland

Situated in 10 acres of tranquil parkland just outside Dublin Airport, the 204-room Crowne Plaza offers everything from a club floor and lounge to international cuisine and a high-tech gym. The hotel needed to create differentiation from its competitors through increased quality and value. At the same time, it needed to create sustainable revenue from new services, reduce costs and improve internal processes.

Cisco provided the Crowne Plaza Dublin with a range of services, including high-speed Internet access in every guest room and easy-to-use IP Phones that enable guests to send and receive email, look up information on hotel services, check the weather and even book taxis. The IP Phones are also personalised by language with specific greeting messages, and even individual company logos. Management was also able to more efficiently manage its rooms. For example: a maid can restock the minibar or order fresh towels from a room using the IP Phones installed in each room.

A business centre comprising 14 meeting and conference rooms is connected via a wireless network that enables delegates and guests to move freely with access to high-speed Internet access anywhere within the conferencing area (no cables or leads required). High-speed Internet access using Wi-Fi hot spots throughout the lobby, bar and other common areas of the hotel enables guests to work at their convenience in a relaxed environment.

Based on the projected increase in profitable occupancy, the hotel expects its network to have paid for itself within three years. This figure could be even shorter (and that is without the consideration of attracting new guests through its new services). Additional revenue opportunities are now emerging. A local car hire company wants to advertise through the guest IP Phones, and other local leisure attractions are expected to follow suit.

"In addition to advanced services such as energy management and security management, climate management can also be run across the entire managed network," says Mr Moufarrige.

But what does all this mean in terms of dollars and cents? In Aberdeen Group's study of 254 enterprises and how they manage their real estate, the Best in Class enterprises invariably credited real estate and facilities lifecycle management technology for delivering the following benefits:

- 5.0 percent reduction in their total cost of occupancy
- 3.3 percent reduction in maintenance costs per square foot
- 2.6 percent reduction in the cost of capital improvements
- 56 percent reduction in the amount of time to close facility work orders

A study by Dr Sing Tien Foo, a researcher at the National University of Singapore, supports Aberdeen Group's findings. Dr Sing, who is also director of the Asian Real Estate Society Board, found that network-ready office space was able to attract better rental returns than those that did not have networks installed. Because networked offices provided new user experiences and operational efficiencies, buildings that upgraded their office space into 'connected offices' experienced improved occupancy rates (58 percent of respondents) and increased rent (46 percent of respondents).

Ubiquitous Connectivity
Connected Real Estate is exceptionally ubiquitous, and this makes many new things possible – Dr Sing estimates the value created by the network at 4 percent of unit rental value.

But to really up the market capitalisation of a property and increase the income stream, you need a platform to deliver all those services and a system to collect that money. That's where partners like Office Squared come in.

"If you have a real estate investment and want to collect incremental income, you must have a management system that enables the billing and provisioning of these services," explains Mr Moufarrige.

Office Squared's information system and portal, successfully deployed in 74 locations around the world, does just that.

In fact, Connected Real Estate enables Office Squared to offer landlords and their tenants unparelleled building and facility management applications, including:

- Energy control via thermostats, environmental control systems, lighting, machinery and onsite generators
- Ownership of always-on high-speed Internet connectivity that may be leased to tenants upon occupancy
- Heating, ventilation and air-conditioning (HVAC) monitoring, management and control
- Ownership of a converged data, voice and video network that may also be let to tenants
- Building security and access management
- Elevator access control and optimisation
- Fire and safety hazard monitoring
- Digital premise signage for directories, emergency instructions and advertising

With Connected Real Estate, property owners can provide tenants premium, high-functionality office amenities such as interactive building directories and booking systems. And, with a managed services provider like Office Squared, building managers that own their network infrastructure can market mutiple network services to their tenants, including data, voice and internet... not to mention a slew of other highly-profitable business services.

With all these savings and benefits to offer, landlords can look forward to increased occupancy rates and tenant satisfaction, leading to better rental returns. Peter Daly — the iconic ex-Chairman and Managing Director of Stockland Corporation, one of Australia's most diversified property groups and a top 50 ASX-listed company — says that Connected Real Estate technology ultimately improves the attractiveness of a property to tenants. All things being equal, the property should become more appealing than other office space.

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"Connected Real Estate with Office Squared makes property easier to sell for developers," explains Mr Daly. "An owner can probably expect up to 2-5 percent more income when using Office Squared with a Connected Real Estate-powered property. Naturally, this edge enhances the value of his asset, thus it also fetches a higher price."

Mr Daly agrees that the Office Squared solution gives landlords the ability to offer tenants quicker, easier and less expensive start-ups. This, he is quick to point out, is valuable to any business. Given the advantages, he also has little doubt that Connected Real Estate will turn up in multi-dwelling, high-rise residential developments sooner or later.

Perhaps best of all, Connected Real Estate technology actually costs less than traditional systems. Capital costs are reduced during construction because only a single cabling infrastructure is required — the need for multiple proprietary networks and their installation costs is virtually eliminated. Operating costs — which consist of 75 percent of the total lifecycle cost for a building — are also reduced through increased efficiency in building monitoring and management and lower energy and maintenance bills. From tenants to landlords to managers, everyone saves.

Tenants do not want to deal with networking and telephone cables, switches and routers, or connections to the Internet. They want to be able to plug into a data port and automatically be connected to the technologies they need, whether it is building services or their own proprietary data network. What if that were possible? What if we could access these technologies at the flick of a switch or the turn of a tap, much like we do with standard services like electricity, water and gas?

That is just what Connected Real Estate aims to achieve.

IP CONNECTIVITY
**COMPATIBLE YESTERDAY,
COMPATIBLE TOMORROW**

The secret to Connected Real Estate is not really a secret — after all, Internet Protocol (IP) technology has been around for long time, much longer than many of today's so-called intelligent building management systems. IP technology is so stable and versatile that it is little wonder it was adopted as the foundation for the World Wide Web.

The Internet Protocol has matured beyond the realm of science fiction to become a part of our lives in so many different ways. In fact, we probably rely more on IP technology than we do any HVAC, energy, security, environmental or building management system in the world. It is this confidence in IP technology and its future that lies at the foundation of Cisco's business, along with millions of other equipment providers.

Although full-fledged IP equipment (beside phones) are still under intense development, compatibility with existing building equipment is easily overcome by using devices called "IP enabled controllers". These inexpensive and widely available devices interface between the IP network and building equipment and may be installed and connected to virtually any existing proprietary building system, including:

- Building Automation
- Energy Management
- HVAC Controls
- Remote Monitoring
- Security & Card Access
- Industrial Automation
- Lighting Controls
- Event Alarming & Notification

THE FOURTH UTILITY

To enhance the value of real estate, Connected Real Estate harnesses and integrates the power of IP (Internet Protocol) networks. A mature, public technology, IP may be thought of as the bloodline of the World Wide Web. It is Cisco's technology leadership in this area that sets Cisco-powered real estate apart from the rest.

Power, water and heating are traditionally taken for granted in building construction, while communications and information networks have always been the responsibility of tenants — they call the contractors and the service providers themselves, and they foot the bill. Managers of multioccupancy buildings are used to seeing the cables of hundreds of networks installed individually, running parallel to each other across ceilings, down elevators shafts and under floor panels.

What a waste. Considering that communications is as much a part of business today as lighting and water, shouldn't these networks be constructed with the building rather than after it? Shouldn't networking be treated as the construction's "fourth utility" after power, water and heating?

Robert Bruner thinks so. Bruner is the developer of Ballantyne Village: an 800,000-square foot mixed-development in Charlotte, North Carolina that includes upscale retail shops, restaurants, an independent movie theater and luxury condominiums. His team decided from the outset to create unique and memorable visitor experiences while also delivering high value to tenants and residents. Building the communication network into the development as a fourth utility will enable that.

"Treating information as a utility completely changed how we think about projects," says Bruner. "Ballantyne Village will be able to do things that no other development can do."

By weaving the network infrastructure into the building, developers not only differentiate their buildings from others, but also offer landlords and property managers the ability to sell value-adds to their tenants.

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Cisco-powered real estate is not just about office space. It's about services. With Office Squared's workspace solution property owners can fulfil tenants' needs in ways that are cheaper, more efficient and more robust than ever before. In fact, we will create the services we need, instead of the other way around.

The living network

The possibilities of these new services will be invented and driven by users as much as the owners themselves. The Fourth Utility will be much more than just a convenient platform for all the cleverness described in this paper. Rather, users and owners will become an active part of the network and will each play roles in deciding what it will do for them.

Ferry Chung, Managing Director, Integrated Solutions Group, Cisco Asia Pacific, calls this the point when service will no longer be limited by the parameters of an application or system, but by the needs or imagination of the owners, users or tenants.

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> Ferry Chung, Managing Director,
> Integrated Solutions Group, Cisco Asia Pacific

When IP becomes the Fourth Utility and with the abundance of information available," reckons Mr Chung, "our interactions with our built environments will become *intuitive*."

Cisco System's collaboration with partners like Office Squared will take service to completely different plane. At this level, owners, users or tenants drive service definitions based on what they need, where they need it and when they would like it available. Property services become an innate part of the built environment, as the network adapts to accommodate the ever-evolving requirements of its users.

The network, in short, will come to life.

CISCO-POWERED REAL ESTATE
Nottingham Trent University, UK.

When Nottingham Trent needed to upgrade its network infrastructure, John Cheesbrough, Network Manager considered his options: one network each for the security camera system, car park and heating? Or a single network that could do all three and more? Choosing an IP solution was a no-brainer, so Cheesbrough started shopping for a networking partner.

"We had three key requirements in choosing a networking partner," says Cheesbrough. "First, we were looking for a supplier offering the complete range of IP networking equipment, from small to large. Second, we were looking for a cost-effective solution. And third, we needed high performance. Cisco Systems met all three requirements."

All of Nottingham Trent's heating, hot water and air-conditioning systems were moved to Cisco's IP network. An engineer can now alter the heating in any of the buildings at any site. The security camera system is also being migrated to the Cisco IP network, enabling the university to simply plug in additional cameras anywhere on site and then view the images from a central control room. Even the car park barriers are now IP-enabled and link straight back to a central host computer and swipe card system.

Instead of having to manage several hard-wired networks at each security, car park and heating site, Cheesbrough's team now only have to manage a single network.

"This cuts maintenance and support costs significantly," says Cheesbrough. "It also allows us to control the system centrally, from an operations centre at our city site. And, it makes it much easier to add of move devices or make changes."

BUILD THE NETWORK AND THEY WILL COME

Although location may still be the primary deciding factor for prospective tenants, the ability to "move in and plug in" — minus the hassle and wait of installation — is a very attractive proposition to a business… especially if it means significant costs saving. For example: new tenants in One America Plaza in San Diego, U.S., enjoy instant, secure access to communications and data networks from day one at just USD250 per month. Compare this to an average of USD1,000 per month if they were to install their own lines, and it's no wonder that this 34-storey building enjoys occupancy rates of 95 percent — other buildings in the area get by with 88 percent.

In any case, the benefits offered by a Cisco-powered building often outweigh whatever geographic advantages another building may have anyway. In Tel Aviv, for instance, the 21 storey Adgar Tower achieved 100 percent sold occupancy of its available space upon opening its doors — an unprecented success in a market where buildings typically average only 60 percent sold occupancy prior to opening.

"Local property brokers accept that other buildings cannot compete with Adgar Tower," says Eyal Litwin, Chief Technology Officer of Adgar Investments & Development. "Location and price used to be the two major elements to consider when leasing office space, but now we have added a third factor: technology."

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For Adgar, IT infrastructure is no longer seen as a building overhead, but a highly-successful marketing investment, with the extra cost of the network paying for itself through increased occupancy.

"Our strategy was to differentiate this building and all our assets in an already saturated market," explains Roy Gadish, CEO of Adgar Investments & Development. "One of the methods to achieve this goal was the creation of a unique communications network that would connect Adgar Tower with all our buildings."

Adgar has applied the principle to other buildings in its global portfolio, with similar results. In Canada, for example, the company fitted out three buildings with Wi-Fi®. Within one year, all three buildings were fully occupied. Yet a Cisco-powered building does more than hook up the Internet. It hooks up *everything*.
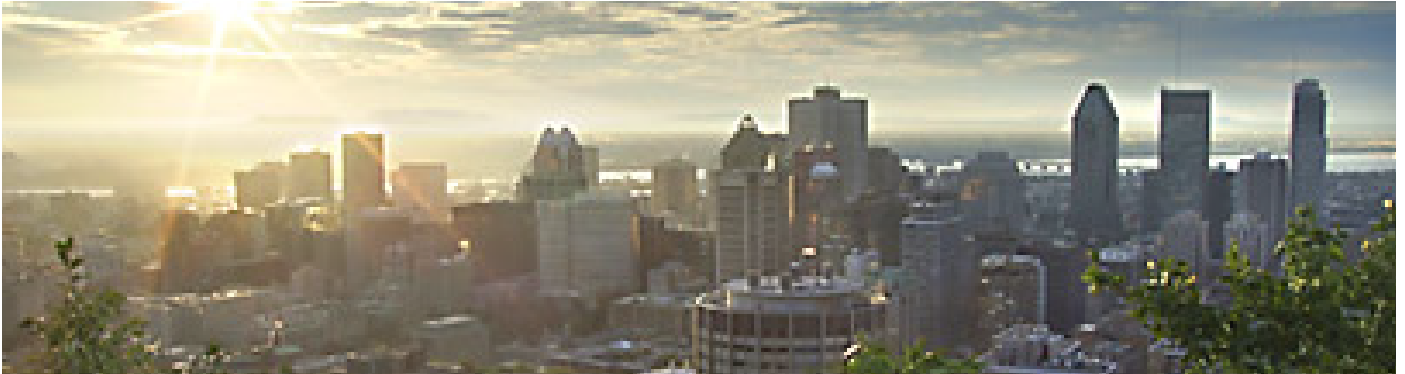
CISCO (IP) PROPERTY — ANYWHERE, ANYWAY

While current "smart" or "intelligent" building structures tout advanced building management systems, HVAC and environmental controls, each system is separate from the rest and must still be managed independently. The Cisco Connected Real Estate solution unites the disparate — and often proprietary — networks and systems over a single IP network that allows all communication, security and building systems to be monitored and managed centrally.

IP is a universal language. Virtually all systems are now IP-enabled and may be 'converged' into one. Wiring up converged services is actually cheaper than wiring several different systems. David Cross, Business Development Manager of Office Squared, reckons that this will become the way all buildings are wired within as few as five years.

Connected Real Estate enables the convergence of all the following onto a single IP network:

- Telephone and data systems
- Lighting networks
- HVAC
- Fire detection
- Public Address (P.A.) systems
- Security and access control
- UPS systems

Furthermore, because it uses the same technology as the Internet, the Connected Real Estate solution may not only be applied to single buildings, but also across a geographically dispersed portfolio of facilities wherever they are in the world.

Take Cisco's APAC (Asia Pacific) operations, for example. It employs close to 9,000 people in 80 sites spread across 14 countries. Cisco created an IP networked building solution that covers its entire real estate portfolio within the region, enhancing security and communication across three continents. The system is also being deployed in its upcoming sites in Bangalore, Beijing, Shanghai and other locations in APAC. The state-of-the-art IP-based solutions will result in cost avoidance and savings of over 30% in the next three years by enabling Cisco to consolidate space and increase employee efficiency and productivity. The solution will also enhance the flexibility of Cisco's infrastructure and enable the company's facilities to cater to dynamic growth without incurring the usual proportionate costs of expansion.

Connected Real Estate enhances the value of real estate with proven technology benefits. Together with managed services providers like Office Squared, it offers property owners a way to unlock the hidden value of their assets in new ways. And, with Cisco continuing to be at the helm of IP technology, there will be many more ways to exploit the IP advantage.

ABOUT CISCO

Cisco, (NASDAQ: CSCO), is the worldwide leader in networking that transforms how people connect, communicate and collaborate.

Cisco is leading the transition to a network-centric technology environment. By combining its core strength (IP) with intelligence, the company is creating a powerful communications platform that will serve as the basis for the convergence of data, voice, video and mobile communications in a secure, integrated architecture.

Additionally, Cisco also believes that business and dedication to the environment go hand in hand. Through the power of the network, people can be empowered to work, live, play, and learn in an environmentally sustainable way. This can be accomplished through reduction in transportation-related emissions via collaborative technologies such as Unified Communications and TelePresence, and also through improvements in workspace utilization and energy consumption.

Information about Cisco can be found at www.cisco.com.

ABOUT OFFICE SQUARED

Office Squared was established to leverage expertise and technology that was developed by Servcorp in order to address clear and specific business needs, thus delivering a distinct competitive edge for Servcorp.

Servcorp is the second largest supplier of serviced office space globally, managing some 70 storeys spanning 14 different countries. Office Squared was set up to deliver this unique capability to buildings and businesses beyond Servcorp.

www.officesquared.com

www.servcorp.net

SOURCES

O'Donnell, Kevin and Wagener, Wolfgang, *"Connected Real Estate"*, Cisco, Torworth (2007), ISBN: 978-0-9551959-1-4

Deign, Jason, *"Cisco Connected Real Estate Gives Adgar the Edge over Commercial Property Rivals Worldwide"*, News@cisco, May 29, 2007

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: +31 0 800 020 0791
Fax: +31 0 20 357 1100

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