



# Cisco® Smart+Connected Real Estate:



Redefine the Real Estate  
Experience

Today’s real estate market is filled with opportunities. Market trends including workforce globalization, environmental and social responsibility, and a growing worldwide population favor building transformation. The next generation of real estate and building services will turn workplaces and home spaces into environments that are personalized, efficient, functional, and profitable.

“The Cisco team did a good job professionally completing a complex network design project which is one of the first truly integrated Smart City networks in the world”

Knowledge Economic City Developer Co. (KEC)

“It was the first time we have had such an engagement with Cisco Advisory Services. The level of coordination, support and professionalism exceeded my expectation and I would be more than happy to work with such a group again and again.”

Saudi Aramco iTHRA Project

“With Cisco Services in place we have peace of mind knowing that the experts are with us. The Services portfolio helps us deploy, operate and optimize our network and safeguards our investment.”

Savola Real Estate Division



The challenge is to be ready for these market opportunities. Most real estate establishments lack the innovation that is available in the marketplace and must catch up to support new requirements, lifestyles, and end-user demands. New value-added services are essential not just to attract new tenants and buyers, but also to keep existing ones. Employees must have access to information and tools that improve responsiveness, accountability, and productivity. Moreover, building performance must be improved to reach profitability goals and to comply with increasingly stringent energy management requirements, and emerging green legislation.

Real estate developers must think beyond traditional services and identify the desired purpose, experience, and performance of each development. They must transform existing and new properties into the buildings of the future. They should also consider how to create value for all stakeholders by improving productivity, increasing profits, adding differentiating services, and streamlining operations.

How can real estate ventures meet today’s needs and lay a foundation for tomorrow, while maintaining and growing profitability?

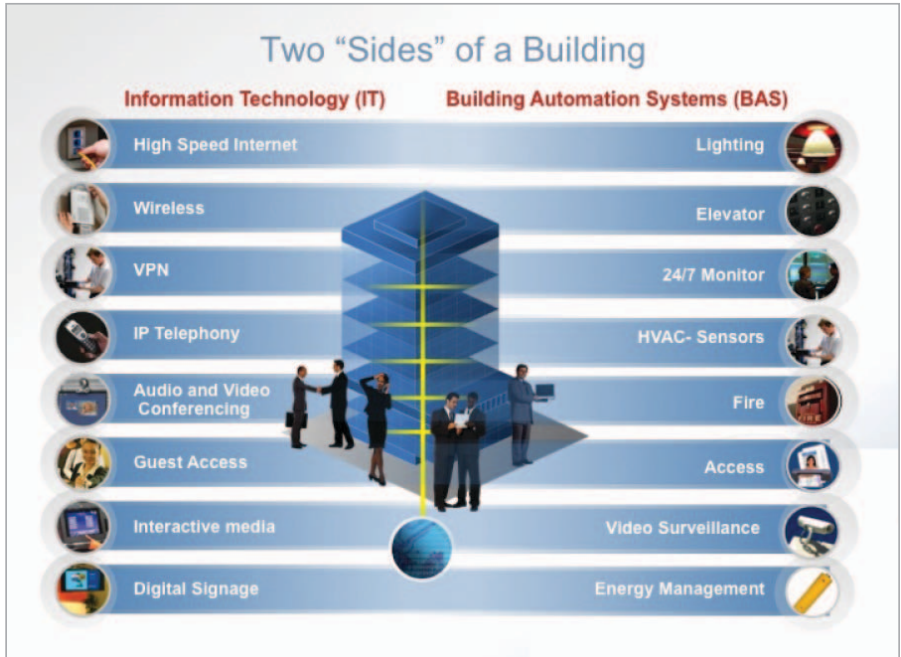
Cisco® Smart+Connected Real Estate solutions converge building, safety, and communications networks onto the open Internet Protocol (IP) standard, streamlining processes by providing a single connection for building management and IT systems. Convergence acts as a disrupting agent for traditional site and building designs, uses, and operations, helping transform physical space into service offerings. The network forms the foundation for an intelligent building infrastructure that adds value to every kind of real estate project.

Cisco Smart+Connected Real Estate benefits all stakeholders in the design, construction, and real estate industries as well as those using the final built environment. The network becomes an “intelligent platform” infrastructure that creates an unprecedented opportunity for improved services, enhanced processes, and cost-effective operations for everyone who uses or creates real estate.

Transform How Real Estate Is Built, Managed and Experienced

Cisco Smart+Connected Real Estate describes the convergence of Technology and Real Estate applications, devices, and solutions onto a converged IP network, disrupting traditional design, use and operations of sites and buildings, transforming physical space into service offerings.

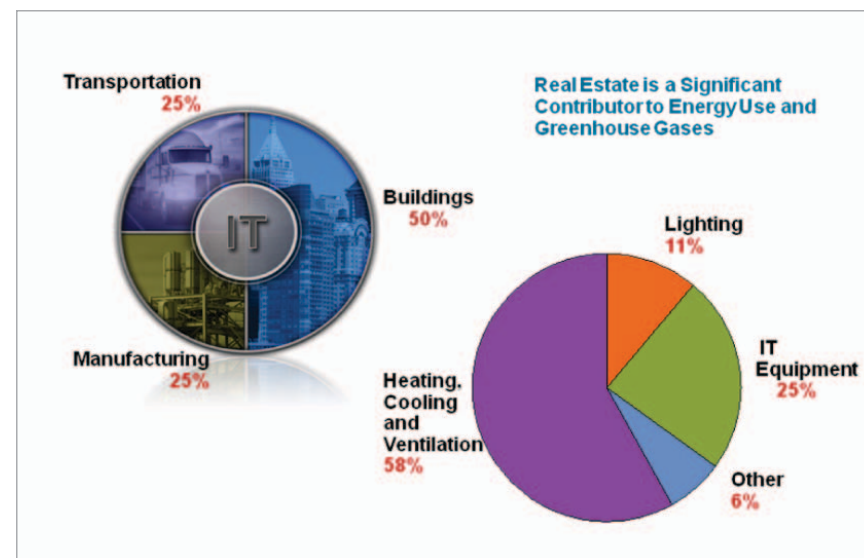
Cisco has proven to be an innovator in the Cisco Smart+Connected Real Estate space by using the network as the core building block and bringing business advantage to our customers through technology. This innovation in the Cisco Smart+Connected Real Estate space is raising the bar for real estate offerings and customers are now recognizing its value. The Connected Real Estate practice can deliver value to all key stakeholders and transform how real estate is built, managed and experienced in addition to meeting the demands of customers asking for more of Cisco’s direct commitment to project execution.



## Promote Environmental Sustainability

Integrated energy management systems support sophisticated power management, energy conservation, and long-term environmental sustainability. For instance, lighting automation solutions can be delivered over the converged IP network. Centralized monitoring and control of elevators, HVAC, and facilities help ensure that the building meets and exceeds performance standards. With knowledge of energy usage patterns, building managers can respond to power cuts and also proactively switch off or reduce unneeded systems. This enables building managers to reduce carbon footprint and build a sustainable and more energy-efficient environment.

By converging multiple functions onto system devices, Cisco Smart+Connected Real Estate also can reduce the amount of IT equipment needed, use systems that consume less power, and make the use of all equipment more efficient. This in turn makes a significant difference in cooling costs, which enables a further reduction of the building's carbon footprint.



Source: UK Department of the Environment, Good Practice Guide 118 Pie Chart — UK Energy Efficiency Best Practice Program; Energy Consumption Guide 19: Energy Use in Offices. Annual delivered energy consumption typical air-conditioned prestige office (kWh/m<sup>2</sup> treated floor area) Arthur D. Little Study, 2002

## Reducing GHG/ Carbon Emissions

Estimates for energy consumption (directly and indirectly) by ICT equipment in commercial offices range from as low as 10% to as high as 40% of the total energy used in an office building, with several studies indicating about 25%.

Clearly, the total varies widely based on a number of factors, including type of building, location, industry, age of equipment, equipment density and user habits.

However, ICT systems in most buildings are the #2 user of energy in an office, behind heating and cooling but ahead of lighting. It is also the fastest growing segment of electrical usage worldwide.

## Enhance the User Experience

Cisco Smart+Connected Real Estate solutions enable developers, operators, and employers to give employees and occupants access to tools and applications at all times through mobility solutions, including Wi-Fi, integrated paging, and Bluetooth. Mobility delivers access to time-critical communications at any time and anywhere, on or off the property. Cisco applications deliver enhanced communications and collaboration by providing access to high-speed Internet, IP telephony, wireless connections, the Cisco TelePresence™ online meeting application, and advanced audio and videoconferencing for common areas and administrative offices. In the hospitality and mixed-use establishments, developers can provide interactive stations with digital signage, rich media communications, and visitor management that keep guests and occupants informed and entertained. Cisco Smart+Connected Real Estate can help create building environments that are distinctive, productive, and intelligent, to add value to the user experience.



## Generate New Revenue Streams

New fee-based or complimentary services can attract and retain tenants and help differentiate a property from the competition. For example, advanced services such as Cisco TelePresence, digital signage, or Wi-Fi can be provided on a fee-based model. Additional revenue-generating services can be added as tenant and user needs evolve. Property builders and developers that have a Cisco Smart+Connected Real Estate foundation in place can also charge a premium on the sale of their property if these services are made part of the standard offering.

## Reduce Total Cost of Ownership

The convergence of applications, devices, and solutions onto a single IP network helps reduce capital investment, support costs, and ongoing maintenance and operational costs. Real estate developers can migrate existing investments into an open, inclusive platform that enables monitoring and control of a wide variety of building systems as if they were all operating as a seamless, homogeneous resource.

## The Cisco Smart+Connected Real Estate Framework

Cisco Smart+Connected Real Estate is a framework consisting of three interdependent levels: foundation, convergence, and transformation. The framework supports the tools and services supplied by Cisco and its real estate solutions partners.

### Foundation: Building Information Network

The building information network is a flexible communications infrastructure that serves as a foundation for all other systems. This IP-based network can dramatically reduce capital expenditures by simplifying building design and construction. In addition, a converged building information network can streamline operations, centralize administration, and reduce maintenance to result in lower operating costs and improved productivity.

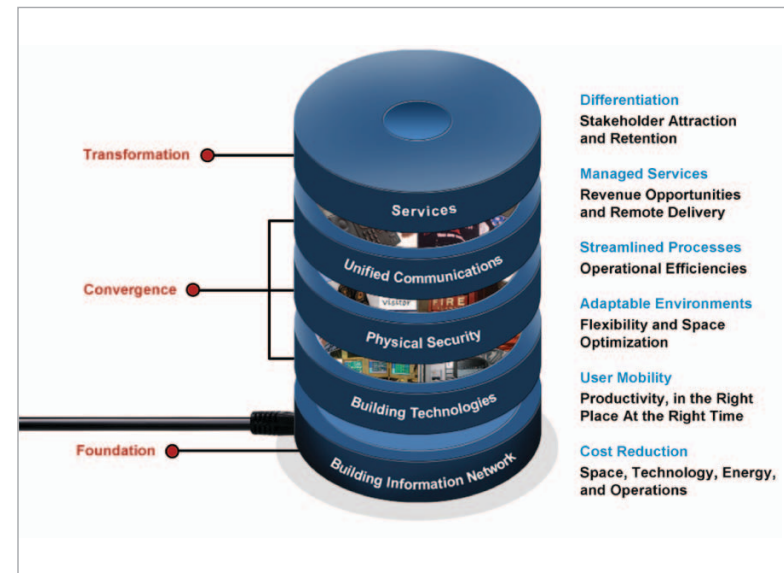
### Convergence: Intelligent Information, Communications, and Building Technologies

The second layer comprises unified communications, physical security, and building technologies. Unified communications delivers IP telephony, videoconferencing, rich media, collaboration, and tools for increased productivity. Physical security supports the deployment of converged security applications, including video surveillance, access control, and visitor management. Building technologies provide an administration and monitoring platform for HVAC, lighting, transportation, building automation systems, energy management systems, and safety and security systems.

### Transformation: Differentiated Space, Technology, and Services

The top layer of the Cisco Smart+Connected Real Estate framework includes the services that lead to building transformation, generating new revenues and attracting and retaining tenants and guests. The solution is a highly adaptable platform enabling flexible services that can accommodate a changing workforce and end-user requirements. Buildings can be enhanced with visitor management services, interactive kiosks, and digital signage to generate new revenues and improve the user experience. Fee-based services can be turned on and off as needed, providing flexibility for multitenant spaces. Tenants and users can choose from a variety of Internet access, access to rich media and content, and IP telephony offered over the Cisco intelligent information network.

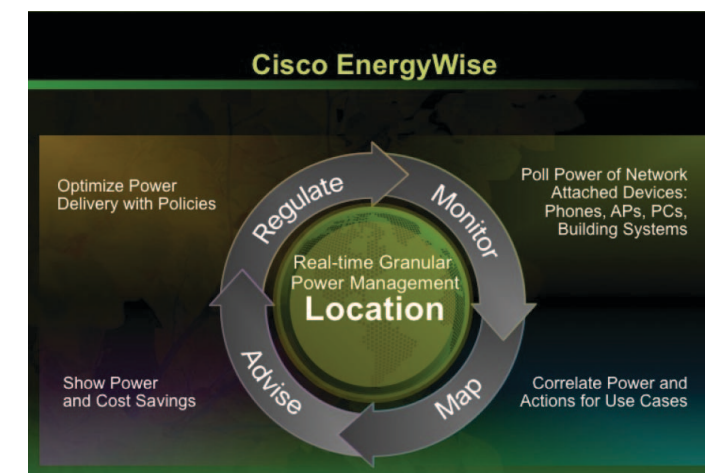
### Creating Value with Connected Real Estate



## Cisco EnergyWise

Rising energy costs, environmental concerns, and new government directives have increased the need for sustainable IT operations. Governments, companies and consumers are more aware of issues like energy and climate change, air and water pollution, resource depletion, human health and safety issues, and waste disposal. Cisco EnergyWise, a pioneering energy management technology incorporated in Cisco core solutions can help address these issues.

Cisco EnergyWise automatically discovers devices it can manage, then enables in measuring, reporting, and reduction of the power consumption of network infrastructure and attached devices using specific policies. The power of the network can achieve lower energy costs and better sustainability.



## Cisco® Network Building Mediator

The Cisco® Network Building Mediator ("Mediator") is the industry's first solution that extends the network as a platform to transform the way buildings are built, operated, and experienced. The Mediator:

- Helps reduce energy usage across global operations
- Leverages Cisco's expertise in collaboration, convergence, and security to foster sustainable energy use
- Provides flexible integration of new technologies that deliver energy efficiency, clean energy, and environmental stewardship

The Mediator collects data from the building, IT, energy supply, and energy demand systems, which use different protocols that are otherwise unable to communicate. It then normalizes the data into a common data representation. This enables the Mediator to perform any-to-any protocol translation and to provide information to the end user in a uniform presentation.

This network-based framework creates a common, standards-based, open platform that then allows enterprise applications, cloud services, and building/IT systems to communicate. The Mediator is protocol-agnostic and extends the network to serve as an effective foundation for sustainability management.

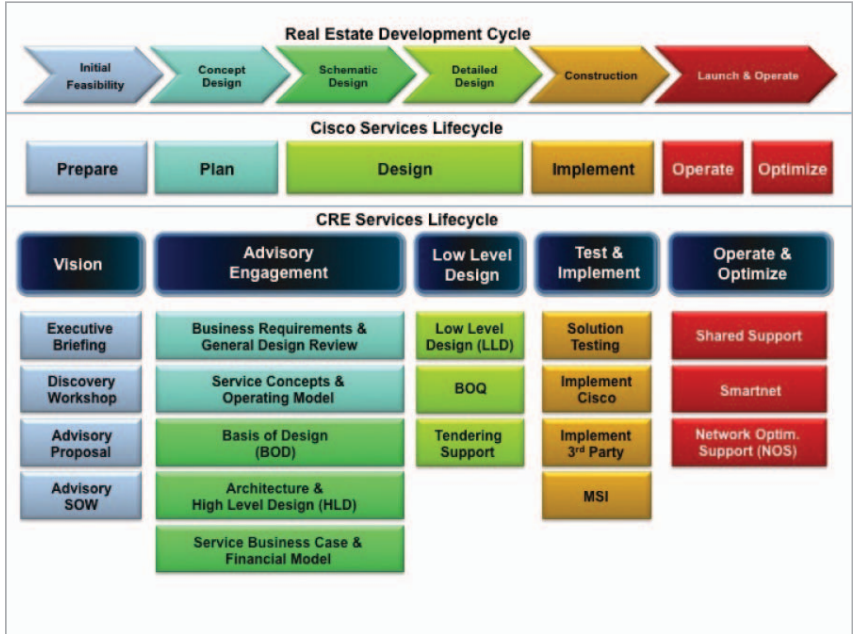


### Cisco Smart+Connected Real Estate Advisory Services

Cisco adopts an end-to-end lifecycle approach to Cisco Smart+Connected Real Estate. It starts with initial advisory consulting, which covers understanding the vision and key value drivers, identifying key services that help realize the vision and targeted goals, creating business cases for the services, and specifying the underlying architecture to enable the desired services. Cisco advisors can continue by providing Master System Integrator (MSI) support and RFI/RFP selection, as well as additional aspects of implementation and testing, operations, and optimization.

### A Roadmap for Success

Cisco Smart+Connected Real Estate solutions are the building blocks for the real estate of the future. The converged network becomes an intelligent building infrastructure and the foundation for change in any development project. Cisco Smart+Connected Real Estate can increase profitability by providing additional revenue streams and enabling new, differentiated opportunities. It can provide end-customers with a superior standard of living while maintaining environmental sustainability.



### End to end offering with Cisco Solutions

#### Cisco Smart+Connected Utilities

Cisco Smart+Connected Utilities solutions use an intelligent IP-based network platform to address energy, water, and gas management and consumption.

Cisco Smart+Connected Utilities solutions:

- Make more utilities available for more people
- Lower energy costs
- Raise operational and energy efficiencies
- Reduce carbon emissions



#### Cisco Smart+Connected Safety & Security

Cisco Smart+Connected Safety & Security solutions enhance the capabilities of emergency and security personnel with prevention, automated detection, analysis, and coordinated response to incidents.

Cisco Smart+Connected Safety & Security solutions lead to:

- Automatic and unobtrusive detection and prevention
- Informed assessment, coordinated response
- Reduced human error and time lag
- Increased effectiveness of response

#### Cisco Smart+Connected Transportation



Cisco Smart+Connected Transportation solutions make use of an IP enabled Urban Services Platform to comprehensively manage traffic flows and integrate multiple modes of transportation. Smart+Connected Transportation integrates workplaces, residential buildings, travel service providers, airlines, and hotels onto a single platform promoting a seamless transportation experience to increase sustainability and productivity. A variety of wireless technologies such as Wi-Fi Mesh, WiMAX, satellite, and 3G/4G can enable connectivity on any mode of transport.

Cisco Smart+Connected Transportation solutions enable communities to:

- Increase productivity during commute
- Improve sustainability, reduce environmental impact
- Optimize city transportation and logistics
- Deliver key citizen services anytime, anywhere

## Cisco Partners

Cisco partners work with us at every phase from planning to deployment, and can even manage the Cisco network on an ongoing basis. Partners are available for all industries and are able to provide a global as well as a local presence to meet all requirements. In addition to our global network of qualified resellers, Cisco provides comprehensive design services and support through professionals holding CCIE® certification and the Cisco Technical Assistance Center.

### Cisco and Partner Supplied Components

- Cisco Secure Network Foundation, including routing, switching, and security
- Cisco Mobility solutions
- Cisco VPN services
- Cisco Unified Communications solutions
- Cisco TelePresence solutions
- Cisco Digital Media solutions
- Cisco Physical Security and Video Surveillance solutions
- Building automation and management systems
- Energy management systems
- Cisco Physical Access solutions
- 24-hour monitoring
- HVAC systems
- Electrical systems
- Lighting
- Elevator
- Visitor management
- Interactive kiosks



## Cisco—The Worldwide Leader in Business Networking

Cisco Smart+Connected Real Estate, delivers more than a real estate system. Cisco advisors can deliver a complete set of business cases that assists decision makers, captures the vision of the project, and brings it to reality with the assistance of a dedicated project management team. We can structure financing arrangements, showing our commitment in the form of risk sharing. And working with Cisco means access to marketing resources as well as our network of Cisco partners.

Cisco is the worldwide leader in networking technologies, with a 20-year record of accomplishments supporting customers of all sizes, around the globe. The Cisco® Smart+Connected Real Estate practice supports our vision of the Intelligent Information Network, an evolution of networking capabilities that supports an ever-expanding portfolio of services and applications to enable business growth.

### Cisco Smart+Connected Real Estate delivers:

- Our long-term commitment to the real estate industry
- Ongoing investments in R&D initiatives benefiting the industry
- Industry-leading partners and resellers to deploy and manage a turnkey offering
- A secure, adaptable, standards-based architecture that easily accommodates today's needs and future services while protecting your network investments
- Proven best practices for deploying network solutions, developed through close working relationships with real estate customers and industry groups
- A standards-based, continuously expanding suite of intelligent network services
- Award-winning support services that help you get the most out of your investment and extend the life of your assets



## Cisco Telepresence in Action—Bringing the world together



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San Jose, CA

**Asia Pacific Headquarters**  
Cisco Systems (USA) Pte. Ltd.  
Singapore

**Europe Headquarters**  
Cisco Systems International BV  
Amsterdam, The Netherlands

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