



The Building Information Network

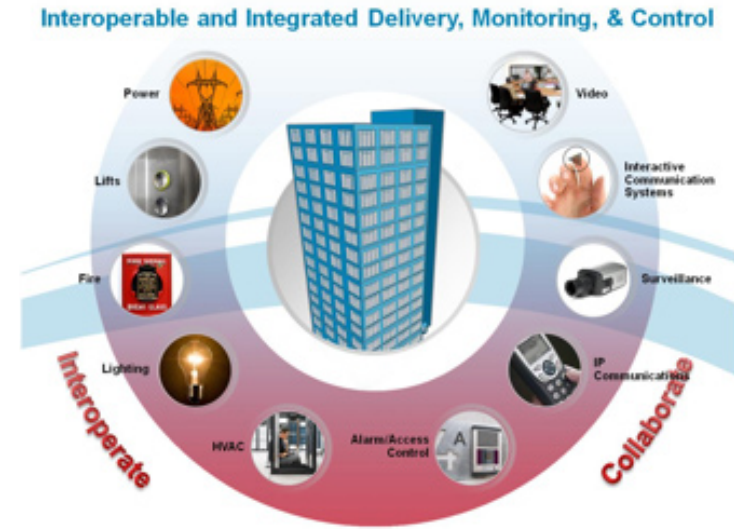
Technology affects every aspect of the way people live, learn, work, and play. However, today's traditional building environments have not integrated and evolved to support these changing lifestyles, requiring individual management systems and resources. Key trends, like the desire to reduce building-related operating and capital expenditures, the need to meet energy and resource conservation mandates, and the drive to improve workplace productivity through integrated building and communication services, are requiring buildings to transform. As user requirements evolve, buildings and building management must adapt and change; users and tenants are demanding the capabilities and benefits inherent in the Intelligent Building. The US Stimulus Package provides unprecedented opportunities to transform the physical spaces of the future through technology innovation, delivering value-added, environmentally-responsible services while streamlining the processes that create and update buildings, facilities, and campuses.

Connected Real Estate: Ideal for Stimulus Package Efforts

The Cisco Connected Real Estate solution is a framework that positions the Network as the Platform, where the network becomes an intelligent building infrastructure and the foundation for change in any development project. The Connected Real Estate solution for state and local government combines proven, advanced technologies into a customized solution, combining existing, disparate sets of communications, security, and building systems onto a single, converged IP network. This intelligent, converged IP network infrastructure enables effective collaboration and integration of building control and management technologies with Cisco and partner technologies.

Our next-generation technologies include EnergyWise, Cisco's Building Network Mediator, the IP-Enabled Network Platform, Digital Signage, Mobility, Security, Cisco Unified Communications, Cisco TelePresence, Cisco Video Surveillance, and Cisco Access Control. Full integration of these technologies over an IP network solves key operational and budgetary challenges. Cisco Connected Real Estate empowers state and local government customers to:

- Deliver new services that enhance the security, usability, and productivity of facilities and the workplace
- Integrate:
 - Communication systems by deploying IP telephony, video conferencing, rich media, collaboration, and productivity tools over the Cisco IP network
 - Physical security systems through the convergence of security applications, video surveillance, access control, visitor management, and fire safety, over the Cisco IP infrastructure
 - Building technologies through the interoperability of HVAC monitoring and control systems, lighting, transportation, and energy management, wherever appropriate, over the Cisco IP network
- Provide a Building Information Network, using the Cisco IP network foundation for all communications systems, building systems, and personal devices to facilitate greater operational efficiencies, conserve environmental resources, and reduce operational expenses



Internet Protocol: Enabling Integration and Interoperability

With Connected Real Estate, a converged IP network is built into the fabric of every building, and acts as the platform supporting all other real estate requirements, from business processes to occupant services and building and business utilities. The Building Information Network not only saves capital and operational resources around the deployment, maintenance, and management of once-disparate building systems, the interoperability of those systems enables the delivery of the optimal workplace experience.

Interoperable systems, combined with the integration of information from those systems, enables buildings to maximize the efficiency and effectiveness of facility systems in ways not possible with traditional approaches like optimizing environmental variables and varying IT / office equipment power based on usage. There are tremendous possibilities for innovation by combining system information, monitoring, control, coupled with the ability to optimize energy and resource consumption, access, and physical security. This approach provides a platform that offers:

- Workforce effectiveness tools:
 - High-speed Internet, offering building wide access
 - IP telephony for integrated communications
 - VPN services to support remote employees and secure operations
 - Wireless services for added mobility
 - Visitor management with remote receptionist capabilities
 - Enhanced audio and video conferencing with Cisco TelePresence



- Interactive media and digital signage for more effective interactions and dynamic one-to-many communications
- Building performance integration capabilities:
 - Lighting automation to reduce costs by saving energy
 - Elevators and access control for centralized monitoring and management
 - HVAC controls for occupant comfort and energy conservation
 - Parking management
 - Facilities management
- Security:
 - Fire control to identify hazardous situations
 - Video surveillance for integrated security
 - Physical Security and network security to block unauthorized usage and users
 - Building access to keep of track access violations
 - Energy management for conservation and environmental sustainability

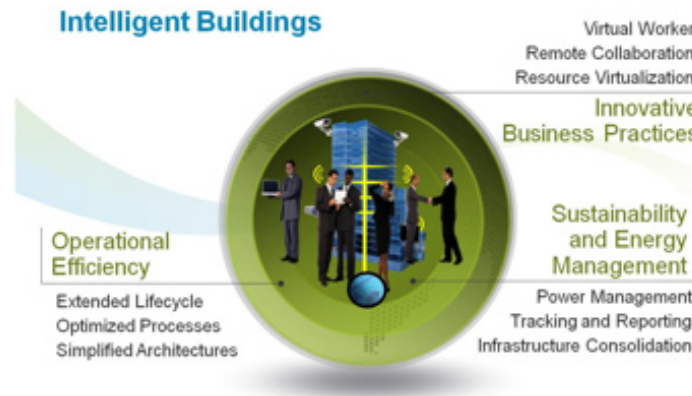
Connected Real Estate creates value and offers tangible benefits to each unique stakeholder in the business and real estate supply chain. With Connected Real Estate, Cisco unites IT and real estate by incorporating technology into each step of the real estate lifecycle, including design, construction, realization, use, and operations. The net results are innovative services that improve the user experience and productivity of built environments, reduce capital and operational expenditure requirements, and positively impact building management and operations by effectively applying technology innovation. With Connected Real Estate, buildings and physical spaces can meet the changing needs of owners, operators, and occupants, enabling facilities to meet near-term and long-term service delivery, security, and environmental goals.

- Improving performance with reduced operational expenses:
 - Optimized space utilization
 - Reduced energy consumption and the use of natural resources
 - Improved workforce productivity
 - Optimized use of physical assets
- Enhancing the experience:
 - Improved user and visitor experience
 - Attraction of top-quality employees
 - Innovative environments that inspire, provide comfort, improve productivity, and motivate
 - Deployment of upgraded services over existing infrastructure
 - Delivery of innovative services through unique combinations of existing facility, information, and communication services

In addition, Cisco offers endless additional possibilities to deliver customized services that transform the experience of all the users of a building, facility, community, or city.

The Benefits of Connected Real Estate and the Intelligent Building

By converging disparate systems over a single, IP-based building information network, Connected Real Estate offers stakeholders proven benefits that will help improve business effectiveness, reduce operational and capital expenditures, and reduce environmental impacts. Connected Real Estate enables the development of new intelligent buildings or the transformation of existing facilities into intelligent buildings, optimizing resource usage and enabling the next generation of the building or facility experience.



Connected Real Estate creates value by:

- Reducing capital expenditures:
 - Consolidation of disparate networks on to a single IP backbone
 - Reduced cabling and integration costs
 - Extension of common services (e.g., video, access control) to multiple solutions

Why Cisco?

As the worldwide leader in business networking, Cisco provides:

- A comprehensive networking solution for all building needs
- 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 network investments
- A long-term commitment to the real estate industry
- Proven best practices for deploying real estate industry network solutions, developed through close working relationships with real estate customers and industry groups