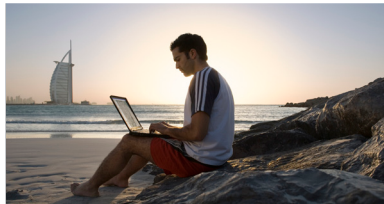




Smart+Connected Communities
Changing a City, a Country, the World



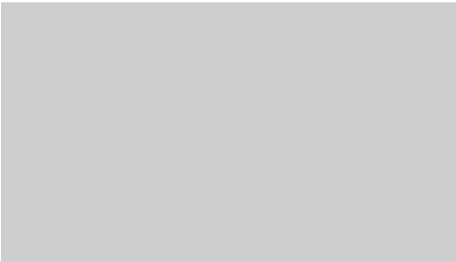
Smart+Connected Communities: Changing a City, a Country, the World



With world populations shifting to urban areas, community leaders are pressed for answers to overcrowding, pollution, budget and resource constraints, inadequate infrastructures, and the need for continuing growth.

Cisco® Smart+Connected Communities is Cisco's visionary answer: using intelligent networking capabilities to weave together people, services, community assets, and information into a single pervasive solution. "Smart+Connected" acknowledges the essential role of the network as the platform to help transform physical communities to connected communities. It also encapsulates a new way of thinking about how communities are designed, built, managed, and renewed to achieve social, economic, and environmental sustainability.

The foundation for the city of the future will be the network and the information it carries, enabling the delivery of vital services from transportation utilities and security to entertainment, education, and healthcare. Everything will be connected, intelligent, and green: from office buildings and appliances to hospitals and schools. Citizens and businesses will enjoy unprecedented levels of collaboration, productivity, and economic growth without compromising the environment. Managing and operating such a smart, connected community will be efficient, coordinated, and secure.



Urbanization: A Global Trend and New Opportunity

The world around us is undergoing a major transition. For the first time in human history a majority of the people in the world live in urban areas. Over the next five years, some 500 million people will be added to the world's cities. By 2050, at least 100 new cities will be inhabited by more than a million residents (1). Developing the infrastructure of these new cities will require trillions of dollars. The environmental impact of this massive urbanization is significant. Cities consume 75 percent of the world's energy and are responsible for 80 percent of greenhouse gas emissions (2). The need for all these cities to sustainably balance social, economic, and environmental resources is more critical than ever before.

Previous centuries saw industrial infrastructure such as rails, roads, and telephone lines paving the way for new cities and new connections. The 21st century is about urbanization based on information and the network as the underlying platform. Today, urban infrastructure including homes, offices, cars, public transport, hospitals, schools, energy, and appliances are all getting connected via wired or wireless infrastructure to the Internet. The Internet has expanded into an "Internet of Things" beyond traditional computers and mobile devices.

Cities using the network as the platform to plan, build, and manage day-to-day operations will gain significant new efficiencies in every aspect of community life: enhancing productivity among city employees, improving availability and access to public services, and creating new models to generate needed revenues. These communities will reap significant benefits that include:

- Improved city management
- Continuous economic growth
- Enhanced quality of life for citizens
- Sustainable urbanization

"Just as the Internet has transformed our businesses and personal lives, it will now transform our cities and communities. Everything will be connected, from healthcare to education, government, buildings, physical security and much more—truly everything. Cities that embrace technology will be those who lead in the future, achieving significant environmental, social and economic sustainability."

—Wim Elfrink, Executive Vice
President, Cisco Services
& Chief Globalization Officer,
Cisco



Cisco's Smart+Connected Communities Initiative

During the 1980s, the development and expansion of the Internet were hampered by disparate networks unable to interoperate with one another. Cisco's multiprotocol router solved this problem by "translating" across networks, paving the way for the development of today's all-encompassing Internet.

Today, urban centers struggle with hundreds of different systems and protocols that do not interoperate. If these systems converge onto a single open-systems based network, significant opportunities for productivity, growth, and innovation can be unleashed.

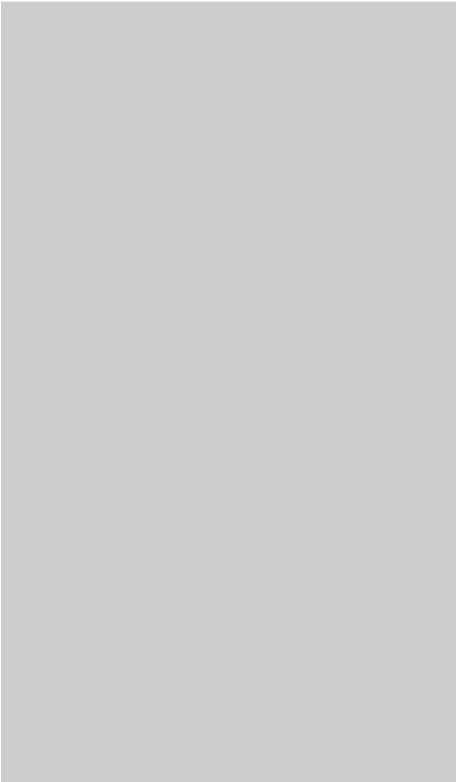
A city of the future is a community that is run on networked information providing integrated services. Using intelligent networking capabilities, Cisco helps to create smart, connected communities that bring together new public and private partnerships in a common purpose: sustaining economic growth, engaging people of all ages and abilities, and addressing ongoing environmental issues and quality of life concerns.

Cisco works with customers from idea to execution, taking advantage of industry solutions built on the network as an open, integrated platform, a broad ecosystem of partners and innovative business models to change how communities are designed, built, managed, and renewed. Cisco Smart+Connected Communities enables citizens, mayors, developers, urban planners and other community stakeholders to address the challenges and opportunities of an urbanized world. It drives economic, social, and environmental sustainability.

Two vital facets of Cisco Smart+Connected Communities facilitate efficient delivery and management of services within a community. Community+Connect helps deliver comprehensive services to residents and businesses in a connected community. Community+Exchange helps enable the management and operation of a connected community to share information and collaborate across a community's ecosystem of government agencies and private sector partners. Both Community+Connect and Community+Exchange are facilitated by the underlying Cisco Service Delivery Platform.

Community+Connect

Cisco's Community+Connect transforms constituent experiences as they live, work, learn, and play in a Smart+Connected Community by leveraging real-time information and applications. With the network as the underlying service delivery platform, Cisco and its public and private partners can deliver services for home, work, school, hospitals, malls, stadiums, travel, and government and drive economic, social, and environmental sustainability.



The Home Experience

Accessing Services from Home

You can now access and manage services from your own home at the click of a button. Cisco's home solutions enable quick and easy access to information and services you need to enhance your personal and professional life. On the delivery side, new small business and entrepreneurship opportunities are enabled. For example, you can attend a yoga or cooking class, access real-time data about your home's energy consumption, visit a doctor, and attend school from the comfort of your living room.

It helps efficient delivery of key citizen services anytime, anywhere.

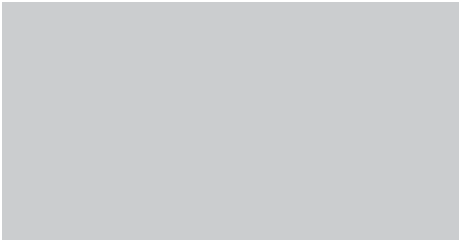


The Office Experience

Improving Performance, Purpose, and Profitability

Does your office know when you arrive and leave the facility? Does it automatically turn on and off your business applications based on usage? Does it notify you of peaking energy use? Does it automatically send security alerts when unidentified persons enter the building, or when unidentified materials are found? A Smart+Connected Office does.

A Smart+Connected Office is responsive to its user's needs and adjusts quickly to changing requirements. It facilitates efficient management of a building's resources for increased operating efficiency.



Today's workforce is mobile, with personnel constantly traveling across the globe, and therefore most buildings have occupancy levels of 30 to 50 percent. The Cisco Personal Virtual Office solution increases the occupancy rate of buildings and makes them more economical to operate.

Family time is precious, and Cisco ensures that the new-generation workforce does not have to forgo family time due to work commitments. Cisco business center solutions allow professionals to catch up on meetings directly from home.



The Wellness Experience

Delivering Better Healthcare

Cisco Smart+Connected Health solutions supported by the Cisco Medical Grade Network help communities by simplifying communication between doctors and patients, maintaining clinical records, and providing access to reports and images while safeguarding their confidentiality. It takes preventive healthcare initiatives and thus helps boost the overall health of citizens within communities.

You can visit a doctor from home. Cisco's care-at-a-distance portfolio of solutions integrates a variety of Cisco video and collaboration technologies together with medical devices to create a live, "face-to-face" experience over the network for remote doctors and patients. It offers an alternative healthcare delivery model with greater convenience, better access, lower cost, and faster deployment to the point of care.



The Learning Experience

Creating a Connected Way of Learning and Living

Today, students and professionals have to keep updating their skills for the 21st century work environment. Educational institutions and communities need to transform the way education is delivered so they become lifelong learning centers. At Cisco, we are empowering educational institutions to create a connected way of teaching and learning.

Imagine taking class from home and a school where learning takes place beyond the classroom walls. Students are exposed to a wider world of information and experience. The barriers in communications have been removed. Technology is facilitating real-time interactions and collaboration, which is necessary in a next-generation learning environment. Furthermore, integrated video technology within campus also helps to ensure a learning environment that protects students and teachers.

Cisco Smart+Connected Learning solutions enable a city to provide students with a 21st century learning environment and help them develop skills needed for tomorrow.



The Shopping Experience

Managing Expectations of the Customer

For today's customer, shopping is not just buying things off a list but a social experience and a form of entertainment in itself. Shopping malls are constantly competing to increase their foot traffic and achieve customer satisfaction. While creating an unmatched shopping experience for the end customer is key priority, mall operators are always looking for ways to gain revenue for their retailers and differentiate themselves from other malls.

Imagine a shopping experience where you can reserve and pay for a parking spot before leaving home, receive real-time sales incentives on entering any store, or obtain personalized discount coupons. Where your goods are delivered to your car or home. Where your security is guarded through real-time video surveillance. Where you can leave your kids in a play area while you shop. These are some of the ways in which mall operators are enticing customers.





The Travel Experience

Intelligent Transportation Control and Management

Smart+Connected Transportation solutions can help communities manage traffic using mobile command centers, which divert traffic during peak hours by sending messages across intersections and to your car, giving you access to real-time transit information to travel anywhere you want. You can find routes, book tickets, or reserve your parking spot using your mobile phone.

The Cisco vision is that workplaces, residential buildings, travel service providers, airlines, and hotels would all be integrated on a single IP-based platform promoting a seamless transportation experience. A variety of wireless technologies such as Wi-Fi Mesh, WiMAX satellite, and 3G/4G would be enabled in any mode of transport.

Cisco Smart+Connected Transportation solutions can help provide you with smarter, safer, and more energy efficient transportation services.



The Fan Experience

Transforming the Delivery of Sports and Entertainment

Cisco sports and entertainment solutions connect fans with their favorite teams and with each other in entirely new ways through interactive and personalized experiences. The experiences are entirely defined and driven by the fans.

You can buy and upgrade tickets through your phone or interactive kiosks around the stadium, have customized video feeds from other games around the league, selection of camera angles, and instant replays. You can order food at your seats, purchase merchandise, have in-seat access to interact with other fans around the stadium, and even check in at work. With the Cisco TelePresence™ facility you could now interact with your favorite fan after the game or receive real-time information on digital displays.



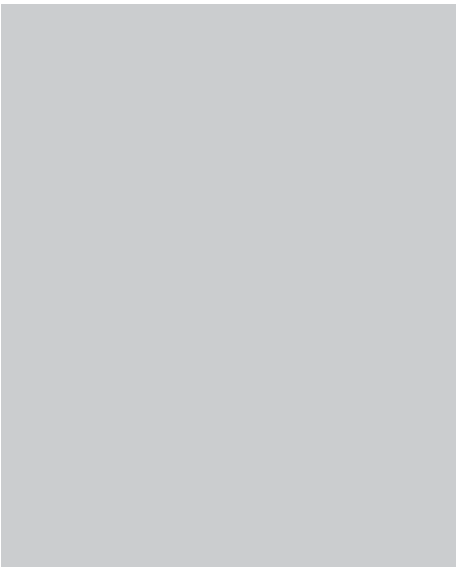
The Government Experience

Improve Services to Citizens

One of the core responsibilities of governments is to protect and serve citizens. Whether it is crimes, fire, accidents, or natural disasters, every city has a unique mixture of safety concerns. Education, healthcare, and entertainment are a prime focus for the constituents of any community. Stringent budgets, limited resources or time, and handling vast amounts of data all make managing cities a mammoth task.

Imagine a government experience that is engaging, where you can access the information you need to live, work, play and learn in your community. Public safety and security are stable and government offices and community transportation systems are designed for citizens of all ages.

Cisco Smart+Connected Government solutions provide organizations the ability to be more connected with constituents, while managing operational costs. It provides governments with the technology and facilities that enable constituent engagement, and access to the information they need. For example, you can renew your driver's license from your home.





Community+Exchange

Cisco's Community+Exchange, is a back-office operations center that helps with the planning and day-to-day operations and management of a community. By providing the network as a highly secure and resilient service delivery platform, you can share information and collaborate across a community's ecosystem of government agencies and private sector partners to facilitate utilities, transportation, telecommunications, safety and security, building systems, health, and government social services.



Utilities

Use an intelligent IP-based network platform for energy, water, and gas management and consumption that helps you gain better visibility into energy consumption, reduce energy costs, improve operational and energy efficiencies, and reduce greenhouse gas emissions.

Transportation

Build highly secure, intelligent, multimodal transportation systems to foster innovative, real-time communications and collaboration while helping ensure safety and security. Integrate workplaces, residential buildings, travel service providers, airlines, and hotels onto a single platform.

Safety & Security

Give emergency and security personnel real-time access to information that helps automate detection analysis, coordinate incident response, and facilitate communication and collaboration, helping to ensure a safer community.



Real Estate

Help make new and existing buildings more energy efficient and productive workplaces, easier to manage with centralized functions, and environmentally sustainable.

Government

Build the foundation to engage citizens of all ages and abilities, promote prosperity, help attract a new generation of employees, and ensure public safety. Government agencies can be more connected, contain costs, and better serve the needs of an on-demand culture by increasing the effectiveness of public safety, justice, and corrections agencies, improving workforce productivity, and enhancing citizen experience and quality of life.



Cisco Service Delivery Platform

The Cisco Service Delivery Platform is the foundational, open-architecture platform that enables Cisco and its partners and customers to create and deploy new smart services and applications to community citizens as well as people that manage and operate the community infrastructure.

The Cisco Service Delivery Platform:

- Enables seamless integration with Cisco and partner software and hardware products
- Is based on extensible and open industry standards
- Acts as the orchestration layer
- Provides an open framework for integrating third-party smart service and application offerings





Benefits of a Smart+Connected Community

Fostering Social Sustainability: The services provided on the Cisco Service Delivery Platform enable citizens to enhance their quality of life and increase their standard of living by creating a healthy and interactive environment.

Boosting Economic Sustainability: Smart+Connected Communities facilitate new job opportunities for citizens. As new businesses and key industries flourish, they help to drive economic growth.

Promoting Environment Sustainability: Cisco Smart+Connected Communities help reduce the environmental impact caused over the years due to improper management of resources.

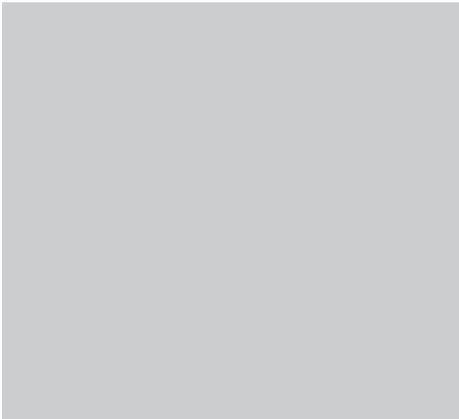


Why Cisco?

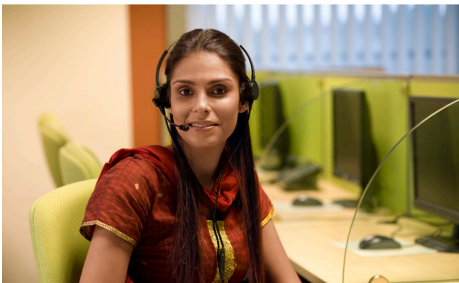
The Cisco Smart+Connected Communities initiative brings Cisco solutions together with Cisco partners' technologies across many industries, enabled by the Cisco Service Delivery Platform, to address the challenges from massive urbanization. Cisco's expertise helps customers throughout the entire lifecycle of building an urbanized center from planning to execution.

The Cisco Smart+Connected Communities initiative pursues innovative solutions along eight tracks:

- Smart+Connected Real Estate
- Smart+Connected Utilities
- Smart+Connected Transportation
- Smart+Connected Safety & Security
- Smart+Connected Learning
- Smart+Connected Health
- Smart+Connected Government
- Smart+Connected Sports and Entertainment



As this significant global market transition continues, driven and enabled by the network, Cisco is well positioned to help foster social sustainability, boost economic development, and promote a better quality of life for citizens.



For More Information

To learn more about the Cisco Smart+Connected Communities initiative, contact your Cisco representative or visit:

- **Smart+Connected Communities:** www.cisco.com/go/smartconnectedcommunities
- **Real estate solutions:** www.cisco.com/web/strategy/trec/index.html
- **Utility solutions:** www.cisco.com/web/strategy/energy/index.html
- **Transportation solutions:** www.cisco.com/web/strategy/transportation/index.html
- **Safety & security solutions:** www.cisco.com/web/strategy/government/safe_secure.html
- **Learning solutions:** www.cisco.com/web/strategy/education/index.html
- **Healthcare solutions:** www.cisco.com/web/strategy/healthcare/index.html
- **Sports and Entertainment solutions:** www.cisco.com/web/strategy/sports/index.html
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