智能互联生活
SMART + CONNECTED
LIFE

The Cisco Pavilion Guide • EXPO 2010 Shanghai, China
Honored Guest:

Welcome to WORLD EXPO 2010, Shanghai China.

Welcome to the Cisco SMART+CONNECTED LIFE Pavilion.

Smart+Connected Life (S+CL) is nothing less than the seamless integration of public and private services, delivered across a common network infrastructure, to individuals, governments and businesses. A Smart+Connected Life delivers the triple bottom line of Economic, Social and Environmental benefits to a Smart+Connected Community.

During the six months of the Expo, some 1,000 delegations will visit the Cisco Pavilion. Every day, extraordinary dialogues are taking place in our exhibit areas, conference rooms and by TelePresence around the world. Discussions that are defining what life will be like in the city.

From these discussions, we have gained a more nuanced understanding of the challenges that you are facing; while you have seen firsthand how Smart+Connected thinking can change the way that your citizens live, work, play and learn.

This Smart+Connected Life Guide will help you share your experience at the Cisco Pavilion with your city and your peers.

We hope that you will find it to be a valuable tool for communicating the possibilities of a SMART+CONNECTED LIFE along with our Pavilion website www.cisco.com/go/expo2010.

Thank you for taking the time to visit the Cisco Pavilion. We look forward to working with you.

Sincerely,

Wim Elfrink
EVP Cisco Services, Chief Globalization Officer
Introduction
Major shifts are taking place around the world: the labor force is aging in some countries, while exponential population growth is taking place in others. Everywhere people are moving to the city, and cities are being built faster than at any point in human history.

The industrialization of the Internet is increasing the rate of change. Today people and things are being connected. Tomorrow, these connections will be used to break down physical barriers to create Smart+Connected Communities built to address the common issues faced by villages, towns and cities around the world.

What will make the smart connection possible is that everyone—governments, service providers, private enterprises and citizens—will share data across a common broadband Service Delivery Platform (SDP).

Governments, service providers and private enterprises utilizing the Service Delivery Platform will enable people to manage energy usage in their homes, work in a combination of physical and virtual offices, interact with students and teachers around the world, obtain health care regardless of their location, make greener choices about how they travel, enjoy a more personalized, more productive shopping experience and go to stadiums that bring them closer to their favorite teams.

And managers will be able to make more efficient use of utilities, maximize transportation system throughput, ensure public safety and personal security, manage smart buildings, optimize communications and coordinate emergency responses across agencies, cities and countries.

Cisco and its world-class partners are working with governments, service providers and investors around the world to develop the business models and partnerships necessary to create a better city and a better life for your citizens.
Part 1

Forces of Change
The population of Planet Earth is fast approaching 7 billion people.

7,000,000,000.

- 400 cities have populations over 1 million.
- 19 cities in the world have populations of 20 million or more.
- 500 million people will be urbanized in the next 5 years.

Somewhere between 100 and 500 new cities—each with a population of at least 1 million—will be built and inhabited by 2030.

Trillions of dollars will be spent. Tens of millions of people will be employed.

By 2050 more people will live in cities than live on all of Planet Earth today.

It is an enormously complex undertaking.
The numbers are so vast, the timetable so abrupt, that our traditional models and practices can no longer scale to solve the problem.

Technology is an essential part of the solution. It can provide tools to manage the challenge, and it can deliver services on a vast scale with unprecedented efficiency.

As it happens, we are entering the third web age, The Internet of Everything, supported by the Internet Protocol for Smart Objects (IPSO).

This evolution has two defining characteristics.

1. Any “thing” can be connected to an IP network.
2. Every “thing” that is connected will speak to each other.

The convergence of all kinds of data across a unified IP network will make it possible to develop a wide range of new services.

And to deliver these services to anyone, anywhere, anytime.

It is this combination of services and delivery that defines a Smart+Connected Community.
AROUND THE WORLD IN 80 MILLISECONDS

Our customers challenge us every day.

In **Shanghai**, we just turned the world’s tallest building into the world’s tallest, most intelligent building—all 101 stories of it.

Built as part of Cisco’s “Connecting Sichuan” initiative, the new **Wenchuan** hospital is fully WiFi enabled, with IP phones and digital signage in every room.

In **Chengdu**, we are designing the Tianfu High-Tech Zone which will use cloud computing and other technologies to attract investment to the city.

In **Chongqing**, we are deeply involved in Party Secretary Bo Xilai’s Five Chongqings initiative: a healthy Chongqing, a livable Chongqing, a safe Chongqing, a Chongqing with smoothly flowing traffic and a forest Chongqing.

In **Songdo, South Korea**, the first Smart+Connected Community will soon replace Seoul as the preeminent business hub in the region.

In **Shah Alam, Malaysia**, i-City is a $565 million ICT-enabled development that is a fully operational regional hub for high-technology companies.

In **Lagos, Nigeria**, Cisco is connecting more than 40,000 faculty and students from the University of Lagos across three campuses.

Cisco and our partners work on smart and connected projects every day.
In Florida, Cisco is building a campus-wide intelligent information network for Ave Maria University.

In New York City, the new Yankee Stadium is the most wired, connected and video-enabled stadium in major league baseball. There are five others in the U.S.

The new hillside town of Lavasa is an S+C Community being planned using the principles of New Urbanism. The idea is already being hailed as the birth of the new urban India.

In November 2007, Cisco opened the Globalisation Centre East in Bangalore. There are over one million square feet of space, all smart and connected.

Our Bangalore Campus is managed by a Service Delivery Platform, which integrates traditionally separate control networks for climate control, power, water, safety, security and communications in a single converged IP infrastructure to provide services for the campus as a Smart+Connected Community.

Every Smart+Connected project is unique. Each offers the opportunity to push the possibilities of imagination and technology a little bit further. To define what makes a better city, and what people need to lead better lives in it.

Which is why we think that you should consider partnering with us when you set out to define the future of your city.
A NEW PARTNERSHIP
Increasingly civic leaders are being challenged to ensure that the cities they represent are able to compete effectively in a fast changing world. Flexibility and agility are central to pursuing new opportunities, especially when the goal is to bring foreign and private investment to a city.

Many focus on reducing operating costs and optimizing their use of natural resources to meet new standards. Others want revenue growth so that they can provide more public services. Everyone wants the assurance that their technology investments will have the desired effect on their community.

No one person, company or entity can create a city on their own. An S+CC initiative is a collaboration between Cisco, the municipality or free trade zone authority, one or more master developers, various property developers, traditional service providers and a variety of other investors and partners.

The government takes the lead in developing the vision and the master plan. It will manage and run the city, it must meet all provincial/state and national standards, and it must demonstrate that the expenditure will benefit its citizens.

In green field projects one or more master developers work with the government to develop the master plan. Typically each is associated with a certain kind of development (e.g., commercial, residential or industrial developments).

The master developers then recommend or recruit property developers to build out their plans.

In many countries the service providers are government or quasi-government agencies. Like the government they will remain involved for the life of the project. By creating innovative services, both traditional and new kinds of service providers can enhance the quality of life while creating new revenue streams for the government.
Like most great ideas, it began with a question.

What would happen if we thought of the ICT network as an underlying platform supporting the infrastructure?

Like many great ideas, the answer was obvious . . .

If you thought of the ICT network as you do a water main or a gas line, you wouldn’t try to install it after the roads were paved and the sidewalks poured.

You would install it before the concrete was poured and the finish work was done.

An ICT network has unique requirements.

• The ICT infrastructure is every bit as critical to the city as its roads, electricity or water supply.

• ICT has a high Capital Expenditure cost with a long-term payout.

• Design is driven by the architectural plan.

• Planning must consider the needs of both public and private stakeholders.

• Management and administration is an ongoing expense and a revenue opportunity.

So, how does a network help to create a community?
THE SMART+CONNECTED MODEL

This graphic presents the S+CC model as a stack.

1. On the bottom are the three enabling Cisco architectures, collectively referred to as the Service Delivery Platform. They are delivered via Cloud Computing.

2. The middle layer is Community+Exchange. The Exchange is a comprehensive Integrated Operations Center, managing much more than the network—a single place for government, private sector and service provider partners to come together to manage and operate the community.

   Community+Exchange includes six verticals to manage the city infrastructure. Data from these verticals is shared with the Community+Connect layer. For instance, Transportation data might be integrated into a Travel application to update bus schedules during the day.

3. Community+Connect is a series of solutions and services that help to manage and enrich different aspects of life in a modern city. These are the elements that the citizen/consumer will interact with but are also services that can be created.
What exactly is a sustainable city?

It is a city in which the “triple bottom line” of Economy, Society and Environment are managed to be in harmony.

Our ultimate vision for a sustainable city is one that is economically resilient. It is culturally and socially vibrant and inclusive. And it is one where resources are used effectively and environmental quality is steadily improving.

By incorporating Smart+Connected concepts into the master plan, government is assured of having the tools to manage the triple bottom line in a sustainable manner.

**Economy**

An intelligent network provides the means for the government to converge functions and services onto a single city computing ‘cloud’. Flexible use of data facilitates collaboration, which in turn increases productivity, which creates competitive advantage.

Often the simplest changes can yield impressive returns. Imagine what it would mean if business processes such as permits or taxes were streamlined. The cost of compliance would be lowered. Investors could be readily paired with local businesses.

The ability to facilitate innovation and to foster collaboration is central to the long-term competitive position of the city. The result is job creation.

In turn, the availability of good jobs attracts people who are capable of advancing the paradigm.
Society

The most vibrant and desirable communities are those in which the citizens are fully engaged.

In a Smart+Connected Life, citizens will enjoy an unprecedented range of public and private services including health, education and of course entertainment. They will interact with the government more easily, and will find it easier to become part of the fabric of the city.

Environment

There are only two ways to maintain, much less improve, the environment: either reduce the amount of resources that are being consumed, or develop clean, renewable supplies of energy. While we wait for the latter, S+CC helps to achieve the former.

Cities that invest in technology platforms will change their business, social and environmental landscape.

The Cisco Internet Business Services Group (IBSG) projects that, as a result of integrating S+CC technology, in 20 years a city of 5 million people would see the following effects:

- City revenues increase by US$15B
- GDP would grow by 9-10%
- Energy efficiency would improve 30%—translating directly to the bottom line
- 375,000 new jobs would be created
SERVICE DELIVERY PLATFORM
The backbone of every Smart+Connected Community is a Cisco Service Delivery Platform (SDP).

The Platform incorporates three of our key architectures:

- **Borderless Network Architecture** which enables anyone, anything, anywhere, anytime communications. In an S+CC environment, the borderless network makes it possible to connect with multiple users simultaneously through whatever equipment they have.

- **Collaboration Architecture** which enables access to the broadest range of communication media possible including text, voice and video. This architecture incorporates enterprise grade security, as well as auditing and recording for specialized industry applications.

- **Data Centre Virtualization Architecture** which enables more efficient utilization of physical assets and reduces data centre staffing requirements. Highly agile, the virtualized data centre can be configured to elastically respond to differing user loads throughout the day.

The goal is to make it possible to purchase infrastructure as a service, shifting the burden of development from capital expense to operating expense, accelerating time-to-market and freeing up resources. At the same time, it ensures that a massive level of computing power is available on demand.

The S+CC experience is seamlessly delivered to the user through **Cloud Computing**, a rapidly maturing technology that combines Internet access with central remote servers that maintain both data and applications. Because both the application and the user’s data are accessed from the Cloud (as opposed to the user’s own computer), users can access their files from any device with Internet access.

The concept of **City Cloud Computing** foresees sharing servers between departments, and even between public and private entities to meet peak demand loads.

**It is this combination of the Service Delivery Platform and Cloud Computing that makes S+CC possible.**
**COMMUNITY+EXCHANGE**

Community+Exchange is the back office operations “layer” used to manage a Smart+Connected Community.

The Exchange makes it possible to connect people (anyone) and devices (anything) anytime, anywhere so that they can work together. This approach eliminates the traditional individual “stove pipe” control centers in favor of a single connected user environment that facilitates collaboration and improves efficiency.

Six vertical solutions are managed in Community+Exchange. Data from any of these solutions can be used to support Community+Connect and the Drivers.

These six solutions are of particular interest to governments, government agencies and their private partners such as utilities and telecommunications.
Community+Exchange Utility solutions help agencies to address energy, water, and gas management and consumption.

By enabling the delivery of utility management services over a converged IP network, the Utilities solutions:

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

Of particular interest is the **Smart Grid**. Cisco’s solution provides two-way communication across the grid to enhance information management on electricity metering. The security architecture for energy systems enables host security, threat detection, and access and authorization systems that protect the network and provide physical monitoring.

Community+Exchange 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. These solutions enable communities to:

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

These solutions are IP enabled and can comprehensively manage traffic flows and integrate multiple modes of transportation.
Community+Exchange Safety and Security solutions enhance the capabilities of emergency and security personnel with real-time access to information that enables the construction of a common security operations picture.

These solutions help to automate detection analysis, coordinate incident response, and facilitate better communication and collaboration between agencies.

Safety & Security solutions lead to:
- Automatic and unobtrusive detection and prevention
- Informed assessment and coordinated response
- Reduced human error and time lag
- Increased effectiveness of response

Community+Exchange Emergency Response provides a collaborative, responsive, and highly secure communications system in which information can flow directly to the point of care. It links responders with hospitals and specialists, and enables tight coordination with safety and security forces.
Community+Exchange Telecom solutions give government agencies the ability to be more connected, contain costs, and better serve the needs of an on-demand culture by increasing the effectiveness of public agencies, and enhance the citizen experience and their quality of life.

Community+Exchange Building solutions make new and existing buildings more productive workplaces and residences. The buildings are more energy-efficient, more economical to operate and easier to manage from a centralized location. These capabilities make a building responsive to its users’ needs and enable it to adjust quickly to changing internal and external requirements.
COMMUNITY+CONNECT

Community+Connect encompasses eight areas of city life. These are inclusive categories because people’s activities often cross categories (e.g., school and home).

- Government
- Health
- School
- Office
- Retail
- Home
- Sports & Leisure
- Travel

Connecting the community enables real-time information exchange, facilitates interaction, and provides access to essential resources and expertise.
GOVERNMENT

Delivering better services to citizens

- Improves the effectiveness of public agencies
- Improves constituent services
- Improves the citizens’ experience and quality of life

There are three major themes that are of interest to every politician and bureaucrat at every level of government.

- Economic development
- Social development
- Political development

Four macro trends have an impact on these three areas.

The first trend is globalization in its many forms: globalization of finance, globalization of trade, globalization of communications and globalization of talent.

The second trend is urbanization. Cities are exploding in size and complexity, and with that come the challenges of developing and managing the cities.

The third trend is pervasive technology. APAC governments, who historically have been used to controlling the news, have struggled to learn how to deal with blogging and social media.

The fourth trend is environmental sustainability, though the commitment to this varies from country to country.

Governments are focusing on attracting Foreign Direct Investment (FDI) as a quick way to grow their economy.

To be truly sustainable, a city needs to attract talented people who will create value from their ideas and entrepreneurial spirit.
HEALTH

Delivering better health care to citizens.

- Extend health care access into the community and the home
- Improve quality of care and simplify communications
- Prompt and secure access to digital images and reports
- Safeguard patient records and clinical applications

Health care costs are rising rapidly around the world. Most countries are currently spending eight to twelve percent of GDP to deliver a “politically acceptable” level of care.

Providing better, localized service to ever-increasing numbers of people is the biggest challenge facing government around the world. The scale of the problem is immense, and there is no easy way to solve it.

Close to four billion people (more than half of the world’s population) do not have adequate health care. Two-and-a-half billion people do not have access to sanitation facilities. One billion people do not have access to clean water.

- In China, India and the developing nations, 80% of the doctors live in cities, while close to 70% of the population live in towns and rural areas. People who need anything but the most basic care must journey to the city to seek treatment.
- In China, the number of patients registering at city hospitals doubled from the year 2005 to 2007. Beijing’s three largest hospitals each support more than 8,000 new patient visits per day. In China, around 60% of all health care expenditures are for hospitals.

To help alleviate the growing demand for hospital space, one of our partners is running a pilot using Cisco IP phones to connect patients in their home with a doctor in a community clinic. The doctor gathers basic data over the phone in order to determine who needs to go to the hospital, and who can be treated at a local clinic.

Seventy percent of all health care budgets are being spent to manage long-term chronic illnesses associated with the rapidly aging population. This is an enormous challenge for many countries and it is particularly acute in China where traditional care models are no longer sustainable.
The inability to transfer data effectively restricts patient and clinical care options, and raises health care costs. The majority of the systems in place today are administrative. They were never designed to connect doctors with patients and colleagues, nor can most be readily adapted to doing so.

Smart+Connected solutions are already demonstrating great promise. They are being used to unify patient records, increase accuracy, reduce costs and deliver care to remote rural areas.

The response to the tragedy in Sichuan has redefined how emergency response is provided in remote areas.

- Starting in September 2008, a Cisco Unified Communications solution successfully supported remote diagnoses between Huaxi Hospital in the provincial capital of Chengdu and temporary field hospitals in Qingchuan and Dujiangyan.

- As of May 2009, other links to injured victims were provided by a Mobile HealthPresence Clinic, a custom-made Isuzu vehicle equipped with state-of-the-art technology. A field test was successfully conducted in Wenchuan County.

- Cisco HealthPresence was installed in the Sichuan-Hong Kong Rehabilitation Center at Sichuan People’s Hospital in May 2009. Using TelePresence, psychological counseling was provided to traumatized quake victims.

In Argentina, Cisco has been running pilots using a mix of high bandwidth in the cities where the hospitals and universities are, and a low bandwidth technology called HealthPresence Extended Reach in the rural areas.

In South Africa, a rural pilot is underway, in which Cisco and the government are partnering with the regional service providers who supply the bandwidth.

In Beijing’s Chaoyang Hospital, a CISCO Unified Communications solution called On Duty Status Check is being tested. This allows nurses and other hospital staff to check the doctors’ availability without physically having to go and find the physician.

In India, at the Cisco Bangalore campus, one doctor is caring for approximately 5,000 employees. When a Cisco employee schedules an appointment, a mobile HealthPresence van comes to their building for the remote consultation.
Creating a Smart+Connected way of living and learning.

- Extend access to education and increase participation regardless of location
- Enable next generation learning and teaching
- Improve administrative efficiency
- Provide safe and secure network and physical environments

The goal of Smart+Connected Learning is to make it possible for the citizens of a country to develop the skills that they will need to create and support a sustainable economy.

Teaching children to read, write and do simple arithmetic is not enough to compete in a global marketplace. Working in a connected society requires that people of all ages have the skills and training to work in teams, to collaborate and to problem solve.

Particularly in developing nations, it is very likely that adults will participate in Smart+Connected Learning before their children do. Today, children are being prepared for the future. But there are generations of adults who need to be prepared for the present while their children grow up.

For instance, as China’s economy transitions with new industries from a manufacturing economy to a service economy, it is estimated that China may have to re-train up to 100 million workers every five years. Traditionally this would have meant creating an enormously costly physical and human infrastructure to bring the students to the content.

By utilizing the Service Delivery Platform, educators will be able to connect to anyone, anywhere, anytime. They will be able to deliver their curriculum on a wide range of platforms—from a cell phone to a TelePresence Suite.

Only Smart+Connected technology can offer the fast, flexible, cost effective tools necessary to teach an entire generation across a country.

Students will benefit from being able to learn at their own pace. From being able to remain in their community with their families. And by interacting with and learning from peers across the city, or around the world.

The future depends on changing the way that people live, work, learn and play. On teaching them to make better decisions. On training them to use the technology at their disposal. And on preparing them to compete and contribute.

Smart+Connected Learning is a scalable, effective way to accelerate the rate of change.
OFFICE

Improving performance, purpose and profitability.

- More efficient, effective use of workspaces
- Easier to manage with centralized functions
- Integrated building management, energy and security reduces costs

Office is one of the most mature Community+Connect implementations.

- The first place to be optimized for connected work was the office.
- The first place to be impacted by mobility and changes in work patterns was the office.
- Aspects of Office are extensions of Community+Exchange Building.

As early as 2000, Cisco began developing office space optimized for the needs of knowledge workers.

One of the earliest examples is Dubai Internet City (DIC). DIC is an information technology park created by the Government of Dubai as a free economic zone. It is intended to be a strategic base for companies targeting regional emerging markets.

DIC has grown to over one and half million square feet of prime commercial office space. More than 850 companies with over 10,000 workers are located there.

This type of development is very popular, and there are now a number of examples of a data optimized economic zone being used to attract business and investment. (Malaysia’s i-City, Songdo and Chengdu are others we have mentioned.)
Recent studies show that with the ever-increasing mobility of the office worker, office space is only used 60-70% of the time. The rest of the time desks sit empty while the lights burn brightly and the air conditioning hums softly.

This has led to some interesting strategies for reducing the total amount of office space a company leases.

A team at Cisco’s Bangalore campus has evolved an S+CC concept called the Personalized Virtual Office or PVO, which enables different parts of an organization to optimize use by sharing a single facility.

- In a PVO building, the network knows each user’s preferences, and what resources they are allowed access to.
- The network can help ensure personal safety—for example, by turning on lights on the way to a car, or confirming arrival with a calendar.
- It can monitor compliance (for example, in a controlled manufacturing environment) where it is required.

Another Smart+Connected solution is the Smart Work Center.

For several years, Cisco has been experimenting in Amsterdam with transportation virtualization. Instead of moving people to a place they can work, the model brings the workplace to where the people live. Twelve fiber and TelePresence enabled neighborhood community centers have been deployed around the city.

To get the program started, the first centers were piloted by the government as a proof of concept. The rest were developed by a consortium of companies. The people running the program quickly realized that the technology in each Work Center could be used for much more than work.

In the evening the workspaces and equipment are used for lifelong learning classes, maximizing the use of the facility and creating opportunities where there would otherwise would be none.

Songdo will be testing a modified version of this idea called T.H.E. Hub, which will also incorporate government services.

Now, in emerging market megacities, Smart Work Center and PVO is being seen as a way to combat poverty and regenerate slum areas. Healthcare and other essential government services can be extended to the point of greatest need. And education can be delivered locally.
MANAGING EXPECTATIONS OF NEW AGE CUSTOMERS

• Increase store traffic and customer satisfaction
• Creating new marketing and advertising models
• Enable mall operator differentiation
• Reduce total cost of ownership

Maybe you are on a bus or walking down the street. Digital signage shows you personalized offers, or you receive a message from your favorite boutique just around the corner. It’s a digital coupon and an invitation to a great sale and it is taking place right now—just for you. When you walk in the door, you're greeted by your favorite salesperson.

The screen over the counter begins to display a selection of items based on your recent purchases. They are shown in your favorite colors. If you want to buy, use your phone and your digital coupon to pay.

On the way home you notice a digital sign over the fish market, advertising your family’s favorite fish. You go in to see how fresh it is, and are shown a detailed record of its journey from the ocean to the counter. Reassured, you buy some and head home.

Or maybe you never had to leave home or the office, because ‘virtual concierge’ services with video connections to the stores and services you want are readily available through TelePresence. Perhaps you have a couple of questions for your bank, which are personally answered in a TelePresence conversation with a Senior Investment Manager—funny, you forgot to ask him where his office is.

Why not do a yoga session over TelePresence with your instructor, then get ready for dinner?

All of this is based on location, identity, profile and your preferences.

With these variables and the appropriate permissions, an almost infinite number of innovative services can be created to enhance productivity, boost sales or simply facilitate someone’s leisure time—while safeguarding privacy.
HOME

Services accessed from the comfort of your home.

- Deliver key citizen services especially health care and education
- Increase small business access and entrepreneurship
- Real-time energy and security management for the home
- Social inclusion

Community+Connect Home will alter our ideas about our home.

No longer will home be a place to disengage. Instead an amazing variety of content and services will be available.

No need to worry about a sick child missing school. Not only will the classes be available, he or she will have access to a rich supplemental library of materials to use for class projects.

Adult classes will also be available—whether to earn a license or participate in a continuing education program. The opportunity to collaborate online with fellow students will make this a very different experience than the home study courses we are used to.

Medical consultations will be important, especially for those caring for the elderly who require constant care.

For those with chronic diseases, the possibilities of IP monitoring go far beyond taking someone’s temperature. IP monitors can record data 24 hours a day, providing a detailed picture of a person throughout the day.

The same monitors can be set to notify caregivers or emergency medical teams if specific measurements rise above or fall below established levels.

TelePresence or an IP phone can be used to help a patient take the proper pills at the appropriate times—something that becomes increasingly complicated with age.

If you are an employer, some of your employees will be able to live where they want to, and work from home. In some cases this will be a recruiting advantage. It will also allow the company to spend less on office space.
HOME (continued)

One benefit of doing all of these things from the comfort of your home is that it is green. Minimizing the need for travel, whether across town or around the world, reduces energy consumption and congestion.

Imagine if instead of driving 30 minutes to a local office, you could use TelePresence to connect to the driver’s license bureau. For the eye test they might ask you to stand three feet away from the screen and read a chart. The camera on your TelePresence unit will take your photograph and automatically transmit it. Add your secure digital signature and your license is renewed.

If you are a single family home owner, integrating home control functions such as building control, lighting, heating and air conditioning will make it easy to monitor household power utilization. The clear graphic displays and the immediate feedback will help you and your family to reduce the energy bill, and the city’s carbon footprint.

If you live in an apartment building or other multi-dwelling development, the building manager will use Community+Exchange Building and Community+Exchange Safety and Security to ensure your family’s safety and make the building operate efficiently.

If you are a sports enthusiast, you will be able to subscribe to a wide range of services to follow your favorite sports teams, talk to the players in the locker room and attend practice. You will also be able to work out with a coach who specializes in your sport—or the rehabilitation you need as a result of the sport.

Needless to say, the menu of entertainment options and personal services will eclipse what we have today.

Staying home may soon be the most productive way to spend the day.
A new Cisco technology called **Cisco StadiumVision™** is providing fans at stadiums with the most technologically advanced game-day experience in sports. The S+CC system integrates video, voice, data and wireless services into one seamless experience that is drawing rave reviews.

In 2009 a complete system was installed at Yankee Stadium in New York City. More than 1,000 high-definition monitors were installed in luxury suites, concession stands and restaurants around the stadium.

At the conclusion of each game, the monitors are used to direct patrons to the nearest exits. They also provide traffic information.

Fans are able to use their own mobile devices to order from the concession stands. They are also ordering instant replays, chatting with friends inside and outside the stadium, and uploading video of the big plays to be shared later.

Professional athletes are eagerly participating in the high-tech evolution in sports. They want a direct connection with fans. They tweet on Twitter. They post videos on YouTube. They create their own MySpace pages and websites.

By putting cameras in the locker rooms, a new dimension has been added for fans and players alike. The fan at home will also be able to participate by purchasing a premium service for the privilege of being in the locker room.

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**Transforming the delivery of sports and entertainment.**

- A connected global fan community
- Interactive luxury suites
- Venues that adapt to event opportunities

The passion for **sports** knows no borders. Fans want to be able to follow “their” teams on their schedule from wherever they are (anytime, anywhere). They want the ability to personalize their content, and of course, ease of use is mandatory.
TRAVEL

Intelligent transportation control and management.

- Optimize city transportation and logistics for all vehicles
- Encourage more public transport, improve sustainability, reduce environmental impact
- Increase productivity during commute
- Deliver key citizen services anytime, anywhere

It is only appropriate to begin a discussion about Travel with a dramatic demonstration of Cisco’s underlying Borderless Network Architecture.

On November 23, 2009, a 100Mbs Cisco router was sent into orbit aboard an Intelsat satellite. The compact router runs Cisco’s IOS software and is a key part of the US Department of Defense’s Internet Routing In Space (IRIS) project, which will route IP voice, video and data traffic between satellites.

Admittedly, space tourism is not yet an important part of Travel. What is important is that routers can operate in moving environments—like planes, trains and automobiles. This leads to smarter transport systems which can interact with vehicles and vehicles which can access services to improve the end to end travel experience.

As cities become wealthier, the use of private vehicles tends to increase. So do energy consumption, carbon dioxide emissions, traffic accidents, and unproductive time spent commuting.

Innovative Smart+Connected solutions are making public transportation more productive for citizens—one way to increase usage and reduce congestion.

In San Francisco, the Connected Bus was introduced in 2007. The strategy is to encourage ridership by making the time spent on the bus more useful.

- Touch screens at bus stops provide real-time arrival and wait times.
- Free, wireless Internet access onboard enables users to connect to their offices, customers, families and friends.
- Traffic signal priority which helps drivers ensure consistent transit times.
- Onboard entertainment services—so riders can watch videos and listen to audio.
- “Find It” portals to help passengers to locate services along the bus route.

The success of the idea traveled halfway around the world.

In May 2009, Cisco and the city of Seoul introduced the Personal Travel Assistant (PTA), a Web-based service that streamlines transactions, route selection, and “disruption management” such as responses to traffic congestion; through various devices including PCs, mobile phones, and kiosks.

Smart Travel Stations, which interact in real time with the transport system, including virtual concierge services, will soon be introduced in Singapore, Malaysia and at Los Angeles International Airport.
Cisco Systems is proud to have been a part of Expo 2010 Shanghai China.

The Expo theme ‘Better City, Better Life’ reflects the ideas and ideals of our time—the common wish of all humankind for a better life in the city.

The major shifts taking place in the world today—aging labor forces, exponential population growth in emerging countries, the growing economic power of developing nations, the urbanization of the world’s population and the skyrocketing cost of health care are unprecedented . . . and anything but homogeneous.

The numbers are so vast, the timetable so abrupt, that it seems highly unlikely that traditional models and practices can scale to solve the problem in a timely and cost effective manner.

The Smart+Connected Life is an essential part of the new solution. Cisco can provide tools to manage the challenge, and to deliver services on a vast scale with unprecedented efficiency to anyone, anywhere, anytime.

It is this combination of services and delivery that defines Smart+Connected, where everything is connected to the Internet through an IP protocol. And no one knows as much about IP as Cisco.

Together with our customers and partners, the future is something that we’re creating every day, on every continent. Which is why we think that you should consider partnering with us when you set out to define the future of your city.

Our goal is to enable you to use Smart+Connected thinking to build a better city. One that supports economic development and job creation, that promotes social harmony by enhancing the quality of life, and that is environmentally sustainable.

A place that reflects your culture and values.

A place that makes it possible for your children to live, learn, play and work as members of the global community living a better Smart+Connected Life.