

Work-Life Innovation Smart Work—A Paradigm Shift Transforming How, Where, and When Work Gets Done

Authors

Bas Boorsma Shane Mitchell

September 2011



Cisco Internet Business Solutions Group (IBSG)

Work-Life Innovation Smart Work—A Paradigm Shift Transforming How, Where, and When Work Gets Done

This paper is the third in a series of perspectives by the Cisco[®] Internet Business Solutions Group (IBSG) on the future of geographically distributed networked work, and how this approach is enabling profound changes to organizations, communities, and individuals. It focuses on Smart Work as an advanced phase in transforming the way we work, and the benefits to organizations and communities at large.

The nature of work—how, where, and when it gets done—is changing radically. While information and communications technology (ICT) has profoundly affected work processes in the past 20 years, such innovations have merely extended old work patterns, been evolutionary in nature, and optimized the last leg of the industrial age.

A paradigm shift we call Smart Work is now emerging and is being driven by extreme changes in approaches to work, work cultures, business architectures, premises, decision making, communications, and collaboration. These changes redefining "work" are transformational rather than evolutionary.

Smart Work is a final stage—an endgame—in a larger transformation. More important, organizations and communities are in different phases of work-culture evolution. Community and organization leaders—mayors, CIOs, policymakers, and human resource directors, for example—must appraise the impact of the changing nature of work on their environments, determine which technologies and business models are associated with that change, and decide which choices fit their needs and how to assess the wider context of those choices.

This Cisco IBSG Point of View discusses Smart Work and the factors driving it, while sharing a broader perspective on the dynamics affecting work and the critical components necessary for a Smart Work strategy that will have a positive impact on the worker, employer, economy, and community.

Smart Work Culture

Smart Work is an act of production performed independent of time and place. In its ultimate form, the "office" no longer exists and traditional work conventions such as work hours are irrelevant. Smart Work is results-oriented: it is often social and collaborative, and the result of a networked way of operating, with exchange, collaboration, and co-creation processes optimizing work and its output.

The network is a key enabler of Smart Work: new networking technologies not only empower and facilitate, they also demand and determine how, where, and when work gets done. Such technologies do not just optimize existing modes of work—they create new ones, enabling a Smart Work culture to emerge. Because of this, the network has evolved from a techno-

logical facilitator to a cultural blueprint that not only enables people to work smarter, but also influences and determines their personal attitudes toward work: where and when they work, and how they compete, collaborate, communicate, exchange information, and envision new approaches to work and to the processes of innovation.

Employee behavior and IT policy—particularly as they relate to social networking, corporate mobility, and the impact of both on IT and security—were examined as part of a global study by Cisco on the expectations and behaviors of workers (and IT staff) accessing information anywhere, anytime, and with any device. The study found:

- 60 percent employees believe they do not need to be in the office to be productive
- 66 percent of employees desire work flexibility
- 66 percent of employees would accept a lower-paying job with more work flexibility than a higher-paying job with inflexibility
- 45 percent of IT professionals are unprepared or struggling to make their workforces more mobile and distributed

Our knowledge, tools, and technologies shape the types of social, economic, and political organizations we inhabit. However, these organizations are being disrupted at an unprecedented level. According to a report by the Institute for the Future (IFTF), "Many organizations we are familiar with today, including educational and corporate ones, are products of centuries-old scientific knowledge and technologies. Today we see this organizational landscape being disrupted."²

At the heart of this disruption lies a Smart Work manner and culture that is truly networked and distributed. As a result, a physically constrained innovation process is now open, location-free, and based on collaborative rather than sequential co-creation. As such, a Smart Work network becomes the incubator of innovation, both within the enterprise and among different organizations. This cultural shift is central to the paradigmatic evolution of work and the nature of innovation, social engagement, and resilient communities. Indeed, innovation is the inescapable imperative of "doing things better" and being more resilient.

Smart Work: A Paradigm Shift?

Does the Smart Work proposition represent a paradigm shift? This paper proposes that it does. According to professor and author Thomas Kuhn, a paradigm shift is a scientific revolution that occurs "...when scientists encounter anomalies which cannot be explained by the universally accepted paradigm within which scientific progress has thereto been made."

The Industrial Revolution produced a paradigm shift encompassing a worldview and a series of premises on how work gets done by definition. Such views bordered on the absolute. Smart Work breaks away from this view—a new worldview emerges with regard to all the fundamental aspects that determine work, how it gets done, what motivates the worker, and what guarantees the output. Intellectual debate on the topic is ongoing; staunch arguments against the paradigm from holdouts of the centralized work culture of the Industrial Revolution include:

- A physical gathering of workers at a central location will result in higher efficiency and effectiveness.
- Smart Work may displace economic activity among communities.

- Smart Work dissolves the traditional command-and-control principles of organizational working.
- Smart Work will raise costs because workers may require additional resources and workplace services.
- Smart Work may diminish an organization's identity and visibility because of its distributed nature.

Why Work Smarter, and Why Now?

Major factors such as climate change, growth in global talent, new technology, and often unforeseen economic pressures are increasingly becoming catalysts for change, offering people the opportunity to work in new and smarter ways. Yet, the reverse relationship is equally valid and its impact felt: new patterns of work directly and indirectly affect and codefine the premises for a "new resilience" that is affecting and empowering individuals, organizations, and entire communities—determining their competitiveness, viability, operational excellence, and well-being. In brief, large trends of change affect the way we work, resulting in new work patterns that induce change and redefine what makes an individual, organization, economy, or community resilient and successful in an era of pervasive connectivity.

The Smart Work paradigm shift has reached a tipping point, with many of the conditions that determine and facilitate a Smart Work culture already in place:

- Pervasive technology such as ubiquitous broadband infrastructures, cloud-based services, data aggregation tools, and service platforms currently exist or, at a minimum, are emerging fast.
- **Distributed ways of working** are determining the level of exchange, openness, and innovation within communities and organizations.
- A sense of space rather than place is producing open, attractive, and socially conducive, sophisticated environments that enable people to conduct work, regardless of location and device.
- New work methods and models—from the world of neuroscience, psychology, design, and gaming, for instance—are profoundly influencing management and organizational processes. Such methods have given birth to "superstruction," the creation of "...structures that go beyond the basic forms and processes with which we are familiar...to collaborate and play at extreme scales, from the micro to the massive."6
- Shared services such as Smart Work as a Service are business models that enable new modes of economic activity, production, and employment.
- A new generation of workers is already connected and well versed in new work methods that organizations must adopt to attract employees.
- A convergence of global crises has already occurred, including government debt, stagnant economic growth, urbanization, energy, and climate change.

These conditions are forcing us to rethink the way organizations are run, how decisions are made, and how innovation can contribute to human prosperity. Local, regional, and national governments can address these issues through Smart Work models such as Smart Work Centers (SWCs), which provide networked locations and technologies that create new ways

of working. Smart Work Centers facilitate operational efficiency, given their highly flexible, less-asset-centric, and distributed architecture.

"My job is to oversee my country's transformation into a genuine smart society. I believe our Smart Work strategy is one of the inroads getting us there."

Dr. Kim Seang Tae President, National Information Society Agency, South Korea

Smart Work: Appraising Your Organization's Stage of Evolution

Many elements of the Smart Work proposition are either in place or emerging quickly, such as pervasive broadband, cloud-based services, and data-aggregation tools and services. Full adoption, however, is not, illustrating the depth to which the old work culture is still ingrained and the level of diversity in the stages and choices of overall Smart Work development.

This paper argues that full adoption of a Smart Work model will not take place unless we understand the progression of work from a historical perspective. No individual, organization, or community is in one single phase of progression or has fully evolved to the Smart Work stage. This progression is not meant to be prescriptive, but the Smart Work transformation process provides the context within which the development and types of work models for organizations, communities, and their leaders can be understood (see Figure 1).

Knowledge Era ICT-Enhanced Industrial Era Work 2.0 Telework Smart Work Location-Centric Email Co-Working Collaboration Location- and Tools Time-Independent Radical Control Office Telecommute Automation Telepresence Intrinsic Carrot & Stick Remote Work Motivation Internet Centers Video Asset-Centric ■ Service-Centric Mobile Phone Satellite Offices Peer-to-Peer Silos Cloud Home Shoring Wiki Centralized Social Media Mechanical SWCs

Figure 1. Work-Culture Evolution.

Source: Cisco IBSG, 2011

Industrial Era

The Industrial Revolution's legacy is broad and continues to affect, if not dominate, contemporary work culture. Core methods used to organize work are:

- Married to Location. History shows that one's work has been married to location—
 from the farmer in the field, to the baker selling bread, to the doctor curing patients.
 The Industrial Revolution enhanced the role and function of the centralized workplace, optimizing and facilitating production via a combination of centrally organized mechanisms and workforce-control assertions made possible through physical proximity or presence. The assumption was that workers were more productive if they congregated at a central location.
- Centralist Models, Radical Control. Many of the industrial era legacies were determined by centralist organizational models, as originally proposed by Henri Fayol⁷ and Fredrick Winslow Taylor,⁸ allowing for "radical control and control mechanisms," and their perceived or real need. The difference between old work legacies and Smart Work is not the absence or presence of control mechanisms, but the degree to which they replace trust as the fundamental organizing principle. Old work culture typically carries high levels of pervasive control mechanisms, with less focus on output and more on the individual worker's behavior, steered by means of mandatory physical congregation, extrinsic motivation/incentives, or contractual obligations. Certain aspects of this culture have lost their edge, as few people today would argue that controlling a worker's nutritional habits, for example, to optimize productivity is effective. This belief was once part of the organizational models exemplified by "Fordism." Control continues to influence contemporary work cultures, assuming by default that physical congregation at a traditional workspace enhances control and therefore output.
- World of "Information Silos." Information management systems incapable of communicating with one another are, perhaps, most indicative of the industrial work culture. There are, however, others: the nine-to-five workday, colleagues (peer groups), a worker's PC hard drive, and brick-and-mortar businesses such as retailers and banks (with their fixed disciplines and written/implied rules) all represent a siloed approach to organizing work. This approach is pervasive and casts psychological and organizational limitations on the ability of individuals and organizations to venture beyond known structures and codes of conduct, severely limiting the potential for innovation, resource optimization, and information exchange.
- Linear Mind-set. Almost all processes in this stage are characterized by a linear mindset, such as lines of control and communication, commodity production, innovation processes, product development, and the way work is organized over time. This mindset was ingrained in entire generations via education, upbringing, and work experience. Some of these people today find themselves in positions of leadership. As such, the linear mind-set is a key challenge in embracing Smart Work.

ICT-Enhanced Work

In this stage, ICT is introduced, thus optimizing traditional modes of work. Personal computers and printers replace typewriters, PC files are complemented with virtual files, and

tools such as email enhance the speed, complexity, and quantity of communications. While the impact of ICT is dramatic in terms of improvements in operational excellence, old work models typically remain intact and the physical workplace and central models of control stay the same.

Telework

Telework introduced the concept of working remotely, mainly from home and primarily in isolation. Telework is an important step in the transformation to Smart Work. ¹⁰ Its semantics, however, imply centralist models—remote workplaces, satellite offices, telecommuting spaces—separate from the traditional office, which serves as the organizational anchor. Yet, the importance and relevance of telework and its solutions must be underscored: they are the first step in the transformation of work because they allow for modes of working that previously did not exist, using new technologies not only to optimize old modes of production, but partially to introduce new ones. Telework focuses on the worker—his productivity, her well-being. The telework stage can also be associated with the emergence of a culture of co-working and co-working spaces¹¹: public and community facilities where people work remotely, basic connectivity is provided, quality and service provisioning vary and remain largely unmonitored, and interconnections among facilities is rare. In short, telework is a substantial step in expanding a physical "universe" where work is performed and the network is restricted to basic Internet connectivity.

Work 2.0

Work 2.0 describes a further stage in the development of work. ¹² In this phase, work is more distributed in terms of time and location, online activity is more collaborative, and peer-to-peer working models are supported by collaboration. High-end communication tools such as high-definition video and immersive telepresence replace physical meetings to a degree. The traditional office still exists, but does so in a vastly expanded universe that is not determined by physical space or geography. Commuting to work is done *by choice, not by default.* Smart Work Centers emerge beyond the realm of co-working, enabling high-end, well-serviced, and networked multifunctional environments. Work 2.0 initiates a change in work culture and dramatically accelerates new ways of working. Smart Work strategies enable the application of Work 2.0 measures within an organization or a community. Individual responsibility for output is a cornerstone of any 2.0 organization.

Smart Work

Smart Work is the evolution of work from a tethered model to one independent of time and place, as the type of work allows. In this way, Smart Work becomes a pure form of a networked way of working. Private and public work environments, both physical and virtual, are completely interconnected. Infrastructure, data, services, and applications are fully cloud-driven. Peer-to-peer and wiki-style work modes are mature, institutionalized ways of crowdsourcing and collaborative ways of decision making. Economic clusters thrive through distributed and networked ways of operating. Traditional conventions governing work are obsolete. Facilitation of work and the worker is service-centric, with various "workspace-as-aservice" models and offerings being mature and dominant.

Smart Work Benefits

Smart Work strategies provide a number of benefits to organizations, communities, individuals, and economic clusters. These benefits are critical ingredients that forge resilient communities and organizations.

Organizations

Smart Work strategies:

- Accommodate and attract a new generation of workers
- Facilitate competitiveness
- Enhance overall effectiveness and efficiency
- Optimize resources and office space through diversification of space usage and flexible work environments
- Encourage green operations
- Foster an open environment that enables optimal exchange, collaboration, and innovation
- Provide a larger network of peers from whom to source knowledge, skills, and information
- Enable advanced and effective collaboration modes for fact-finding and decision making, especially for organizations that have large, distributed geographies or are dealing with highly volatile conditions that require resiliency and quick responses
- Reduce operational expenses while redefining an organization's capacity to produce, innovate, compete, and make effective and collaborative decisions
- Substantially cut the cost of workplace resources

Cisco: A Globally Distributed and Networked Organization¹³

Cisco is a prime example of a globally distributed and networked organization that provides its workforce with collaboration capabilities that drive business value. Much of this value comes from enabling employees to remain highly engaged and productive, no matter where and when they work:

- 41 percent of employees work outside the United States
- 38 percent work in a different location than their managers
- 47 percent of collaboration is with employees in different time zones
- 89 percent of employees telecommute
- 1.6 percent of employees are characterized as "remote workers," although 6 percent work in a fully remote manner

This Smart Work environment enables Cisco to reduce travel / accommodations costs; improve interactions among employees, partners, and customers; shorten sales cycles; and increase sales success rates. By improving the speed and richness of interactions, collaboration technologies provide a strong platform for growth and innovation.

Communities

Smart Work strategies:

- Facilitate community participation and social inclusion
- Create a connected, open, low-threshold environment that spurs innovation and community-driven design, and incubates new businesses and jobs. End users are at the center of the collaboration process, involved in original solutions design, and benefit from the innovative product or service.¹⁴
- Reduce pressures on transportation grids by altering traffic flow and encouraging an environment/culture where physical transportation is an option
- Increase energy efficiency of buildings
- Mobilize people and organizations within the community, fluidly and effectively
- Stimulate exchange and collaboration among public and private institutions
- Foster economic cluster development by organizing people, investments, government support, and academic areas of excellence around communitywide Smart Work environments—both physical and virtual
- Position cities, regions, cross-border areas, and countries as innovative and attractive environments in which to work and invest; enhance economic activity

Smart Work in Amsterdam

Amsterdam's Smart Work initiative is a collaboration of private and public stakeholders in the Netherlands. The initiative is governed by the Double U Smart Work Foundation, ¹⁵ which brings together stakeholders, oversees the creation of quality standards for Smart Work Centers throughout the Netherlands, and facilitates development of Smart Work services, such as Smart Work Booking tool ¹⁶ and the Worksnug ¹⁷ augmented reality workspace finder. The high-end facilities address modern urban challenges such as reducing travel and promoting efficient and sustainable ways of working. For example, since the SWCs were launched, the current municipal footprint of 200 office buildings has been reduced to 120, with a decrease in the desk-to-worker ratio from 1.3 to 0.7. Workers are encouraged to work from SWCs and home, relying on the larger SWC network in place in the Netherlands (100+with public Cisco TelePresence® and Smart Work services). A number of former municipal offices are being considered for development as open work environments, operated and serviced by third parties and available to both municipal and non-municipal workers.

Individuals

Smart Work strategies

- Enhance work-life balance by enabling employees to work independently from home or a telework center, reducing commutes and providing flexible work hours
- Enable access to a networked environment for people to work, learn, and produce within a larger peer group
- Increase participation in a community or business

- Enhance entrepreneurship within the enterprise
- Focus on the individual and collaborative situation rather than emphasizing the organization as an instrument of control

"GreenBizStartUp:18 One Woman's Professional Network

"Several years ago, I started GreenBiz, a private practice that advises others on how to set up a green business. The first year, I concentrated on researching the concept around the world. I found Twitter useful in expanding my horizons, building professional networks quickly, and learning exponentially. Businesswise, I found it challenging to come up with an 'old school' business identity via business cards, offices, you name it. Part of the struggle was that most of the prevailing options were not green or smart, and certainly not in sync with the universe of people I most wanted to relate to. And there were more ways to distinguish myself from a 'regular business'; my starting point was not my business plan, but rather having enough spare time to gain knowledge, support other initiatives, travel, apply my skills in the best way, and see my practice grow. Suddenly, time became an important currency. Yet, at the same time, I realized that I had to work on reaching a balance in my personal development while seeing my business grow. It has been three years since I started GreenBiz. I find myself engaged in more projects than I had dreamed possible. Yet, I still do not have any business cards, a website, or a fixed office, and still use my Gmail address. I thrive on Twitter and work wherever, whenever, with the 'city' as my 'office' and the network as my primary tool."

> Simone Veldema Founder, GreenBizStartUp

Economic Clusters¹⁹

Smart Work strategies:

- Strengthen existing economic activity associated with a given community or organization through a networked approach and, in addition, allow an open, innovative, and networked environment to incubate fresh enterprise
- Give rise to network-enabled value chains in which knowledge creation and transfer, research and development, product and services creation, and new markets emerge in a dynamic process independent of location and organization
- Enable micro-multinationals—from individuals to small businesses—to use the Smart Work network to innovate and co-create; enterprises can make enhancements to such innovations by providing financial, marketing, manufacturing, or services support

Wallonia Region of Belgium

The Belgium Smart Work²⁰ initiative began as a regional program in Wallonia, the French-speaking southern region of Belgium. Today, the initiative is managed by Euro Green IT, an association of public and private partners, with support from various cities and universities. The program caters to an economic development agenda for the region, helping incubate new business and creating a community work environment that harnesses innovation and entrepreneurship.

Building Smart Work Strategies: Lessons Learned

Various findings and principles help constitute a resilient, workable Smart Work strategy. This section provides an overview that borrows on Cisco IBSG's experience working on Smart Work strategy implementation in various communities around the world.

Vision

A compelling yet workable vision is key to any Smart Work strategy. Its degree of viability and success, however, depends on the stakeholders' ability to define the strategy—both in terms of goals and resources, and relatively free from legacy constraints.

Governance and the Art of Multiple Stakeholder Management

An effective approach to developing a Smart Work strategy relies on multiple stakeholders coming together, agreeing on, and implementing a plan. Organizations must consider various disciplines, and leadership must agree on new cost models, incentives, services, tools, and desired culture. For communities, public and private organizations must collaborate and include relevant stakeholders (employers, Smart Work service providers and communications providers, transportation services, and policymakers).

Business Architectures

New business architectures will emerge, especially in larger communities that adopt Smart Work strategies. These architectures will be in "city centers" that cater to entrepreneurs, start-ups, and larger businesses. Euratechnologies Development Center in Lille, France is an example of an SWC that, while location-centric, provides ICT and other resources such as fiber, video collaboration solutions, and desk sharing to enable work beyond its local parameters.²¹

Smart Infrastructure and Services

A well-articulated Smart Work strategy can result in infrastructure and a larger set of services that enable a community or organization to work smartly via:

- Broadband Infrastructure—A reliable, secure, high-end symmetrical communications
 platform for high-end collaboration, video communications, and cloud-based services
 and operations
- Video Services—High-definition video solutions such as Cisco TelePresence that enable workers to collaborate, independent of time and place
- Cloud Infrastructure and Services—A green, fast, and efficient way of (re)organizing networked work. Scale, optimization, and solution sophistication of cloud-based

- approaches will help define the effectiveness and efficiency of any Smart Work strategy for organizations and communities.
- Smart Work Services²²—In addition to traditional online services, Smart Work services and applications include global positioning systems, web tools for booking SWCs, augmented reality, public telepresence, and peer-locator/resource-management tools.

Smart Work Spaces and Smart Work Centers

Physical and virtual Smart Work spaces are essential to the effectiveness of any community-based Smart Work strategy. Such spaces facilitate working beyond the traditional office or home office. Online collaboration tools and advanced Smart Work services supported by a sophisticated environment that is open, attractive, and socially conducive can enable people to conduct work, regardless of location and device.

The degree to which SWCs are successful depends on network effects and network granularity. One SWC is not enough; a larger network creates an infrastructure that facilitates Smart Work behavior and enhances and diversifies economic activity. For example, Amsterdam's Double U Smart Work network²³ brings together more than 100 Smart Work locations in the Netherlands within a 15-minute bicycle ride from one another for professionals working in the country's western urban region.

Smart Work as a Service

Smart Work as a Service is a distributed delivery model in which elements that facilitate work such as workspaces, large offices or office locations, network connectivity, collaboration tools, office catering, and labor/staffing are provisioned via the network. As Smart Work becomes mainstream, the truism that "one does not need to own an orchard to acquire apples" becomes increasingly prevalent. Furthermore, as Smart Work architectures mature, they will transform the way organizations and communities think about built environments and how they are financed, used, and managed.

Legislation and Regulation

Legislative and regulatory groundwork must be in place for Smart Work arrangements to be embraced. In many communities and countries, the relationship between employer and employee is defined in terms of the physical location where work is conducted, often prohibiting Smart Work strategy implementation. While such legislation must be more flexible or altered altogether, new rules and methods must also be defined to rate the quality of SWCs and services, for instance.

For example, South Korea's National Smart Work Strategy and Program oversees the deployment of more than 500 SWCs throughout the country's major urban and suburban areas.²⁴ Forged by the government, the program will be executed by public and private stakeholders, including Korea Telecom and LG.

The Role of Government and Enterprise

Governments and enterprises must become providers of a solid ICT infrastructure, supported by a progressive regulatory environment and local policy framework that stimulates investments from the private sector and fosters the use of open data to create

collaborative applications and services for citizens. Such an environment will allow citizens, small enterprises, entrepreneurs, and non-governmental organizations to openly innovate products and services for both public- and private-sector use.

Intrinsic Motivation

As "work" changes, so do worker expectations. A worker is typically rewarded through income. But, what drives a worker to be productive, efficient, effective, and collaborative is less likely to be determined by "carrot-and-stick" and central-control measures. Motivation, therefore, is expected to become more intrinsic, as evidenced by wiki-style methods of working where there are no rewards, yet contributors remain motivated and output is high. The social and collaborative nature of Smart Work, autonomy, individual responsibility, and, quite simply, joy may end up distinctively coloring, if not driving, the tapestry of tomorrow's work culture.²⁵

Trust

Trust is central to a Smart Work culture. How can organizations trust their employees and external partners in a distributed, global, and networked manner at a time when cultural norms and pervasive network technology are game-changers in the way work gets done? For Smart Work to be effective, workers must be trusted to utilize information, devices, and relationships appropriately. Furthermore, when and where someone works must be less constrained by rules and regulations. The focus must be on output. That is not to say controls and checks are not in place across the workplace—but that the expectations, needs, and demands of a new generation of knowledge workers is changing the cultural norm. A tacit "contract" is required to share expertise, relationships, and extrinsic reward in return for a reciprocal level of trust. It is increasingly crucial for organizations to understand the nature of trust and intrinsic motivations, espouse and practice a Smart Work culture, and, moreover, attract talent that views Smart Work as both a norm and a personal right.²⁶

Call to Action

There are a number of considerations to explore when developing a Smart Work strategy:

- Develop a vision: What is the outcome being sought?
- Address governance and collaboration: Determine which organizational structures, cost models, incentives, services, tools, and culture need to be in place.
- Identify your stage of Smart Work culture evolution: Businesses, communities, individuals, and organizations devising economic development strategies should identify which stage they are at in the evolution to determine the required technologies and resources required.
- Discover and research best practices: Investigate best practices and leading examples for inspiration, and assess their relevance to other organizations and communities.
- Explore key success factors: How are strategic vision, stakeholder governances, new business models, smart infrastructures and services, motivations, and trust enabled in your organization or community?
- Understand enabling technology: Which technologies can provide better ways of working to help you engage customers, partners, and existing/future employees?

- Connect the dots: Find out who is applying Smart Work strategies in your community today. Can connections and collaboration take place there?
- **Develop new business models:** How can multisector partnerships be effective in your community? Identify social, monetary, and cultural incentives to forge new approaches to Smart Work.

Smart Work encompasses a dramatic change in culture and is a transformative step in applying ICT and network technologies to "work" so that people can work anytime, anywhere, collaboratively and effectively. Smart Work is also a way to attract the next generation of talent.

The ability of society to grasp the Smart Work concept will be a key factor in enabling individuals, organizations, and communities to compete effectively and achieve operational excellence. Similarly, the ability of communities to define and implement Smart Work strategies for infrastructures, spatial environments, and regulatory frameworks will prove increasingly imperative.

For more information, please contact:

Bas Boorsma, Director
Urban Innovation
Global Public Sector Practice
Cisco Internet Business Solutions Group
pboorsma@cisco.com

Shane Mitchell, Manager Urban Innovation Global Public Sector Practice Cisco Internet Business Solutions Group shanmitc@cisco.com

Further perspectives on Work-Life Innovation are provided at: www.cisco.com/go/worklifeinnovation

Endnotes

- 1. "Cisco Connected Technology World Report," 2010. (Survey population = 2,612 end users and key decision makers in 13 countries.)
- 2. <u>"Future Work Skills 2020,"</u> Institute for the Future, for the University of Phoenix Research Institute," April 14, 2011.
- 3. Resilience is a measure of how well a system—an organization or institution, an ecosystem, a city or region, or indeed a whole country—recovers from an unexpected shock or disaster. But it also has become invested with a larger and more important meaning of cultivating the assets, culture, and capabilities that render systems less vulnerable to risk, more agile and adaptable, and therefore better prepared for successive waves of change and disruption. It means not only bouncing

- back, but also bouncing forward. <u>"The Resilient Society: Innovation, Productivity, and the Art and Practice of Connectedness,"</u> Cisco IBSG, August 2011.
- 4. "The Structure of Scientific Revolutions," Thomas Kuhn, University of Chicago Press, 1962.
- 5. "Connected and Sustainable Work," Boorsma, B. and Allwood, N., Cisco IBSG, 2008.
- 6. "Superstructing Ourselves: Finding Opportunity in Turmoil," Marina Gorbis, Institute for the Future, February 10, 2009, http://www.iftf.org/superstructing-ourselves
- 7. "Administration Industrielle et Générale," Henri Fayol, July 1916.
- 8. "The Principles of Scientific Management, Fredrick Winslow Taylor," 1911.
- 9. "The People's Tycoon: Henry Ford and the American Century," Watts, S., 2005.
- 10. <u>"Telework: Achieving Higher Levels of Federal Employee Productivity, Inclusion, and Environmental Sustainability,"</u> Cisco IBSG, May 2011.
- 11. An overview of global co-working spaces is available at http://coworking.pbworks.com/
- 12. "Work 2.0: Building the Future, One Employee at a Time," Bill Jensen, Basic Books, 2003.
- 13. "Transitioning to Workforce 2020: Anticipating and Managing the Changes that Will Radically Transform Working Life in the Next Decade," Cisco, March 2011.
- 14. Future Communities is one example of a community engagement program. http://www.futurecommunities.net/
- 15. <u>"Work-Life Innovation Through Distributed Smart Work Network,"</u> Bas Boorsma, Connected Urban Development, Cisco, March 2010.
- 16. http://www.w-work.nl/frontoffice
- 17. http://www.worksnug.com/
- 18. http://www.twitter.com/GreenbizStartup
- 19. Next-Generation Clusters: Creating Innovation Hubs To Boost Economic Growth, Cisco IBSG, June 2010.
- 20. http://www.smartworkcenters.be
- 21. http://www.euratechnologies.com/en
- 22. "Transitioning to Workforce 2020: Anticipating and Managing the Changes that Will Radically Transform Working Life in the Next Decade," Cisco, March 2011.
- 23. http://www.w-work.nl
- 24. http://www.korea.go.kr/new-eng/html/files/information/Smart Government Impeme-ntation_Plan.pdf
- 25. "Drive: The Surprising Truth About What Motivates Us," Daniel H. Pink, 2010.
- 26. "Smartworking: A Definitive Report on Today's Smarter Ways of Working," JB Associates, 2008.

More Information

Cisco Internet Business Solutions Group (IBSG), the company's global consultancy, helps CXOs from the world's largest public and private organizations solve critical business challenges. By connecting strategy, process, and technology, Cisco IBSG industry experts enable customers to turn visionary ideas into value.

For further information about IBSG, visit http://www.cisco.com/go/ibsg.

cisco.

Americas Headquarters Cisco Systems, Inc. San Jose, CA Asia Pacific Headquarters Cisco Systems (USA) Pte. Ltd. Singapore Europe Headquarters Cisco Systems International BV Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)