The People-Ready Business

Whitepaper

Always On, Always Connected

The New World of Work

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EXECUTIVE SUMMARY

In the next 10 years, as the world moves toward ubiquitous, seamless data connectivity to support a global economy, the relationship between people and work will change. Most people will have access to almost any information, anywhere, anytime, on any device, with a high quality of service. As barriers to access fall away, new challenges will arise over how to contextualize and prioritize information and how to turn raw data into intelligence that can be acted upon. We will also face a reinvention of work that will redraw the boundaries between work and life. Microsoft Corp. envisions a new generation of software and devices that offer people smarter, easier ways to make informed choices about how to accomplish their work while leading a rewarding life. In a "new world of work" that is always on and always connected, technology will help people fulfill their commitments to their families, their friends, their community, and their workplace.

OVERVIEW

Current technology is nearing the point at which most people who need access to information will be able to get it from any place on Earth. In many parts of the world, high-speed networks are nearly ubiquitous, and those networks are increasingly available through both traditional wired connections and wireless connections. With this development comes access to information on the Internet and on corporate networks through secure connections, and to personal resources running on computers in people's homes. With the increase in wireless communications, people connect not only through voice but in a variety of new and rich ways that greatly enhance the fidelity of their conversations.

Access to information from a wide variety of systems, across a plethora of networks, has created new challenges while seemingly solving some basic information and connectivity needs. People today are distracted not just by meetings, phone calls, and drop-ins by colleagues, but by e-mail, instant messaging, unsatisfying search engine results, and less-than-relevant Internet sites. The increase in connectivity makes it harder for people to draw lines between their work and their personal lives. The mere existence of pervasive connectivity creates expectations that people will make themselves available for work or communication at all hours—expectations that can add considerably to the stress of both work and life.

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It challenges employers to seek new models that recognize that work no longer has boundaries and that workers are drawing new ones themselves. The question facing people in the next 10 years, therefore, is not "Where and how do I get my information?" but "How do I use technology to help restore context and priority to my work, and balance to my life, now that information is everywhere?"

Microsoft believes that those challenges are best met with a new generation of information work tools and practices that are optimized to the way people work and live in the connected world. Emerging technology can help people better manage their exposure to the various channels of communications, make working from home or on the road seamless and productive, and simplify the synchronization of data between networks and devices.

New information work technologies can also help organizations achieve the long-promised benefits of virtualization and decentralization. Businesses will be able to adopt business models that include a global workforce that can be managed irrespective of physical location, giving remote, mobile, and temporary workers the access to information resources—and the same management oversight and expectations—experienced by workers operating under more traditional arrangements. People will have far greater opportunities to balance work and life priorities while regaining time lost to commuting and unproductive communication tasks. This, in turn, will allow them to focus on the tasks that will help them accomplish their goals and those of their organizations.

Because of rich new tools and truly ubiquitous connectivity, increasing numbers of organizations and people will be able to enjoy the flexibility and cost savings of virtualization without sacrificing the intangible advantages of workplace culture, management oversight, knowledge-sharing, and informal collaboration. Microsoft believes this will prove to be a significant competitive advantage in a world characterized by increasing global integration and demographic change.

The Virtualization of Information Work

The concept of the workplace is a legacy that has been with us practically since the birth of civilization. People congregated at a common location during preappointed hours to combine their talents for the harvesting of crops, the production of goods, the delivery of services, or the exchange of knowledge. Collaboration was necessary to multiply the value of individual labor, and collocation was a precondition for collaboration.

Collaboration in the information age is, if anything, more important, because the knowledge, insights, and innovation of people cannot be automated. However, in a world that is always on and always connected, the link between collocation and collaboration is neither necessary nor always desirable. Many people can be as effective at their jobs working from the field, from home, or from remote locations as they can be working in a single office with colleagues. And, increasingly, global pressures on labor distribution will result in expertise residing in the place best suited to the expert, which will mean reaching out across the world for advice, counsel, and learning.

This pattern has been emerging for some time. Integrated telephony systems, including home and mobile phones, can route calls anywhere in the world. Remote workers can access corporate networks over secure Internet or virtual private network (VPN) connections, or download messages and e-mail on mobile phones. Presence awareness technology enables organizations and people to manage communication based on availability, reducing the instances of missed connections or unwanted distractions.

But the arguments for decentralization have always been offset by equally compelling justifications for keeping a common office environment for information work: propagation of an organizational culture, the intangible benefits of informal interactions, discipline and regulation of the workforce, access to proprietary information and materials, and the comfort level of workers and managers with more structured expectations of work. A few spectacular failures of virtualization in the late 1990s[i] may have convinced less adventurous organizations that the time was not yet ripe to do away with the traditional office and workday. But the global economy is no longer an experiment, and for many organizations collocation is no longer an option. Fortunately, the maturing of global business models has been facilitated by the maturing of collaboration technology that helps make virtual organizations more seamless by supporting rich communication between people.

Maturing of global business models has been facilitated by the maturing of collaboration technology.

Better Tools for People Collaboration

The technology landscape has changed considerably over the past decade. Organizations have deployed a new generation of enterprise collaboration infrastructure and end-user applications that have been able to address many of the first-order business concerns.

- **Integrated communications.** Intranets, e-mail, and rich-media presentations are becoming integral to the maintenance of corporate culture in organizations where many people rarely encounter executives or senior managers. We are also seeing the increasing integration of voice and data telephony to provide an integrated communication experience on any device.

Social, economic, and environmental factors over the next 10 years will create increasing momentum toward decentralization.

- **Team collaboration.** Threaded discussion groups, communities of practice, internal blogs, team work-sites, and informal communication tools such as instant messaging, online meetings, and e-mail perhaps provide better opportunities for informal, cross-organizational collaboration and spontaneous innovation than chance meetings and corridor encounters.

- **People-driven processes.** Enterprise project management, management scorecards, and line-of-business workflow systems often provide far greater regulation and visibility of structured information work than direct human supervision.

- **Access to people and information.** Unified enterprise data repositories, enterprise search, and expertise location provide nearly instantaneous access to relevant people and information across vast organizations, while information rights management is coming into use to protect intellectual property and confidentiality beyond the firewall.

Today, this technology is starting to see broad-based adoption within the framework of traditional office-based cultures. An early majority is beginning to extend these enterprise collaboration capabilities out over wider networks to enable radical decentralization of high-level information work (software development, research and development, and customer service). In addition, many enterprises are using this new infrastructure to realize the economic benefits of outsourcing and offshoring, which, according to TechWeb, is expected to grow nearly 20 percent annually through 2008.[ii]

Momentum for Virtualization

Social, economic, and environmental factors over the next 10 years, combined with the growing ubiquity, increasing capabilities, and falling costs of information and communications technology, will create increasing momentum toward decentralization.[iii]

Social. The emerging generation of "Millennials" (born 1981-the present) have lived their entire lives in the digital, connected world. Cell phones, networked video games, instant messaging, chat rooms, and other forms of distance communication are not novelties to these people but part of their expectations of work and life. Their experiences and outlook may make them more likely to embrace the flexibility and opportunities of workforce decentralization.[iv]

As millennials and their slightly older peers begin starting their own families, the familiar issues of childcare and its impact on workforce productivity (and participation) come into play. According to a U.S. Department of Labor study, "An estimated 10 to 20 percent of nonworking mothers with young children do not seek employment because childcare is not available or affordable. In addition, about 20 to 25 percent of employed mothers would work longer hours if they did not have childcare constraints."[v] Another study found that 37 percent of highly qualified women and 43 percent of women with children leave the workforce for a period of time. Ninety-three percent of those women said they want to return to their careers, but only 74 percent managed to do so. An even more

disturbing statistic for employers: Only 5 percent of highly qualified women looking to return to work want to rejoin the company they left. That number drops to zero in business sectors. The study speculates that the reason for this finding is that many women felt underappreciated by their employers when they left their jobs.[vi]

At the other end of the demographic scale, increasing numbers of baby boomers (born 1946-1962) will opt to remain in the workforce past traditional retirement age, out of either preference or economic necessity. As improvements in healthcare increase the age of the population in general, a growing number of workers will be faced with the costs and time commitments of caring for elderly parents in their 80s and 90s or attending to their own health and wellness. According to a U.S. Department of Labor report, "In 1996, 22.4 million U.S. households (almost 20 percent) provided informal care to a relative or friend age 50 or older, or had done so in the previous year. Employers report an increase in the number of requests for time off to care for aging parents."[vii] Forty-four million Americans engage in the care of an older loved one. Fifteen to 25 percent of the workforce now care for older or disabled loved ones, and by 2010, the percentage is expected to double. Family caregivers struggle to balance their work and eldercare obligations. This juggling act often affects a worker's health, finances, and family and social life—and it results in lost productivity at work.[viii]

As the availability of skilled workers diminishes, as it is predicted to do throughout the developed world over the next 15 years, organizations will benefit significantly by finding ways to increase the participation rates of qualified women in the primes of their careers and by increasing the productivity of those people with caregiver responsibilities.

Technology solutions such as remote and mobile access can make it easier for working families to be high-value contributors by allowing them to stay connected to the people, processes, and information of the workplace even when they are not there. Investments in collaboration and communications technologies will help unlock personal and economic potential for people, employers, and communities as the new realities of the work world evolve.

Economic. Globalization has leveled the playing field for organizations and people, creating an international market for services and talent. Many companies are looking to reduce costs by shifting more business and project functions to lower-cost labor markets overseas or by tapping foreign labor markets for skilled workers they cannot find at home. More robust technology and management practices are rapidly evolving to support the unique requirements of outsourcing and offshoring, driving innovation and economies of scale.[ix] It is likely that the next 10 years will see increasing numbers of organizations applying the lessons and investments of outsourcing to internal decentralization efforts, and even more organizations seeking highly skilled talent from other geographic locations.[x]

Environmental. Decentralized work may also, finally, realize the promise of a reduced need for commuting. Americans spend billions of hours each year on the road to and from work. This activity

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is close to a total economic loss. It consumes expensive fuel, costs billions in the upkeep of roads and vehicles, leads to accidents that cause injury and damage, produces stress, and reduces productivity. Any innovations in technology and practice that could reduce the need for commuting will produce significant qualitative and quantitative improvements in the economy, the environment, and the overall health of workers in America and around the world.

Decentralized workplaces also increase the resilience of organizations against disasters, security threats, and temporary events that could prevent workers from making it to the office.[xi]

Implications for Work Style and Lifestyle

The virtualization of information work in the always-on, always-connected world presents profound challenges to employers, people, and the institutions that surround and support them, such as families, communities, and governments. It may require a radical rethinking of long-held assumptions about the distinction between work and private life, modes of compensation, employee measurement systems,[xii] relevant job skills, the supervisory role of management, and the nature of place.[xiii]

Microsoft sees the following issues as possible implications of the decentralization of information work:

- **Task-based compensation.** Because physical attendance at a workplace will not be required for many information work jobs, many workers will be measured and compensated on a task or project basis rather than with hourly wages.[xiv] In addition, some organizations will adopt a more flexible commitment-based employee measurement system that allows the employee to better choose how, where, and when he or she works, while fitting into an overall set of dates and commitments.[xv]
- **Negotiated boundaries.** Ubiquitous access to work processes and information will no longer be a technical challenge or a competitive differentiator for businesses and people, but rather a background assumption in the negotiations between the firm and its workers about how, when, and where work is performed. Employers may find the ability to offer flexible work arrangements a competitive advantage in attracting top talent. According to Avery and Zabel in their 2001 book *The Flexible Workplace*,[xvi] "Telecommuting is being used as a tool to recruit and retain highly skilled workers, especially information-technology workers." We have already seen the mix of employment in large corporations move toward key competencies, with such functions as facility maintenance, physical security, mail delivery, and various advisory and consulting services outsourced to firms that both collocate employees in facilities and, more important, require contract employees to interact with fulltime employees, and provide services to the organization in a seamless and transparent way.

- **New job skills.** People who are able to effectively manage their time and attention while working independently, without direct supervision, will have a competitive advantage in virtualized roles. It is likely that a secondary industry of training and support for virtual workers will emerge,[xvii] in addition to a strong demand for home-office and community-office design and supply.[xviii]

- **New management practices.** Driving high levels of productivity and innovation from virtual teams and decentralized organizations is uncharted territory for many traditional managers. Indeed, many experiments in outsourcing and offshoring end up generating significantly higher costs (or lower savings) than anticipated because of difficulties in managing teams by remote control.[xix] Very soon, however, a body of best practices will begin to emerge. The sooner organizations and managers can adopt and internalize the skills needed to thrive in a virtualized environment, the sooner they will realize the significant economic, social, and environmental benefits that decentralization makes possible.

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Implications for Information Work Technology

In the 1990s, information work applications such as Microsoft® Office were geared largely toward maximizing individual productivity by giving workers full-featured tools for document creation, data analysis, communication, schedule management, presentation design, and personal data management. A few applications also provided groupware functionality such as file and print sharing, threaded discussions, and document life-cycle management.

As the 2000s dawned, however, tools that merely enabled individual and team productivity were no longer good enough to drive competitive advantage for organizations operating in a global environment. The traditional office suite therefore evolved to provide richer tools for contextual collaboration, access to people and information, and integration with structured workflow and enterprise applications, as can be seen in Microsoft Office 2003.

In an always-on, always-connected world, this need for evolution will continue, driven by new challenges that arise from ubiquitous connectivity, next-generation devices, and the changing nature of work.

Presence Awareness and Attention Management

"Information overload" is already a measurable productivity-killer. In 2005, HP and the University of London conducted a study on the impact of constant interruptions on human intelligence. They came to the colorful and oft-quoted conclusion that a distracted worker's effective IQ drops nearly 10 points—twice the average drop caused by using marijuana.[xx] HP the University of London went so far as to develop a handbook for avoiding "info-mania," whose abstract reads as follows:

One technology that promises to restore control to people in an always-on, always-connected world is presence awareness.

> The abuse of "always-on" technology has led to a nationwide state of "Info-Mania" where UK workers are literally addicted to checking email and text messages during meetings, in the evening and at weekends. Mobile technology offers massive productivity benefits when used responsibly, but inappropriate use can be negative.[xxi]

The problem here isn't necessarily the ubiquity of access, but people's inability to manage it effectively. Current technology forces matters to our attention without context or priority. The cell phone rings during the opera and at least some people feel compelled to answer it, in contravention of common courtesy and civility; an instant message about nothing important can derail an analyst's train of thought as she's preparing a detailed report. Some executives still have personal assistants to screen their calls and manage their calendars, but that is not a luxury afforded to every worker—though evidence indicates that many workers could use the service.

One technology that promises to restore some degree of control to people in an always-on, always-connected world is presence awareness. Currently, presence is used to indicate the availability of people for collaboration (messaging, online meetings, and other activities) and is a specific feature of dedicated collaboration systems such as Microsoft® Office Live Communications Server and Microsoft® Office Communicator. Presence is signified by the little "person" or "pawn" icon in Microsoft® Office Outlook® or a Microsoft® Office SharePoint® Server team list.

As communication and identity management become more integrated across networks, systems, and devices, unified presence management will be important to regulating a person's exposure to interruptions, communication, processes, and information. Users will be able to control who can reach them, at what hours, on what device(s), using what channels (voice, instant message, e-mail, fax, and other devices). Senders will know whether to expect a real-time conversation, a return call, or a return message based on the recipient's reported presence status.

Next-generation context-aware unified messaging applications will overlie an additional set of business rules and pattern recognition on presence data, intelligently extrapolating clues about urgency, timeliness, and priority of communications from organization charts, project teams, message content, personal preferences, calendar data (such as appointments), and contact lists—exactly as a human assistant would. A person could choose to be more available to communications from a spouse, boss, or doctor, for example, than to other colleagues. The application would "know" to immediately put through a cancellation notice for a meeting 10 minutes hence, but route a less-urgent call directly to voice mail.

Making Information Useful

Managers spend two hours a day looking for information they need, and almost half the data is useless once they get it, according to a study by Accenture of 1,009 managers at U.S.- and U.K.-based companies, reported by InformationWeek.[xxii] The report continues: "Things are even worse for tech managers.

IT managers admit they waste even more time than other managers—including those in HR, accounting, customer service, and sales and marketing—searching for information. Forty-seven percent of IT managers said they spend 30% of their time trying to pin down information relevant to their jobs. IT managers say information-overload affects their jobs in a number of ways. Forty-two percent complain they are bombarded by too much information; 44% complain other departments in their companies are not forthcoming with data; 39% say they can't figure out which information is current; 38% say they need to weed out duplicate information; and 21% say they don't understand the value of the information they do receive."

New technologies can provide better context for information so that ubiquity of access translates effectively into business value. The increasing use of metadata to describe content stored in data repositories can provide a more flexible, adaptive way to associate documents, people, and records with relevant search terms, without having to maintain cumbersome taxonomies. This "smart content" will update its metadata description each time it is used and accessed, and it will dynamically update references to all documents that cite or include it. When combined with adaptive filtering and pattern recognition capabilities of next-generation search engines and security/identity protocols, content and documents will be at once more accessible and more secure.

This way, a distributed business can rest firmly on a single information management platform. Employees, partners, customers, and other interested parties will have comprehensive access to relevant data, with access privileges automatically determined by their role, task, and level of permissions.

Solving Synchronization

Today, a "road warrior" is likely to have a desktop PC in the office, one at home, a notebook or Tablet PC, and at least one portable multifunction communication device (such as a smartphone or Pocket PC). The road warrior is likely to access data via broadband Internet and VPN connection where available, Wi-Fi networks, general packet radio service (GPRS), or perhaps a proprietary network for mobile e-mail and Web browsing—and in a crunch may fall back on shared public PCs or other means of access. Individual sites or applications may require the user to present unique credentials (user name, password, and perhaps a biometric). Sessions time out. Connections are dropped. Mobile devices are limited in the amount of data they can cache locally in the event of discontinuity of service.

All of this can result in frustration and lost productivity for people whose expertise does not include proficiency with so many gadgets and systems.

Server-side solutions such as Microsoft Exchange Server provide some relief for synchronization woes by ensuring a consistent experience across multiple devices and a single view of the user's inbox, calendar, contact list, and shared folders, regardless of method of access. For team members who are working collaboratively on projects or documents, products such as Microsoft Groove® Virtual Office can handle synchronization and connectivity issues in the background.

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Moving forward, cross-network identity management will eliminate barriers to access by passing a single set of valid user credentials to networks, sites, and applications via secure, standards-based protocols. People in enterprises where Microsoft Active Directory® is deployed already enjoy the ability to discontinue and resume their current task, session state, permissions, access to resources, and set of interface and application preferences from any device connected to the network. In the future, people will be able to have this same continuity of experience and synchronization seamlessly across any network with security and privacy.

Smart devices and context-aware operating systems will provide an even simpler synchronization experience by bringing together data from GPS and location systems, calendars, presence awareness, content, and user behavior in a way that simulates the behavior of an intelligent human assistant. For example, a person is engaged in an online meeting at his office PC, but has to leave for an appointment off-site before the meeting is complete. The context-aware system would access GPS information, traffic system data, and other information to calculate the time necessary for transit between locations and notify the user with an alert at the appropriate time. The person could then seamlessly transfer the meeting and all of its related resources, data, and media services to his smartphone, to a voice-activated conference system in his car, and then to a networked PC at his destination—all without disconnecting and reconnecting.

Conclusion

The benefits of decentralization and the "work anywhere" world have been promised for a long time. Generations of technology have brought us closer to that point, but so far have not been able to surmount the ingrained behaviors that support the persistence of the office, the workday, the in-person meeting, and the other trappings of industrial-age work.

Technology is now evolving to the point at which unprecedented levels of virtualization, mobility, and remote work are possible, just at the moment when the dynamics of globalization and workforce development are making it economically essential. Next-generation workers are already living in a world with instant, worldwide communications, and therefore bring those skills to the marketplace with an expectation that employers will be able to leverage those skills.

People and organizations need to prepare for dramatic changes brought about by ubiquitous connectivity. Those who are drawn into the always-on, always-connected world without adequate investment in the right technology and practices risk enormous problems in sustaining productivity, morale, and overall competitiveness. "Information overload" and the anxieties associated with constant exposure to communication are real, and they rapidly reach a point of diminishing returns.

Conversely, organizations and people who use and manage connectivity to their advantage will enjoy a number of benefits. People will have greater freedom, greater control of their time, and greater flexibility to balance work and life commitments. Organizations will be able to sustain productivity and extend their operations and culture worldwide with enhanced management control and visibility because communications and collaboration technology will give them even better connections to their global workforce than they experience with a geographically concentrated workforce.

Microsoft is committed to delivering the innovations in information work software and technology to smooth the transition to an always-on, always-connected world optimized to the way people work. Although the specific examples cited in this paper do not represent promises of future products or features, they indicate the forward thinking and investments Microsoft is considering as it looks to the challenges that customers and people will face in the years ahead.

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The people ready business.

A people-ready business is one where people can apply their unique skills, insights and experience to create new products and services, work responsively with customers and partners, and drive operational excellence in every aspect of the business. People-Ready businesses support people with knowledge, practices and tools so that they can add the extra value that helps differentiate successful organizations in a competitive, fast-moving global economy.

people ready

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[ii] Keizer, Gregg. "Offshore IT Outsourcing Seen as Immune to Political Action." Tech Web Note, Oct. 6, 2004. http://www.techweb.com/wire/ebiz/49401216

[iii] Avery, Christine, and Diane Zabel. (2001). "The Flexible Workplace: A Sourcebook of Information and Research." Westport, Conn.: Quorum Books. Avery and Zabel cite six tangible benefits of workplace flexibility: "productivity gains," "improved customer satisfaction," "reduced absenteeism and turnover," "heightened employee morale," "remuneration methods for survivors of downsizing" and "flexibility as a recruitment tool." (p. 6)

[iv] For some insights into the sociology and expectations of the millennial generation, see http://www.millennialsrising.com and http://www.mondaymemo.net/010702feature.htm.

[v] Harriet B. Presser and Amy G. Cox, "The Work Schedules of Low-Educated American Women and Welfare Reform," Monthly Labor Review, April 1997, p. 26., cited at http://www.dol.gov/asp/programs/history/herman/reports/futurework/report/chapter3/main.htm.

[vi] "Off-Ramps and On-Ramps: Keeping Talented Women on the Road to Success," conducted by the Center for Work-Life Policy.

[vii] "Futurework." U.S. Department of Labor, 2005. http://www.dol.gov/asp/programs/history/herman/reports/futurework/report/chapter3/main.htm

[viii] Workforce Management Online, April 2007. According to a study by MetLife Insurance (MetLife Caregiving Cost Study: Productivity Losses to U.S. Business, 2006 http://www.workforce.com/archive/feature/24/85/10/index.php?ht=), the cost to U.S. business from the lost productivity of working caregivers is more than $33 billion per year. The average caregiver costs an employer $2,110 per year. The findings in the 2006 study represent an increase of about $4 billion in both categories from 1997, when the study was first conducted.

[ix] Some sources include Gottschalk, Petter, and Hans Solli-Saether, "Managing Successful IT Outsourcing Relationships." Hershey, Penn. : IRM Press, c2006, and Rick Click and Thomas N. Duening, "Business Process Outsourcing: The Competitive Advantage, Hoboken, N.J. : John Wiley & Sons, c2005.

[x] "Is Offshoring the Answer to the 2010 Labor Shortage?" IT Business Edge, Feb. 8, 2006,http://www.itbusinessedge.com/item/?ci=12006. In this interview, Edward Gordon, author of "The 2010 Meltdown" (2005, Greenwood Publishing), discusses the upcoming need to scour the globe for scarce talent and skills.

[xi] Avery and Zabel, p. 25. In addition to telecommuting, other environmental reasons include contingency plans for storms and earthquakes (particularly in earthquake-prone areas such as California).

[xii] For practices on measuring performance in virtual work environments, see Igbaria, Devine and Cheon, "The Measurement of Telecommuting Performance," in "Managing Web Usage in the Workplace: A Social, Ethical and Legal Perspective." Hershey: Idea Group Publishing, 2002.

[xiii] Zelinsky, Marilyn. "New Workplaces for New Workstyles." New York: McGraw Hill, 1997. Still one of the best discussions of the implications of virtualization on work place design, workplace sociology and worker productivity.

[xiv] Simmons, Steve. 1996. "Flexible Working: A Strategic Guide to Successful Implementation and Operation." London: Kogan Page. According to Avery and Zabel, Simmons sorts topics into areas of competency that include "task competencies" (p. 115).

[xv] Chan, Shirley. "The Invisible Factors in Telecommuting." Workforce Management, March 1, 2006, http://www.workforce.com/archive/feature/22/22/78/index_printer.php (registration required). Chan lays out some best practices for managing tele commuting workers and explains how employment terms and measurement differ from those for workers at the traditional workplace.

[xvi] Avery and Zabel, p. 89.

[xvii] As an example, the virtual learning site Training-classes.com lists a course called Managing a Virtual Office, with a brief description reading: "More and more companies are finding that flexibility for employees in both work hours and work location help them attract and retain the best talents and actually improve productivity. This course identifies the potential benefits and pitfalls in managing a 'virtual' workforce, gives guidelines for maintaining communication, monitoring productivity, and encouraging peak performance. There are methods for assuring alignment and consistency, and suggestions for preserving important working relationships without the traditional work structure." http://www.training-classes.com/course_hierarchy/courses/995_Managing_a_Virtual_Office.php

[xviii] Office Depot is one of many office supply and design retailers to offer extensive resources for home-based workers on its Web site at http://www.officedepot.com/businesscenter.

[xix] Gartner has observed in a March 2005 report that "60% of organizations that outsource parts of the customer facing process will encounter customer defections and hidden costs that outweigh any potential savings they derive from outsourcing" and that "through 2007, 80% of organizations that outsource customer service and support contact centers with the primary goal of reducing cost will fail." http://www.gartner.com/press_releases/asset_121821_11.html

[xx] As reported in The New Scientist, issue 2497, April 30, 2005, http://www.newscientist.com/channel/being-human/mg18624973.400.

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0907 Part No. 098-108764