

# TELEWORK 360°

A Best Practices Digest and Guide to Getting  
Telework Right in the Public Sector



# EXECUTIVE SUMMARY:

## The Case for Telework

The case for telework and telecommuting originally relied on convenience. Now the value of its underlying flexibility extends well beyond convenience.

On the face of it, telework offers unique flexibility for both the day-to-day work of government and especially during crises, when people look to government to do those things that they cannot do for themselves. The oft-cited examples of the devastation in Gulf Coast states and the events of Sept. 11 are poignant reminders that this is not a theoretical exercise.

The United States needs to change the way our workers work. We have witnessed natural disasters impede our governments' ability to accomplish work. Individually, employees face

physical obstacles to arriving at work, such as traffic and stressful commutes and increasing gasoline prices. Aside from work viability and convenience, governments' public service sector needs a new way to attract and retain employees. Telework seems the most reasonable way to improve how our workforce goes about accomplishing its business.

People in nearly every industry can telecommute. Aside from providing an employee control over their work environment, telework offers workplace flexibility, takes the geography and time clock out of the work equation, and offers unrestrained service delivery options.

Governments are complex entities. For telework to become a viable option for public service employees, government must consider

how unions, the specific organization undertaking a telework plan, managers, the individual employee and the public will react to such an undertaking.

While there are obvious benefits and certain concerns about telework, the purpose of this white paper is to bring the view of telework full circle. *Telework 360°* identifies eight interrelated dimensions of telework that can inform an enterprise-level strategy for transforming public service through networked technologies.

*Telework 360°* provides a thorough view of work-at-a-distance in government by asking and answering eight questions based on the core dimensions of telework:

**1) WHAT?**

Telecommuting vs. Telework — A Distinction With a Difference

**2) WHY?**

Imperative for Change — Drivers & Benefits of Telework

**3) HOW?**

Policy – Working Outside the Box & Within the Law

**4) WHO?**

People & the Challenge of Organizational Readiness

**5) WITHIN WHAT CONTEXT?**

Keeping the Team Together, Even When They are Apart

**6) WITH WHAT TOOLS?**

Assess, Implement, Secure & Train

**7) WHERE?**

Alternate Work Sites

**8) FOR WHAT PUBLIC PURPOSES?**

Operational Resiliency, Economic Vitality & Environmental Sustainability

*Telework 360°* suggests workable responses and strategies based on emerging and best practices. The guide includes references to working models, policies and contracts or agreements throughout.

# Introduction: Work it is a-Changin’

*Come senators, congressmen  
Please heed the call,  
Don't stand in the doorway  
Don't block up the hall...*

— Bob Dylan, 1964  
*“The Times They Are A-Changin’”*

Given the graying of the civil servants, demographic data suggests that if you are reading this, you are probably old enough to identify with the sentiment of Bob Dylan’s call to attention, directed to the 1960’s counterculture. You may also be one of the millions of public employees that rode the wave of the Great Society<sup>1</sup> — or the “Ask not what your country can do for you, ask what you can do for your country” imperative of John F. Kennedy’s New Frontier — into a career in public service, finding yourself eligible to retire soon. Instead of draft cards, mail carriers are now bringing AARP<sup>2</sup> cards by the truckload. Before you return your thoughts to “flower power” and begin tending the backyard rose bushes full time, you have one more opportunity to be part of a transformation of public service. You have the opportunity to transform the public sector workplace and prepare it for your successors.

Even if you are of an age that the musicians you listen to regard Dylan as only one of their old-school inspirations, the stakes may be even higher now than when Dylan offered his call. This is a unique opportunity to help shape public sector work around the aptitudes and attitudes of generations for whom the benefits of the Information Age are taken for granted, much the same way their parents assumed the gains from the Industrial Revolution. Theirs is the Conceptual Age, and according to Daniel Pink, most well known for his book *Free Agent Nation*, it is anachronistic for them to think of work as place or location-bound.

That is because tomorrow’s public employees will be no more comfortable in today’s bureaucratic structure than you were in the system left over from the Hoover administration. Tools and trends are changing the times

so quickly that the day may soon be upon us when the halls of government contain few but senators and congressmen.

According to the federal Office of Personnel Management (OPM), as of October 2004, “58 percent of supervisory and 42 percent of non-supervisory workers were eligible to retire by the end of fiscal 2010. In addition, 200,000 federal employees are expected to resign over the next five years, resulting in a potential loss of nearly 900,000 workers.”<sup>3</sup> Obviously, this does not include the hundreds of thousands of state and local officials similarly situated.

OPM Director Linda M. Springer recently said, “The federal government is facing a ‘retirement tsunami’ in the next few years and [government] needs to begin taking steps now to expand employment opportunities for the next generation of public servants.”<sup>4</sup>

Future public servants will come from and serve a very different public than the one in place today. They will expect to receive and deliver service in a very 21st century fashion.

The Pew Internet and American Life Project recently surveyed 24 million American teens between the ages of 12 and 17. The survey results report:

- 87 percent of American teens use the Internet.
- 65 percent use Instant Messaging (IM).
- 44 percent go online everyday.
- 29 percent keep several IM conversations going at once.
- 29 percent have more than 50 “buddies” on their regular IM list.
- 25 percent IM people in the same room with them.<sup>5</sup>

Anyone familiar with teenagers will tell you that all of this activity is most likely accomplished with the television on, an iPod ear bud in one ear, a cell phone handy and a math text open on the table.

The public sector may be facing a “retirement tsunami” in the next few years, but today’s teenagers live very comfortably everyday in an “information tsunami” that would simply wash many of their parents and grandparents away.

And yet, it is how they are preparing to take your place in the workforce.

If the public sector is going to be prepared for them, it is imperative that we begin to put the workplace policies, processes and tools in place now that will be necessary to attract the upcoming workforce to a public service career. They will be looking for the same level of professional flexibility and social balance that now governs their entertainment choices. Part of the answer will be telework.

Telework and telecommuting are not new concepts — in government nor larger society. There is a history here and anytime there is history, there is not only positive experience, but possibly negative perceptions and experiences that must be overcome. Some will worry about public perception and question whether government employees can be trusted to work remotely. Traditional managers may find it difficult to manage by results and not by sight. How will the infrastructure, technical support and training be provided? A statewide implementation may require additional staffing and a centralized teleworking office. A relatively small but focused effort will be required to create such a centralized telework office, but once in place, the office can provide program uniformity across the enterprise, support employees and supervisors, and offer a central authority for policies, guidelines and best practices. Furthermore, dedicated staff in a central program office can staff an advisory or oversight committee and ensure appropriate performance goals and measures are created.

Of course the question remains, where will the funding come from?

This guide has been created to help explore those issues and to encourage and ease the transition toward a more flexible workplace. This guide will highlight key telework concepts and show how, despite the questions and reservations that will be raised, telework can benefit public service organizations today, prepare for the expectations of tomorrow’s workforce and take communities to a new level of success in the future.

## Toward a 360° View of Telework in Public Service

*Telework 360°* is written primarily for state and local government officials interested in implementing or expanding organizational telework capabilities. The concept of telework or telecommuting is not new for government. Most states, counties and cities have some experience with telework and some programmatic elements are already in place.

What has changed and what governors, personnel directors, city and county executives and senior technology officials should be aware of are the societal and operational imperatives for expanding programs and the information technology available to support such change.

The guide begins with definitions and a brief history of telework. It is important to understand these concepts because a comprehensive telework program offers and requires more than simply putting a plan in place to

that can be harvested as reward for having the courage to fundamentally change the way public service is delivered. But the organization must be prepared to manage such change. To that end, the guide explores some of the policy issues that must be addressed in order to support change in making telework work.

Successful and sustainable telework requires a 360° view and due consideration of the sometimes competing interests within the public sector, including accounting for the needs and expectations of individual employees, managers, unions, the organizational whole and the wider public. This guide considers each in turn. Success depends on the technology of telework being considered as a routine part of enterprise strategic planning. Too often in earlier implementations, little or no thought was given to the effects a mobile or satellite workforce would have on technical infrastructure.

work force also raises issues of information and technical security and makes teleworker training an important part of organizational strategy.

If telecommuting was born from an effort to reduce commuting pressures and their attendant environmental impacts, and if telework owes its initial uptake to flexibility and convenience, then it would be easy to overlook telework's mission critical role in operational continuity and economic vitality.

Indeed, the federal government has made telework a central component of its Continuity of Operations Planning (COOP). State and local governments are not under the federal telework mandate but the same benefits are available to them if they include a telework strategy as part of disaster recovery and business continuity planning. In addition, including telework as part of a state and local economic development strategy will likely improve both economic prosperity and help further the case for expanding telework opportunities for government employees. Finally, the guide returns to an examination of just a few of the environmental and transportation system benefits made possible by telework.

*Telework has the potential to fundamentally change the way public service is delivered. But the organization must be prepared to manage such change.*

have a few employees work from home a few days a week. There are both compelling drivers pushing the public sector toward telework, and the promise of transformational benefits

The guide provides some insight into the challenges telework presents for the chief information officer responsible for enterprise technology planning and support. A decentralized

*Telework 360°* suggests workable responses and strategies based on emerging and best practices. It is useful to begin with some needed definitional clarity.

# The Question of What: Telecommuting vs. Telework — A Distinction *With* A Difference

## Telecommuting

Telecommuting has been around a long time. According to Dr. K. Kay Delk of Seminole Community College, the first telecommuter was a Boston bank president who had a dedicated telephone line strung from his bank to his home in 1877. In early 1963, a programmer working for the Defense Advanced Research Projects Agency (DARPA), the precursor to the Internet, was going to resign his position to stay home with his pregnant wife. He was persuaded not to resign and instead installed a teletype machine in his home and continued to program from there. In 1973, a rocket scientist named Jack Nilles coined the term "telecommuting," earning recognition by most as the father of telecommuting. Nilles lived in California and worked on projects headquartered in Washington, D.C.<sup>6</sup>

In the last several years, the American public has witnessed personal and laptop computers and a plethora of other communication devices take their place among home appliances such as televisions, coffeepots and toasters, and bring telecommuting and telework to the mainstream business community.

In the purest sense, telecommuting still refers to a program that reduces or eliminates the need for employees to travel every day from their homes to their employer's location and back again. By focusing on eliminating or at least reducing the number of commute trips a worker must make, telecommuters can claim to support goals such as reducing traffic congestion during peak hours or making their workplace more environmentally friendly.

Telecommuting is also a strategy for workplace flexibility, giving employees options regarding where they work on any given day. Certainly there are full-time telecommuters, but most often telecommuting is used as part of an overall employee work plan strategy that remains essentially place-based with telecommuting options.

## Telework

Telework takes the geography and time clock out of the workplace equation. More specifically, telework is a work arrangement in which employees work at any time or place that allows them to accomplish their work in an effective and efficient manner. In short, it is bringing work to the worker instead of bringing the worker to the work.

As we continue to transition from the Industrial Age to the Information Age, the nature of work, as well as the nature of the workplace, is changing. Telework is an Information Age phenomenon created by the increase in knowledge and information-based work facilitated by the rapid advances of information technology.

The relatively recent proliferation of personal computers, laptops, cell phones, e-mail and voice mail, all connected by the Internet, have created the opportunity for telework. But it isn't only the technology that is changing; the desires and expectations of workers are changing as well. Today, there is a new emphasis on a balanced life that demonstrates itself in the desire for a work life that supports time for family, better health, and general well being. The appreciation of these values motivates workers to seek out work arrangements such as telework.

In his most recent book, *A Whole New Mind: Moving from the Information Age to the Conceptual Age*, author Daniel Pink sees the world of work radically changed by the answers to three questions about any vocation:

1. Can someone overseas do it cheaper?
2. Can a computer do it faster?
3. Is what [you're] offering in demand in an age of abundance?

Pink cautions readers that we remain constrained by the habits and structures of industrial or even information era workplaces, implying we need to find a new way to approach and

accomplish work. According to Pink, developing whole new conceptual minds is both a competitive advantage and a matter of necessity in an economy and society built on the inventive, empathetic and big-picture capabilities for which people who are intrinsically motivated, creative and with a firm grasp of their own emotional intelligence will do well. If, as Pink asserts, the creative types are the people we will rely on for prosperity in the coming century, they are the last people we should force to inhabit a cubicle row.<sup>7</sup>

For those reasons, telework has developed a constituency much greater than the original technocrats who founded telecommuting. Today's teleworkers include people working in almost every industry. For example, executives, artists, sales people and data-entry clerks are all able to take advantage of technology and work when and where it is most convenient for them, irrespective of regular office hours or the geographic location of their employer. Services of every sort, including public services, are provided by teleworkers.

It is no longer uncommon for large companies to receive customer calls in call centers located hundreds of miles from their offices or even in a foreign country. Many companies have gone well beyond just having their calls taken elsewhere. The easy availability of information technology and the interconnection made possible by the Internet allows almost every information driven process or project to be broken into component parts and accomplished in almost any location before the components are assembled into the finished product.

# The Question of Why: Imperative For Change — Drivers and Benefits of Telework

Modern information technology has made effective and efficient telework possible and today's employees expect telework as an option, but are those sufficient reasons to implement it? If telework is going to become part of a successful public service strategy, there needs to be more behind the proposal. What benefits can be expected from moving to a telework program and what resources will be required? It is important for decision-makers and implementers to have a full understanding of both the drivers and the benefits, and the relationship between the two. Otherwise, well-intentioned action may result in confusion and improper expectations for the organization and from constituents, as well as errors in planning, program promotion, and other implementation activities.

Additionally, it is important to realize early on that the drivers, benefits, and other aspects of telework are highly situational. They are relative to and/or tailored to the organization and its particular circumstances. Both drivers and benefits can vary from organization to organization and/or from location to location.<sup>8</sup>

The difference between drivers and benefits begins with their timing. More specifically, telework drivers influence implementation, whereas benefits are received as the result of implementation.

For example, the transition from working in the Industrial Age to working in the Information Age is a driver of telework programs (occurred prior to and led to the evolution of telework). Improved employee morale is a benefit (occurs after and results from implementation of telework).<sup>9</sup>

Clearly, there is an overlap. The need for and expectations of certain benefits, especially when such benefits have been proven as common results of telework, can also be drivers (see sidebar: Telework Drivers and Benefits). Recently, the



## TELEWORK DRIVERS AND BENEFITS<sup>10</sup>

### Drivers: (influence implementation)

- The transition from working in the Industrial Age to working in the Information Age
- Advances in technology
- Sociological trends (Increases in dual wage earner and single parent families, along with increased pressures to balance work and family life)
- Changing worker values, leading to more emphasis on balance between work and personal life as well as reduced stress
- Social and political pressures for environmental conservation
- Organizational pressures to be more competitive, to reduce operating costs, and to improve the ability to recruit and retain workers

### Benefits: (implementation results)

- Improved quality of work-life: morale, stress, personal control, work/family/personal life balance, commute pressures
- Improved job performance: individual, organizational
- Improved ability to recruit and retain workers
- Environmental conservation
- Improved organizational cost efficiency: facility, health care, and other operating costs
- Improved management of human resources

increased need to be more competitive in recruiting and retaining high tech workers has become a driver for telework because the benefit of improved work-life quality has been highly touted by teleworkers.

The point is to know what you are talking about when asked. Typically, policymakers are highly interested in drivers. They want to know what is required to make telework happen and what the effect on available resources may be. On the other hand, managers, human resources personnel, unions, and workers are interested in the benefits. They want to know what they can expect to get out of telework. Successful implementers will need to respond effectively and accurately to both audiences.

# The Question of How: Policy Working Outside the Box *And* Within The Law

To be successful, government telework activity, goals and objectives have to be legal, authorized, encouraged, tracked, and rewarded. Before a teleworking program is implemented, a legal review should be conducted to make certain there are no statutory restrictions on where work can be accomplished.

If it is going to fulfill its promise, telework must be made an inherent part of the way work is organized and done, and not merely be relegated to special circumstances. Otherwise, there is not a sufficient programmatic foundation to support it. In that case, telework becomes a mere experiment — easily begun and easily abandoned — and the likelihood that the expected benefits will be received is small.

Executive sponsorship from the highest level of the organization is also necessary but it is not sufficient. The mid-level managers and supervisors who will actually be responsible for administering the program need to be invested in the success of the program. Governments that have seen the most success have a formal policy in place and have augmented that with additional program support and training materials. Most jurisdictions — ranging from the federal government (civilian and military), states (Arizona, California, Georgia and Washington) and localities (Portland and Austin) of all shapes and sizes — have official telework agreements. These agreements provide official documentation for the alternate work arrangement between the employer and employee (see working examples in the previous chart).

With respect to telework, such official agreements outline and explain specifics such as:

- voluntary participation by employer and employee
- the location of a duty station and alternative workplace
- an employee's work schedule
- performance measures
- assignment of any associated cost and expenses
- work site inspection rules
- technical support.



## OFFICIAL TELEWORK AGREEMENTS IN PUBLIC SERVICE

### **GSA Office of Personnel Management Interagency Telework Site**

<http://www.telework.gov/>

### **U.S. Department of Defense Telework Policy**

<http://www.telework.gov/policies/dodpolicy.asp>

### **State of California Department of Personnel Administration Telework Policy**

<http://www.dpa.ca.gov/telework/teleworkpolicy.shtm>

### **State of Georgia Telework Policy and Training Materials**

<http://www.gms.state.ga.us/employee/telework.asp>

### **State of Washington Executive Order and Telework Policy Guidelines**

[http://www.governor.wa.gov/actions/orders/eoarchive/eo\\_01-03.htm](http://www.governor.wa.gov/actions/orders/eoarchive/eo_01-03.htm)  
<http://www.ga.wa.gov/CTR/Guide08.PDF>

### **Arizona Department of Administration Telework Page**

<http://www.teleworkarizona.com/>

### **Denver Regional Council of Governments**

<http://www.drcog.org/index.cfm?page=telework>

### **City of Portland, Oregon**

<http://www.sustainableportland.org/Telework%20Guidelines.pdf>

### **City of Austin, Texas**

<http://www.ci.austin.tx.us/telecom/twrkgdln.htm>

# The Question of Who: People and the Challenge of Organizational Readiness

Every public sector organization is by definition created to serve the public. However, every organization is different and every "public" is different. Each organization has a culture and a history. Each community has developed expectations regarding the services government provides and how and when public employees provide them. Successful change requires an understanding of both the organization and the community. It would not be smart to overlook or underestimate this reality.

Therefore, it is not sufficient to simply understand telework. Successful implementation will require a solid understanding of the organization in which you plan to implement telework. Governments are complex entities. They are made up of many parts and constituencies — often complementary but occasionally at odds with each other.

To successfully implement a telework initiative, the following interest groups should be considered:

- Individual Employees
- Managers
- Unions
- The Organization
- The Public<sup>11</sup>

## Individual Employees

For most individual employees considering telework, especially younger employees who grew up in the information culture, the ability to balance work and family is more important than any other factor including job security, quality of work environment, or relationships with co-workers and supervisors. The worst part of the workday for many is just getting to and from work. Commuting is costly and very stressful. When stress is reduced, work is more enjoyable. When people enjoy their work more, they tend to be more productive.

In a recent study conducted by Dr. Thomas Horan and Ms. Kimberly Wells of the Claremont Information and Technology Institute titled "Digital

Connections Between Home, Work, and Community: Multi-Wave Research Findings and Directions,"<sup>12</sup> both public and private sector teleworkers were interviewed regarding their experiences. How telework and teleworkers were viewed by their organizations differed somewhat between the public and private sectors.

Private sector telecommuters had perceptions that were quite different from their public sector counterparts, due to the different context of the program. For instance, because the private sector program in the study was open to all employees and acceptance was nearly guaranteed, enterprise teleworkers did not express as much worry about potential co-worker resentment. Public sector programs were much more limited and participation was not available to all employees. That caused some public sector employees to worry that they would be viewed and treated differently by co-workers if they accepted a telework option.

In both cases, individual workers differed in their preferences regarding the optimum teleworking arrangement. One respondent in the study observed, "I currently telecommute just part time, two to three days per week. I tried to do four to five, and that did not work because I felt too isolated and it was too hard to communicate with co-workers. This is why I only telecommute part time."

Another respondent worried that by not coming into the office fairly often, they were "out of sight, out of mind, that kind of thing."

One teleworker noted that the biggest challenge is "realizing the onus is on me to stay connected." Working out of the office for the majority of the work week, this teleworker reported increased efforts to send more e-mails and "pick up the phone" more frequently.

Another respondent noted, "When I'm on site, it is very important to have face time. I go and



## MUTUAL SELF-ASSESSMENT<sup>13</sup>

Although telecommuting involves many different people, at the core the employee and manager are the two main players. The arrangement will likely get off to a good start if they fit these profiles:

### EMPLOYER

- I am willing to try new ways of doing things.
- I can trust my employees to get the work done, even if I cannot see them doing it.
- I feel it is important for a manager to help employees achieve a balance between their professional and personal responsibilities.
- In this department, people are open to part-time work, job sharing, and other flexible work arrangements.

### EMPLOYEE

- I have strong organizational and time management skills. I will be able to set and meet my own deadlines and maintain regular work routines at home.
- I have enough experience to understand the job requirements and department policies and procedures. I know who to call for information or advice.
- I can keep to a schedule that meets both my professional and personal responsibilities.
- I am motivated and self-disciplined, and I get the work done even when no one is watching.

have an informal conversation at some point with each team member."

Yet another teleworker said, "I try to maintain contact by scheduling lunches and so on to maintain face-to-face contact with each of my coworkers." Another respondent commented upon the critical importance of full attendance

at face-to-face unit meetings, recognizing that "meetings become important."<sup>14</sup>

Teleworkers have to be willing to adjust their own schedules to attend office functions and engage co-workers. The combined efforts of employees and management seem to be key in maintaining important social network ties that keep teleworkers feeling like part of the organization.

The single most important factor in creating a successful telework relationship between the employee and manager is a shared definition and understanding of mutual expectations. This can be ensured through the use of a comprehensive telework agreement negotiated and adopted by each. It essentially becomes the contract each will use to hold the other accountable for results.

The telework agreement will provide the structure for fair evaluation and take the place of the familiar landmarks of the common office experience that have historically framed the supervisory relationship.<sup>15</sup>

## Unions

As unions contemplate the effect telework may have on members, they will likely be concerned about the ability to represent their members and will be seeking a clear definition of the role of the union in implementing telework. In the past, union leaders have struggled with employers who attempted unplanned, informal telework programs through an essentially arbitrary selection process. Union leaders will want to know early on how they will be involved in planning, implementing and monitoring telework programs.

The federal government requires agencies to develop telework programs in partnership with unions and other stakeholders since telework affects conditions of employment.<sup>16</sup>

Unions have historically been supportive of teleworking as an option for members when they have been involved from the beginning, and implementation plans have been well considered and well constructed. When appropriately involved, unions can be very helpful in instituting a telework program. For example, unions can sponsor information sessions on telework that are open to employees at every level of the organization. Employers in the public and private sectors who have successfully implemented a telework plan can be invited to discuss the benefits and challenges of the programs. If a telework program is to be successful, all staff must be comfortable with the process. The union can facilitate this with management and supervisory counterparts.

Telework can be a win-win proposal if done correctly. Both union leadership and management may need to work to alleviate citizen and politician concerns regarding perceptions that telework hinders supervision and therefore facilitates reduced workloads and employee laziness. Teleworking is part of the technological wave of the 21st century and can be beneficial to citizens and workers alike, but it must provide seamless coverage in support of the quality services that the public has come to expect from its dedicated public employees.<sup>17</sup>

## Public

Public perception of government workers tends to vary. The reality is that in some cases, public employees are viewed unjustly as self-interested and privileged. Members of the public will need to be assured that telework is not being implemented merely to benefit employees but is a way to provide better and more efficient service. The public must understand that their needs will be better and more effectively met though the implementation of telework that results in better access to government, reduced cost or some other metric.

## The Question of Context: Keeping the Team Together Even When They Are Apart

The organizations best positioned to implement a comprehensive telework program will have an organizational maturity and culture of teamwork and collaboration that can support it. A clear and shared understanding of mission and priorities will make it less important to have all employees spending their workdays in close physical proximity. Open, honest and proactive communication is a prerequisite. Everyone involved must understand what is being done and why, and the role they are expected to play in supporting the whole.

*The biggest challenge for teleworkers may be realizing the onus is on them to stay connected.*

In the Claremont study conducted by Horan and Wells that was previously mentioned,<sup>18</sup> public sector employee perceptions indicated that many believe telecommuting is often implemented primarily to realize the organizational advantages of cost cutting. With most agency departments located in expensive urban areas, a strong impetus behind telecommuting implementations has been to address the growing need to contain or reduce expensive office space.

However, the study findings suggest that telework implementation in practice goes well beyond that and may, in fact, have unintended consequences for workplace functions and processes — particularly upon social networks, supporting informal communications, and social learning opportunities.

For example, when asked, “To your knowledge, are there plans underway to expand telework [in the agency] in the future,” one manager said, “Yes, although there has been a hold on telecommuting, because we [department managers] didn’t want more than 30

percent of the staff telecommuting.” One of the reasons given for the halt was widespread concern among managers that the more experienced workers would be telecommuting and not available when needed in the office.

The response from private sector firms, when asked to identify the primary reason for implementing a telework program, differed from their public sector counterparts and cited attracting and retaining qualified personnel as the key operational issue facing their organization.

Consequently, in those firms, telecommuting has been implemented largely as an employee incentive with primary goals of employee attraction and retention.

When queried regarding the potential disadvantages of telework, a public sector manager said, “Brainstorming is compromised by telecommuting. Just the interchange that takes place in the office, talking with someone and maybe someone in the next cubicle overhears and says ‘Oh yes, I had something like that happen’ and ‘Can we talk about it?’ In this way they find new solutions for issues.” Telecommuting more than half-time was seen as a potential problem that may cause employees to feel disconnected and like they didn’t really belong to the group.

Speaking from the perspective of his department, a manager observed, “We really have three classes of employees now: satellite/ off-site workers [virtual], home workers [in the office part of the time], and in-office employees. The satellite staff we hardly ever see; telecommuters we see more often and they

seem to make more contact with fellow employees...But still, telecommuters are in the office less frequently and so telecommuting doesn’t do a lot to foster informal learning, communications, or esprit de corps.”

To mitigate this, managers should make a conscious effort to stay in close contact with satellite employees and frequently encourage other staff to do so as well. Organizations that have successfully implemented telework also make in-person attendance mandatory for regularly scheduled meetings. Best practices demonstrate that teleworkers should be required by a teleworking agreement to be available during core hours (for example, from 9:00 a.m. to 3:00 p.m.).

The biggest challenge for teleworkers may be realizing the onus is on them to stay connected, requiring increased efforts to send more e-mails, make use of instant messaging or pick up the phone more frequently. When on site, it is very important for teleworkers to have “face time” with co-workers.

Creating opportunities for face-to-face social networking, such as co-worker lunches, also helps maintain a spirit of teamwork and helps keep teleworkers connected to the organization. The combined efforts of employees and managers seem to be key in maintaining important social network ties.

# The Question of Technology: Assess, Implement, Secure and Train

## Management Implications

For a telework program to be successful, senior management within an organization should publicly endorse and actively promote telework as a vital element of the organization's strategy. This level of leadership support will give organization management — from information technology (IT), human resources, procurement, facilities, and security, as well as core business operations — the opportunity to contribute to a comprehensive program.

In most organizations, telework is not being considered part of long range IT planning or budget decisions made at the department level. Enterprise-level assessment of the effect institutional telework may have on end user equipment, agency technology architectures, user environments, network services and information security is not typically conducted. Therefore, telework programs are frequently created and implemented in an ad hoc, department by department fashion.

Organizations need to proactively address policy questions regarding how the IT environment supporting the home-based or mobile teleworker should be configured, funded, and supported. Such decisions will influence the selection, acquisition and support for IT equipment. IT support for telework should be addressed at an enterprise level to ensure successful delivery of IT capabilities as telework expands to become an important alternative for most or all employees. For this to happen, IT management must play a greater role in planning and implementation support to ensure employees have the IT tools necessary to perform their jobs.

## Role of CIO/IT Director

The CIO or IT director and technical staff have especially important roles to play in establishing a successful enterprise telework program. The effectiveness of telework will largely depend on the capability of the infrastructure and tools in

place to support it. In addition to enterprise programmatic planning, IT staff needs to be actively involved in informing the decisions that are made regarding equipment (home and mobile), software, network services, and other aspects of IT support for teleworkers.

Most public sector organizations have a standard desktop or mobile configuration for the enterprise that makes centralized help desk support more efficient. A similar set of standard products or configurations for teleworkers should be established to ensure compatibility with overall architecture.

In addition, decisions regarding technology refresh should take into account the implications for supporting telework. For example, by replacing desktop computers with laptops, a great deal more flexibility regarding work location is created and consistent support configurations can be maintained for only a slight increase in per unit cost.

## Assessment of Technologies

The consulting firm Booz Allen and Hamilton (BAH) recently conducted a survey and assessment of federal government home-based telework capability for the General Services Administration Office of Personnel Management (OPM).<sup>19</sup>

The survey of technologies supporting home-based telework evaluated key information technology components supporting the home environment and partitioned them into three broad domains:

- Residence domain — including PCs, printers, software for the home environment, and residential network services to provide connectivity.
- Network domain — encompassing wide area transport and remote network access technologies.
- Enterprise domain — including application software and enterprise-level information security capabilities.

In addition, they identified certain IT related issues that will present challenges as the scale of home-based telework expands, including the following:

- Bandwidth and availability of residential network services that will provide the last mile connectivity for home-based teleworkers
- Performance and reliability of legacy client-server applications in a home-based telework environment, particularly when supported over dial-up connections
- Protection and security of agency information and systems as networks are "opened" to accommodate home-based telework.

According to their findings, the challenges resulting from these (and other) IT areas "are not expected to prevent most federal organizations from proceeding with telework implementations. However, if left unresolved, many federal organizations will likely find that these challenges will slow or significantly impair implementation activities, as telework becomes more prevalent in the federal environment. Such challenges can be resolved through application of agency IT planning, architecture, budgeting and project management processes that have not yet been fully brought to bear on home-based telework."

## Infrastructure

Like most work, telework requires a basic tool kit. A laptop or personal computer, applications software, printer, Internet connection and a telephone make up the basics. Increasingly, in addition to the basics, many teleworkers have cell phones, mobile e-mail devices and access to desktop video conferencing.

High-speed network connectivity, wired or wireless, should be available if telework is going to reach its full potential. Fortunately, in most urban areas the necessary infrastructure is already in place or rapidly being built. Rural

areas are also increasingly able to enjoy the benefits of robust data connections.

Without high-speed connectivity, the performance of legacy client-server applications over remote connections can become a serious constraint. This is especially important for workers who plan to connect via dial-up. Legacy application performance may make telework very difficult. Some applications may need to be redesigned or moved to a Web-based architecture to achieve acceptable performance. The implications of employees' teleworking on a variety of machines over numerous connection configurations should be routinely considered as part of the requirement definition for all new applications.

## Security

Security of government information and systems in a robust telework environment is also a concern for some managers in organizations actively implementing telework.

In the Booz Allen and Hamilton (BAH) survey, security issues were viewed as an important but manageable concern. Chief Information Officer (CIO) staff and IT management generally indicated that the technology and management tools to address IT security issues are available now, but effort needs to be placed into identifying security risks and designing solutions to mitigate these risks. Resources needed to secure an agency's network against telework vulnerabilities are very small if vulnerabilities arising from other remote access applications have been adequately addressed. The need to provide information security is not seen as a reason to inhibit home-based telework in any of the organizations contacted in the analysis.<sup>20</sup>

## Training

One thing seems to be consistently present in all successful telework implementations. That is, an understanding of the importance training plays in establishing a foundation for success — and a commitment to providing training. An initial training program should be set up to provide telework information to both managers and employees. Management and employees may have additional needs for role-specific training but these can be dealt with subsequently.

Initially, it is important to demonstrate that both managers and employees are “in it together” and mutually responsible for success.

There should be a concentrated effort to make telework institutionalized throughout the government enterprise and not have it based on the desires of one supervisor or another. Employees who telework should not be concerned that if their supervisor changes, their telework plan will automatically be revoked.

The federal government includes training as a major component to be addressed by every agency telework plan. In accordance with Department of Defense (DOD) policy, “Supervisors and employees participating in the DOD telework program are encouraged to undertake training in telework, as experience shows that the most successful telework arrangements include initial training for both supervisors and employees. Components may determine the best training options in this respect.”<sup>21</sup>

It can be relatively easy to put a generic training program in place that focuses on the policy and programmatic aspects of telework. Such a training program is important and can certainly go a long way in supporting a successful program. However, it is important to remember that once workers are sent off to “telework” they will find themselves in a variety of environments.

Unfortunately, few teleworkers receive specific training concerning the home IT environment. This appears to be the case despite the fact that teleworkers tend to be more dependent on their IT environment than office-based staff. The demands of telework may be significantly different and require more technical knowledge than people have accumulated on their own by using e-mail or Web surfing from home. Special emphasis should be placed on IT operation and maintenance, information security and vulnerability, and maintaining effective communication with managers and co-workers.

By specifically including a technology component to cover what people will see and be required to do from their telework computers, an organization can help ensure that workers feel confident in their ability to understand the

technology they are asked to work with and maintain. Leaving workers to learn systems “as they go” or to get the training on their own can be time consuming, expensive, or even be a cause for teleworker failure.

# The Question of Location: Alternate Work Sites

Depending on how the telework program is established, some employees may be assigned to work from an alternate work site. What is an alternate work site? Quite simply, it is defined as a location away from the organization's main work site where the employee teleworks. The most commonly used alternate work site is an employee's residence. Other commonly used alternate work sites include telework centers, satellite offices, hotel rooms, airplanes, trains and automobiles. To an extent, the definition of an alternate work site depends on how an organization defines telework. Thus, alternate work sites can range from designated work locations that reduce employee commutes, to any location away from the main work site.<sup>22</sup>

## Satellite Offices

Satellite offices are typically auxiliary work sites set up and used by a single employer. Satellite offices are not necessarily geographically convenient or designed specifically for telework use.

## Telework Centers

Some governments, particularly in the Washington D.C. area, also arrange for employees to be able to work from a telework center. According to Workingfromanywhere.org, a telework center is an alternate work site that contains workstations that are leased by the employer for the use of teleworkers in their organizations.

Generally, telework centers are set up in geographically convenient locations. For example, some telecenters are located in suburban, exurban,<sup>23</sup> or rural areas and are designed to accommodate nearby residents who wish to avoid the commute to main work sites in urban centers. Telework centers have been established by cooperative ventures or partnerships,

private sector organizations and by public sector agencies.

As originally envisioned, telecenters were intended to play many roles, including:

- Bringing government to the people
- Filling the preference gap for those workers wanting to avoid long commutes but not wanting or unable to work at home
- Revitalizing rural and/or economically blighted areas
- Making customer service more convenient for a wide variety of customer groups
- Linking home-based teleworkers to convenient administrative support
- Helping organizations reduce facility operating costs
- Serving as emergency work sites
- Playing a major role in linking the information highway to under-served citizens
- Providing community services

Telecenters have performed very well on the program side of things. That is, they have lived up to their promise in:

- providing workstations for nearby residents, enabling them to avoid long commutes;
- providing government services such as training and counseling to nearby communities;
- providing emergency workstations for workers affected by disasters;
- providing Internet access for activities such as distance learning.

However, in many cases, telecenters have not performed well on the business side of the ledger. Most have not been able to become financially viable. For that reason, most teleworkers either work primarily from their residence or are almost completely mobile and location-independent.<sup>24</sup>

## Office Hoteling/ Desk Sharing

Other terms common in the world of telework are office hoteling and desk sharing. Both refer to work arrangements in which employees utilize non-traditional workstation arrangements when working at their employers' main work site. This arrangement is primarily a facility management strategy. In most cases, hoteling refers to work arrangements in which the employee reserves the use of a vacant workstation on an as-needed basis, or simply uses a vacant workstation on a space-available basis. Desk sharing usually refers to a work arrangement in which two or more employees share the same workstation in a typically pre-arranged manner that allows each of the employees to have sole access to the specified workstation on given days while the others involved in the sharing arrangement work elsewhere. Hoteling challenges include employee adjustment to not having the same workstation each time they work at the main office, and the need to reserve or look around for a vacant workstation. The challenges of desk sharing demonstrate the need to come to an agreement on a mutually satisfying schedule for workstation use, as well as the need to live with the desk habits of others.<sup>25</sup>

# The Question of Public Purposes: The Role of Telework in Government's Operational Resiliency, Economic Vitality and Environmental Sustainability

Precisely where someone works matters little if they cannot get there or if there is no longer a viable infrastructure in place once they arrive. Natural and manmade disasters alike have recently interrupted the efficient delivery of government services with an alarming regularity. This is especially troublesome because unlike most companies, government has a fundamental obligation to stay open for business. Telework provides an opportunity to distribute the means of service delivery. Telework therefore greatly reduces geographic vulnerability and positions both the human and technical infrastructure in such a way to help ensure continuity of operations.

## Disaster Recovery & Business Continuity

For the reasons mentioned immediately prior, telecommuting and telework are or should be an essential part of a government's disaster recovery and business continuity plans. Earthquakes in California, the Oklahoma City courthouse bombing, the terrorist attacks of Sept. 11 and more recently, the devastation of New Orleans and the Gulf Coast brought by Hurricane Katrina, have all shown in vivid and horrific detail how vulnerable to interruption government operations can be. Unfortunately, it is precisely during a time of crisis that a well functioning and responsive government is most needed.

The reality of these events should serve to infuse government disaster recovery, business continuity and continuity of operations planning with a sense of importance and urgency. We have seen in painful detail that it is no longer sufficient to simply plan for an occasional snowstorm or temporary interruption of electrical power to key facilities. Government must also plan and be prepared to deliver critical services even after suffering a more catastrophic "denial of service" attack.

To ensure that essential government services are available in emergencies — such as terrorist

attacks, severe weather, or building-level emergencies — federal agencies are required to develop continuity of operations (COOP) plans. Responsibility for formulating guidance on these plans and for assessing executive branch COOP capabilities lies with the Federal Emergency Management Agency (FEMA), under the Department of Homeland Security. FEMA guidance, Federal Preparedness Circular (FPC) 65 (July 1999), identifies elements of a viable COOP capability, including the requirement that agencies identify their essential functions.<sup>26</sup>

To further reinforce its importance, in June 2004, FEMA revised its Federal Preparedness Circular (FPC) 65, "Federal Executive Branch COOP," to require agencies to consider human capital management in their planning for emergencies. This circular's Annex H emphasizes telework as an important tool as well as the need to address emergency situations in teleworking agreements. The circular was issued by FEMA with consultation and cooperation from the Office of Personnel Management (OPM).<sup>27</sup>

State and local governments, while not specifically covered by federal planning mandates, are also required to have well considered, comprehensive plans in place to govern and direct actions and response to disaster.

Telework can and should be a critical component of such plans. A well formulated and routinely operating telework program can, by its very nature, provide geographic independence and infrastructure redundancy to government operations. The people, processes, systems and infrastructure elements needed to continue to perform essential functions during a disaster or major incident remain in place but are dispersed enough to retain some independence from the interruption.

In April 2005, Congressman Tom Davis, chair of the House Committee on Government Reform said during a review of federal agencies'

continuity of operations planning, "It is imperative that we incorporate telework into our government's continuity planning. Telework, or allowing employees to work from home or other remote locations, leverages the latest technology to give significant flexibility to managers."

Davis continues, "Telework is not just common sense efficiency, but an important national security consideration as well. The decentralization of federal agency functions inherent in a healthy telework strategy can greatly increase the survivability of those agencies in the event of a terrorist attack or other disruptive crisis. It can even serve to reduce traffic congestion which, as we all know, is a major problem around here, particularly when one considers the various evacuation scenarios in the event of a disaster in Washington."<sup>28</sup>

In June 2005, Rep. Frank Wolf, (R-Va.), said in a statement, "The federal government should be leading the way when it comes to teleworking, instead of being pushed into it. There simply is just no magic in strapping ourselves in a metal box every day and driving ourselves to the office only to sit behind a computer or talk on the phone for eight hours."

Representative Wolf continued his push for the expanded use of telework in the federal government in a letter to President Bush dated September 15th, 2005. In the letter, Wolf points out that many federal contractors conducting business in the region hit by Hurricane Katrina are using telework to continue operations. They are, however, having a difficult time working with federal counterparts who are not allowed to participate in telework programs. Wolf calls on President Bush to "embrace telework as a workplace priority for both the public and private sectors to improve continuity of operations in the event that a disaster — whether natural or man-made — strikes our country."<sup>29</sup>

## Economic Development Strategy

The bottom line for every economic developer is this: find a way to increase prosperity. Including telework as part of a regional economic development strategy turns traditional thinking on its head. Instead of thinking about how to entice companies to relocate into a community bringing jobs and people with it, a telework strategy focuses on how to connect people already living in a community with employment opportunities generated anywhere in the world. While most teleworkers are independent individuals, developing the local capacity for telework can become a community economic strategy. Many communities are beginning to recognize how a community-wide initiative to develop citizens' skills for entrepreneurship and telework can become a valid economic development initiative.

In short, telework removes geographic constraints from the equation and begins to focus on recruiting jobs instead of companies. In that way, it supports the goals and desires of people who have already chosen to live in a particular place, giving them access to a world full of employment opportunities. It also brings the benefits of additional employment without adding to the public service burden on community infrastructure.

Through telework, individuals are able to find and hold jobs in which they report to organizations irrespective of location. This allows individuals to live in areas with a high quality of life and low living costs while performing jobs, particularly high-tech jobs, that may not be available yet in their community. A focus on telework opportunities also helps states or cities build a critical mass of workers in high paying job fields with an eye toward the future, and helps more traditional business expansion or relocation efforts.

Community planners would generally like to see robust economic development generate tax revenues and a strong local economy. Locally generated tax revenues do provide the financial basis for government to provide local service. However, business property tax is not the only contributor to local coffers. Individual income and the associated purchasing power support the myriad of local businesses that

make up a community. If additional well-paying employment opportunities are available via telework to community members they will have more money to spend at local grocery stores, car repair shops, restaurants and movie theaters.

Lone-eagles.com, a Web site for independent, Web-based entrepreneurs estimates that approximately 26,000 communities are competing for an average of 400 corporate relocations each year. In contrast, the majority of new jobs and economic growth come from small businesses, which produce more than 80 percent of our international exports. While it might be a nice idea to attract a big company that might hire and train hundreds in your community, your odds may be much better investing in local entrepreneurs and small businesses. Yet the current trend has focused on attracting corporate relocations — not on developing local skills or aspiring entrepreneurs. Both strategies can and should be developed together.<sup>30</sup>

With extensive experience in the area of telework, Washington State University (WSU) began exploring applications for rural areas. When urban businesses offer e-work opportunities in rural communities it is known as rural telework. Teleworkers can either work for these companies as employees or under contract.

The overall economy is strengthened and diversified by rural telework. Rural telework jobs provide urban employers an expanded labor pool to help supply hard-to-find talent and reduce operating costs resulting from lower wages, facility costs and turnover. Each job located outside urban areas may mean one less commuter in peak hour traffic, thereby creating a potentially positive impact on the current infrastructure and environment. Telework jobs benefit rural communities by providing living wage jobs, reducing out-migration, providing year-round employment and diversifying the economy in regions experiencing depletion in natural resource-based jobs.<sup>31</sup>

Creating or expanding e-work opportunities can be a new strategy included in economic development plans for rural communities. In order for e-work to be successful, communities must have three essential elements in place: sufficient telecommunications infrastructure,

workforce development capacity and interest in securing information-based jobs. E-work provides a return on telecommunications infrastructure investments by strategically using this resource to benefit rural communities through the creation of information-based jobs.

Government adoption and implementation of telework programs for public employees can help support and further telework as an economic development strategy.

## Environment & Transportation

Telework can and should be part of the overall policy platform for government. If telework is proposed simply as a way to reduce air pollution or traffic congestion the program will most likely never get off the ground. People just don't seem to care enough about either of them to undertake such a fundamental change to the way government operates. That is not to say that telework won't reduce traffic congestion or help improve air quality. It will.

A November 2005 report by the Reason Institute, "The Quiet Success: Telecommuting's Impact on Transportation and Beyond," details the positive impact telework programs can have on transportation and the environment in a community. The paper states that "telecommuting may be the most cost-effective way to reduce rush-hour traffic and it can even improve how a weary nation copes with disasters, from hurricanes to terrorist attacks. It helps improve air quality, highway safety, and even health care as new technology allows top-notch physicians to be (virtually) anywhere."

The report states:

*Telecommuting expands opportunities for the handicapped, conserves energy, and — when used as a substitute for offshore outsourcing — can help allay globalization fears. It can even make companies more profitable — good news for our nation's managers, many of whom have long been suspicious of telecommuting. Other than driving alone, telecommuting is the only commute mode to gain market share since 1980.*

*The Census Bureau notes that from 1990 to 2000 the number of American workers who usually*

worked at home grew by 23 percent, more than twice the rate of growth of the total labor market. Since 2000, telecommuting has continued to grow in popularity. Roughly 4.5 million Americans telecommute most workdays, roughly 20 million telecommute for some period at least once per month, and nearly 45 million telecommute at least once per year.

And telecommuters drive less than office workers do. During the days they telecommute, workers reduce their daily trips by 27 to 51 percent, and driving (vehicle miles traveled) is reduced by 53 to 77 percent. Although they effectively receive no public subsidies, telecommuters actually outnumber transit commuters in a majority (27) of the 50 most populous metropolitan areas. Telecommuters outnumber transit commuters in places like San Diego, Dallas, and Phoenix. They outnumber commuters by more than two to one in places like Raleigh-Durham, Tampa-St. Petersburg, and Nashville. In Oklahoma City, telecommuters outnumber transit commuters nearly five to one.<sup>32</sup>

In addition to the more obvious benefits of reduced traffic congestion during rush hours and reductions in the associated pollution produced by commuter automobiles, telework programs can support public policy objectives in other areas. For example, telework can reduce wear and tear on roadways and help reduce or at least manage the demand for parking in crowded urban centers.

Telework can also have a positive influence on our national transportation security. In his previously referenced letter to President Bush, Rep. Frank Wolf said, "The recent devastation from Hurricane Katrina along the Gulf Coast disrupted oil drilling operations, flooded refineries, shut down pipelines and slashed U.S. fuel production by more than 10 percent. As a result, Americans were faced with record-high gasoline prices. This experience underscores the necessity of conserving fuel. The United States now imports almost 60 percent of its oil." Wolf continued, "With telework, employees save energy and the nation's dependence on foreign oil sources are reduced."<sup>33</sup>

Mr. Chuck Wilsker, president and co-founder of the Telework Coalition, recently put it this way: "The tools are in place for the government to offer telework options. The coalition is urging all workers to telecommute two days per week. The business sector has more readily adopted a top-down approach to telework. I don't know how long it will take to pay \$50 or more to fill a gas tank before more workers in both the private and public sectors begin looking at telework."<sup>34</sup>

Doing away with the ancient tradition of leaving home every morning to travel to where work awaits, only to turn and come back home again at sunset, does much more than save dollars at the gas pump. Telework finally begins to give people who must work everyday a small portion of the control over their lives that has heretofore been principally reserved for the idle rich. Frankly, it couldn't come at a better time.

People, especially in the United States, are living longer and will by necessity have to work longer than their grandparents did. The National Center for Health Statistics reports that the average life expectancy in the U.S. for someone born in 1900 was 47.3 years. If you were born in 1950, average life expectancy is 68.2 years.<sup>35</sup> Those born in 1990, tomorrow's workforce, can expect on average to live 75.4 years or approximately 47 percent longer than those born 90 years earlier. For most, longer life means a longer work life. Telework puts the control of those work days into the hands of the individual and allows unprecedented control over when, where and how they will contribute to the communities they live in and to their own well being.

## Conclusion: Telework as *The Legacy Play*

*Come mothers and fathers throughout the land  
And don't criticize  
What you can't understand.  
Your sons and your daughters  
Are beyond your command.  
Your old road is  
Rapidly agin'.  
Please get out of the new one  
If you can't lend your hand,  
For the times they are a-changin'.*

— Bob Dylan, 1964  
“The Times They Are A-Changin’”

The next few years will see a transformation of public service the likes of which has not occurred since the inception of the Great Society in the 1960's. Public employees will be retiring in significant numbers and young people, raised in the information culture and considering public service, will have a very different set of career goals and expectations than their predecessors. Telework is one strategy that will allow them to balance their professional and personal lives in the way they will demand.

The *Washington Post* reports that the federal government's Office of Personnel Management (OPM) estimates 60 percent of the government's 1.6 million white-collar employees and 90 percent of about 6,000 federal executives will be eligible for retirement over the next 10 years. The projected high-water years will be 2008 through 2010, as baby boomers and others leave Uncle Sam. Director Springer of the OPM explains that “what we are looking at, essentially, is a very different, a very new set of

people who will be here eight, nine, 10 years from now. The time to think about that is now, not then,” Springer concludes.<sup>36</sup>

According to an estimate by Work Design Collaborative LLC, 12 percent of today's U.S. workforce qualifies as distributed. In urban areas the number is closer to 15 percent. Work Design Collaborative LLC predicts 40 percent of the U.S. workforce will be distributed by 2012. Many technology companies are already there. At IBM, 40 percent of the workforce has no office at the company; at AT&T, a third of managers are now post-geographic.<sup>37</sup>

Properly implemented, telework will meet the expectations of tomorrow's work force and return benefits beyond just those enjoyed by the employee. It will provide for improved service delivery infrastructure making disaster recovery and business continuity more robust and sustainable. Telework will create economic development opportunities by encouraging

the recruitment of well paying jobs — not just companies. It supports efforts to ensure a healthy environment and improved air quality. Telework takes pressure off overburdened urban transportation systems and saves governments money by reducing the demand for fixed facilities. Finally, telework saves employees money by reducing travel, parking and other personal costs associated with transporting themselves every day to and from the work site.

Hurricanes, terrorists and the pressures of cultural change are all having an influence on how government meets the needs of the people it serves. It seems the forces at work are all conspiring to challenge the comfortable bureaucratic status quo. How will we respond?

## Additional Resources

**General Services Administration Interagency Telework Site**

<http://www.telework.gov>

**A comprehensive nonprofit site focused on broad based telework issues**

<http://www.telcoa.org>

**Helpful site for those interested in individual, Web-based self-employment and rural economic development issues**

<http://www.lone-eagles.com>

**A site dedicated to economic and community development through telecommuting education**

<http://www.telecommuter.org>

**A public and private sector not-for-profit organization dedicated to advancing the growth and success of work-independent locations**

<http://www.workingfromanywhere.org>

**The Telework Consortium is a nonprofit, federally funded entity that helps public agencies and private companies plan and implement robust telework/distributed work programs**

<http://www.teleworkconsortium.org>

**Comprehensive site dedicated to promoting telework in Canada**

<http://www.ivc.ca>

## Endnotes

<sup>1</sup> The Great Society was a set of domestic programs enacted in the United States by President Lyndon B. Johnson. Johnson gave a speech in 1964 highlighting the new social reforms, loosely based on Roosevelt's New Deal. The general thrust of the social reform programs was to end poverty and racial injustice. For more information, see the Wikipedia entry for The Great Society at [http://en.wikipedia.org/wiki/Great\\_Society](http://en.wikipedia.org/wiki/Great_Society).

<sup>2</sup> American Association of Retired Persons.

<sup>3</sup> [http://www.ourpublicservice.org/usr\\_doc/PPS-05-08.pdf](http://www.ourpublicservice.org/usr_doc/PPS-05-08.pdf)

<sup>4</sup> <http://www.govexec.com/fedblog/1005.htm>

<sup>5</sup> PEW Internet and American Life Project, *Business Week*, December 12, 2005, "The MySpace Generation," pages 88-94.

<sup>6</sup> From Dr. K. Kay Delk's PowerPoint presentation, "Relinquish Your Campus Office — An Online Faculty Telecommutes." Presented at the Course Technology Conference, March 16 — 18, 2005.

<sup>7</sup> From Paul W. Taylor's book review, "Caring for the Whole Mind in a Global World: What a Concept," *Converge*, Spring 2006.

<sup>8</sup> <http://www.knowledgetree.com/ata-adv.html>

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> <http://www.workingfromanywhere.org/telework/1999workshop1.htm#what>

<sup>12</sup> Claremont Information and Technology Institute (Digital Connections Between Home, Work and Community: Multi-wave Research Findings and Policy Directions Thomas Horan, Ph.D. Associate Professor School of Information Science Claremont Information and Technology Institute. Kimberly Wells, M.A. School of Behavioral and Organizational Sciences Claremont Graduate University Paper Prepared for HOIT 2003: The Networked Home and Home of the Future University of California, Irvine April 6-9, 2003.

<sup>13</sup> Ibid.

<sup>14</sup> <http://www.pao.gov.ab.ca/health/flexible-work/telecommuting/>

<sup>15</sup> See a working example of a telework agreement at <http://www.telework.gov/policies/tele-sam.asp>.

<sup>16</sup> <http://www.telework.gov/faqs.asp#6> <http://www.telework.gov/faqs.asp#6>

<sup>17</sup> <http://www.aft.org/pubs-reports/pubemps/DigGov02.pdf>

<sup>18</sup> Op. cit. Claremont Information, Kimberley Wells, School of Behavioral and Organizational Sciences.

<sup>19</sup> [http://www.telework.gov/IT\\_Report/method.asp](http://www.telework.gov/IT_Report/method.asp)

<sup>20</sup> Ibid.

<sup>21</sup> <http://www.telework.gov/policies/dodguide.asp#training>

<sup>22</sup> <http://www.workingfromanywhere.org/telework/1999workshop1.htm#what>

<sup>23</sup> A semi-rural community beyond the suburbs, typically wealthy. *Webster's New World Dictionary and Thesaurus*, Second Edition, Wiley Publishing, Inc., Cleveland: 2002.

<sup>24</sup> <http://www.workingfromanywhere.org/telework/1999workshop1.htm#what>

<sup>25</sup> <http://facilityinnovations.com/10keys.htm>

<sup>26</sup> <http://www.gao.gov/new.items/d04638t.pdf>

<sup>27</sup> [http://www.opm.gov/news\\_events/congress/testimony/4\\_28\\_2005.asp](http://www.opm.gov/news_events/congress/testimony/4_28_2005.asp)

<sup>28</sup> <http://www.orau.gov/emi/events/2005%20Meeting/presentations/Session%203A%20Kiell-Handout14.pdf>

<sup>29</sup> <http://www.govexec.com/pdfs/wolftopresidentteleworkletter.pdf>

<sup>30</sup> <http://lone-eagles.com/ecommerce5.htm>

<sup>31</sup> <http://cbdd.wsu.edu/initiatives/ework/whatis.html>

<sup>32</sup> <http://www.reason.org/ps338.pdf>

<sup>33</sup> <http://www.govexec.com/pdfs/wolftopresidentteleworkletter.pdf>

<sup>34</sup> <http://www.govexec.com/dailyfed/0905/090605tdpm1.htm>

<sup>35</sup> <http://www.cdc.gov/nchs/data/hus/05.pdf#027>

<sup>36</sup> [http://www.ourpublicservice.org/usr\\_doc/PPS-05-08.pdf](http://www.ourpublicservice.org/usr_doc/PPS-05-08.pdf)

<sup>37</sup> *Business Week*, December 12, 2005, "The Easiest Commute of All" page 79.

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100 Blue Ravine Road  
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