Managing Telecommuting in the

Federal Government: An Interim Report

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TABLE OF CONTENTS

Foreword

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On behalf of The PricewaterhouseCoopers Endowment for The Business of Government, we are pleased to present this report by Professors Gina Vega and Louis Brennan, "Managing Telecommuting in the Federal Government: An Interim Report."

The report is an excellent assessment of the state of telecommuting in the federal government today. In the future, The Endowment will present updates on how telecommuting is faring in the federal government. According to Professors Vega and Brennan, telecommuting is in its early stages and currently suffering "growing pains" as organizations, managers, and employees each develop a greater comfort level with the new world of work.

It is highly likely that telecommuting will increase in future years. Professors Vega and Brennan provide valuable insights on lessons learned to date about how to make telecommuting "work" in government. The authors conclude that while there are many good reasons to undertake telecommuting, there continues to be resistance to the practice among many managers. With continued research on the telecommuting experience, the federal government will gain increased understanding of the types of work and workers most likely to succeed in telecommuting.

We trust that this report will be useful to federal executives considering implementing telecommuting in their organizations and to individuals in those organizations deciding whether or not to participate.

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Executive Summary

Workplace trends are triggered by social movements and political ideology, as well as by technical advances or changes. One such trend that has been enthusiastically accepted by private industry and municipal organizations alike is the movement of workers out of the traditional office and into an alternate work setting in a process called teleworking, telecommuting, or distance working.

The increase in the use of advanced technology in today's workplace coincides with the rise of the two wage-earner family and the concomitant need for more flexible work styles and work hours. This report focuses on the practices and procedures of the federal government as they relate to the development and implementation of a teleworking community of federal employees. It seeks to:

- define telecommuting in the municipal context,

- examine policy differences and their impact on workers and management,

- look at the ways in which public sector managers monitor and measure the performance of teleworkers and the quality of their work,

- consider the impact of telework on the functioning of selected agencies,

- determine whether managers are taking advantage of the potential for synergy that teleworking may provide,

- identify a series of best practices, and

- provide recommendations for future consideration.

With the able assistance and cooperation of federal managers and employees, the authors have been able to render an interim assessment of the status of telework in the U.S. federal government today. It is expected that the data will likely be updated in the near future, as long-overdue federal employment surveys are made available. However, it is not anticipated that these data will create a new or unexpected picture that significantly changes the impressions presented here as of the latest head counts conducted in January 2000.

Teleworking encompasses a variety of government grade levels, job titles, functional areas, tasks, and occupations — most federal workers can qualify for at least episodic telework assignments. In a desire to create and maintain a "family-friendly workplace," the federal government has encouraged and supported policies that provide for flexiplace work arrangements for nearly all federal workers. This policy had the additional goals of minimizing budgetary expenditures, improving customer service, reducing energy consumption and traffic congestion, and improving environmental conditions. These goals are addressed in the following report, along with issues of management and implementation.

Areas that have been identified as needing further consideration include the second-order consequences of isolation on individuals, communication impacts on relationships, and new ways for managers to perform their managerial responsibilities. These have been addressed in an embryonic manner in this paper.

An application of the government's five criteria for measurement of programmatic success has served as a guide in identifying a set of best practices in telework Phase One — the factors that need to be in place if superior performance is to be attained. Phase Two best practices, those related to the actual implementation of programs, have proven to be a more elusive target. Problems related to funding, training, and governmental managerial uncertainty have blocked some of the hoped-for best practices at this level.

However, the brief lifespan of the teleworking program, coupled with the lack of identification of appropriate benchmarks in the private sector, indicates that federal best practices can at least meet those being established in industry. Telework is likely to continue to create managerial challenges and, at the same time, improve service quality for the American citizen and quality of work life for the American federal worker.

Introduction[*]

The identification of best practices in an organization as complex as the federal government poses special challenges to the researcher. Issues of complexity in terms of reporting structures; the volume of agencies, sub-agencies, departments, and offices; differences in operating procedures; and variety in job titles, classifications, and responsibilities can be overwhelming to distill. Making sense of government is very different from making sense of business. In general, best practices are agreed upon as a result of their connection with productivity, quality, customer service, and worker satisfaction. This requires that measurements be established for the foregoing, that benchmarks be identified, and that a careful program of documentation be in place, so that potential best practices can be nurtured and supported. The identification of best practices in telework program implementation in the federal sector may be considered premature at this stage of development.

The goal of this report is to share how federal managers, like managers in the private sector, are advancing telecommuting within their organizations. Policies, procedures, and best practices regarding the challenges of implementing tele-

commuting within the federal workforce and their managerial implications will be discussed. The report will conclude with opportunities for improvement in management practices along with several recommendations for addressing some of the current problems in implementation of a comprehensive telecommuting program.

The authors' solution to the conundrum of "the business of government" has been to identify from among manuals, handouts, presidential and congressional mandates, and other significant sources, a consensus description of perceived intent. The assumptions made for this report included the acceptance at face value of the following:

1. The general acceptance of telework as a method to address some of the substantive problems that government has been dealing with. These problems include traffic congestion, air pollution, infrastructure costs, difficulties in recruitment and retention, absenteeism, low morale, employee stress, and overhead expenses, to name just a few.

2. A desire to improve the quality of work life (QWL) in government and to create a family friendly workplace at the federal level.

3. A willingness on the part of federal employees to entertain creative solutions to the above-named problems.

4. The application, as quickly as they become available, of financial resources to address the implementation of proposed solutions.

Background

In 1994, President Clinton issued a directive to all federal agencies to establish, to the extent possible, a "family-friendly" workplace for the purpose of recruiting and retaining an effective workforce. The directive mandated "broad use of flexible work arrangements to enable federal employees to better balance their work and family responsibilities … increase employee effectiveness and job satisfaction, while decreasing turnover rates and absenteeism."[1]

This mandate was the result of favorable early response to Flexiplace (Federal Flexible Work Place Pilot Project), a program established in 1990. Flexiplace was designed to test the effects of work-at-home and telecenter work on infrastructure use, environmental stresses, and quality of work life. Early returns were positive. In 1992, the federal telecommuters contributed to the considerable annual savings of vehicle miles traveled, gallons of gasoline expended, and hours in commuting time recorded by all American telecommuters. However, the 2,000 participants in the pilot project accounted for only one-tenth of 1 percent of federal workers, and an even smaller percentage of the total American telecommuting workforce. The goal was set to increase the number of federal telecommuters to 60,000, or 3 percent of the federal civilian workforce, by the end of FY 1998.[2]

The establishment of the President's Management Council Interagency Telecommuting Working Group in 1996 focused federal agencies on implementation of the pilot project by calling on "each agency and department to make telecommuting part of its overall strategy to improve government services to the American people."[3] By this time, telecommuting was being promoted as a means of reducing traffic congestion, conserving energy, improving air quality, reducing the cost of government, addressing employee needs, and improving customer service. The focus was broadened to include home-based telecommuting, community-based telecenters, mobile offices, and a one-stop customer service center termed the U.S. General Store.

Meanwhile, telecommuting in the private sector was expanding at a rapid rate. Although there are no accurate or verifiable figures on the number of American telecommuters, even conservative estimates indicate growth rates of over 10 percent a year for each year of the 1990–1999 decade. Figures range from 9.9 million, reported in October 1998 in *Business Week*[4] through 11.1 million, reported in October 1997 by "Telecommute America,"[5] to even higher guesses. The most recent estimate appeared in the Telework Tax Incentive Act (HR 3819), introduced by Congressman Frank Wolf. Congressman Wolf claims to have data supporting "an estimate of 19 million Americans teleworking by the year 2002,"[6] a mere two years hence.

A recent temporary closing of federal offices due to civil protests (April 18, 2000) resulted in increased episodic and unplanned telecommuting by General Services Administration (GSA) workers. As reported on the govexec.com website, "On a typical day, 150 GSA workers log in to the agency's computer system remotely, over telephone lines. But on Monday, with the headquarters office closed because of protest, 261 employees logged in — a 75 percent increase over normal usage. Another 28 employees signed on to the network over a pilot virtual private network, or VPN, which allows people with cable modems or other high-speed Internet service to access the agency's computer system. On a typical day, 20 employees use the VPN."[7] The magnitude of the trend, even without firm figures, is apparent.

Technological advances such as:

* affordable Wide Area Networks (wide-band home access that allows remote access to business systems)

* faster PCs and modems

* client server computer systems, which remove the need for mainframes and are more inherently friendly to remote access (TCP/IP — Telecommunications Protocol and Internet Protocol)

[1] *Memo from President Clinton. July 11, 1994.*
[2] President's Management Council National Telecommuting Initiative Action Plan. *July 1996.*
[3] *Ibid.*

[4] Business Week. *(October 12, 1998). 152.*
[5] *Press Release. Telecommute America. October 24, 1997.*
[6] *H.R. 3819* Telework Tax Incentive Act *(Introduced in the House), March 1, 2000.*
[7] *Brian Friel. (April 21, 1000). "Telecommuters work despite protest shutdowns," http://govexec.com*

- lighter and faster laptop computers, and

- advances in user-friendly applications-specific software

have made telecommuting feasible for many workers who had been office-bound in the past. Today, telecommuters hold a wide variety of jobs and number among their ranks professionals such as architects and accountants, professional support workers such as bookkeepers and researchers, road warriors such as inspectors and sales personnel, IT specialists of many sorts, office support workers such as word processors and customer service personnel, scientists, speech writers — the list could continue through nearly every job title. The private sector has enthusiastically endorsed telecommuting as the solution to a great many problems, including space usage, the cost of doing business, employee recruiting and retention, and worker productivity.

What is Telework?

The answer depends on who is talking. In general, telework suggests computer-based distant access to company business systems. Within the federal government there are two recognized forms of teleworking: episodic and formal. Formal telework implies that there is a signed agreement between the employee and supervisor, coupled with a set schedule — for example, the worker will be at the alternate work site every Tuesday and Wednesday and in the office every Monday, Thursday, and Friday. Within that schedule, there is room for flexibility; if an employee has a doctor's appointment on an office workday, the alternate workday can be switched.

The episodic model is dependent on the needs of the worker and the demands of the work. For example, when workers need quiet time to do research or write a speech, they work at home and bring the finished product in by an agreed upon deadline. Verbal agreement identifying product and delivery date is all that is required. It is informal, but nonetheless controlled by the parameters of the specific task and timing. The vast majority of teleworking arrangements in the federal workforce are of an episodic nature.

Both of these telework formats fall under the general rubric of "family-friendly workplace." The alternate work site has been defined as any location that is not in the main office. This might include telecenters, the employee's home, the client location, mobile locations (as exemplified by road warriors), and others.

Findings

The Five W's and One H — A Description of Telecommuting Practices

The following descriptive discussion of department, manager, and employee visions and ideas about telecommuting will provide perspective on the complex topic of telecommuting. Although the language used is the same for all groups, the intent and implications differ among these three levels of federal hierarchy. Despite our comprehensive research process, hard data have been hard to come by. A number of government studies have been initiated, but only one of these has been fully completed to the point of providing limited verifiable hard data regarding some of the following key points, identified in the 1996 action plan:

- "number of employees participating in a telecommuting program or other alternative work arrangements, broken down by type of work arrangement and location
- telecommuting strategies used
- method of commuting and distance commuted per day of those employees
- goals of the program
- structures for managing and overseeing telecommuting
- evaluation of program strengths and weaknesses
- obstacles to be overcome."[8]

The data provided in surveys subsequent to this (1996) are presented in incompatible or non-comparable formats. The most current results have been compiled by the Department of Labor, but they are limited to head counts of telecommuters. As of this writing there are no plans to replicate the 1996 study despite acknowledgment of the need to do so. According to a study completed in 1998 by the Office of Personnel Management,[9] there were a total of 24,889 telecommuters reported within the federal government, or 1.4 percent of the federal workforce, by October 1998.

It is noteworthy that no fewer than 14 agencies and departments provided no data for the aforementioned study and that another seven reported no employees engaged in telecommuting. This means that out of the 63 agencies and departments listed, fully one-third either failed to provide data and/or had no employees telecommuting.

The rules that classify employees as telecommuters include the following parameters:

1. Telecommuting is a management option rather than an employee benefit.

2. To be acceptable, telecommuting must not present an adverse impact on employee performance.

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[8] President's Management Council National Telecommuting Initiative Action Plan. *January 1996. p. 14.*

[9] Office of Personnel Management Report to Congress: *A Review of Federal Family Friendly Workplace Arrangements,* Addendum. October 30, 1998.

3. The alternate work site must be safe, adequate, free from interruptions, and provide security for government property.

4. Telecommuting is not a substitute for dependent care.[10]

It is important to note that the agencies that were more successful in their telework practices were the most creative in their interpretation of these guidelines.

Who is Teleworking?

Three levels of interest in telecommuting were considered — department, manager, and employee. At the macro level, we reviewed the percentage of teleworking employees by department. Table 1 ranks, by percentage of total reported telecommuters, those agencies/departments accounting for 5 percent or more of federal telecommuting employees as reported on October 30, 1998, and includes an updated count of Department of Labor (DOL) employees as of January 2000. The bulk of telecommuting is concentrated in a small number of departments, with the top four accounting for almost three-fourths of all federal telecommuting employees. Apart from these top four departments, no other agency or department accounts for at least 5 percent of telecommuters. Another four agencies/departments (Transportation, 4.21%; Environmental Protection

Agency, 4.01%; General Services Administration, 3.12%; and Agriculture, 2.96%) account for just under 15 percent of federal telecommuters.

Within the Department of Health and Human Services (HHS), the data (HHS Telecommuting Profile — internal document updated November 5, 1998) show that one employee in every 40 (2.5 percent) telecommutes. This compares to an estimate of over 16 percent of positions considered eligible for telecommuting. As within the federal government in general, the bulk of telecommuters tend to be concentrated within a number of agencies within the department.

Table 2 lists, by component, the numbers and percentages of employees engaged in telecommuting within HHS as reported in November 1998. Note that only agencies with 2.5 percent or more of teleworking employees are listed.

Due to the significant level of participation and the variety of applicable job titles, the Department of Health and Human Services and the Department of Labor, as represented by their respective telecommuting coordinators, were examined. These two senior-level managers provided a great deal of information regarding the genesis and development of teleworking within their agencies. They were

Table 1: Percent and Number of Total Federal Teleworkers by Department

Department	Percent of Total Federal Teleworkers Reported as of Oct. 30, 1998	Number of Teleworkers Reported as of Oct. 30, 1998
1. Department of the Treasury	44.83	11,160
2. Department of Defense	13.50	3,361
3. Department of Health and Human Services	7.14	1,778
4. Department of Labor	6.77	1,685*
Total telecommuters accounted for	**72.24**	**17,984**

This number has decreased as of January 2000 to a total of 433 workers — 225 national office employees and 208 field employees in formal teleworking arrangements. The decrease indicates only that workers with formal arrangements have switched to episodic arrangements, providing the department and themselves with the additional flexibility that comes with less formalized work situations.

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[10] Interagency Telecommuting Program Implementation Manual Section II. *October 1993.*

Managing Telecommuting in the Federal Government

Table 2: Number and Percent of HHS Teleworkers by Agency (November 1998)

Agency	Number of Employees Telecommuting	Percent of Employees Telecommuting
Office of Civil Rights	74	2.8
Department of Appeals Board	33	55.0
Administration on Aging	10	5.6
Health Care Financing Administration	164	4.0
Food & Drug Administration	500	5.4
Health Resources and Services Administration	84	4.2
Department Totals	**1,469**	**2.5**

able to give an overview covering levels of interest and participation, as well as a bird's eye view of the attitudes of their managers and employees regarding the adoption and implementation of teleworking and flexiplace work configurations.

The two departments represent both modes of teleworking: formal and episodic. At the Department of Labor, the norm for formal agreements is to have teleworkers at the alternate work site for only one or two days per week. Even so, 75 to 80 percent of the DOL employees who are flexiplacers are on episodic arrangements. At Health and Human Services, this arrangement seems to be reversed. On their terms, flexiplace is defined more in terms of presence at the work site rather than absence from the work site. Thus, some HHS agencies have mandated that teleworkers appear in the office on only one given day per week. Health and Human Services appears to favor a more decentralized approach to the administration and implementation of teleworking within its agencies, while the Department of Labor appears to follow a more centrally coordinated approach. These preferences seem to have no impact on the successful implementation of the program.

At the Department of Labor, teleworkers span the spectrum of job titles. However, at Health and Human Services teleworkers tend to be highly technical professionals — predominantly federal grades 12 and 13. Many of the more production-oriented jobs, such as processing of complaints

and data processing, are contracted to the states and other providers. As a result, data on those workers are limited.

At the manager level, interviews were held with personnel from the Occupational Safety and Health Administration (OSHA) [DOL] and the Centers for Disease Control (CDC) [HHS]. OSHA has a high percentage of teleworkers due primarily to the nature of the work. Many OSHA workers are involved in the investigation of complaints and therefore have to spend a great deal of their time outside the office. As such, these are the prototypical road warriors of the federal government. The OSHA federal agency program officer and regional supervisory investigator for Colorado manages an entirely teleworking workforce, and the assistant area director for Dallas, Texas, reports that teleworking employees comprise one-third of his staff. These teleworkers are off site an average of four days a week and operate under formal agreements.

The HHS agencies that have most warmly endorsed teleworking are also those with a high percentage of job titles that are not dependent on working in a centralized office location. The chief of network technology at CDC reports that over 15 percent of the engineers who report to her are episodic teleworkers. The Department of Appeals Board was an early adopter of teleworking because most of the employees are lawyers, and there was little need for them to be in the office since most of their work entails reviewing cases

and writing up decisions. It is important to note that for each enthusiastic manager that we spoke to, there was an equivalent number of managers who were either opposed to or disinterested in telework arrangements, making it clear that there is no universal acceptance of the program.

Certain recurrent views were identified in our limited direct exposure to federal workers. Within OSHA, employees interviewed expressed a common theme relating to the selection of workers on flexiplace. Succinctly stated, "If you have a need for social activity or regular communication, do not go to flexiplace — you would become stagnant and depressed and would not be able to function that well."[11] The teleworker perspective also identifies a significant latent danger inherent in working from home — that of isolation and blurring of home and work separation: "… [there is] no separation between work and home and no chance to leave it behind you and go home and have a family life," and, "You can't get away from the work because it's always with you. You are afraid that someone will think you are not working…." In addition, the potential for divisiveness among employees arising from the operationalization of telework was emphasized: "A lot of folks that do not flex will be extremely jealous and critical of those at home. They can all do it, but don't want to, but they are jealous anyway."

What Are Teleworkers Doing?
Teleworking encompasses a variety of government grade levels, job titles, functional areas, tasks, and occupations. It is evident that the greatest frequency of teleworkers occurs among workers whose tasks tend to be solitary in nature and not dependent on the work of others on an ongoing basis.[12]

It is also apparent that the majority of teleworkers are at government grades 12 and above.

The nature of the work carried out by teleworkers needs to satisfy a number of criteria. Leading the list is the need to identify suitable work by its job content rather than by job title or by "normal" work

schedules. The most suitable type of work is portable and requires thinking and writing, suggesting that quiet and uninterrupted time are key components of telework tasks. The actual task assignments might include research; data analysis; report writing; reading or preparation of cases, grant proposals and similar documents; and programming, data entry, word processing, and other computer-related tasks.

Job titles that tend to be synonymous with such tasks are economist, investigator, psychologist, scientist, writer/editor, tax examiner, auditor, analyst, computer specialist, data clerk, customer service representative, safety and compliance officer, engineer, and attorney. These positions extend over most government grade levels.

Work involving a lot of "face" time is likely to be unsuitable for teleworking. When employees need to be in close proximity to their supervisors and/or co-workers, their ability to conduct their work at a distant location is inhibited. The same holds true if the employee needs frequent access to classified materials or to material that cannot conveniently be removed from the main office to the alternative work site. Because agencies rarely have sufficient financial resources to duplicate special facilities or necessary equipment, tasks that are dependent on them are not suitable for teleworkers.

Teleworkers may require specific equipment such as computers, telephones, and specialized software. In the business world, these are often supplied for telecommuters. However, in the world of the federal government, provision of such equipment appears random. Episodic teleworkers use their personal telephone lines and computers almost exclusively. Even teleworkers under formal arrangement are dependent upon agency budgets and receive allocations on a case-by-case basis. According to the Department of Labor, when the department upgrades their equipment they provide surplus computers to teleworkers, but most teleworkers provide their own equipment. For those who receive the surplus computers, the provision of older equipment can create problems of compatibility with the newer, upgraded equipment at the office. For those who provide their own hardware, the need for site licenses for specialized software can create expenses that are not covered by current appropriations. Further, "the government assumes no responsibility for the telecom-

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[11] *Government employee of 17 years, of which five have been spent as a teleworker. November 1999.*

[12] Flexible Workplace Pilot Program Final Survey Results *(DOL and the National Council of Field Labor Locals). July 1996* and Flexiplace Pilot Program Final Survey Results *(DOL, Local 12, AFGE, and AFL-CIO). August 1996.*

muter's expenses relating to heating, electricity, water and space usage…generally, the government will be responsible for the service and maintenance of government owned equipment. Also generally, telecommuters using their own equipment are responsible for its service and maintenance."[13]

The absence, due to budgetary constraints, of a consistent policy within the federal government on the provision of resources for employees to be able to work from the home compares unfavorably with the private sector. According to the Department of Labor, "Each flexiplace arrangement is dealt with individually — setting up the arrangement, what kind of equipment, whether additional phone lines are needed; if so, who will pay for them. Basically our philosophy is we have agencies that have budgets, but we don't know what those budgets are. We can't mandate that you will supply all of your people who want to go out on flexiplace, because what will happen is, nobody will get to go. They'll just say we can't afford it; we don't have the budget."

Where and When Is Teleworking Done?

According to the algorithm of the family-friendly workplace, there are multiple sets of guidelines for work hours. For example, The ANY-80 program at the Food and Drug Administration permits employees in certain groups to work any 80 hours that they choose within a two-week period. This originated with the needs of their scientists who had to conduct experiments on a round-the-clock basis. The General Services Administration conducts a similar program, as do agencies within other departments. The Centers for Disease Control provides work-schedule variations — the flexible schedule and the compressed schedule. Compressed schedules permit workers to complete a 40-hour work week in fewer than five days or an 80-hour pay period in fewer than 10 days. In this system, a flexible schedule establishes "core" hours and "flexible" hours. All employees must work during core hours, but they complete the remainder of the work during flexible hours, thus allowing various possibilities as far as start and finish times are concerned.

Telework has also made it easier for some workers to complete their required tasks by eliminating the need for them to report to the office on a regular basis. For example, safety inspectors no longer need to report in on Monday, pick up seismic equipment, go to inspect a mine, and then return to the office to prepare the report. Now they can do their work at the site and then go home to complete their reports, saving them time, effort, and commuting expense.

Regardless of the name assigned to a program, flexiplace boils down to four primary work schedule configurations: shift work, around the clock, standard hours, and on call. Workers are assigned to these configurations based on the needs of the task. These task requirements also mandate the place in which the work is to be accomplished. As previously noted, a percentage of workers are mobile or road warriors. These people have little or no choice but to work outside the office as the nature of their responsibilities require site visits to clients, as in the case of auditors. The only impact telework has made on them is to permit them the freedom to write up their reports in an interruption-free environment.

For the other workers on flexiplace, their work may be conducted in telecenters or at their homes. "A telecommuting center (telecenter) is a multi-agency facility that provides a geographically convenient office setting as an alternative to the federal employee's main office. Federal telecenters also serve as conveniently located administrative support centers for home-based telecommuters."[14] Overall, the federal telecenter project has experienced limited success. Between 1993 and 1996, nine pilot project telecenters were opened. Although these facilities offer secure 24/7 access and assistance, computer hardware has not been upgraded in several centers and system outages have resulted in diminished utilization at one of the centers. Individual telecenter occupancy rates varied from 1 percent to 86 percent, with an overall occupancy rate of 45 percent by 1997. Additional design flaws, including lack of privacy and limited working areas, have also contributed to lower than anticipated participation on the part of federal employees in the use of telecenters as alternative work sites, notwithstanding their reasonably good access to highways and other main arteries.[15]

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[13] Implementation Manual, Section IV.

[14] Ibid.
[15] Pilot Project Study 1998: Overview of GSA Telecenters.

The default location for telework is the home. The majority of federal teleworkers consider the home their flexiplace work location, according to the requirements in the formal agreement that each teleworker must sign. This agreement includes descriptions of the work hours scheduled and the alternate work site, details of "designated work area within the alternate duty station, including the space to be used such as home office den, dining table, etc.; available equipment such as PC, modem, fax, etc., and security related such as locked file cabinet and smoke detectors."[16]

Employees who use their homes as their alternate work site agree to permit periodic home inspections by the government of their workplace. Despite this requirement, recent rulings from the secretary of labor have made it clear that "… the OSH (Occupational Safety and Health) Act does not apply to an employee's house or furnishings. OSHA will not hold employers liable for work activities in employee's home offices," according to Charles N. Jeffress, assistant secretary of labor in charge of OSHA.[17] It is not clear whether this ruling applies to federal teleworkers or only to workers in private industry. This important issue will need to be addressed definitively prior to additional expansion of the telework program.

The government is not liable for any damages to employees' personal or real property while they are performing their duties nor is it responsible for any operating costs, home maintenance, or any other incidental costs of the employee's residence while it is used as an alternate work site. The employee is responsible for ensuring the safety and adequacy of the home workplace and for ensuring that appropriate safety and building codes are met. Notwithstanding the stringency of these requirements on employees, they have not deterred the small percentage of federal workers who telecommute. People appear to like to work at home. Even federal employees who are neither formally nor episodically participating in telework tend to check their office e-mails at home in the evening because of the absence of work interruptions.

Why Seek Alternate Work Arrangements?

From the perspective of the federal government (President's Management Council Telecommuting Action Plan, January 1996), telecommuting has the potential to address several significant challenges.

Budgetary Limitations

Within the challenge of meeting budgetary requirements, telecommuting offers the promise of reducing the amount of real estate needed for workspace. This goal has not been realized to the extent anticipated because the number of people telecommuting has not met the anticipated levels. In 1996, it was projected that 3 percent of the federal workforce would be telecommuting by 1998. However, available estimates suggest that less than 2 percent had entered teleworking arrangements by that date. It is possible that the transfer of operating expenses from the agencies to the individual workers when telecommuting to a home office may have had a negative impact on the acceptance of telework by federal employees.

A second budgetary objective was to increase employee productivity through telework. This has certainly occurred for federal workers whose normal tasks require site visits, but has not been demonstrated for other workers, despite anecdotal claims. At the least, there is little doubt that teleworking has increased awareness of issues around productivity. Managers told us: "… it kind of forces government to say what its results are, and how to measure those results." "It has in fact forced some degree of people into being more aware of time, employee's time, and how we are going to be more productive." Opinions can differ on the productivity impact, but anecdotally there was a perception that the impact was positive, as indicated by comments like: "She gets a lot more done at home."

The final budgetary goal was to permit the streamlining of state, regional, and local planning in coordination with local government. There is no evidence of this having taken place thus far.

Improved Customer Service

The concept of one-stop shopping for federal services was at the core of the goal to improve customer service in areas such as Social Security,

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[16] Flexible Workplace Attachment 2: Sample Flexible workplace agreement for civilian employees.

[17] Frank Swoboda, "OSHA Exempts White-Collar Telecommuters," Washington Post. Feb. 2, 2000.

public assistance, the U.S. Postal Service, and the Department of Housing and Urban Development (HUD) loan offices. To date, only one such center has been developed, located in Dallas, Texas.

Employee Needs/Family-Friendly Workplace
Early in the Clinton administration, it became clear that attention had to be directed to the needs of families. President Clinton's 1994 memorandum that directed departments and agencies to support family-friendly work arrangements — telecommuting among them — had an immediate response. Program guidelines were designed to assist in establishing such programs, but there was no attempt at enforcement or encouragement. In fact, there has been no method developed even to *count* the number of federal employees participating in telework.

Interviews conducted by the authors with federal employees at several levels have indicated that although telework is not for everyone, it can aid in recruitment and retention of federal workers. In particular, it has become easier for the Centers for Disease Control and the National Institutes of Health to recruit renowned scientists despite their inability to pay on the same scale as private industry because of the teleworking option. Several managers told us about the usefulness of the telework option as an aid to recruitment: "… [telework is] something you have to have in order to be attractive. It's not usually a deal breaker, but at least it makes [the job] attractive," and "One of the nice things about offering this is that it attracts people to a job." Additionally, HUD and DOL are experiencing a competitive advantage in retaining personnel through the implementation of flexiplace working arrangements. For federal workers with disabilities, teleworking may be a means of making the workplace more accessible.

Energy Consumption
Lengthy commutes to main offices consume non-renewable resources; each commuting trip that does not have to be made reduces this consumption. If the projections for teleworking within the federal government were to be realized, it would significantly reduce the consumption of non-renewable resources such as gasoline and oil. Although the argument for telecommuting includes reduced energy consumption in commercial build-

ings, it is likely that overall energy consumption (gas and oil for home heating and electricity expenses) will increase through the use of multiple home offices and the concomitant increased energy use at these locations.

Environmental Issues of Air Quality and Global Warming
Reduced commuting resulting from telecommuting contributes to a reduction in greenhouse gas emissions and global warming. This is a positive effect, the benefits of which cannot be overemphasized.

Traffic Congestion and Safety
There is a direct correlation between the number of vehicle miles traveled and the number of traffic accidents, and associated fatalities and injuries. Reduction in one automatically implies a reduction in the other.

These last three concerns also address the general QWL issues related to community. Several telecommuters and managers from three different regions of the country (Washington, D.C., Georgia, and Texas) commented about quality of work life issues. "To me, it means that an employee doesn't have to go through the stress of getting to work every day, and therefore I think they probably start the day with a better mental attitude. It's easier — I mean, not having that half hour or hour every day just to start the day off which is stressful, makes the whole day easier." Another noted, "The only nice thing is that I don't have to get up at 4:30 in the morning on the days that I work at home."

Other comments testify to the fact that the environmental and commuting impacts of teleworking are appreciated by federal employees: "[There are] horrible smog problems in Atlanta — this cuts down on the smog and gets people out of the car … it's nice to get up, sit down, and go to work," and "The biggest personal benefit is that commuting from home to office does not have to be done."

How is Telework Implemented?

Management of Teleworkers
Although the federal government family-friendly workplace initiative encourages alternative work arrangements for the convenience of federal work-

ers, it must be emphasized that the telework initiative was introduced as a *management benefit* since teleworking is implemented as a *management* option. When federal managers were asked to describe the benefits of teleworking for their agencies, the responses were inconsistent and confused. In fact, one manager remarked, "I kind of think (I have no numbers to support this), but looking back it seems like the employee has gotten the best end of the deal." When asked to elaborate on this comment, the manager in question pointed to a fall in productivity, which he claimed to be in excess of 10 percent. An opposite view was expressed by another manager who claimed that the lack of social interactions and other distractions made teleworkers more efficient.

The most frequently heard managerial comment pertained to the *benefits of teleworking in the recruiting process.* This cited outcome is congruent with the formal goals of the federal government telework program. Although some managers are willing to entertain the concept of telework for their employees, more managers appear totally disinterested. This disinterest arises from a familiar set of causes:

- Change has been frequent and rapid in the federal sector, and the telework initiative is just one more program to learn about.

- Some people are just not interested in any kind of change.

- There are no rewards, tangible or otherwise, for the manager who supports telework.

- There is a grave suspicion that telework means more work for the manager.

- Managers fear the "out of sight, out of mind" syndrome — if I can't see and observe you, how do I know you are working?

- Most importantly, the authors believe that the inability to describe work creates a sense of frustration and objection among managers.

Workers' response to telework has also been mixed. Some have endorsed it eagerly, citing personal benefits relating to lack of commutation and increased autonomy in the performance of their work. Others comment on the meeting of family

needs or a perceived benefit that the government is providing them in lieu of financial rewards. Anecdotal responses from employees indicate increased, not decreased, levels of productivity due primarily to lack of interruptions at the alternate work site. Others report loneliness and difficulties with the lack of social interaction, feeling out of the loop, and varying degrees of unhappiness with the need to furnish one's own work equipment at home.

The thorny issue of what someone is doing when you can't see them can create an environment of suspicion and distrust among employees, managers, and co-workers. From the worker's view, "… sometimes you feel like you're being asked to do or account for things that your co-workers sitting in the office aren't being asked for, so you kind of have this feeling of being put upon… It sounds kind of petty, but right around Christmas Eve they'll shut down the agency and send people home. They don't call the teleworkers and tell them to stop working." In another case, a worker reported, "… There were times when I felt like I was totally out of the loop. I mean, people were having babies, people were getting married … you're not in the office, and they're not thinking [about you]."

From management's eyes, "… part of the resistance is … too many managers think it is just a way to alleviate the day-care pressures." Over and over again we were told that the telework program is not meant as an alternative to child or elder care. However, one of the primary incentives for workers to undertake telework is to be at home when their children return home from school or be in close contact with an elderly relative. When this has no negative impact on productivity, it is hard to quibble with. The problem is not that so much of the work that is done in the public sector is *process work* compared to *product work*. The problem is that, unlike product work, the measurement of process-centered work is not well established. Often, process workers are rewarded for "just being there." The larger question, which is outside the scope of this report, is whether people are being paid to show up or to deliver something. For environments in which the "showing up" is valued, the managerial fears mentioned above are completely valid.

Policies Regarding Equipment

Each agency is expected to establish its own policy regarding the provision of equipment for alternate work sites.[18] For the most part, teleworkers provide their own equipment as a result of federal budgetary constraints. From time to time, agencies can provide used equipment to their teleworkers, but it is the rare occasion that permits agencies to provide dual equipment for employees' use in the main office and at home. In areas where equipment is provided to employees for work at home, the employees are required to sign an agreement stating that they will not use the equipment for personal purposes, but will reserve it solely for government work. This requirement is inconsistent with the requirement to allocate unrecompensed space in the home for government work to be conducted.

Policies Regarding Human Resources — Selection

The successful teleworker will share most characteristics with the successful main office worker. However, some additional qualities are required for the teleworker. This employee needs a strong sense of self-discipline and should be able to work with minimal supervision. The person's performance should be rated at least "fully successful" (on the federal government's evaluation scale) and the person should exhibit an organized approach to work completion. Clearly, teleworking is not for all employees. Those people who need social interaction or close supervision are not likely to succeed at an alternate work site.

It is important to note that the characteristics of the manager of teleworkers are equally important. This manager must be willing both to take risks and to trust people working beyond the immediate scope of vision. The teleworker manager must also be able to design a method to manage by results and evaluate those results in the absence of a system protocol.

Federal government policy is that any employee has the right to telework as long as their job content is suitable. Additional particulars regarding this policy are available on a departmental and agency basis. The DOL presents a particularly fine example of a flexiplace handbook for both union and non-bargaining unit employees that incorporates the principles referred to earlier.

[18] Implementation Manual Section IV FAQS.

Policies Regarding Career Paths

Although there is no explicit reference to career paths, given the goal of using telecommuting as an aid in recruitment and retention of employees, it is likely that any negative impact on career advancement is negligible. However, managerial styles vary and the tendency may be for some managers, when dealing with urgent or crisis situations, to call upon the first person they see rather than to contact someone who is at an alternate location. This can result in non-teleworking employees being provided with opportunities for outstanding achievements. Teleworking employees may fall off the fast track for lack of opportunity to show their mettle. There is also some concern among federal employees that teleworking may be the thin edge of the wedge that results in massive outsourcing of federal work, as has already been experienced in the Health Care Financing Administration.

Monitoring of Performance

Monitoring of teleworkers' performance depends upon a combination of applicable methods and methods of application — technique and style. Table 3 outlines techniques for monitoring teleworkers' performance (largely gleaned from the Implementation Manual, Section III, page 4).

Style refers to the manner in which techniques are applied to issues of management. Any discussion of management style must be understood in the context of an organization that is steeped in bureaucracy. Paperwork, checklists, and forms are a way of life for any government or municipal organization. Once those organizational supports are withdrawn, it is natural for concerns to arise about how to demonstrate the value of one's work. One set of response to these concerns is a flexible and adaptive approach, openness to new experience, and a willingness to measure by results as opposed to physical presence. The implementation manual suggests that changes may be necessary in supervisory controls for teleworking employees. This leads to a common human response on the part of many managers — suspicion, distrust, fear, and resentment at the loss of their supervisory control. One manager even told us, "On flexiplace they have a lot of time, and some of this time is unmanaged — nearly all of it. If the employee is not a self-starter, then it is going to be hard for them to sit down and work for us eight hours a day. From that standpoint,

Table 3: Performance Monitoring Techniques for Teleworkers

Performance Monitoring Technique	General Example	Specific Example
Use of traditional standards, adjusted for unique circumstances encountered when telecommuting	Results-oriented in terms of quantity and quality of output	Specified number of claims processed without error within a specified time period
Use of periodic progress reports by telecommuters to compare with existing expectations	Reporting progress on specified steps of an ongoing project in which a reasonable time frame, based on past experience, has been established for each step	Completing and reporting the steps involved in a research project
Use of expectations developed and refined through systematic reporting by the telecommuter allied with other available information	Because of rarity or novelty of task, the supervisor does not know how long a task should take and must rely on reports of sufficient detail and breadth from the telecommuter and other sources to develop expectations	Developing a new systems architecture for the agency
Use of face-to-face meetings with telecommuter to review progress and/or conformance to standards/expectations	Any of the above	Any of the above
Other methods, such as feedback and intelligence from on-site colleagues, are used by managers on an informal basis	In some cases, telework speeds up processing, and in other cases, slows it down; sometimes telework makes more work for on-site workers, while sometimes it diminishes on-site work requirements	Writing reports relevant to a specific distant location

you end up getting just a few hours of work out of them and the rest is far less than in the office."

Affective responses such as these demand the development of a *new approach to management.* Even managers who don't tend to micromanage are more likely to keep a more careful watch over those they cannot see than those who are sitting at their desks. Managers of teleworkers have to understand that they can't demand greater accountability from teleworkers than they do from on-site workers without also creating a two-tiered system — the upper tier that includes the visible workers and the lower tier that supports the teleworkers.

Teleworkers know that they are subject to *greater accountability* and that a closer eye is maintained on their productivity than on that of their office-working peers. As a result, they feel that there is little tolerance for slippage and they are afraid that someone, either managers or co-workers, will think or even express the view that they are not working. Some also experience the disorientation of no hands-on supervision — autonomy can be threatening to people unused to making many work-related decisions. As a frequent result, they are often unable to leave work alone. They may work many more hours per day than they are being paid for, and discover that they have lost the separation between their home and their work.

Measuring of Effectiveness in Terms of Productivity and Quality

Government documents make it clear that produc-

tivity and quality standards must be similar for tele-workers and non-teleworkers. The enigma here, however, is that the government guidelines specify only certain types of work as suitable for telework-ing, leaving a much greater variety of work at the main work site. The guidelines state, "Performance standards for telecommuting employees should be results-oriented and should describe the quantity and quality of expected work products and the method of evaluation."[19] There are inherent difficul-ties in meeting these requirements. These difficul-ties arise far less with episodic work arrangements than formal ones, because episodic arrangements are made purely on the needs of the task while for-mal arrangements are in place whether the work is suitable for it or not. The theory is that everyone gets treated the same. The shared concern among employees and managers is that someone is getting special treatment and it's not "me." This sense of victimization can be detrimental to a cohesive workforce.

Unit of Analysis for Evaluation (Customers)

The customer of the federal government is the American citizen. Regardless of the convenience or inconvenience to the federal worker, this customer must be served. Because it is in the best interests of every American citizen that the people who serve them both enjoy their work and do so in a family-friendly environment, when the American citizen can be served seamlessly through a flexiplace arrangement, the program should be endorsed regardless of management impact. Given that the teleworkers' immediate customers are often inter-nal to the government, however, the benefit to the American citizen tends to be indirect and can be difficult to identify.

Training Programs

When the pilot for telework was introduced in 1994, everyone involved had mandatory training. Since that time, there has been little additional training provided. There is a government manual that is made available to supervisors and employ-ees, and the DOL designed a self-instructional manual for the supervisors and employees in their small regional offices. Anyone who began flexi-place after the initial training courses were offered

is provided with a manual, but only if they request it. It seems that many federal managers and work-ers believe that anyone is capable of teleworking if they meet the basic criteria, without the need for any preparatory or ongoing instruction or training. Notwithstanding this belief, some teleworkers are clearly concerned that they might have missed something and worry about the effectiveness of their performance. This is despite the discontinua-tion of these courses due to apparent lack of sup-port and interest: "It's not something the managers are supporting particularly or are interested in, and so they don't attend." Even agencies that exhibit exemplary practices in other areas fail to provide ongoing training in the process of telework.

Impact on the Agency

Contradictions abound in terms of perceptions. On-site workers may simultaneously view telework-ers as being demanding in terms of their expecta-tions regarding immediate responsiveness to their questions, telephone calls or faxed inquiries, and as goofing off rather than working. Teleworkers may consider that they are out of the loop while concur-rently believing that they are under such close scrutiny and accountability that they will be sus-pected of having slacked off if they wander away from their desk to the kitchen for a cup of coffee.

This dichotomy creates potential conflict between the concept of family-friendly workplace and pro-fessionalism. If the background stimuli, such as babies crying, televisions playing, and doorbells ringing, are inconsistent with those found in the traditional workplace, the concern is that this may indicate a diminished level of professionalism. People are more accustomed to background stimuli such as ringing telephones, photocopier machines, or collegial laughter, and may not even perceive these as "noise" or stimuli that interfere with con-centration on task.

Perhaps the biggest concern regarding the impact on the agency is the challenge inherent in main-taining a *high level of communication* among co-workers. Once out of constant visual contact, the danger for teleworkers is that they will cease to be able to pick up on the social cues that create the norms to which co-workers must subscribe. The long-term effect is the weakening of the social structure and the absence of a shared culture. In

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[19] Implementation Manual Section I General Guidance From The Office of Personnel Management.

simple terms, if you don't know that a co-worker's child had a baby, you can't be part of that co-worker's life. You become socially isolated, not a full-fledged member of the work association.

Managers suggest that there are many alternatives for workers who feel isolated. They can pick up the telephone, join in a conference call, send an-email, beep a colleague — use technology for social purposes. But technology cannot access the whole story of social behavior. Emoticons in an e-mail message are weak substitutes for a personal smile, a wink, or the sound of a colleague's chatter. A cup of coffee, steaming hot and delicious in one's own kitchen, compares poorly with a cup of cafeteria-brewed coffee with co-workers.

Those managers who have recognized the importance of social interaction have established systems for their teleworking employees to make frequent visits to the office environment. Some managers, on the other hand, take such pride in the seamless nature of the technological solution that they deny that any limitations or diminution in social interactions ensue. In the words of one such technophile, "[I believe] that employees are happier in their jobs, that they have more time to do a better job, they are not interrupted, that they feel, [they, the employee] … that they are turning in a better product, a more quality product because they can sit and think about it without the telephone and people walking in and interrupting them."

Despite this confidence, there is a need to generate new policies and procedures to address the issue of social structure and worker communication and interaction. This issue is too critical to be addressed on an *ad hoc* basis or left to happenstance.

Management Roles in Worker Success
The manager's role in teleworking has to evolve from one of "enforcer" to one of "coach" or "facilitator." In practice, this means that rather than overseeing behavior, the manager of teleworkers must oversee output. Setting independent output expectations to ensure that the employee's work boundaries are not diffused is part of this coaching process. The process of setting independent work output expectations has traditionally involved several steps. It begins with the determination of a desired end state and works backward in a negoti-

ated process to apply the requisite, but typically limited, resources to accomplish the prioritized resolution of the tension between what can be done and what must be done. In resolving this tension, various tools and techniques may be usefully employed. A combination of work design tools and resource allocation and scheduling methodologies derived from operations research provide a series of formats to do this.

But there is more to the role of the manager as coach than just coordinating work processes. Maintaining a team ethos that transcends location and focuses on goal attainment is an integral part of this role. Managerial skills that are often overlooked in the traditional workplace may need to be developed because they are critical in the teleworking environment. These skills include additional attention to training, nurturing of interpersonal relationships and development of connections across a dispersed workforce, and the valuation of differences as well as a consistent commitment to team building.

Instead of demanding greater effort from employees, it is the responsibility of the teleworking manager to design new routes of success for teleworkers. Managers must not simply withdraw from view when the worker telecommutes, but must maintain an active role in assuring the worker's success in the autonomous location.

Teleworking represents a shift in the traditional context of government work, and the success of the teleworking project is dependent upon management's ability to make this transition. The pilot project study indicated a high level of resistance among management to the teleworking process. This resistance seems to be based in part on a lack of understanding of management's role in a teleworking environment.

In the private sector, managers of teleworkers are beginning to understand their role in a new light. They are beginning to recognize that the demands of coordinating the output of a distant workforce can offer different rewards than the traditional model. These rewards for the manager are based more on the development of workers' skills and abilities than on generating as much activity as possible in the hope that "product" will result. The shift in work

approach from appearing in a location to performing a valued activity resonates profoundly for the American work ethic. This paradigmatic refocus is redefining work for people globally; its impact for American federal workers should not be underestimated.

Opportunities for Synergy

The story of federal teleworking can have some happy surprises, synergetic circumstances that create a sense of vibrancy and forward thinking in a traditionally stolid organization. Was there discussion of new connections being made within agencies or across agencies? No. Was there mention of initiatives jointly involving on-site and off-site workers? No. Instead of a renewed sense of commitment to government work, there was talk of people who stayed in government service as a result of the teleworking opportunity but who would have left without it. Instead of organization-wide endorsement of new work arrangements, people mentioned resistance. Instead of wholesale training and skills development, people talked about budget limitations and cost reduction.

Overall, below the level of the telecommuting coordinators, the comments reflected grudging acknowledgment of the potential benefits of teleworking for employees, rather than the enthusiastic endorsement of the theory and practice of telework. This is a troubling response, but it is consistent with programs that are handed down from above rather than arising from the worker level or managerial initiative. This absence of synergies constituted the most disappointing finding of our study.

Best Practices in Creating Telecommuting Programs

In establishing the teleworking initiative, the government has specified five criteria as the basis for measuring operating success. The five criteria are listed and described below.

- **Goal orientation:** This represents the set of overarching objectives cited as the motivation for the President's agenda.

- **Practicality:** This suggests that the proposal must make common sense and be doable without excessive political costs being incurred in the process.

- **Costs:** This addresses the question of affordability and appropriate allocation of resources.

- **Mandates:** The key questions that this criterion raises are: Are we allowed to do this, and if so, should we?

- **Leverage:** This involves the issue of what synergies have been captured by the proposed program.

These five criteria have been applied to identify best practices in the teleworking initiative. The attainment of best practices is dependent upon the successful execution of two phases of activities. The first phase pertains to identification of the sets of processes that need to be in place if superior performance is to be attained. The second relates to the degree to which these previously identified processes have resulted in the implementation of unambiguous policies and procedures at the opera-

tional level. To evaluate the degree to which there has been implementation of unambiguous policies, a series of metrics — including employee-related metrics such as absenteeism, lateness, turnover, and productivity — need to be available. Particularly critical is the need to develop group performance measures encompassing both on- and off-site workers and their interactions. The absence of these data make the adjudication of best practices difficult.

Nonetheless, some practices at the federal level stand out as clear indications of best practices. These appear primarily in phase one — the identification phase (see Table 4 for details). This table introduces some of the key processes that have been identified within government related to implementing telecommuting programs. This table draws on the DOL Flexiplace Handbook, which appears to be the most comprehensive description of issues pertinent to the implementation and operation of telecommuting.

Within operational policies and procedures and their implementation, a strong example of a best practice is the flexiplace manual at the Department of Labor. This manual for union and non-union workers describes relevant guidelines, sample work agreements and checklists, and FAQs relating to the formal teleworking initiative. The manual is comprehensive, readable, and readily available, and should be promulgated throughout the federal workplace.

Table 4: Best Practices in Launching Telecommuting Programs

Launching Step	To Be Resolved
Establishing telecommuting program	Program feasibility, employee eligibility and application, recall.
Termination of telecommuting agreements	Employee and supervisor entitlement to termination of arrangement.
Dispute resolution	Resolution of employee/supervisor disputes.
Generation of work agreements for employees' signature	Position and performance including work arrangements related to such items as time and attendance, hours of duty, alternative work schedules, etc.
Designation of home-office requirements	Home-office space and inspections and home utility expenses.
Designation of telecommunications and other equipment	Installation, maintenance, repair and equipment costs. Access to and privacy of data and records.

Another best practice appears in the method developed in the Dallas area office of OSHA. In an effort to avoid resentment or abuse among workers — both on- and off-site — an alphabetical list of team members is maintained. When a project comes in, it is assigned to the next person on the list regardless of location. This practice avoids the development of the two-tiered system discussed earlier in this report that can lead to career truncation.

Best practices are optimized by the happy confluence of work inherently suited to flexiplace; workers suited to independent work; and trusting, supportive, and unintrusive managers. In addition, a track record of trust developed through previously established relationships with co-workers and managers serves to fortify the effective implementation of teleworking. This was evidenced in the Denver, Colorado, regional office of OSHA. In this case, a history of openness and frank discussions between managers and workers clarified worker suitability and joint expectations prior to the implementation of the telework initiative. This points to the need for an environment of openness and trust to be in place prior to the implementation of teleworking. In the absence of such an environment, the implementation of teleworking is compromised.

If this environment is not established prior to the implementation of teleworking, it is unlikely that it will be attained later. Thus, in the absence of a compatible organizational and managerial environment, telework is likely to be fraught with many of the difficulties discussed earlier.

Recommendations

Based on the findings of this report, the following recommendations are offered to address some of the current problems in implementing a telecommuting program.

Government-wide

1. Develop a tracking system to encompass the key points identified in the 1996 action plan so that the aggregate nature and extent of teleworking within the federal government can be accurately established and the associated costs and benefits determined. This will entail, at the very least, performing a "real" head count of both formal and episodic workers by counting first those who do *not* telecommute, then establishing guidelines to measure episodic and formal arrangements.

2. Compare the impact of the differing approaches to teleworking (centralized versus decentralized) in terms of costs and resources, both human and fiscal, before encouraging further development.

3. Review the government's commitment to telecenters, recognizing that inadequate resourcing and flawed design of working environments therein need to be addressed, or savings in office space are not likely to be realized.

4. Clarify the position in relation to the applicability of OSHA in teleworking arrangements and, if necessary, design an implementation model vis-à-vis home visits.

5. Provide opportunities for initial training of employees and managers and ongoing forums whereby experiences can be shared and synergistic opportunities exploited.

6. Building on the Government and Performance Results Act, nurture the development of an organizational mindset among all levels that emphasizes outcomes rather than behavior. This means establishing a firm definition of telework and a set of general guidelines regarding work in the public sector — are federal workers to be paid for a product or for "being there"? This will vary according to the position.

7. Establish a program of management training and rewards to transform the role of federal managers to team builder, coach, and facilitator.

Agency by Agency

8. Allocate resources to underwrite the set-up costs of formal teleworking arrangements and provide consistent allocation of resources and compatibility of equipment.

9. Promulgate teleworking within the federal government by means of case studies demonstrating best practices and quantifiable success both in terms of productivity and quality of work life. Such case studies should be undertaken within the federal government. The benefits of drawing on material from the private sector as a spur to the development of teleworking in the public sector is questionable.

10. Ensure that communication between on-site and off-site workers is regularly reviewed to prevent the emergence of misperceptions and divisiveness.

11. Generate policies and procedures to address the issue of social isolation, worker communication, and interactions.

12. Identify the various customer benefits before designing a program, rather than via back formation. Bear in mind the impact of union needs and interests when doing so.

For Telecommuters

13. Establish a professional work environment at home, away from family and personal distractions.

14. Be aware that you may begin to feel isolated and have a remedy prepared in advance, such as a regular telephone meeting time or an e-mail "chat" time set aside with colleagues.

15. Be conscious of the possibility of an erosion of time boundaries between work and home. It is not intended that teleworking should lead to a greater time commitment to work.

16. Maintain an ongoing rapport with your supervisor and on-site colleagues so that misunderstandings related to issues of role and performance are avoided.

Conclusion

Studies in the corporate sector report that among the most frequent causes for the failure of telecommuting programs are failure of the financial, managerial, and structural infrastructure. The federal program is no different. Inadequate funding levels result in technological scrimping, lack of training for managers and workers results in a "make do" attitude, and governmental managerial uncertainty has created an environment antithetical to a commitment to teleworking. The bifurcation of the workforce creates additional stress for already overworked government employees.

The flexiplace program within the federal government is of relatively recent origins. The nature of continuous improvement and best practices suggests an ongoing process of incremental change involving benchmarking against existing best practices. However, whether in the private sector or elsewhere, best practices in teleworking have yet to manifest themselves in reality. Therefore, the benchmarking process at the heart of any attempt to implement best practices lacks this key comparison ingredient. In addition, while the goal of any organization's continuous improvement program is to attain best-in-class status, this requires time in class. Given the brief span of time covered by the federal government's teleworking initiative and the paucity of available resources within the federal budget allocation, it is unfair to expect that the government has been any more successful than the private sector or that its efforts would have already culminated in the development of best practices.

The federal government's commitment to teleworking is to be commended because of the leadership role government is taking in the design of new working arrangements conducive to addressing the needs of workers and creating a family-friendly workplace. It is also to be commended because the potential for a shift in focus resulting from effective implementation of teleworking is likely to produce improvement in quality service for the American citizen and in quality of work life for the American federal worker.

Appendix: Methodology

The approach to this study consisted of a number of steps. A literature review, encompassing materials focused on telecommuting and pertinent sources from areas such as QWL, management, and organizational practices, was undertaken. It was followed with a search of federal government documents and websites dealing with telecommuting. An examination was undertaken of a number of government reports such as the Office of Personnel Management Report to Congress reviewing family-friendly workplace arrangements within the federal government. Other studies such as joint reports of the Department of Labor and worker representatives dealing with flexiplace pilot programs and a pilot project study of GSA Telecenters were also examined.

Another step was to identify and select a number of departments within the federal government with high telecommuting profiles and/or department heads with high commitment to telecommuting. As with any change initiative within an organization, some departments quickly develop a high-profile reputation. This may be due to the perception that a department is a repository of expertise based on being an early embracer of change and hence is considered to have a greater level of knowledge and experience to draw on. It may also be due to the perception that there are individuals within a department whose level of commitment to the change and enthusiasm for advancing the initiative qualifies them as "champions." These considerations, together with the issues of accessibility and levels of employee participation, were central to the selection of the Department of Health and Human Services and the Department of Labor as candidates for more in-depth study of telecommuting practices. Dr. Wendell

Joice of the Interagency Telecommuting Program of the General Services Administration offered some initial guidance on the identification of study sites.

The selection of appropriate departments for study was followed by site visits to the selected departments where face-to-face structured interviews were conducted and recorded with the key management personnel charged with advancing the federal family-friendly workplace arrangements and telecommuting. These interviews dealt with issues of definition and policies related to telecommuting as well as the motivations for involvement in the project. Further questions related to such diverse factors as demographics, relationships, and the impacts of telecommuting as well as a number of more general issues.

Following these site visits, both departments extended a request to managers who were actively engaged with telecommuting to volunteer for telephone interviews. As a result of this solicitation, both managers and several workers volunteered to be interviewed. These telephone interviews focused on issues such as benefits stemming from telecommuting, management aspects including relationships between onsite and offsite workers, degree of preparation and training, and hindsight reflections.

An examination of performance metrics and benchmarking issues was also conducted. Within this realm, the significance of a cost benefit analysis emerged.
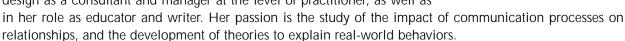
Based on the foregoing stages of the study, the current state of telecommuting within the federal government was assessed and a short list of best practices was compiled.

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