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- Telecommuting pilot program assess



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# MINNESOTA DEPARTMENT OF ADMINISTRATION

## TELECOMMUTING PILOT PROGRAM ASSESSMENT

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APRIL 1997



*Admin*  
**MINNESOTA**

Department of Administration

# TELECOMMUTING PILOT PROGRAM ASSESSMENT

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## EXECUTIVE SUMMARY

The Minnesota Department of Administration has invested more than a year in planning and testing an employee telecommuting program in response to increasing telecommuting interest and activity by the state legislature and other state agencies. Since 1994, state agencies have been required to include a telecommuting plan with any funding request for building or relocation of office space.

Administration's telecommuting pilot program was very successful and will likely lead to a permanent telecommuting program for the department. The pilot, which ran from Nov. 1, 1995, through Oct. 31, 1996, was guided by goals and objectives established by Administration's Telecommuting Advisory Committee. The goals included:

- to encourage telecommuting solutions that seek to provide savings in state-occupied space and other operating costs;
- to use telecommuting as a tool to increase productivity with the available resources;
- to take a leadership role in using telecommuting to improve the quality of the environment, community, and family; and
- to encourage the use of telecommuting to accomplish flexibility and innovation in meeting customer, management, and employee needs.

Telecommuting was identified as a management tool and was designed as a voluntary program. Sixty employees from 15 divisions participated as telecommuters. They came from a variety of job types — word processing operators, accounting staff, personnel officers, technical support and systems managers, managers, management consultants, management analysts, planners, office managers, and purchasing staff. Three recruiting campaigns during the year provided formal training to all participating telecommuters and supervisors.

During the pilot, the department gained telecommuting experience, employees gained experience telecommuting and acclimating themselves to work habit changes, and supervisors gained experience

in managing off-site employees. A majority of participants and supervisors reported that telecommuting was a positive experience and indicated a desire to establish a permanent telecommuting program.

## FINDINGS and CONCLUSIONS

The broad and ambitious goals established for the pilot were related to space, productivity, environment, community, family, employee empowerment, and re-engineering. Supervisors and managers were asked by the department to keep costs to a minimum and to experiment with space savings without undergoing major reconfigurations. Pilot program results suggest that goals related to productivity and the environment can be achieved with little or no financial investment in telecommuting. Other goals, such as those involving space and re-engineering, would require more planning, commitment, and resources and a longer period of time before results could be seen.

Significant test results, measured against the program's goals, are published here. They are based on replies to a post-pilot survey.

**GOAL 1.** To encourage solutions that seek to provide savings in state-occupied space and other operating costs. The objectives were to improve use of total office space, reduce growth in state-occupied space, reduce total state-occupied space, and reduce other operating costs.

### Results

In order to experience space savings, the department would need to increase the number of participants and the number of days each participant works away from the office.

- 77 percent of supervisors who responded to the survey reported no experimentation with office space during the pilot; they all reported no change in office space use.
- All supervisors reported that telecommuting had no effect on growth in state-occupied space or total state-occupied space.
- 67 percent of supervisors reported that telecommuting had no impact on operating costs.

**GOAL 2.** To use telecommuting as a tool to increase productivity with the available resources. The objectives were to increase employee-retention rate, maintain and encourage high levels of employee performance, develop and improve methods of performance management, and increase levels of satisfaction of telecommuters, their managers, and their co-workers.

## Results

Telecommuting has been shown to enhance recruitment in two ways: by making the job more attractive to a good candidate and by expanding the pool of potential candidates. Telecommuting can also help retain valued employees who might resign because they are moving farther from the office or want a shorter commute. No quantitative employee turnover data was available to evaluate the impact of telecommuting on employee retention during Administration's pilot. Supervisors' opinions, however, indicated that 39 percent believed that telecommuting helped retain employees. Supervisors who reported that telecommuting helped with employee retention indicated that the retention was due to higher morale and having a work alternative (telecommuting) available no where else.

Telecommuting appears to enhance productivity without negatively affecting telecommuters' co-workers in the office. Most telecommuters reported a greater quantity and quality of work done on telecommuting days and also indicated that their productivity increase was due to fewer interruptions.

Telecommuters either did not consider their supervisors' performance management changes to be a direct result of their telecommuting activities or they did not recognize the changes because they were minor.

- Most telecommuters reported that no different methods of performance management were used during the pilot, compared with 39 percent of supervisors who reported that new methods of performance management were established.
- Most telecommuters reported no change in communications or relationships with supervisors; about half their supervisors said their relationship with telecommuters did not change; and three-fourths of their co-workers reported no change in their relationships with telecommuters.

Telecommuters, supervisors, and co-workers reported difficulties for telecommuters in planning, scheduling, and attending meetings. In some cases, telecommuters skipped or rescheduled telecommuting days in order to attend meetings and, in other cases, supervisors and co-workers delayed scheduling or conducting meetings until the telecommuter returned to the office. It is not clear why this problem occurred. It could indicate a resistance to change in work habits or it could relate to the technology made available to telecommuters and co-workers.

**GOAL 3.** To take a leadership role in using telecommuting to improve the quality of the environment, community, and family. The objectives were to decrease commute miles, fuel consumption, rush-hour traffic congestion, and air pollution; increase employee presence in communities; and reallocate commuting time to personal life.

## Results

The pilot data shows that telecommuting can have a positive, measurable, and immediate effect on the environment, the community, and the family.

Studies have shown that telecommuting reduces traffic congestion, air pollution, fuel consumption, and use of other natural resources, and the pilot's results affirm that conclusion.

- Approximately 30,000 fewer commute miles were driven during the pilot, averaging 500 miles per participant; the number of miles saved by individual telecommuters ranged from 20 to 2,300. That decrease in miles resulted in 1,500 gallons of fuel saved during the pilot and, as a result, 1,620 pounds of pollutants were not released into the atmosphere.
- Telecommuters avoided making about 2,000 trips by telecommuting, an average of 33 trips per telecommuter.

Community leaders recognize that telecommuters who remain in their homes and communities during the workday have a positive impact on the community and the neighborhood.

- Telecommuters spent about 1,000 workdays in their community, averaging 17 days per telecommuter. The minimum amount of time, reported by one participant, was one day, and the maximum, also reported by one participant, was 71 days.
- More than half the telecommuters increased the amount of time devoted to their personal life by using some or most of their commute time for personal activities.

**GOAL 4.** To encourage the use of telecommuting to accomplish flexibility and innovation in meeting customer, management, and employee needs. The objectives were to empower the employee at the point of customer contact and promote re-engineering of business processes.

## Results

Although the majority of telecommuters and supervisors reported no changes in decision-making authority at the point of customer contact during the pilot, many telecommuters and supervisors said they think that, in the longer term, telecommuting will offer that opportunity.

- 64 percent of telecommuters reported no change in decision-making authority at the point of customer contact.

Business process changes during the pilot were made in the areas of technology and communication, but with no radical re-engineering efforts.

- 50 percent of telecommuters reported no changes in business processes during the pilot.
- 82 percent of telecommuters and all supervisors said they believe there is long-term opportunity for re-engineering of business processes because of telecommuting.

These findings suggest that more planning, commitment, and resources would be needed for these changes to occur.

## OTHER FINDINGS

In addition to questions connected to the four goals, the survey asked questions involving technical equipment, anticipated barriers to telecommuting's future, and telecommuting's effect on co-workers.

**Technology.** Divisions' investment in technology was minimal, probably because of senior management's request to minimize costs. Seventy percent of telecommuters said they used either a desktop or a laptop computer when they worked at home, and 42 percent said they had remote connectivity to the office while working at home. Sixty-two percent of supervisors reported no technology costs as a result of telecommuting; 23 percent reported incurring costs ranging from \$100 to \$500; and 15 percent were uncertain of costs.

**Potential long-term barriers to telecommuting.** Telecommuters, supervisors, co-workers, and technical support staff were asked to indicate what they thought would be the primary barriers to telecommuting in the Department of Administration in the longer term. The replies of telecommuters, supervisors, co-workers, and technical support staff focused heavily on difficulties with technology, such as remote connectivity.

**Telecommuting's impact on co-workers.** Fifty-eight percent of co-workers reported seeing no difference in how they planned, scheduled, or organized their work as a result of co-workers' telecommuting. Thirty-six percent reported a difference, which focused heavily on planning, scheduling, and attending meetings.

## RECOMMENDATIONS

The Telecommuting Advisory Committee recommends that the Department of Administration evaluate the department's long-term business goals. If it is determined that telecommuting can serve as a tool in meeting those goals, a permanent program should be implemented, including the specific recommendations outlined below.



1. The department should determine its leadership role in promoting telecommuting statewide.
2. The department should define an organizational structure for telecommuting and identify and assign roles and responsibilities.
3. The department should address and resolve the primary barriers and disadvantages identified during the pilot.
4. The department should promote the program with telecommuting fairs and workshops, newsletter articles, and other publicity efforts.
5. The department should develop a formal training program for telecommuters, supervisors, and co-workers.
6. The department should review telecommuting policies, make necessary changes, and convert draft policies to formal policies.
7. The department should review the Telecommuter Understanding form and make necessary changes.
8. The department should conduct a six-month pilot program with several divisions that have had experience with telecommuting. Focus the pilot on space sharing, including sharing of personal office space, "hotel" space, and other space reconfigurations.
9. Telecommuters and supervisors should help to make telecommuting a successful experience for everyone by having an open and positive attitude toward telecommuting, having mutual trust and respect, having good planning and organizational skills, and setting clear, measurable objectives that focus on deliverables.
10. The department should identify requirements and options for enabling technology.
11. The department should define the level of technical support to be provided to telecommuters, including days, hours, and types of problems addressed.
12. The department should define standard configurations where possible, to ease the support burden.
13. The department should investigate non-threatening audio-conference equipment and electronic scheduling tools, purchase prototypes, or ask divisions to share knowledge about existing equipment and tools.
14. The department should train all telecommuting participants to use electronic meeting scheduling software.
15. The department should make a permanent distribution of the department's loaned laptops.
16. The department should train telecommuters, supervisors, and co-workers on alternative meeting techniques (audio attendance, video-conferencing, and other forms of team communications).

## BACKGROUND

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**T**elecommuting — where an employee performs job responsibilities away from the normal work location — is part of a trend that is shifting the country's economy from an industrial base to an information and service base. This shift is being accelerated by the use of personal computers and enhanced communications equipment.

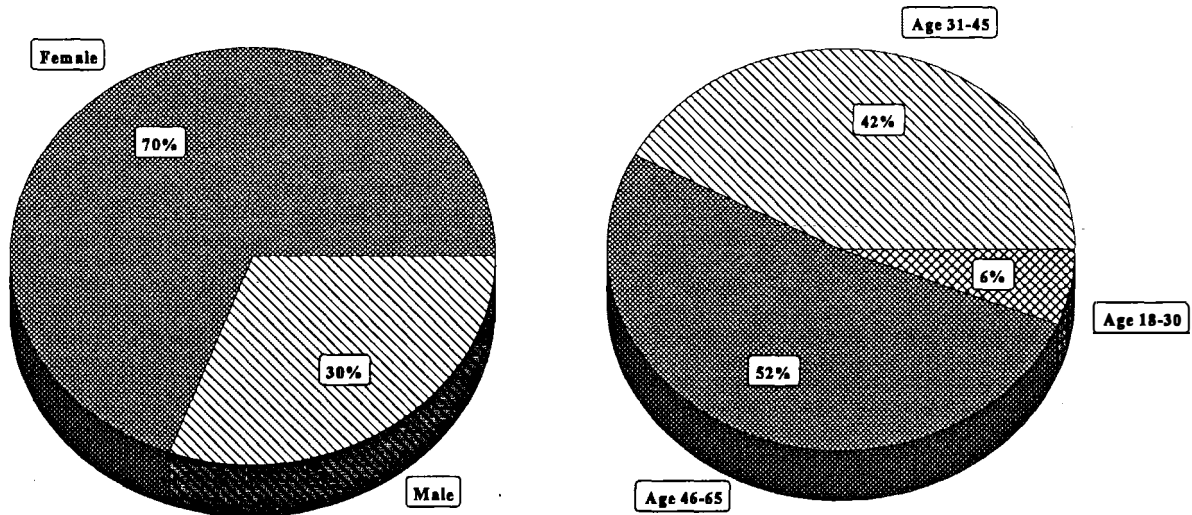
The Minnesota Department of Administration became involved with telecommuting in late 1994 and early 1995 in response to increasing telecommuting interest and activity by the state legislature and other state agencies. The 1994 Legislature required state agencies to include a telecommuting plan with any funding request for building or relocation of office space. The same legislation required the Information Policy Office of the Department of Administration to review and approve agency plans. IPO created guidelines and initiated a statewide effort to create a state telecommuting policy.

In the meantime, Administration decided to conduct its own pilot telecommuting program to gain telecommuting experience that would help determine the applicability of telecommuting within the department. Administration also decided to publish the results of its experience to share with other agencies.

## ADMINISTRATION'S PILOT PROGRAM

Administration's telecommuting pilot program ran from Nov. 1, 1995, through Oct. 31, 1996. The pilot program was guided by goals and objectives established by Administration's Telecommuting Advisory Committee to enable the department to measure and report on the pilot's success. The committee — composed of representatives from each Administration bureau — also planned, implemented, and evaluated the pilot program, which had the following goals:

- to encourage telecommuting solutions that seek to provide savings in state-occupied space and other operating costs;

**FIGURE 1. Gender of telecommuters. FIGURE 2. Age of telecommuters.**

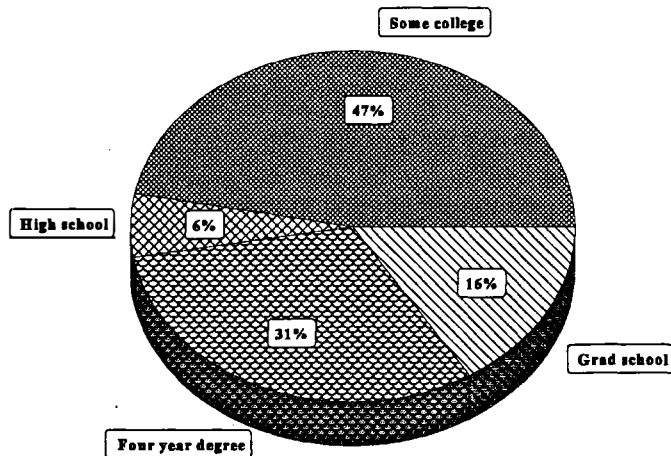
- to use telecommuting as a tool to increase productivity with the available resources;
- to take a leadership role in using telecommuting to improve the quality of the environment, community, and family; and
- to encourage the use of telecommuting to accomplish flexibility and innovation in meeting customer, management, and employee needs.

Telecommuting was voluntary. Telecommuters and supervisors were free to volunteer for the pilot program, with manager approval. Employees were invited to participate, and supervisors could decide whether they were willing to participate or to supervise telecommuters. Also, telecommuters and supervisors were free to discontinue telecommuting at any time for any reason, and a few employees did end their participation early.

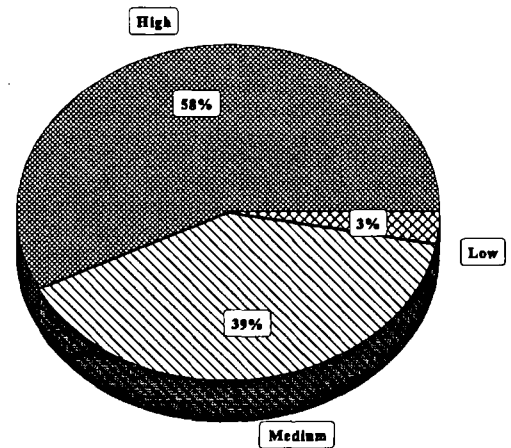
Sixty employees from 15 divisions participated as telecommuters. They came from a variety of job types — word processing operators, accounting staff, personnel officers, technical support and systems managers, managers, management consultants, management analysts, planners, office managers, and purchasing staff.

Department managers and committee members were given information on telecommuting by Jane Anderson, director of the Midwest Institute for Telecommuting Education, and the committee then began its work by surveying managers to get a sense of the potential for telecommuting. The committee documented division managers' opinions regarding job classes suitable for telecommuting, established goals and objectives, and created policies and a telecommuter's agreement form, which they

**FIGURE 3. Telecommuters' education levels.**



**FIGURE 4. Telecommuters' comfort with technology.**



reviewed with managers for their input. Communication efforts included presentations to the department's executive and management teams and publication of articles in the department's *Adminformations* newsletter.

The committee conducted a formal training program for all telecommuters and supervisors participating in the pilot program. Telecommuters, supervisors, and co-workers completed pre-pilot surveys. The department purchased 10 laptop computers for participating divisions; the divisions were expected to implement their own technology plans. The committee conducted three recruiting campaigns and training sessions during the year and held a discussion meeting at pilot midpoint to identify obstacles to and challenges of telecommuting and to offer suggestions on ways to overcome them. In December 1996, the committee sent post-pilot surveys to telecommuters, supervisors, and co-workers. Data collected during and after the pilot was used to evaluate whether the pilot program's goals and objectives were met.

## SURVEYS and PARTICIPANTS

The majority — 70 percent — of pilot program telecommuters were female, although only 44 percent of the department's employees are female (Figure 1). Half the telecommuters were in the 46- to 65-year-old age group, and 42 percent were 31 to 45 (Figure 2). Two-thirds of the telecommuters did not have dependents in their home. Thirty-one percent of the telecommuters had a four-year undergraduate degree and 16 percent had some graduate school (Figure 3). Three-quarters of the telecommuters had worked in state service for at least six years. Fifty-eight percent of the telecommuters reported being very comfortable with technology, and 39 percent reported medium comfort with technology (Figure 4).

Pilot program supervisors tended to be between the ages of 46 and 65; the number of male and female supervisors was evenly split. More than two-thirds of them held at least a four-year undergraduate degree and 85 percent had at least six years of state service. A majority (69 percent) indicated being very comfortable with technology and 15 percent reported medium comfort.

The majority (62 percent) of survey participants who were co-workers of pilot program telecommuters were age 46 to 65, with the others from 18 to 30 (10 percent) and 31 to 45 (28 percent). Sixty percent were female, 40 percent male. Thirty-one percent of the co-workers had a four-year degree and 14 percent had some level of graduate school. Eighty-one percent had six or more years of state service. Sixty-one percent indicated being very comfortable with technology and 34 percent reported medium comfort.

## FINDINGS

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Survey feedback from telecommuters, supervisors, and co-workers reflected a positive experience with telecommuting and support for implementation of a permanent telecommuting program within the department. Of the 60 telecommuters, 33 completed the committee's post-pilot survey, for a 55 percent return. Thirteen supervisors and 48 co-workers also responded. Some questions were not answered by all respondents, so that some data does not total 100 percent.

**Telecommuters had positive experiences with telecommuting in five ways. They found that it:**

- increased their productivity (reported by 76 percent of responding telecommuters);
- increased their probability of meeting deadlines (67 percent);
- reduced their stress levels (82 percent);
- positively affected their home life (64 percent); and
- increased their job satisfaction (79 percent).

Ninety-two percent of telecommuters said they are in favor of establishing a permanent program. Specific post-pilot survey comments included:

*Need to establish a permanent program and move forward.*

*It should definitely happen. Every employee should telecommute at least one day per month, if only for personal planning.*

*The Department of Administration should provide statewide leadership.*

*Make sure it is structured and organized so managers and staff know expectations. Communications processes should be in place and understood.*

**Supervisors indicated that telecommuting:**

- increased employee productivity (reported by 58 percent of responding supervisors);
- increased employee morale (100 percent); and
- improved probability of meeting deadlines (85 percent).

Every supervisor who responded to the survey said he or she is in favor of establishing a permanent program, and 85 percent of them said they would telecommute if given the opportunity. Specific comments included:

*I think a permanent program is an excellent idea.*

*Telecommuting is the way of the future; we need to compete with other employers.*

*Forget about saving space and energy and push productivity and availability when not physically at a state office.*

**Co-workers indicated that telecommuting:**

- did not reduce their productivity (reported by 80 percent of co-workers);
- did not increase their stress levels (74 percent); and
- did not impede getting their work done on time (82 percent).

Eighty-four percent of surveyed co-workers said they are in favor of establishing a permanent program and 57 percent of them said they would telecommute if given the opportunity. Specific comments included:

*It should be made available to everyone, but not mandatory.*

*Telecommuting should be part of Admin's normal business operations.*

*If productivity doesn't decrease and if less frequent contact with others doesn't hurt the group, then it should be made permanent and office space should be reduced by telecommuters' sharing space.*

*I don't think any office space will be saved for a long time, but the job satisfaction goes way up.*

*It's a good idea, but will take more work before it's smooth. Communication and clear expectations are key to success.*

*Telecommuting should be offered to workers who have appropriate assignments that can be done off-site.*

*I think telecommuting is an excellent program. Reduces travel concerns. Provides a quiet atmosphere.*

In addition, two technical support staff indicated a neutral opinion about implementing a permanent telecommuting program. Their specific comments were:

*There should be separate or additional support for telecommuters from LAN administrators; supporting at-office and at-home staff is difficult.*

*One to two days/week of telecommuting isn't much of a problem.*

*Speed of equipment provided to telecommuters will make things work more smoothly.*

## GOALS and OBJECTIVES

The four goals and their objectives were applied during the pilot program to use as performance measures at the end of the test period.

**GOAL 1.** To encourage solutions that seek to provide savings in state-occupied space and other operating costs. The purpose of this goal was to demonstrate that telecommuting would have an impact on state-occupied space and other operating costs. State-occupied space includes office and parking space. Office space includes personal, shared, hotel, storage, and conference/meeting space. For the pilot, space-saving efforts were voluntary. Supervisors were encouraged to experiment with sharing space but to minimize expenses during the pilot. Goal 1 had four objectives:

**Objective 1.** Improve use of total office space. To measure the impact on office space, the survey asked supervisors if they experienced any change (increase or decrease) in office space usage. "Office space usage" refers to the number of individuals served by a defined space — personal space serves one person and shared space serves two or more. For example, improved space usage would equate to a decrease in personal space and an increase in shared or hotel space or conference/meeting space.

### Results

- 77 percent of supervisors reported no experimentation with office space during the pilot and 8 percent reported experimenting with space
- No supervisors reported a change in office space use during the pilot

**Objective 2.** Reduce growth in state-occupied space. Supervisors were asked if they avoided office expansion or decreased the size of an expansion effort during the pilot.



## Results

- All supervisors reported that the telecommuting pilot did not affect the growth rate of space

**Objective 3. Reduce total state-occupied space.** Supervisors were asked if they had reduced their office space. Telecommuters were asked if they were able to release or share parking space.

## Results

- All supervisors reported that total state-occupied space was not affected by the telecommuting pilot
- All telecommuters reported that they did not share or release parking space during the pilot

**Objective 4. Reduce other operating costs.** Supervisors were asked if they experienced an impact on operating costs during the pilot.

## Results

- 67 percent of those who replied to this question reported that telecommuting had no impact on operating costs during the pilot, 17 percent reported minimal costs for software in telecommuters' homes, and 8 percent reported minimal cost reduction

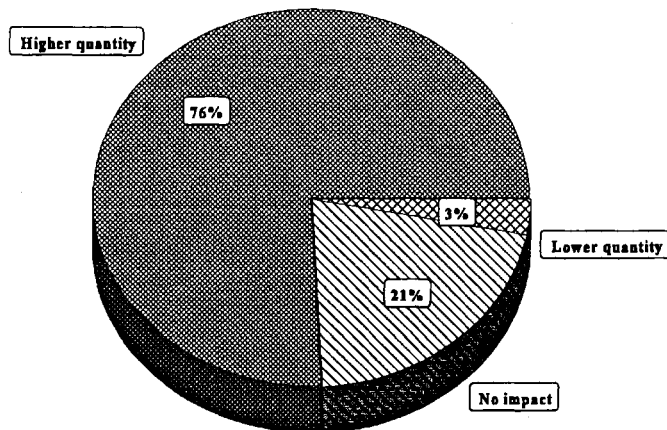
**GOAL 2. To use telecommuting as a tool to increase productivity with the available resources.** The purpose of Goal 2 was to demonstrate that telecommuting would increase productivity for telecommuters and co-workers and to identify specific factors affecting productivity. Four objectives were identified.

**Objective 1. Increase employee-retention rate.** This objective involved comparing employee retention (turnover) rates for telecommuters with Administration's rate as a whole. If the retention rate for telecommuters was lower than for the entire department, it might be attributed to telecommuting.

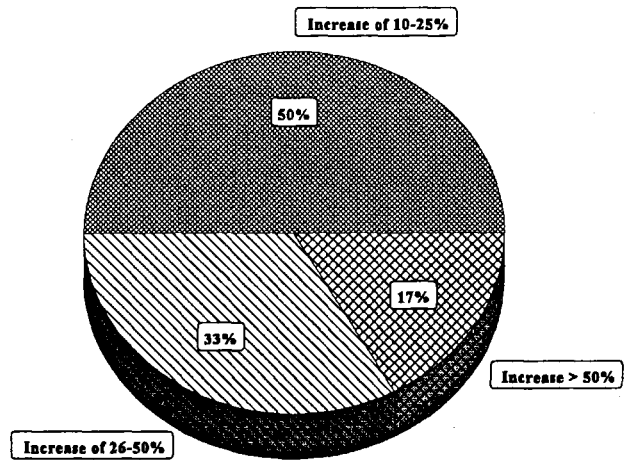
## Results

- The actual retention rate data was inconclusive; a longer period of time would be needed to determine if telecommuting affects employee turnover rates.
- 61 percent of supervisors reported that telecommuting did not help retain employees during the pilot and 39 percent reported that it did

**FIGURE 5. Telecommuting's impact on work quantity.**



**FIGURE 6. Percentages of increased work quantity.**



**Objective 2.** Maintain and encourage high levels of employee performance. Employees, supervisors, and co-workers were asked if the quality and quantity of their work were affected on telecommuting days.

## Results

- 79 percent of telecommuters reported that work done on telecommuting days was of higher quality, and 21 percent reported no impact
- Of those who replied, 58 percent of supervisors reported that work done on telecommuting days was of higher quality and 42 percent reported no impact
- 92 percent of co-workers saw no change in their own work quality on days when co-workers telecommuted
- 76 percent of telecommuters reported a greater *quantity* of work done on telecommuting days (Figure 5), with half indicating an increase of 10 to 25 percent, a third indicating an increase of 26 to 50 percent, and 17 percent indicating an increase of more than 50 percent (Figure 6); 21 percent reported no impact; and 3 percent reported a lower quantity of work performed
- 58 percent of supervisors who replied reported a greater quantity of work done on telecommuting days, 34 percent were uncertain, and 8 percent reported no impact

- 97 percent of telecommuters indicated that the productivity increase was due to fewer interruptions
- 80 percent of co-workers reported that telecommuting had no impact on their own productivity
- 68 percent of co-workers who replied reported no impact on their number of interruptions on co-workers' telecommuting days, 19 percent reported more interruptions, and 13 percent reported fewer

The surveys also included questions aimed at identifying other factors that might affect productivity, such as stress level, morale, and type of supervision.

## Results

- 82 percent of telecommuters reported less job stress due to telecommuting
- 85 percent of supervisors reported that the telecommuting pilot had no impact on their job stress
- 74 percent of co-workers reported that the telecommuting pilot had no impact on their job stress
- All supervisors reported that telecommuters' morale had increased
- Of those who replied, 58 percent of supervisors reported that supervising telecommuters was different, but with a neutral effect; 42 percent reported no change in the way they supervised telecommuters
- 67 percent of telecommuters reported an improved probability of meeting work deadlines, and the same percentage reported that they managed time more efficiently
- 85 percent of supervisors reported an increased probability that a telecommuter would meet work deadlines
- 82 percent of co-workers reported that the telecommuting pilot had no effect on their ability to finish their own work on time

**Objective 3. Develop and improve methods of performance management.** New or improved methods of performance management would include such factors as more clearly defined work outcomes or better communications and relationships between telecommuters and supervisors. Telecommuters and supervisors were asked to report new or improved methods.

## Results

- 94 percent of telecommuters reported no different methods of performance management
- 91 percent of telecommuters reported no change in communications or relationships with supervisors

- 61 percent of supervisors reported that no new methods of performance management were established, and 39 percent of supervisors reported that new methods of performance management were established, including closer review of tasks, better communication, clearer objectives, and specific duties agreed on for off-site work
- 46 percent of supervisors said that their relationship with telecommuters did not change; 31 percent reported that their relationship was positively affected; 15 percent reported that the relationship changed, with a neutral effect; 8 percent said they were uncertain
- Of those who replied, 79 percent of co-workers reported no change in their relationships with telecommuters; 6 percent of co-workers reported that the relationship was negatively affected due to difficulty with communications and scheduling meetings, and lack of availability; 9 percent of co-workers reported that the relationship changed, with a neutral effect; 4 percent said the relationship was positively affected; and 2 percent said they were uncertain

**Objective 4.** Increase levels of satisfaction of telecommuters, their managers, and their co-workers. Telecommuters, supervisors, and co-workers were asked if their level of job satisfaction changed during the pilot period.

## Results

- 79 percent of telecommuters reported increased job satisfaction
- Of those who replied, half the supervisors reported that the pilot had no impact on their own job satisfaction; 33 percent reported higher job satisfaction
- 70 percent of co-workers reported that the telecommuting pilot had no effect on their own job satisfaction; 15 percent reported greater job satisfaction; and 15 percent were uncertain

**GOAL 3.** To take a leadership role in using telecommuting to improve the quality of the environment, community, and family. The purpose of Goal 3 was to demonstrate that telecommuting would improve some aspects of quality of life. Six objectives were identified to measure the impact Administration's telecommuting had on the environment, the community, and the family. Overall, telecommuters reported that their home life was positively affected (64 percent) by telecommuting or showed no effect (36 percent).

**Objective 1.** Decrease commute miles. The measure used to evaluate this objective involved calculating the total number of days each pilot participant telecommuted and the number of trip miles to work to determine the total decrease in commute miles.

## Results

- Using the responses received, it can be estimated that there was a decrease of approximately 30,000 commute miles driven during the pilot, averaging 500 miles per participant; the number of miles saved by individual telecommuters ranged from 20 to 2,300

**Objective 2. Decrease fuel consumption.** To evaluate this objective, the committee used 1995 Federal Highway Administration statistics. The figures used were applicable to all passenger cars and other two-axle vehicles, including sport utility vehicles. The total commute miles saved (16,600) was divided by the average miles per gallon (19.67) to determine the total decrease in fuel consumption for the 33 survey respondents.

## Results

- Using the responses received, it can be estimated that 1,500 gallons of fuel were saved during the pilot, averaging 25 gallons per telecommuter

**Objective 3. Decrease rush-hour traffic congestion.** To evaluate this objective, the number of days participants telecommuted was doubled to determine the total number of trips *not* made to and from the work place.

## Results

- Using the responses received, it can be estimated that telecommuters avoided making about 2,000 trips, or an average of 33 trips per telecommuter

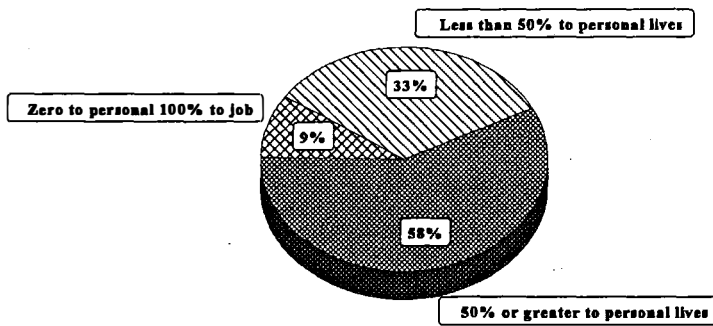
**Objective 4. Decrease air pollution.** To evaluate this objective, the Minnesota Pollution Control Agency's pollutant factors were used. An average passenger car produces 27 grams per mile of pollutants. To determine the decrease in air pollution, the number of miles saved (30,000) was multiplied by 27 grams, then multiplied by .002 to convert to pounds.

## Results

- 1,620 pounds of pollutants were not released into the atmosphere

**Objective 5. Increase employee presence in communities.** The measure used to evaluate this objective was the total number of days that pilot participants remained in their community as a result of telecommuting.

**FIGURE 7. Telecommuters' reallocation of commute time.**



## Results

- Using the responses received, it can be estimated that telecommuters spent more than 1,000 workdays in their community, averaging 17 days per telecommuter; the minimum time spent telecommuting, reported by one participant, was one day and the maximum time, also reported by one participant, was 71 days

**Objective 6.** Reallocate commuting time to personal life. The measure used to evaluate this objective was the percentage of time saved by telecommuters and allocated to personal activities.

## Results

- 58 percent of respondents said they devoted at least half their saved commute time to personal activities (Figure 7)
- 33 percent of respondents said they devoted some, but less than half, of their saved commute time to personal activities
- 9 percent of respondents said they devoted all their saved time to job-related activities

**GOAL 4.** To encourage the use of telecommuting to accomplish flexibility and innovation in meeting customer, management, and employee needs. The purpose of Goal 4 was to demonstrate that telecommuting would improve customer service and work processes.

**Objective 1.** Empower the employee at the point of customer contact. This objective measured changes in employee decision-making authority at the point of customer contact as a result of telecommuting. Telecommuters were also asked to predict future opportunities for more decision making with customers.

## Results

- 64 percent of telecommuters reported no change and 12 percent reported an increase in decision-making authority at the point of customer contact; 24 percent were uncertain
- 69 percent of supervisors reported no change and 8 percent reported an increase in telecommuters' decision-making authority at the point of customer contact; 23 percent were uncertain
- 27 percent of telecommuters said they expect future opportunities for more decision making and 21 percent said they expect none; 52 percent were uncertain
- 38 percent of supervisors said they don't expect opportunity for more decision-making authority, 31 percent said they do, and 31 percent were uncertain

**Objective 2. Promote re-engineering of business processes.** This objective was measured by the number of business processes re-engineered during the telecommuting pilot and telecommuters and supervisors' speculation on long-term re-engineering as a result of telecommuting.

## Results

- 50 percent of telecommuters who replied to this question reported no changes in business processes during the pilot
- 25 percent of telecommuters reported changes, including:
  - Remote connectivity to the office
  - Use of on-line reference materials
  - Computer connections, laptop computers, and printers
  - Increased use of the Internet
  - Increased use of and reliance on e-mail and voice mail
- 25 percent of telecommuters were uncertain whether there were changes
- 64 percent of supervisors who replied reported no changes in business processes during the pilot, 18 percent reported some changes, and 18 percent were uncertain
- 82 percent of telecommuters and all supervisors said they believe there is long-term opportunity for re-engineering of business processes because of telecommuting

## OTHER FINDINGS

### Technology

Telecommuters were asked about the equipment they used and the services they were provided while performing job responsibilities at home. Supervisors were asked if they incurred technology costs related to the telecommuting pilot program.

### Results

- 70 percent of telecommuters said they used either a desktop or a laptop computer when they worked at home; most of the desktop computers were owned by the telecommuters, most of the laptops by the department
- 42 percent of telecommuters said they used remote connectivity to the office while working at home
- 55 percent of telecommuters said they used a telephone while working at home
- 62 percent of supervisors reported no technology costs as a result of telecommuting; 23 percent reported incurring costs ranging from \$100 to \$500; and 15 percent were uncertain
- 42 percent of supervisors replying said they were uncertain about future costs; 33 percent said they expect costs to increase over the longer term; 17 percent said they expect no change; and 8 percent said they expect costs to be reduced

### Benefits of telecommuting

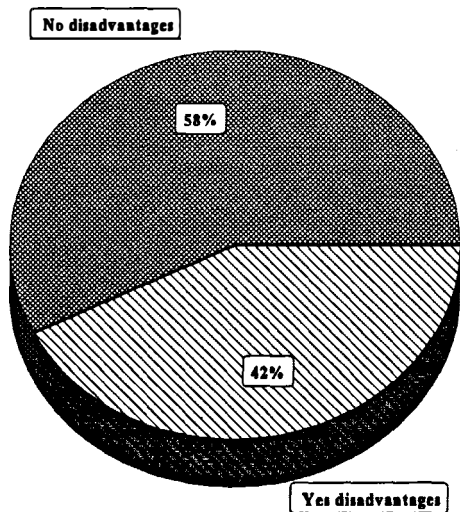
Telecommuters and supervisors were asked to indicate primary benefits to the department during the pilot. Replies included environmental benefits, enhanced productivity due to better management of employees' time, increased productivity due to fewer interruptions, enhanced productivity due to working at personal peak times, and improved employee morale.

### Disadvantages of telecommuting

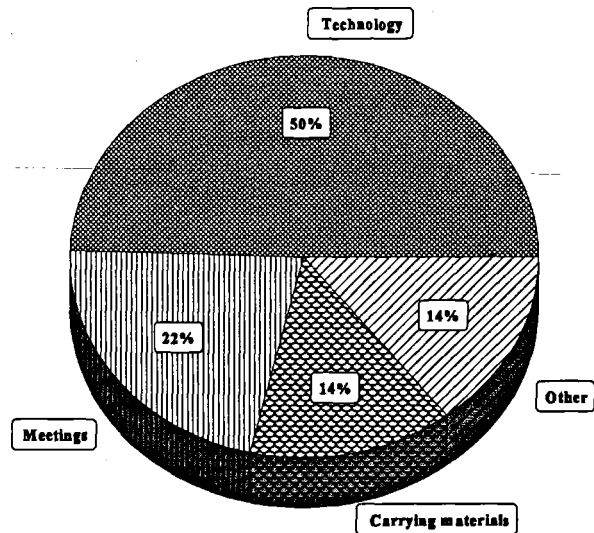
Telecommuters, supervisors, and co-workers were asked if they saw any disadvantages to telecommuting and, if so, to describe them. Technology and connectivity problems were mentioned most often, with specific comments including "slow speed telephone connection," "unable to access office workstation," and "difficulty with computer connection due to server problems."



**FIGURE 8. Telecommuters reporting on disadvantages of telecommuting.**



**FIGURE 9. Types of disadvantages reported by telecommuters.**



While 58 percent of telecommuters indicated that they experienced no disadvantages during the pilot, 42 percent indicated the opposite (Figure 8), mostly in the technology and scheduling areas (Figure 9). Other disadvantages mentioned were carrying materials between home and office, having no fax or copy machine available at home, and missing communications (written material and word-of-mouth).

Fifty-eight percent of supervisors indicated that they experienced no disadvantages during the pilot; 9 percent were uncertain; and 33 percent reported disadvantages with specific comments, including:

- Slight delays occurred in setting up meetings because telecommuters were telecommuting
- There was some perception of unfairness because not all employees could telecommute

Sixty-seven percent of co-workers indicated experiencing no disadvantages during the pilot. Twenty-one percent reported disadvantages, including lessened accessibility to telecommuters for help, backup, and client contact; more difficult contact with telecommuters than with individuals in the office; more difficulty scheduling meetings; and having to handle other staff members' reactions. Twelve percent were uncertain about disadvantages.

## Potential long-term barriers to telecommuting

Telecommuters, supervisors, co-workers, and technical support staff were asked to indicate what they thought would be the primary barriers to telecommuting in the Department of Administration in the longer term. The replies of telecommuters and supervisors focused heavily on difficulties with technology and people's resistance to change. Co-workers mentioned technology and such other factors as management of telecommuters and organizational productivity. Responses from technical support staff indicated that the largest telecommuting issue for the department would be technology and/or lack of it. In addition, technical support staff indicated difficulty troubleshooting and assisting telecommuters when only one telephone line was available for both communications and remote connectivity. Technical support staff also indicated that a lack of standard computer configurations may contribute to future support problems.

The top unranked long-term telecommuting barriers predicted by telecommuters, supervisors, co-workers, and technical support staff were:

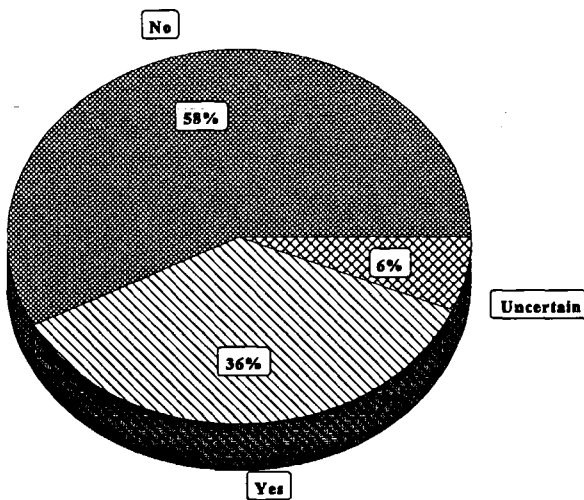
- Unavailable equipment and technology
- Unavailable technical support
- Equipment, technology, and communication costs
- Managers' resistance to change
- Senior and middle management opposition
- Employees' resistance to change
- More-difficult management of telecommuters
- Social and professional isolation

**Thoughts and concerns about the pilot program.** Telecommuters, supervisors, and co-workers were asked for additional thoughts or concerns about the telecommuting pilot, including what worked and what did not work. Comments included:

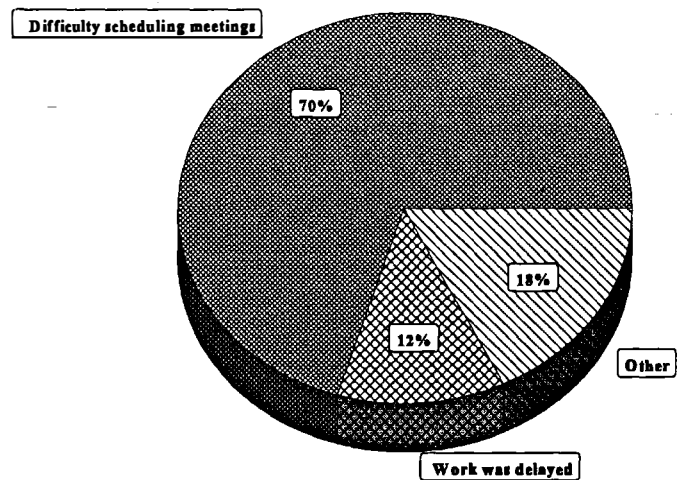
### Telecommuters

- *The program works well; I'm not bothered by telephone calls and other interruptions*
- *My concern is that divisions with work responsibility that requires staff to be in an office environment won't support telecommuting for other divisions*
- *Too difficult to telecommute with current work assignment*

**FIGURE 10.** Percent of co-workers reporting whether their work habits changed.



**FIGURE 11.** Reasons why co-workers' work habits changed.



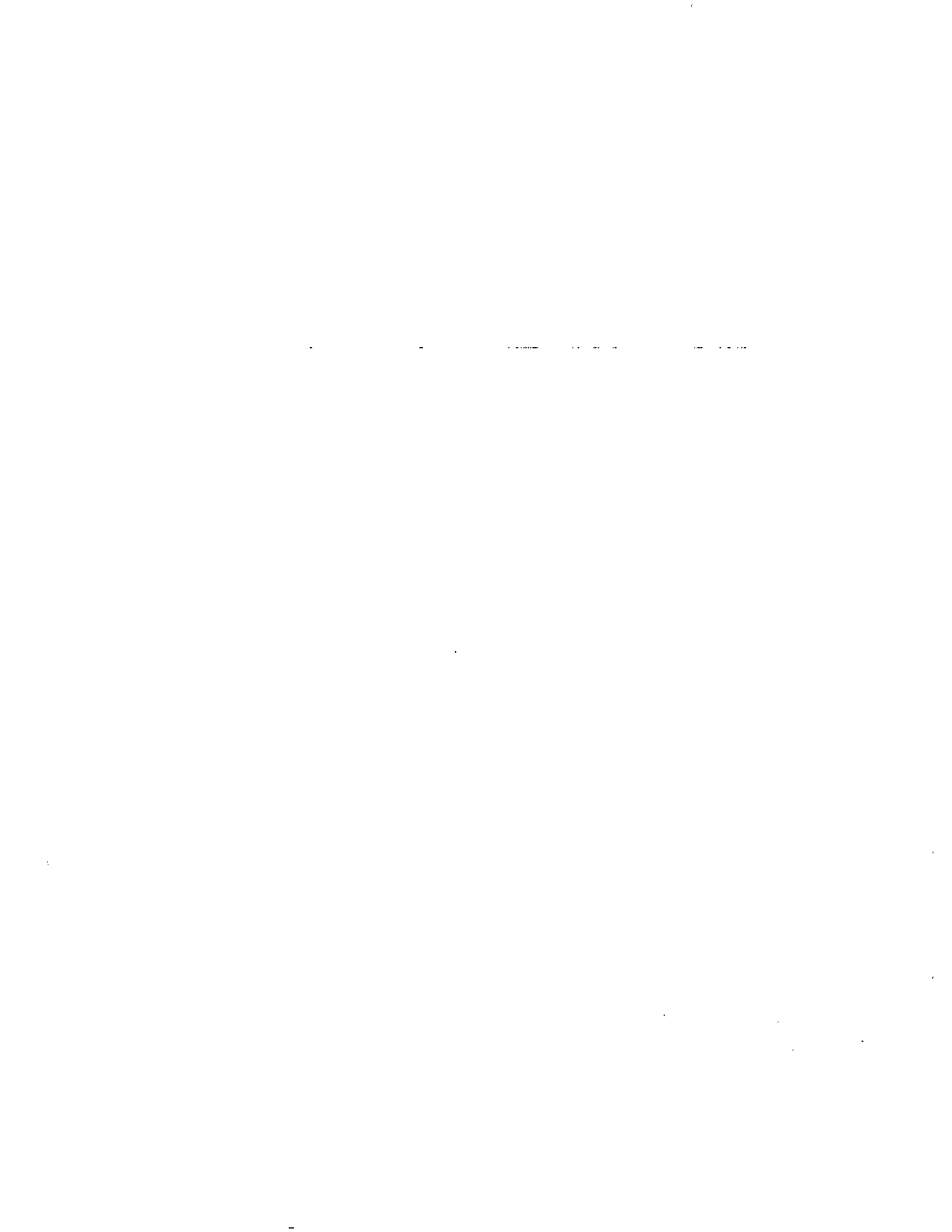
**Telecommuting's impact on co-workers.** Co-workers were asked if they needed to plan, schedule, or organize their work differently because co-workers were telecommuting. Fifty-eight percent reported no difference, 36 percent reported a difference, and 6 percent said they were uncertain (Figure 10). Each of the 17 co-workers who reported a difference provided an explanation (Figure 11). The majority indicated difficulties and delays in planning, scheduling, and attending meetings. Two of the 17 reported delaying work until the telecommuting co-worker returned to the office.

**Telecommuting policies.** Eighty-one percent of telecommuters and all supervisors reported that the department's telecommuting policies were clear. Clarification was requested on the following policy issues:

- *Should the number of telecommuting days determine who will pay equipment costs?*
- *How does one get technical support?*
- *Does a telecommuter stop working at home if a snow day is declared?*
- *Who gets to telecommute — how can we ensure that all divisions join in?*
- *Why do some telecommuters get special treatment for their particular circumstances?*

**Customers and staff feedback.** Telecommuters and supervisors were asked if telecommuting directly or indirectly affected internal or external customer feedback on quality, quantity, or timeliness of work. Sixty-one percent of telecommuters reported no change, 21 percent reported a positive impact, and 18 percent were uncertain. Eighty-four percent of supervisors reported no impact, 8 percent reported a positive impact, and 8 percent were uncertain.

Telecommuters and supervisors were asked if telecommuting directly or indirectly affected feedback from staff. Forty-three percent of telecommuters reported no change, 21 percent reported positive feedback, and 36 percent said they were uncertain. Seventy-six percent of supervisors reported positive feedback, 8 percent reported negative feedback, 8 percent reported no change, and 8 percent reported being uncertain.



## CONCLUSIONS

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Telecommuting is a successful concept with many advantages for the employer, employees, and society. Telecommuting is a means of reducing overhead costs, increasing employee satisfaction, morale, and productivity, and helping with the employer's management of labor strategy by providing flexibilities. Organizations that have embraced telecommuting report reduced sick leave usage, reduced real estate and property management costs, and increased employee satisfaction and retention.

The Department of Administration established four ambitious goals for its telecommuting pilot program. During the one-year pilot, the department gained experience with telecommuting, trained telecommuters and supervisors on issues related to telecommuting, and increased the number of participants through active recruitment efforts. Fifteen divisions with 60 employees including supervisors and managers participated in the program. Employees gained experience telecommuting and acclimating themselves to work habit changes. Supervisors gained experience in managing off-site employees. A majority of participants and supervisors reported telecommuting as a positive experience and indicated a desire to establish a permanent telecommuting program.

Before the pilot began, goals, objectives and measures were established. The broad and ambitious goals were related to space, productivity, environment, community, and family, employee empowerment, and re-engineering. Supervisors and managers were asked by the department to keep costs to a minimum (for example, limit equipment purchases and make use of existing equipment) and to experiment with space savings without undergoing major reconfigurations, because implementation of a permanent program was dependent on the department's experience with the pilot. Pilot results suggest that goals related to productivity and the environment can be achieved with little or no financial investment in telecommuting, while other goals, such as space and re-engineering, require more planning, commitment, and resources and a longer period of time before results can be seen.

## SPACE

Physical places are increasingly being replaced by virtual spaces — technology — as a preferred medium for doing business. In the process, technology will drive a dramatic reduction in commercial real estate demand during the next few years. Businesses will continue to require physical places to conduct business, but the amount of space, how it is used, and where it will be located are all subject to rapid and unpredictable change. People are working differently — the number of telecommuters is expected to grow to more than 20 million by the year 2000, shedding as much as 3 billion square feet in the process.

Organizations are rethinking the design of office space, and ideas such as “non-territorial” and “hotel-ing” are becoming popular. With these space changes come better space usage, lower costs, and offices that are designed more for team work, rather than for individual desk work. Changes in space, however, need to be carefully planned and need to include an analysis of work and workflow, technology, and organizational culture.

The Department of Administration’s goal related to space was to encourage solutions that seek to provide savings in state-occupied space and other operating costs. Survey results indicate that space savings did not occur during the pilot period. Space sharing was voluntary; supervisors were asked to consider doing it, but no pressure was placed on them, no resources or information were provided to them, and no specific expectations were stated. They were asked to minimize costs for any space reconfigurations.

Space savings are dependent on having telecommuters who can work away from the office two or more days a week. Very few pilot program participants worked at home that frequently. Sixty-nine percent telecommuted fewer than 20 full days — 42 percent fewer than 10 days and 27 percent between 10 and 20 days. Some began participation later in the pilot period, but for others the data suggests that scheduling telecommuting days was difficult. Scheduling regular, consistent telecommuting days was problematic for some telecommuters, due to requirements to be at the office (for example, to attend a meeting). To cope with this problem, some telecommuters abandoned a telecommuting schedule and decided to telecommute as their schedule allowed. Without a stable and predictable schedule of days worked at the office and at home, the success of long-term space savings was not measurable.

Telecommuters, supervisors and co-workers reported difficulties for telecommuters in planning, scheduling, and attending meetings. In some cases, telecommuters skipped or rescheduled telecommuting days in order to attend meetings and in other cases, supervisors and co-workers delayed scheduling or conducting meetings until the telecommuter returned to the office. It is not clear why this problem occurred. This could result from the cultural change brought about by telecommuting; it could relate to a resistance to change in work habits, or it could relate to the technology made available to telecommuters and co-workers. Questions need to be answered: *Is e-mail available for scheduling meetings and notifying telecommuters? Are participants comfortable conducting and attending meetings*

*using audio and video conference equipment? Did telecommuters attend meetings using electronic capabilities and, if so, was their experience with this equipment a positive one?*

In order for an organization to experience space savings as a result of telecommuting, large numbers of telecommuters need to be participating and working out of the office two or more full days per week. Telecommuting two or more days per week requires analysis and selection of the suitable job, availability of enabling technology, and adaptation to significant cultural change by telecommuters, supervisors, and co-workers.

## PRODUCTIVITY

Telecommuters and supervisors reported favorable experiences related to productivity on telecommuting days. In addition, findings suggest that telecommuting had no negative impact on the telecommuter's co-workers in the office. The majority of telecommuters and supervisors reported increases in the quality and quantity of work done on telecommuting days, with quantity estimates ranging from 5 to 75 percent. Although these productivity increases were reported using a subjective method, that is, opinion vs. measurement, they are extremely important. All levels of government are being requested to "do more, faster, with less" and productivity increases help government units comply with that request. The majority of telecommuters indicated that improved productivity was due to reduced numbers of interruptions while working at home. It is not clear what types of interruptions were avoided or how and when those interruptions were eventually handled.

The majority of telecommuters and about a third of the supervisors reported increased job satisfaction as a result of telecommuting. The majority of co-workers reported that telecommuting had no impact on their job satisfaction. These findings suggest that the gain in job satisfaction for telecommuters was not obtained at the expense of supervisors or co-workers.

## PERFORMANCE MANAGEMENT

Although only one-third of supervisors reported changes in performance management techniques, 76 percent of telecommuters and 58 percent of supervisors reported increased quantities of work done on telecommuting days. This suggests that productivity was increased without changes in performance management techniques for all telecommuters.

It is not known why two-thirds of supervisors did not establish new methods of performance management for telecommuters. Possible explanations include the small number of telecommuting days and the selection of trusted employees to telecommute, therefore precluding need to measure performance.

Telecommuting provides managers with the opportunity to manage by results and to further empower



employees to do their job. Employees need to develop skill sets and priorities and to understand what is expected of them in a remote work environment. Successful telecommuters must be independent, self-motivated, and flexible. Supervisors who are used to managing by walking around need to learn to manage by results.

During the department's pilot, most telecommuters reported no change in performance management techniques used by their supervisors. However, about a third of the supervisors reported that they established new methods of performance management and better communications with telecommuters. Approximately 6 percent of co-workers indicated that their relationship with telecommuters was negatively affected.

## RECRUITMENT and RETENTION of EMPLOYEES

Telecommuting can enhance recruitment in two ways: by making the job more attractive to a good candidate and by expanding the pool of potential candidates. Telecommuting can also help retain valued employees who might resign because they are moving farther from the office or want a shorter commute. Telecommuting may also prevent an employee from seeking another position. Reducing employee turnover rates reduces an organization's costs and increases productivity. Telecommuting can also assist employees with disabilities.

The results of the calculation and analysis of retention rates were inconclusive. These rates may need to be monitored over a longer period to determine if telecommuting would have any impact.

Of those supervisors who reported that telecommuting helped with employee retention, the comments indicated the retention was due to higher morale and having a work alternative (telecommuting) that is not available elsewhere.

## IMPACT on ENVIRONMENT

There is no question that telecommuting can reduce traffic congestion, air pollution, fuel consumption, and use of other natural resources. In the department's pilot alone, using the responses received, it can be estimated that Administration's telecommuters contributed in the following ways:

Fewer commuting miles — 30,000 miles

Decreased fuel consumption — 1,500 gallons

Decreased rush-hour traffic congestion — 2,000 trips

Decreased air pollution — 1,620 pounds of pollutants

The Metropolitan Council forecasts an *annual* growth rate of 1.5 percent in the number of trips for the Twin Cities metropolitan area. It appears that traffic congestion in the metro area will worsen at an aggressive pace while at the same time future funding for roadway expansion will be substantially lower than in previous decades. For this reason, the Department of Transportation strongly supports telecommuting for both public and private sectors. The decrease in commute miles and rush hour traffic congestion achieved by the participants in the telecommuting pilot shows that telecommuting can have a positive, measurable, and immediate effect on a real problem.

## IMPACT on COMMUNITY

Community leaders recognize that telecommuters who remain in their homes and communities during the workday have a positive impact on the community and the neighborhood. Community involvement increases and it is expected that crime will be reduced. When people are telecommuting, they have more time and more flexibility in their schedule to become involved in their own communities. In the department's pilot alone, the telecommuters who responded spent 560 workdays in the community.

## IMPACT on EMPLOYEE and FAMILY

Many benefits can accrue for telecommuting employees and their families. Telecommuting offers flexibility in hours, allowing employees to work at their own personal peak times. As a result of this flexibility, employees may be able to increase productivity and reduce the amount of sick and vacation leave used for personal situations that arise and require their attention at home or near home.

The department's results indicate that more than half the telecommuters increased the amount of time devoted to their personal life by using some or most of their commute time for personal activities.

## IMPACT on DECISION-MAKING AUTHORITY and RE-ENGINEERING

The majority of telecommuters and supervisors reported no changes in decision-making authority at the point of customer contact during the telecommuting pilot. However, many of the telecommuters and supervisors think that, in the longer term, telecommuting will offer that opportunity.

About half the telecommuters and supervisors reported no business process changes during the pilot. Twenty-five percent of telecommuters and 18 percent of supervisors reported that changes were made. The examples provided reflected changes in the area of technology and communication, but no radical re-engineering efforts. When asked, however, 82 percent of telecommuters and all supervisors said that they see an opportunity for business process re-engineering in the longer term. These findings suggest that more planning, commitment, and resources may be needed for these changes to occur.

## TECHNOLOGY'S IMPACT on TELECOMMUTING

Studies have shown that telecommuters who are inadequately equipped and must fend for themselves will not achieve the productivity gains experienced with a well-implemented telecommuting program. Without the proper remote access capability, telecommuters find themselves electronically, as well as physically, disconnected from the office. If testing and set-up are not done at the beginning, telecommuters can spend weeks or months working through the "bugs" in these systems. Besides affecting the telecommuter's productivity and morale, this process will create burdens for the telecommuter's supervisor, team members, and technical support staff.

Fifty-eight percent of telecommuters did not use remote connectivity to the office while working at home. It is not clear if the low use of remote connectivity was due to a lack of availability, performance, and support, or whether it was not needed to perform the work at home. Also, it may have been the intent of some telecommuters to avoid interruptions such as e-mail.

The investment in technology by divisions was minimal and may have resulted from senior management's request to minimize costs. Also, divisions had not planned on supporting a telecommuting pilot when the last biennial budgets were developed in Fall 1994 and funds may simply not have been available.

# RECOMMENDATIONS

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The Telecommuting Advisory Committee recommends that the Department of Administration evaluate the department's long-term business goals. If it is determined that telecommuting can serve as a tool in meeting those goals, a permanent program should be implemented, including the specific recommendations outlined below.

1. The department should determine its leadership role in promoting telecommuting statewide.
2. The department should define an organizational structure for telecommuting and identify and assign roles and responsibilities for telecommuting champions, telecommuting coordinators, division representatives, telecommuting committee members, Human Resources Office personnel, employees, managers, supervisors, co-workers, and telecommuting coaches.
3. The department should address and resolve the primary barriers and disadvantages identified during the pilot.
4. The department should promote the program with telecommuting fairs and workshops, newsletter articles, and other publicity efforts.
5. The department should develop a formal training program for telecommuters, supervisors, and co-workers.
6. The department should review telecommuting policies, make necessary changes, and convert draft policies to formal policies.
7. The department should review the Telecommuter Understanding form and make necessary changes.
8. The department should conduct a six-month pilot program with several divisions that have had experience with telecommuting. Focus the pilot on space sharing, including sharing of personal office space, "hotel" space, and other space reconfigurations.

9. Telecommuters and supervisors should help to make telecommuting a successful experience for everyone by having an open and positive attitude toward telecommuting, having mutual trust and respect, having good planning and organizational skills, and setting clear, measurable objectives that focus on deliverables.
10. The department should identify requirements and options for enabling technology.
11. The department should define the level of technical support to be provided to telecommuters, including days, hours, and types of problems addressed.
12. The department should define standard configurations where possible, to ease the support burden.
13. The department should investigate non-threatening audio-conference equipment and electronic scheduling tools, purchase prototypes, or ask divisions to share knowledge about existing equipment and tools.
14. The department should train all telecommuting participants to use electronic meeting scheduling software.
15. The department should make a permanent distribution of the department's loaned laptops.
16. The department should train telecommuters, supervisors, and co-workers on alternative meeting techniques (audio attendance, video-conferencing, and other forms of team communications).

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# APPENDIX

## TELECOMMUTING POLICIES

**A**dministration's telecommuting policies are intended to provide clarification during the telecommuting pilot program. As the pilot program continues and/or if a telecommuting program is implemented following the pilot program, these policies will be modified as the need arises.

### COMMUNICATIONS

Telecommuters and supervisors are expected to develop an effective communications strategy. Telecommuters must be reachable, within reason, during the agreed-upon scheduled work hours. Telecommuters must notify the assigned office staff if they leave their telecommuting worksite, just as they would inform the receptionist or sign out when leaving the traditional office during the workday.

### DATA

Provisions of the Minnesota Government Data Practices Act and program data privacy policies apply to telecommuters. Telecommuters and their supervisor should discuss the type and form of data that will be taken to and from the remote worksite and agree on the security and transfer process necessary to meet the needs of their division.

**Security** Telecommuters must provide reasonable security of the data and information they carry to and from their office site. Simple measures such as removing disks that contain sensitive data from the computer and placing them in secure storage may prevent a burglary from becoming a major and potentially costly security breach.

**Privacy and confidentiality** Telecommuters needing restricted-access information while working at remote sites must discuss the need with their supervisor before taking the information off-site. Telecommuters are responsible for protecting the privacy and confidentiality of data at remote work locations the same as they are at the office.

**Data retention** Data created and maintained on a telecommuter's home computer, if generated for conducting state business, is subject to the state's records management statute. This means that proper retention and disposal procedures are required and that the data remains the property of the state.

### DEPENDENT CARE

Telecommuting is not a substitute for dependent care. Telecommuters with dependents should make arrangements for care during agreed-upon work hours. On a limited case-by-case basis, the telecommuter may undertake short-term dependent care obligations provided that the employee has prior approval from the supervisor.



## **EQUIPMENT and SUPPLIES**

Equipment, software, and supplies provided by the department for use at the telecommuting worksite are for conducting state business and may not be used for personal purposes by the employee or other individuals. Employees using state equipment will take reasonable care to ensure the equipment's safety and performance.

Division managers are responsible for determining the availability and type of equipment and software needed for telecommuters. Managers need to ensure that telecommuters have adequate equipment to do their jobs, but that new equipment purchases are held to a minimum during the pilot program. Expenditures for the sole purpose of meeting individual telecommuter needs are not recommended. Instead, managers should consider the use of existing state- or employee-owned equipment and portable equipment that can be used by multiple telecommuters. If new purchases are made, costs for such equipment must be absorbed by the division's budget.

Equipment and software furnished by the department remain the property of the state and are subject to the same business use restrictions. When telecommuters use state-owned equipment, the department is responsible for the installation and testing, maintenance, and repair of the equipment.

When a telecommuter uses his or her own equipment and/or software, the department will be responsible for the installation, testing, and maintenance of that portion of the equipment that directly affects the employee's ability to telecommute. If repairs are required on employee-owned equipment, the department may pay for the repair as a direct result of telecommuting. To ensure hardware and software security for state-owned equipment, all software used for telecommuting must be approved by the supervisor and division manager before installation. Use of state-owned software may be used only by department employees and must be in compliance with all applicable software licensing agreement requirements.

The telecommuter and immediate supervisor will maintain a record of state-owned equipment, software, and other property located at the alternate worksite.

The telecommuter will return state-owned equipment, software, supplies, documents, and other property to the assigned office prior to termination of telecommuting or employment.

The telecommuter will be responsible for promptly notifying the immediate supervisor of any equipment malfunction or failure of either state-owned or employee-owned equipment. If the malfunction prevents the telecommuter from performing assigned tasks, the telecommuter must notify the immediate supervisor. The telecommuter may be assigned to perform different tasks, to assist with repair or exchange of equipment, or to proceed to another work location, depending on current work assignments.

Division managers are responsible for determining the telephone requirements for telecommuters within the division and for determining the most cost-effective means for meeting those requirements. Divisions are expected to comply with state policies regarding long-distance costs and reimbursements.

Routine office supplies necessary to complete assigned tasks at the alternate worksite should be obtained during one of the telecommuter's in-office work periods or through approved procurement procedures. Other expenses must be approved in advance by the individual normally approving such purchases. Out-of-pocket expenses for supplies normally available in the office will not be reimbursed.

## **LABOR RELATIONS, COLLECTIVE BARGAINING**

The telecommuter's work schedule (including such items as normal workday hours and/or core hours) will be determined and approved by the supervisor and division manager within collective bargaining agreement provisions and appropriate laws such as the Fair Labor Standards Act.

The telecommuter will have regularly scheduled telecommuting workdays and work hours. The work schedule will depend on the type of work to be performed, the needs of the division, the current work assignment, and the employee's personal situation. Changes to the work schedule must be agreed to by the supervisor and division manager.

If an emergency situation occurs at the telecommuting worksite and the employee is not able to continue working, the telecommuter is expected to contact the immediate supervisor. After discussion, the telecommuter may be asked to report to the assigned office or to use approved leave.

If an emergency is declared by the commissioner of Employee Relations at a specific office location, all employees who were scheduled to work at that location during the emergency period are eligible for emergency leave.

## **LIABILITY, WORKER'S COMPENSATION**

The telecommuter's designated telecommuting worksite is considered an extension of the department during the agreed-upon working hours. The department does not assume responsibility for third-party injury or property damage that may occur at the residence or within the designated workspace. Business meetings must not be held at telecommuting worksites.

The department is responsible for a telecommuter's injuries arising from job-related activities that occur within the identified telecommuting worksite and during the agreed-upon working hours. If an injury does not occur at the identified telecommuting worksite, then worker's compensation would be provided according to Minnesota Statutes, Chapter 176. If an injury occurs, the telecommuter must immediately report the injury to the supervisor.

The telecommuting workspace must accommodate any equipment to be used in performing work and the telecommuter must protect the workspace from hazards and dangers to the equipment and to the employee. With advance notice, a department representative may visit the telecommuting worksite to ensure that the equipment and work area are safe and free from hazards.

The department is responsible for insuring state-owned equipment. The telecommuter's responsibility for taking steps to minimize damage to state-owned property at the telecommuting worksite is the same as at the assigned office.

The telecommuter is responsible for insuring employee-owned equipment, unless otherwise agreed to in writing before the loss.

## **TRAINING**

Training and/or orientation is required for telecommuters, their managers, and division liaisons prior to beginning telecommuting. The purpose of telecommuting training is to prepare individuals for telecommuting by providing general knowledge about working off-site, including office safety, and detailed knowledge needed to complete the telecommuting agreement.

## **WORKSPACE**

**Remote workspace** The telecommuter is responsible for establishing and maintaining adequate workspace at telecommuting worksites. The telecommuter's remote workspace is subject to the supervisor's approval. The telecommuter will be responsible for absorbing all costs related to remodeling, initial set-up, and office furnishings.

**At-office workspace** During the telecommuting pilot, divisions may choose to leave office space as is or to experiment with space-sharing among telecommuters. Office reconfiguration costs should be kept to a minimum during the pilot.

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# APPENDIX

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## TIPS for TELECOMMUTERS

### A telecommuter should:

- establish a schedule for telecommuting work times; set aside blocks of time to work; plan to take breaks; consider doing something physical on breaks.
- be willing to share office space at the central work location.
- make a periodic list of objectives with the supervisor, make sure the supervisor is well informed of the status of the telecommuter's work, and establish a method of periodic reporting.
- make sure people at the office know how to reach the telecommuter.
- be sure that office staff knows when it is appropriate to call at the telecommuting worksite.
- make sure support staff know how to handle phone calls.
- be sure to call in regularly for messages.
- take the initiative to stay in contact with colleagues.
- try not to miss meetings at the office. Be sure to schedule telecommuting days around office meetings.
- replace the routine of getting ready for work with another routine. Instead of the traditional office routines of morning conversations, coffee runs, or even the dreadful commute that often symbolizes the beginning of the workday, some telecommuters take a walk around the block. Others play music or perform morning exercises.
- designate a place at the office to collect materials for the telecommuting day. Always take more than you think you can accomplish. Try to schedule your work so you don't need assistance from others on your telecommuting day.
- double check that you have everything you need before you leave the office.
- choose a work location, create a "going to the office" ritual, and establish a clear end-of-the-work-day time.
- train family, friends, and neighbors: Request their cooperation and explain when interruptions are acceptable.
- manage the work: Stay in contact with the office, stick to deadlines, inform your supervisor of your progress and roadblocks, attend meetings at the office, and pace yourself to avoid burnout. Follow the same rules for deadlines as in the office. If you need to deliver work to the office on a scheduled telecommuting day, it might be wise to set an earlier deadline or postpone telecommuting until another day.



# APPENDIX

## TIPS for SUPERVISORS of TELECOMMUTERS

**S**ome managers are reluctant to participate in telecommuting for two primary reasons: (1) they believe they won't be able to monitor an employee's activities and (2) they think they can't effectively manage people who are working away from direct supervision.

The key to managing telecommuters is to manage by results. Managers need to realize that if they are incapable of measuring an employee's remote performance, they are essentially managing on-site attendance, not productivity.

Contrary to the perception of many employers, instead of destroying a manager's effectiveness, telecommuting actually can serve as the vehicle for improving management skills — making them more focused on outcomes and performance management. Managers should evaluate employees based on how well they achieve mutually agreed-upon goals, rather than what they are seen doing every day.

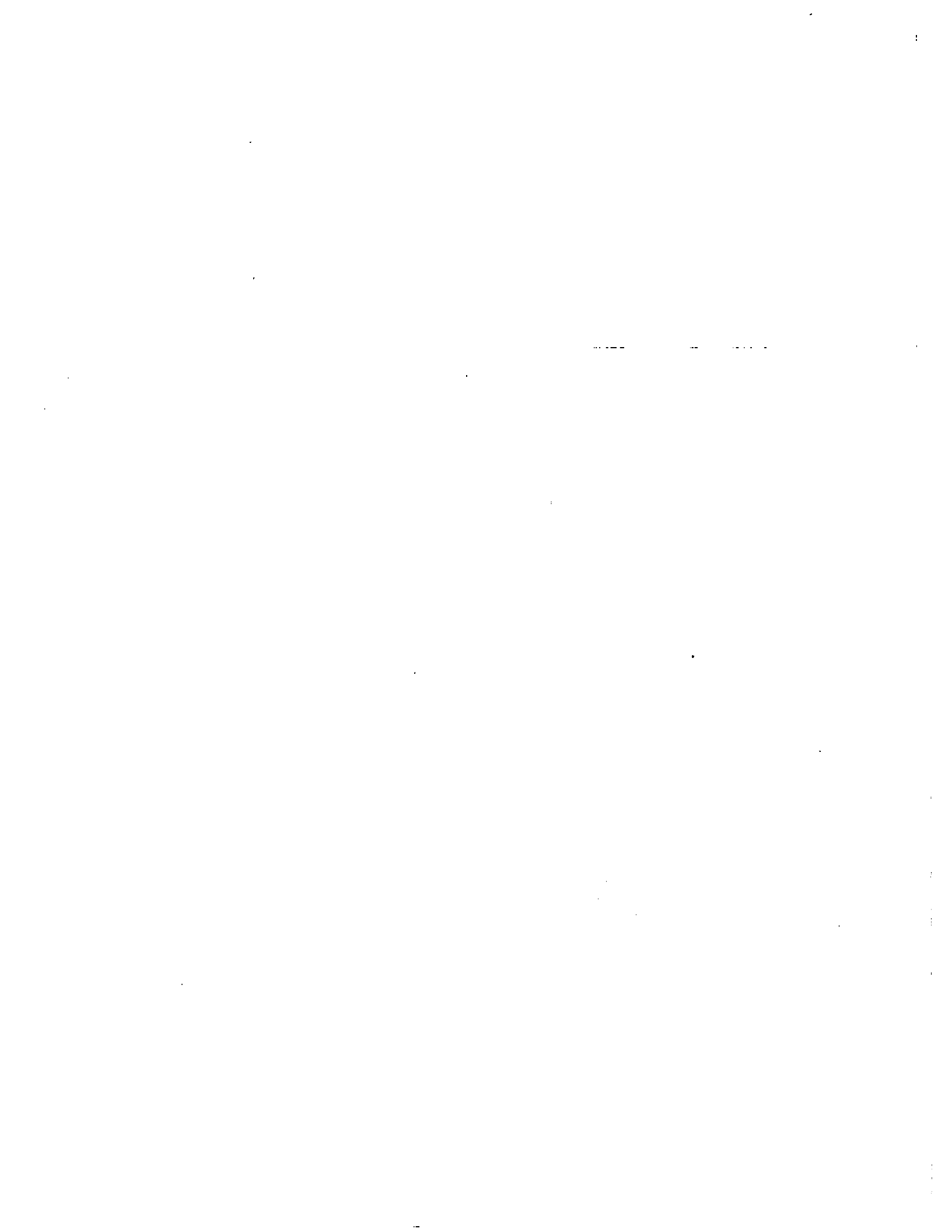
### **A supervisor should:**

- define goals and measurable objectives for telecommuters, then have a feedback mechanism of regularly scheduled progress/ valuation meetings.
- make sure all arrangements are within the bargaining unit agreements.
- complete and sign the telecommuter's understanding form.
- define concerns and responsibilities:
  - delegation
  - decision-making authority
  - frequency and format of communications
  - documentation
  - evaluation of worksite
  - knowledge of equipment, software, telecommunications
  - monitoring and feedback of work performance
  - communication and feedback with colleagues
  - development of a telecommuting team (colleague relationships; team-building)

- establish expectations (for example, work schedule, attending staff meetings, telephone conferencing, physical attendance at the central office, travel and parking guidelines).
- identify and communicate alterations needed in the telecommuter's job description and support staff positions (if needed).
- establish and communicate standards and measurements for job performance and evaluation of telecommuting work arrangements.
- jointly review telecommuting policies and procedures with the telecommuter.
- ensure that the telecommuter receives training on the supporting technology.
- establish a realistic communications and messaging plan, including:
  - daily or weekly checkpoints
  - use of telecommunications (phone, e-mail, modem, voice mail)
  - how to reach the person in an emergency
  - telephone courtesy
  - a messaging plan with in-house support and colleagues
  - routing and mail procedures
  - receptionist etiquette — What does the receptionist tell callers on telecommuting day? What does voice mail message indicate? What information is given to callers and visitors?
  - how the telecommuter will get in touch with the supervisor
  - handling sick time (for example, telecommuter calling into the office)
- consider the schedules of all telecommuters while negotiating telecommuting days, in order to provide adequate coverage for the office.
- resist calling a telecommuter frequently.
- remember to include the telecommuters in communications, materials distribution, and all other associations with employees.
- set realistic deadlines.
- address problems.
- set attainable goals.
- avoid close supervision.
- assign non-telecommuters the usual amount of work in the office while telecommuters are telecommuting.

- make it clear that telecommuters have assignments to perform and deadlines to meet the same as if they were in the office; focus on goals and time lines — on results, be flexible, trusting, and supportive of their telecommuters. (Supervisors of telecommuters have discovered that they know more about the work an employee is doing by shifting the focus from how much work the employee looks like he/she is accomplishing to how much he/she actually is accomplishing. By focusing on the product instead of the work activity, supervisors find they are better able to communicate clear expectations to employees. The resulting agreement on job expectations often leads to increased productivity and job satisfaction.)
- work with the telecommuter to prepare a periodic list of objectives and establish regular times to review the progress of tasks. Clearly communicate work expectations and due dates.
- provide telecommuters with timely and ongoing feedback, in person, by telephone, or in a note.
- make sure telecommuters understand that they cannot make extra work for others in order to telecommute.
- understand that telecommuting is not for everyone; an individual who really enjoys the social aspects of the office might not be the kind of person who would want to telecommute.
- make sure the job is suitable for telecommuting.
- establish an atmosphere of trust and open communications.
- reinforce the need for teamwork.
- watch for signs that telecommuting may not be working.





# APPENDIX

## QUESTIONS and ANSWERS for TELECOMMUTERS

**Q. *What is telecommuting?***

- A.** Telecommuting is a management tool available to all state agencies, boards, and commissions. Telecommuting allows employees to work at home, or at a state office closer to home, one or more days per pay period. Telecommuting offers a working environment with fewer distractions that may result in better job performance, improved employee morale and job satisfaction, and reduced absenteeism and sick leave usage.

**Q. *Is telecommuting an employee benefit?***

- A.** Offering the opportunity to work at a telecommuting worksite is a management option; telecommuting is not a universal employee benefit. Supervisors may select employees who have the abilities and job tasks that are appropriate to telecommute. An employee's participation in the telecommuting program is voluntary.

**Q. *Who may be selected to telecommute?***

- A.** Successful telecommuters are self-motivated, organized, results-oriented employees who work well independently. They need minimal supervision and are successful in setting priorities, meeting deadlines, and taking the initiative to communicate with supervisors and co-workers.

**Q. *What kinds of jobs are telecommutable?***

- A.** An employee with information-handling tasks may be a candidate for telecommuting. Jobs are a collection of tasks. Some tasks must be done at the office. Tasks that may be done away from the office are called telecommutable tasks. The amount of telecommuting an employee may do depends on how many telecommutable tasks he or she has each week and whether the equipment required to accomplish those tasks is available. It is not necessary to have a computer to telecommute; many tasks, such as reading, thinking, planning, and making phone calls, do not require computers and may be saved for a telecommuting day.

**Q. *What if telecommuting doesn't work out?***

- A.** Both the telecommuter and the supervisor should understand that if telecommuting does not work out for an individual, it does not in any way reflect on that individual's ability to perform his or her job. The employee, supervisor or manager may terminate telecommuting without cause.

**Q. *What about the state's liabilities for injuries at telecommuting worksites?***

- A.** Because the employee's telecommuting worksite is an extension of the workplace, the state's liability for job-related accidents will continue to exist during the agreed-upon work hours. A designated work space should be maintained by the telecommuter in a clean, professional, and safe condition at the telecommuting worksite.

**Q. *Do all telecommuters need computers?***

- A.** No. Many employees have information-handling tasks that do not require computers. These tasks may be collected for the telecommuting day.

**Q. *May I use my own computer?***

- A.** Many employees find the opportunity to telecommute so worthwhile that they choose to use their personal equipment. Whether you use your personal equipment is your own choice! Many divisions have computers that people can take to the telecommuting worksite.

**Q. *What if my supervisor wants me in the office on my scheduled telecommuting day?***

- A.** Whatever days are selected to telecommute, they are not carved in stone. Telecommuters need to be flexible enough to respond to office needs even if that means not telecommuting on a scheduled telecommuting day. Telecommuters should also be willing to come in during the middle of a telecommuting day if that's the only way to solve a problem.

# APPENDIX

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## TELECOMMUTER UNDERSTANDING and TERMS and CONDITIONS FORMS



# Department of Administration - Telecommuter Understanding

## Telecommuter Work Location:

Employee name		Home phone number	
Remote work location: <input type="checkbox"/> Employee residence <input type="checkbox"/> Other (specify)			
Remote work address	City	State	Zip
Description of designated work space at remote work location:			

## Schedule:

Specify days and core hours:	Telecommuting start date:
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## Equipment:

Administration equipment (such as PC, modem, dictaphone, calculator, telephone), software, and data (if any) provided for use at remote work location: (attach sheet if needed) Description	Fixed Asset Number	Serial Number	New Purchase? (Yes or No)	If new, cost

Information systems the employee will access from remote work location (if any):
--

Non-Admin equipment, software, and data to be used for Admin telecommuting: Items

## Communications:

Frequency and type of contact between the employee and their supervisor on telecommuting days will be:
--

## Conditions:

List specific conditions/expectations/performance measures/agreed upon by the employee and their supervisor: (attach sheet if needed)
---

My signature below indicates that I have read and accepted the terms and conditions specified on the reverse side of this form, as well as any related state laws and Admin policies involving telecommuting.		Approvals:	
Employee	Date:	Supervisor	Date:
		Division manager	Date:
Copy to employee, supervisor, Human Resources Division, telecommuting co-chair and division manager 3/96		Assistant commissioner	Date:

## Telecommuting Terms and Conditions

I agree to perform services for the Department of Administration as a telecommuter. I understand that telecommuting is a discretionary management tool, is voluntary, and may be terminated at any time by the department or me.

I agree to develop an effective communications strategy with my supervisor and follow that strategy throughout my telecommuting activities.

I agree that my duties, obligations, responsibilities and condition of employment with the department are not affected by telecommuting. My salary, retirement, benefit, and state-sponsored insurance coverage also are not affected by telecommuting.

I agree that my work hours, overtime compensation, vacation, sick leave, and other terms and conditions of employment will conform with the current collective bargaining agreement and meet the terms agreed upon with my supervisor.

I agree that telecommuting is not a substitute for dependent care.

I agree to restrict use of any state-provided equipment, software, data, and supplies, located in my remote work site, to the sole use of conducting state business.

I agree to designate a remote work space, subject to the approval and periodic review by a department representative. The work space will accommodate any equipment to be used in my work and I will protect the work space from hazards and dangers that could affect the equipment and me.

In the event of equipment malfunctions, I agree to notify my supervisor immediately. If the malfunction precludes me from working on my telecommuting work assignment, I understand that I may be assigned other work, be asked to report to the office work site or be asked to take approved leave pending the repair of the equipment.

I agree that my remote work space is considered an extension of the department's work space and, therefore, I am governed by the provisions of workers' compensation during the agree-upon work hours. If I have a job-related accident during my telecommuting hours, I will report it to my supervisor immediately. I agree I will not conduct state business with third parties in my remote work site.

I agree that all products, documents, reports, and data created as a result of my work-related activities are owned by the department and will be returned to the department as requested.

I agree to comply with the department's policies on telecommuting. I understand that failure to comply with these policies may result in termination of the telecommuting understanding.

**Tennessee Warning:** Minnesota Statutes 1994, Section 15.95, Subdivision 10, requires the Information Policy Office within the Department of Administration to review and approve state agency telecommuting plans related to capital investments in office space. The Department of Administration is conducting a telecommuting pilot in order to 1) promote telecommuting, 2) gain knowledge and experience with telecommuting, and 3) use that knowledge and experience to assist other state agencies in preparing telecommuting plans.

The information in the Telecommuter Understanding form is being collected to document specific individual telecommuting work arrangements for the pilot project. The information you provide on this form will be used by you and your supervisor to maintain a current record about your specific work location and schedule, equipment used, communications, and other conditions. Some of the information will also be used by members of the Department of Administration's Telecommuting Committee to analyze activities and evaluate the success of the project. Summary data that does not identify you as an individual may be released to others. You are not legally required to provide this information. However, if you do not provide this information, your supervisor may not be able to 1) determine that you are willing to telecommute, and 2) determine what conditions may be necessary for you to be successful when telecommuting. If you do provide this information, you and your supervisor can reach agreement and document the conditions relating to your telecommuting work arrangement.

This information may be made available to your supervisor, division manager, assistant commissioner, the department attorney, the Human Resources Division, the members of the Administration Telecommuting Committee, the legislative auditor, and by court order.