

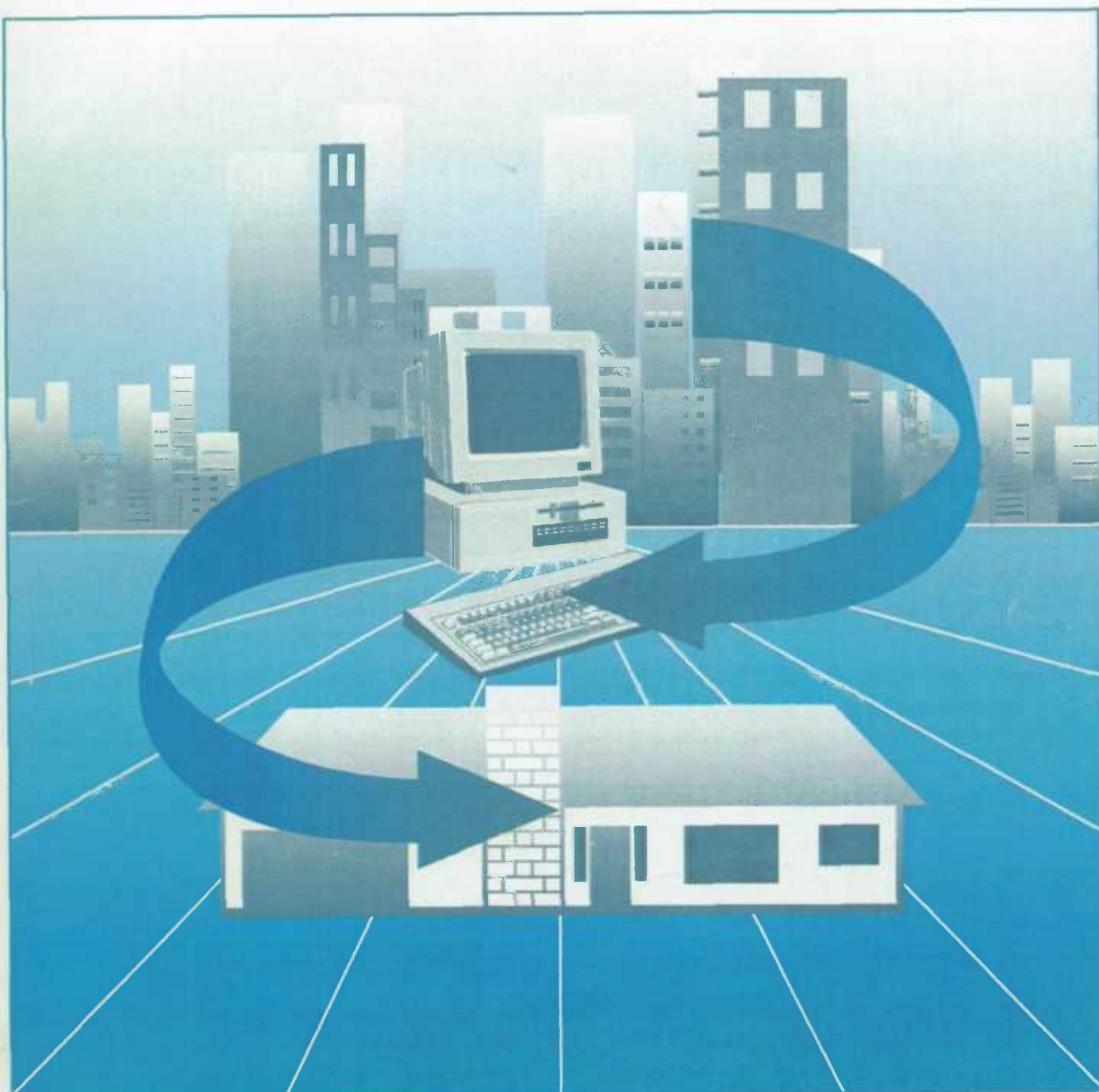
C3
Product No. 75F0008XPE

Summary Report of Statistics Canada's Telework Pilot

STATISTICS STATISTIQUE
CANADA CANADA

FEB 26 1996

LIBRARY
BIBLIOTHÈQUE



Statistics Statistique
Canada Canada

Canada

How to Order This Report

The Summary Report of Statistics Canada's Telework Pilot may be purchased by contacting:

Greg Maika
Telework Pilot Project Manager
4th floor - A5
Jean Talon Bldg
Statistics Canada
K1A 0T6

Telephone: 1 (613) 951-3949
Fax: 1 (613) 951-0686

Internet: maika@statcan.ca

Nicole Charbonneau
Census Reference Development Officer
4th floor - A5
Jean Talon Bldg
Statistics Canada
K1A 0T6

Telephone: 1 (613) 951-2058
Teleworkplace: 1 (613) 679-1324
Fax: 1 (613) 951-0686

Internet: charbni@statcan.ca

The cheque or money order should be made payable to the Receiver General for Canada. Please refer to the Order Form at the back of the report.

Standards of Service to the Public

To maintain quality service to the public, Statistics Canada follows established standards covering statistical products and services, delivery of statistical information, cost-recovered services and service to respondents. To obtain a copy of these service standards, please contact your nearest Statistics Canada Regional Reference Centre.



Statistics Canada

Summary Report of Statistics Canada's Telework Pilot

Published by authority of the Minister responsible for Statistics Canada

©Minister of Industry, Science and Technology, 1995

All rights reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission from Licence Services, Marketing Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

January 1995

Price: Canada: \$35.00
United States: US\$42.00
Other Countries: US\$49.00

Product 75F0008XPE

Ottawa

La version française de cette publication est disponible sur demande (75F0008XPF)

Preface

In today's changing workplace, flexible work arrangements have been gaining popularity as a way of helping employees achieve a better balance between their work and home lives. Telework has been advanced as an alternative work arrangement with the potential to provide benefits both for employees and for their organizations. For individuals, there is the advantage of increased time to spend at home and a reduction in work-related expenses such as transportation and meals. Organizations may realize benefits in the form of productivity gains, a smaller central operating facility and an enhanced ability to attract and retain quality employees.

To determine the suitability of telework to the needs of the Department and its staff, Statistics Canada launched a telework pilot in the summer of 1993. The trial's design included a comprehensive research evaluation of the effectiveness of the program for the teleworkers involved, for their supervisors, for co-workers of the program participants, and for the Department as a whole.

It should be noted that the pilot was conducted with participants from 8 of some 59 divisions in Statistics Canada.

Acknowledgements

I would be remiss if I were not to acknowledge the "major" contributions of several individuals as well as groups of people. These people provided the support necessary to manage the Telework Pilot test at Statistics Canada and without their involvement, this report would not have been possible.

Thanks goes out to Nicole Charbonneau whose tireless effort in the co-ordination of many aspects of both the preliminary work as well as the pilot should be acknowledged. Diane Fournier was instrumental in the co-ordination, review, distribution and collection of all telework surveys for the pilot.

Thanks should also go to the members of the Statistics Canada Telework Steering Committee including Luc Albert, Wayne Baxter, Barbara Bova, Ernie Boyko, Ken Brown, Marcelle Dion, Phillip Jorre-de-St. Jorre, Colleen Lahey, Marietta Morry, Lee Reid and Craig Seko.

Finally, I would like to extend my gratitude to all those who participated in the pilot for without their involvement as teleworkers, telemanagers, co-workers and colleagues, this evaluation could not have been conducted.

Greg Maika
Telework Pilot Project Manager
Statistics Canada

Table of Contents

	Page
Introduction	9
Methodology	11
A Profile of Statistics Canada Teleworkers and Their Supervisors	11
Telework's Effects on the Nature of Work	14
Telework's Effects on Communication	16
Telework's Effects on Relationships	17
Telework's Effects on Productivity	18
Measuring Productivity	19
Effects of Telework on Home Life	20
Home Work Environment	21
Advantages and Disadvantages of Telework	21
For Teleworkers	21
For Supervisors	23
For Statistics Canada	24
Statistics Canada's Support for Telework	25
Outcome of Focus Group Sessions	27
Recommendations for Future/Continued Telework Programs	27
Conclusion	29
Appendix A: Costs	31
Appendix B: Savings	39
Appendix C: Teleworker and Supervisor Quotes from Interviews	45

List of Tables

	Page
Table 1. Average Number of Days at Home Per Week	11
Table 2. Average Commuting Time (One Way) for Teleworkers	12
Table 3. Changes in Communication (Reported by Teleworkers)	16
Table 4. Changes in Communication With Telework Employees (Reported by Supervisors)	16
Table 5. Changes in Intra-organizational Relationships Due to Telework	17
Table 6. Suitability of Teleworker for Different Job Tasks (Reported by Teleworkers)	19
Table A1. Technical and Non-technical Equipment Costs - Fully Equipped Office	32
Table A2. Equipment Requirements - Fully Equipped Office	34
Table A3. Equipment Costs - Partially Equipped Office	35
Table A4. Equipment Costs - Office With Minimal Equipment	36
Table A5. Teleworkplace Maintenance Costs by Month for a Fully Equipped Office	37
Table B1. Utility of Space	39
Table B2. Potential Overhead Costs Savings - Teleworking Five Days a Week	40
Table B3. Potential Overhead Costs Savings - Teleworking Four Days a Week	40
Table B4. Potential Overhead Costs Savings - Teleworking Three Days a Week	41
Table B5. Potential Overhead Costs Savings - Teleworking Two Days a Week	41
Table B6. Potential Overhead Costs Savings - Teleworking One Day a Week	41
Table B7. Teleworker Costs Before and While Teleworking (4 Days a Week)	43
Table B8. Commuting Time for a Long-distance (100 Kilometres One Way) Teleworker (4 Days a Week)	43
Table B9. Kilometres Before and While Teleworking (4 Days a Week)	44

List of Figures

	Page
Figure 1. Job Characteristics of Telework Participants and Supervisors	13
Figure 2. Personal Characteristics of Telework Participants	14
Figure 3. Primary Work Responsibilities of Teleworkers	15
Figure 4. How Supervisors Measured Productivity	20
Figure 5. Advantages of Telework (Reported by Teleworkers)	22
Figure 6. Disadvantages of Telework (Reported by Teleworkers)	23
Figure 7. Advantages and Disadvantages of Telework (Reported by Supervisors)	24
Figure 8. Advantages and Disadvantages of Telework for Statistics Canada (Reported by Supervisors)	25
Figure 9. What Support Would Teleworkers and Their Managers Like from Statistics Canada	26

Introduction

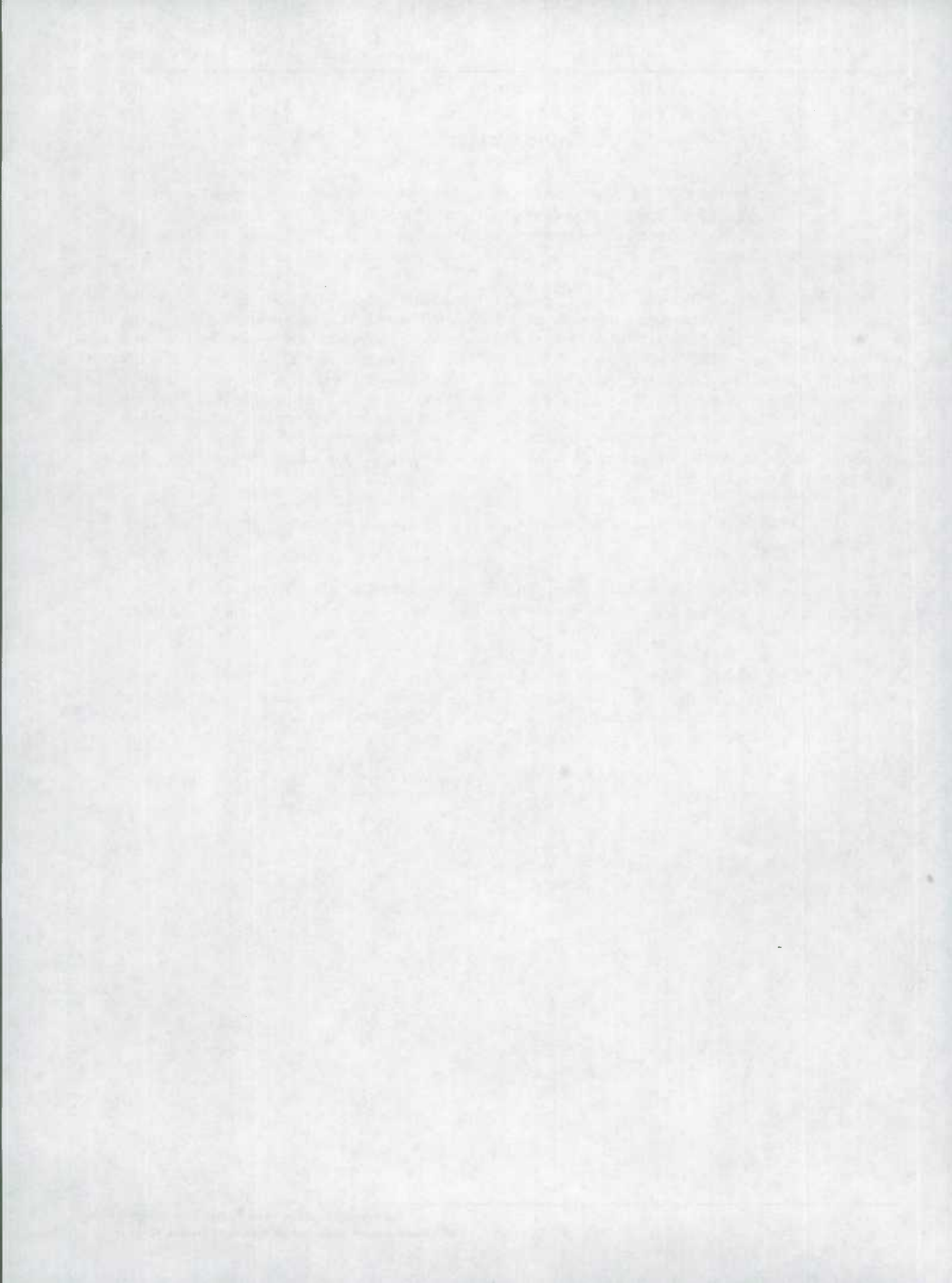
This summary report is the culmination of more than two and a half years of work related to the development and implementation of the Statistics Canada Telework Pilot and has been written by Dr. Linda Duxbury and Dr. Christopher Higgins under the direction of Greg Maika, Telework Pilot Project Manager, Statistics Canada. The pilot took place between June 1993 and January 1994.

Telework was a relatively new concept in the Canadian Federal Public Service back in 1992. However, there were several publications and papers available that provided some information on this concept and its successful implementation in many forward-looking organizations throughout the world but more specifically in the United States. It appeared that there was potential for the application of this alternative work arrangement in Statistics Canada. Greg Maika of the Census Operations Division of Statistics Canada organized a "Working Group" that undertook a study on the concept of Telework to determine if there were potential benefits to both employee and employer with its implementation at Statistics Canada. The working group prepared a paper recommending that a telework pilot test be conducted. This recommendation was presented to the Statistics Canada's Policy Committee (Chief Statistician and six Assistant Chief Statisticians) and was accepted.

The data collected in this evaluation come from participants representing 8 of the 59 divisions in Statistics Canada.

Dr. Linda Duxbury and Dr. Christopher Higgins were hired to evaluate the Telework Pilot. They have conducted extensive research in the area of work and family, including the evaluation of telework programs.

Dr. Linda Duxbury is an associate professor in the School of Business at Carleton University in Ottawa, Ontario, Canada. Dr. Christopher Higgins is an associate professor in the School of Business at the University of Western Ontario, Canada. The evaluation methodology that they developed and employed is outlined in this report.



Methodology

Data were collected by questionnaire and through telephone interviews with 20 teleworkers and 17 telework supervisors involved in the telework program at Statistics Canada between June 1993 and January 1994. Through a longitudinal design, data were collected prior to the implementation of the program and again six months after the trial had begun. Questionnaires were also completed by 23 co-workers of the teleworkers involved. Focus groups were conducted with teleworkers and supervisors at roughly the mid-point of the pilot study.

A Profile of Statistics Canada Teleworkers and Their Supervisors

Teleworkers and managers involved in the pilot were men and women working in the National Capital Region, primarily in professional and managerial positions. The majority worked with Census Operations Division or Social Survey Methods Division.

Women represented 75% of the telework study group. Forty-five percent (45%) of teleworkers had university degrees and over 80% had personal incomes of \$40,000 or more. The mean age of the participants was 41 and the average tenure with Statistics Canada was 14 years. Sixty-five percent (65%) of participants had children living at home, and over 55% had sole responsibility in the family for the children's care (i.e. did not share responsibility with a spouse). Most teleworkers worked at home an average of one or two days a week.

Table 1. Average Number of Days at Home Per Week

No. of Days	Percentage
1	35.0
2	40.0
3	15.0
4	10.0
5	0.0

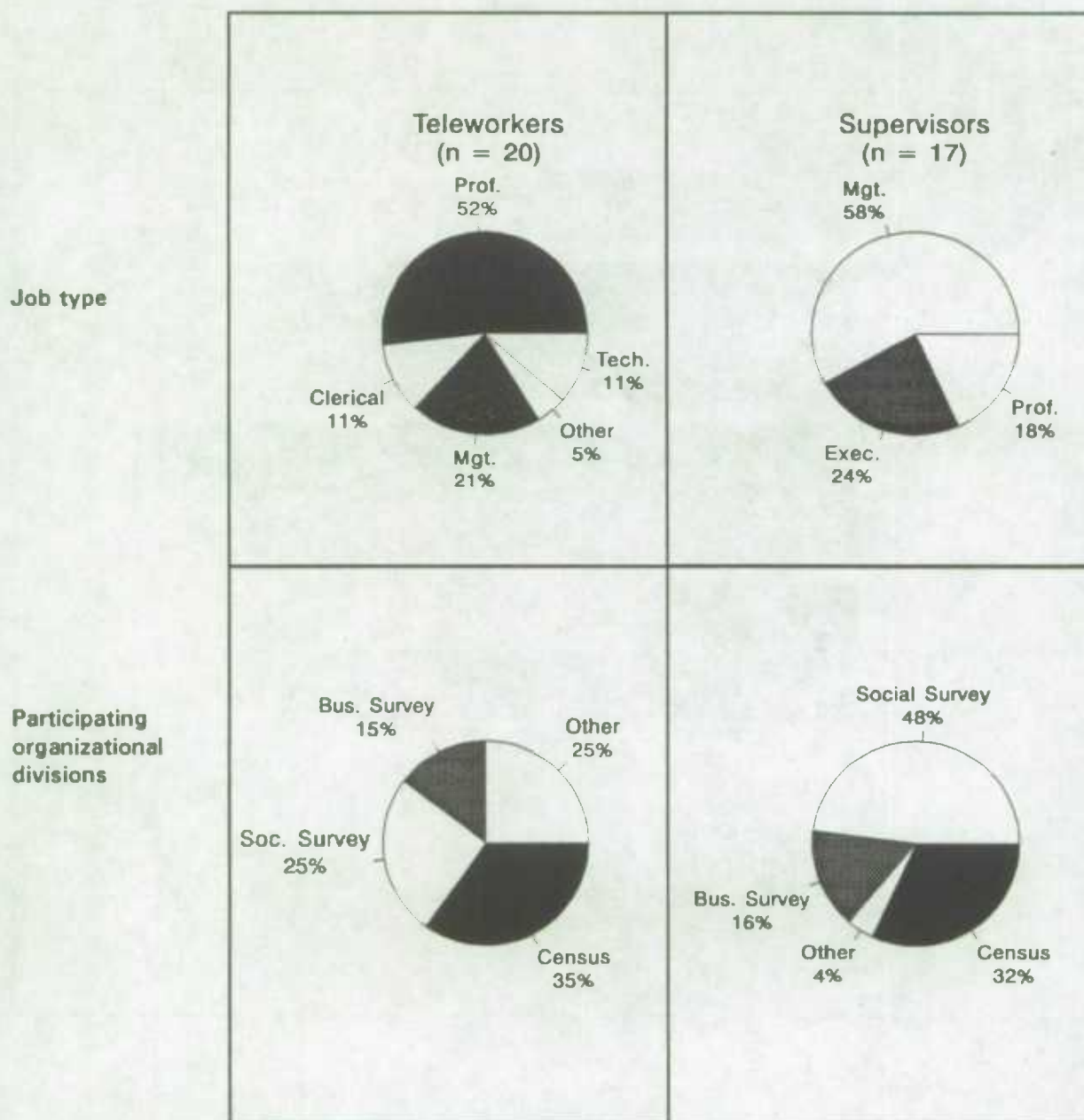
Teleworkers lived, on average, 23 kilometres from their office and spent more than an hour each day (between 35 and 40 minutes each way) commuting.

Table 2. Average Commuting Time (One Way) for Teleworkers

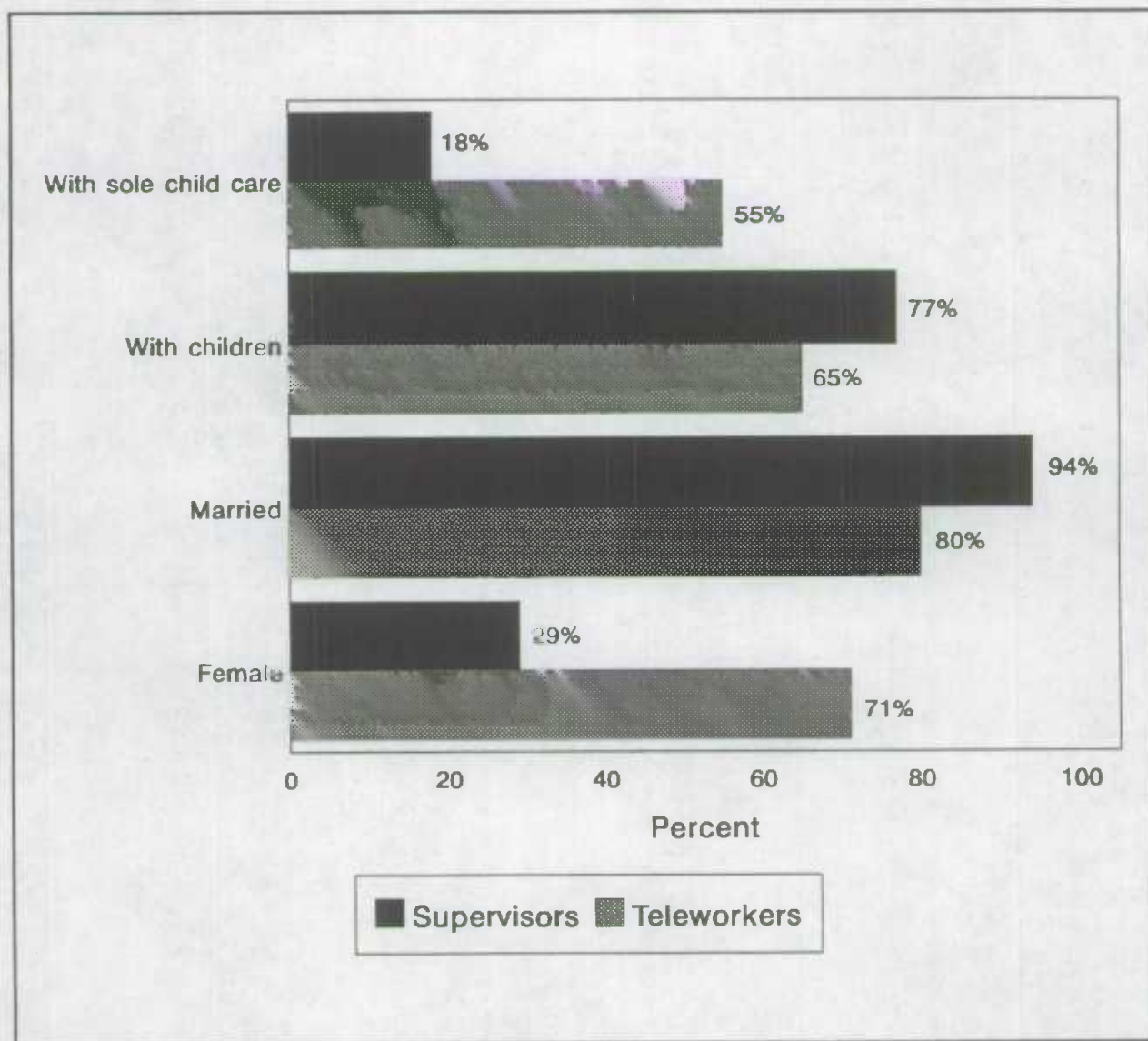
Commuting	Time
Home - Office (in km)	23.1
Home - Office (in minutes)	34.5
Office - Home (in minutes)	39.5
Transportation costs per month	\$101.0

Telework supervisors were on average older (mean age 44), better educated (81% held degrees) and more tenured (average tenure 17 years) than the teleworker group. Women represented 29% of the supervisor group. Although supervisors were, in fact, more likely than teleworkers to have children at home (77% of supervisors had children, compared with 65% of teleworkers), they were much less likely to be responsible for their care (only 18% of supervisors had sole responsibility for child care at home, compared with 55% of teleworkers). The majority of managers involved had only one direct report who teleworked.

Figure 1. Job Characteristics of Telework Participants and Supervisors

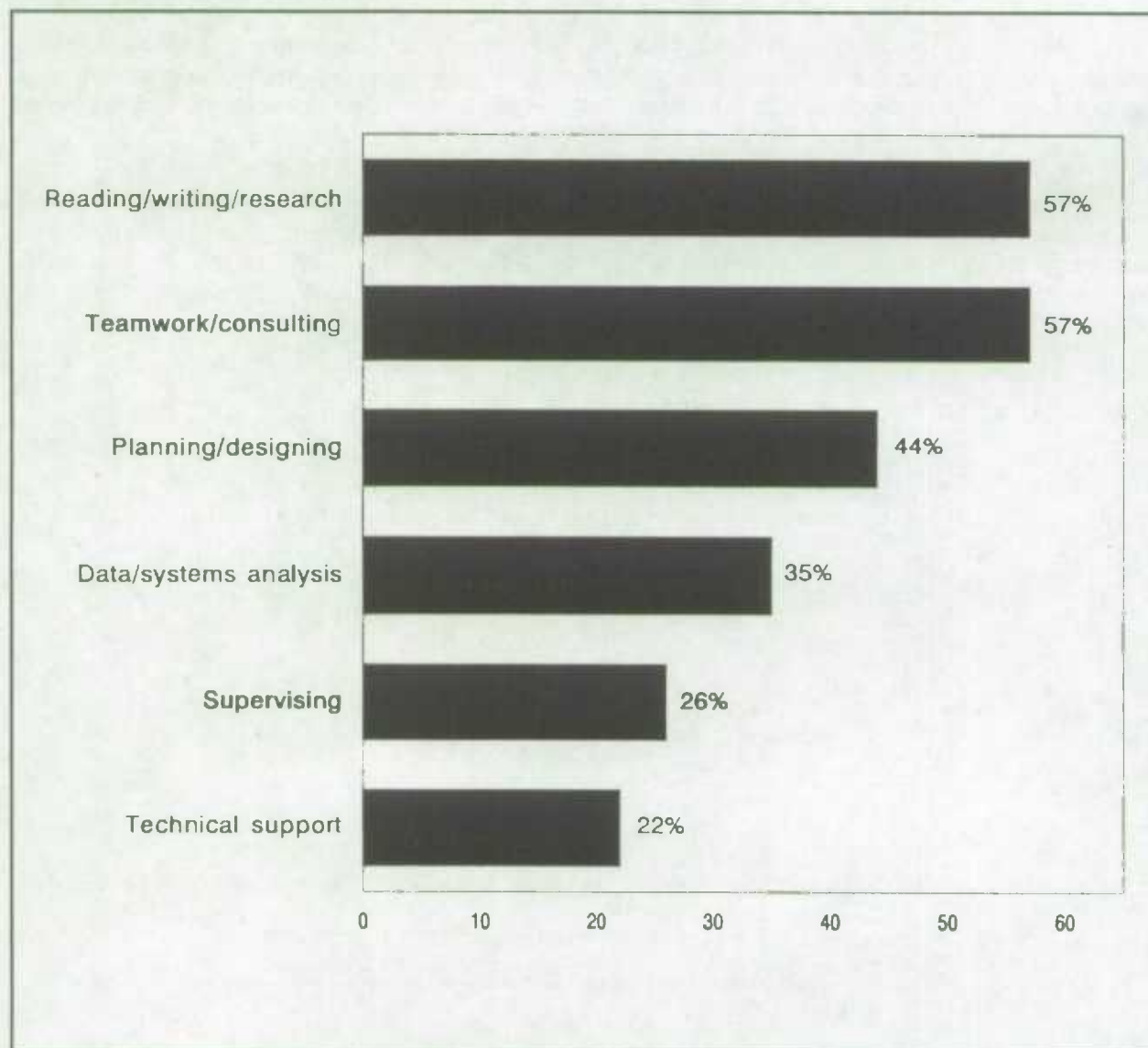


Note: "Other" organizational divisions include Agriculture Division, Housing, Family and Social Statistics Division, Library Division, Prices Division and Survey Operations Division.

Figure 2. Personal Characteristics of Telework Participants

Telework's Effects on the Nature of Work

A large proportion of teleworkers (57%) identified their primary job tasks as reading, writing and conducting research. Not surprisingly, these are "portable" tasks and ones that are best performed in a quiet environment, free from interruptions. However, an equal proportion of teleworkers identified teamwork and consulting as primary tasks, jobs that would normally be difficult to handle at home. Teleworkers explained during the telephone interview that they adapted to these demands by dealing with interactive responsibilities on their office days and reserving the more independent work for telework days.

Figure 3. Primary Work Responsibilities of Teleworkers

Note: Multiple responses were accepted.

Overall, 83% of participants said that telework had not changed the nature of their work. Managers were also unlikely to report any effect on their work: 75% of managers said that supervising teleworkers had not changed the nature of their own jobs. Many supervisors who claimed their work had changed somewhat reported that telework had in fact helped them become better organized and more structured in their dealings with the employees involved.

Telework's Effects on Communication

Overall, communication remained strong over the course of the program. Few participants reported any change in the way they communicated with supervisors, clients or subordinates as a result of telework. Most teleworkers noted that they already had an adequate communication system in place, one that worked equally well for work done at home.

A minority of participants, however, mentioned a change in the nature of communication with co-workers: 33% of teleworkers noted that they communicated less frequently with colleagues and relied more on the telephone and less on face-to-face meetings. For many of these teleworkers, however, fewer communications with colleagues meant fewer interruptions and more time to spend on their tasks. This was one of their goals in embarking on telework.

Table 3. Changes in Communication (Reported by Teleworkers)

Direction of Communication	Percent of Teleworkers Reporting No Effect on Communication
With clients	94
With subordinates	83
With supervisor	79
With co-workers	66

Table 4. Changes in Communication With Telework Employees (Reported by Supervisors)

Change Reported	Percent of Supervisors
Yes	63
- more by phone	58
- more structured	50
- less frequent	42
No	37

Note: Multiple responses were accepted.

Managers were considerably more likely than teleworkers to report a change in communication as a result of having an employee who teleworked. Only 37% of managers said there had been no change since their employee began teleworking. Again, however, the majority felt that the change involved more structured communication and fewer face-to-face meetings.

Telework's Effects on Relationships

The large majority of teleworkers perceived that telework had not affected their relationships with supervisors, subordinates, co-workers or clients. Participants attributed the lack of change to the fact that they communicated well and remained very accessible when at home. In fact, most participants reported that client service was preserved to the extent that the program was totally transparent to clients. ("My calls are forwarded to my home phone. The people who rely on me don't even know I'm not at the office.")

Managers also felt that relationships with teleworkers had remained solid: 79% of supervisors indicated that they had not changed what they expected from their employees who teleworked, and an equal proportion said their attitudes toward them also remained unchanged. Most supervisors reported that their teleworkers were individuals in whom they had confidence, and that a flexible work arrangement would not affect their feelings. ("I've always had high expectations of this employee and telework won't change that.")

Table 5. Changes in Intra-organizational Relationships Due to Telework

A. Teleworkers	
Relationship With	Percent of Teleworkers Reporting No Effect on Relationship
Subordinates	91
Clients	89
Co-workers	74
Supervisors	66

B. Supervisors	
Aspect of Relationship	Percent of Supervisors Reporting No Effect
Attitude toward teleworker	79
Expectations of teleworker	79

Telework's Effects on Productivity

Various measures related to productivity were included in the questionnaire administered to teleworkers. The following results compare teleworkers' responses at Time 2 (after six months of teleworking) with their responses prior to starting to telework.

Teleworkers:

- were better able to meet deadlines;
- took significantly fewer family leave days;
- lost significantly less time due to family responsibilities;
- had significantly fewer telephone interruptions;
- were less likely to have work interrupted due to equipment failure;
- were less likely to feel that work-family problems reduced their productivity;
- were less likely to feel that stress from commuting reduced their productivity.

Supervisors were also asked through their questionnaire to evaluate any changes in their employees' productivity since they had begun telework.

Supervisors:

- reported that telework had reduced lateness;
- were significantly less likely to feel that teleworkers spent unproductive time on the job;
- were less likely to feel that supervising teleworkers would reduce their own productivity.

Telephone interview data provided more detail about the effects of telework on productivity and identified which tasks were more appropriate for telework. As expected, participants felt telework was suited to tasks requiring large blocks of uninterrupted time, high levels of concentration and little or no access to specialized equipment. ("You don't need other people for this task"; "The kind of work I do at home is 'cerebral'... I do it best when I can work on my own"; "It makes sense for this type of work. All I need is paper, a pencil and my brain.")

Table 6. Suitability of Teleworker for Different Job Tasks (Reported by Teleworkers)

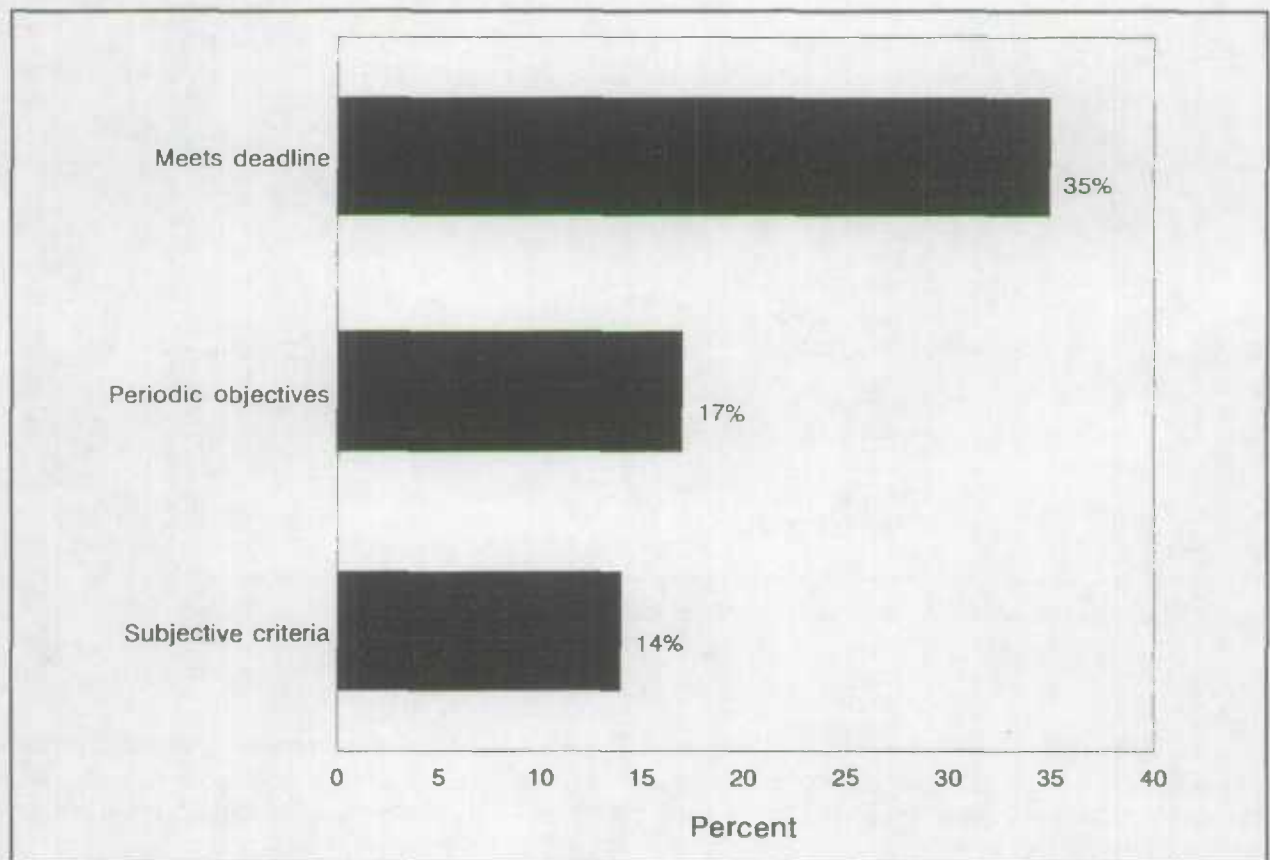
Tasks	Percent of Teleworkers Identifying Task
Can Be Done More Productively at Home	
• Reading/writing/research	81
• Planning/designing	31
• All primary tasks	26
• Writing computer programs	19
• Data/systems analysis	13
• Accounting/budgeting	13
Cannot Be Done More Productively at Home	
• Teamwork/consulting	69
• Teaching/training/presenting	13

Note: Multiple responses were accepted.

Eighty percent (80%) of supervisors reported during the telephone interview that supervising teleworkers had not affected their own productivity. These supervisors indicated that their employee was as available (or more available) at home as at the office. ("It makes no difference to me whether she is across the hall or across town. All I have to do is pick up the phone.")

Measuring Productivity

The most common approach used by managers to measure productivity was to track the teleworker's ability to meet deadlines (a measure used by roughly one third of supervisors). Some used periodic objectives, others used informal, subjective criteria. Some managers pointed out that measuring the productivity of professionals was no easy task, and that projects were long-term, with results "too far up the road to be identified during the course of a trial like this". Only 3% of supervisors felt their teleworkers' productivity was quantifiable by strictly objective criteria.

Figure 4. How Supervisors Measured Productivity

Note: Multiple responses were accepted.

Effects of Telework on Home Life

Questionnaire data on teleworkers' non-work attitudes and time use revealed that telework:

- reduced role overload;
- reduced work-family interference;
- increased teleworkers' ability to manage individual and family time;
- made it easier to commute to work;
- had a favourable effect on home life/other family members;
- did not increase the amount of time teleworkers spent in home chores, errands or activities with their children (i.e. teleworkers were not spending their work time on personal matters).

Home Work Environment

Most teleworkers were quite satisfied with the physical work space they had established at home. Most had home offices or a spare room that suited their work needs, although 29% had no defined office area and relied on a corner of a room or "anywhere they could find a comfortable spot". Regardless of the work space available, privacy was not a problem: 79% of teleworkers found their privacy satisfactory and 17% indicated they had more privacy at home than at the office. Most teleworkers were alone in their homes while they worked. Teleworkers were particularly happy with the availability of windows and the quality of light at home. ("I work in a cubicle at the office -- Having a window at home is a luxury"; "Natural light and fresh air are real energizers.")

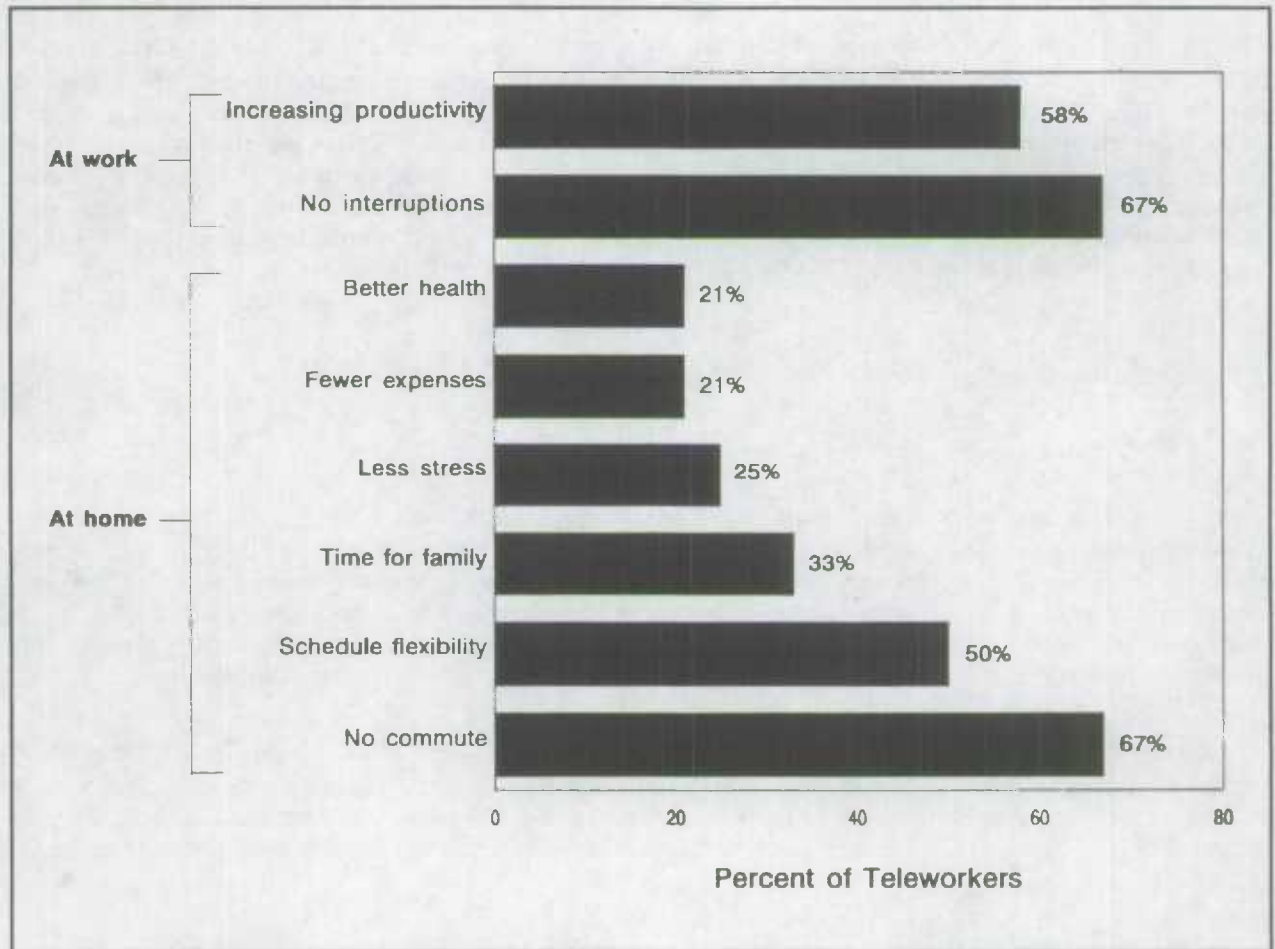
Advantages and Disadvantages of Telework

For Teleworkers

Teleworkers were asked during the telephone interview to identify the advantages and disadvantages of telework, both at work and at home. The primary work advantages were better concentration due to the quiet atmosphere ("We have an 'open concept' floor layout at the office. The noise level is incredible. Anything that requires more than a three-minute attention span, well...") and increased productivity. ("With telework, I never kill time. I just log off when things are going bad instead of looking at the clock or socializing. When I'm ready to focus again, I log back on.")

Personal advantages were much more numerous than those related to work. Not having to commute was the number one personal advantage for teleworkers. Participants also enjoyed the freedom to set their own hours. ("It's nice to be able to have an hour for a personal appointment or something that I can easily make up later in the evening -- so I can choose my own hours that way.")

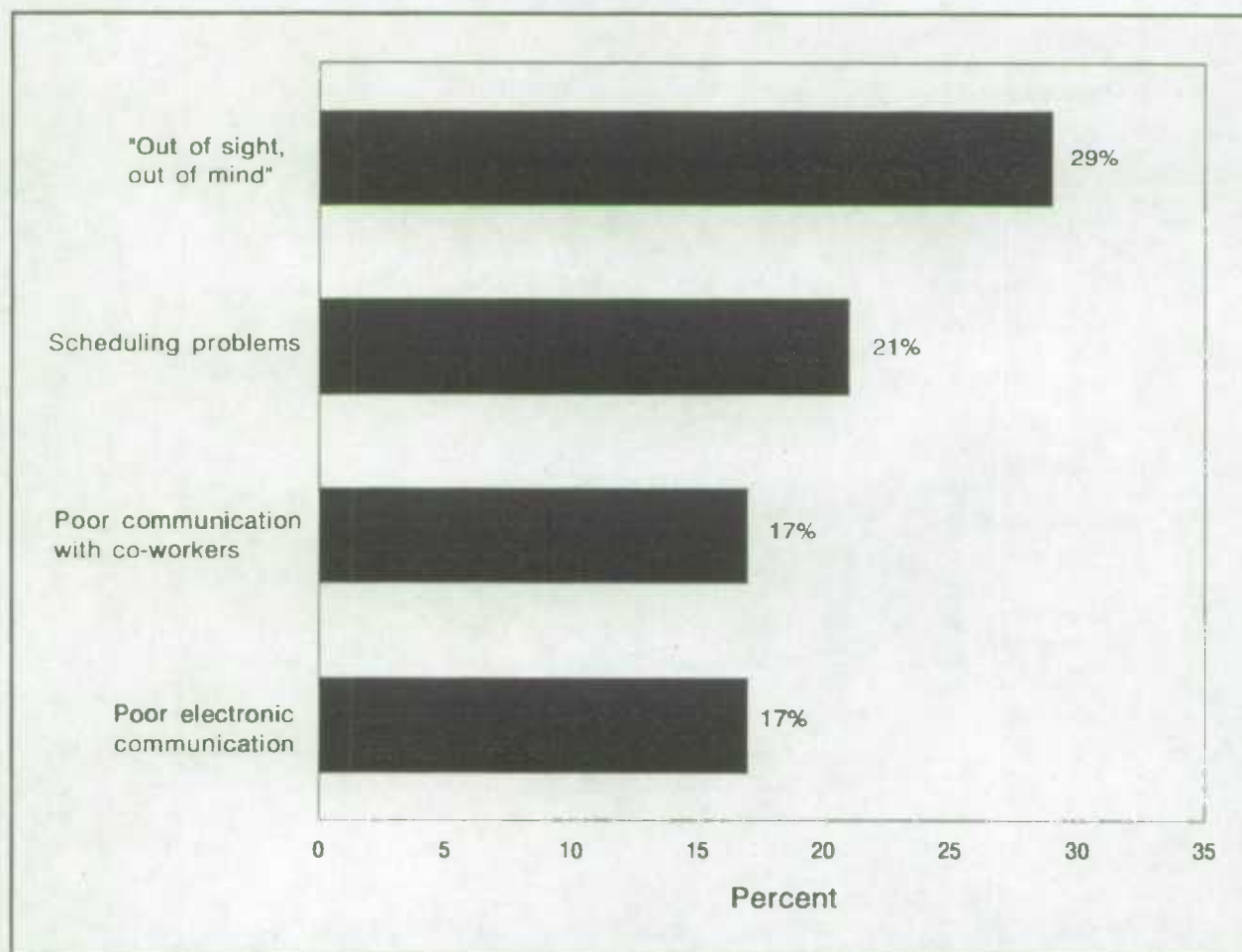
Figure 5. Advantages of Telework (Reported by Teleworkers)



Note: Multiple responses were accepted.

Teleworkers cited far fewer disadvantages than advantages. Disadvantages centred around being somewhat "out of the loop". ("Sometimes I feel 'out of sight, out of mind' -- that work life is passing me by, and that decisions are going ahead without me.") Teleworkers also sensed difficulties in the area of communication (scheduling meetings, communicating with co-workers, inadequate electronic communication, etc.).

Most teleworkers (75%) were unable to identify any personal disadvantages. A very small proportion (13%) felt that family members initially made demands on their time. These problems seemed to work themselves out fairly quickly.

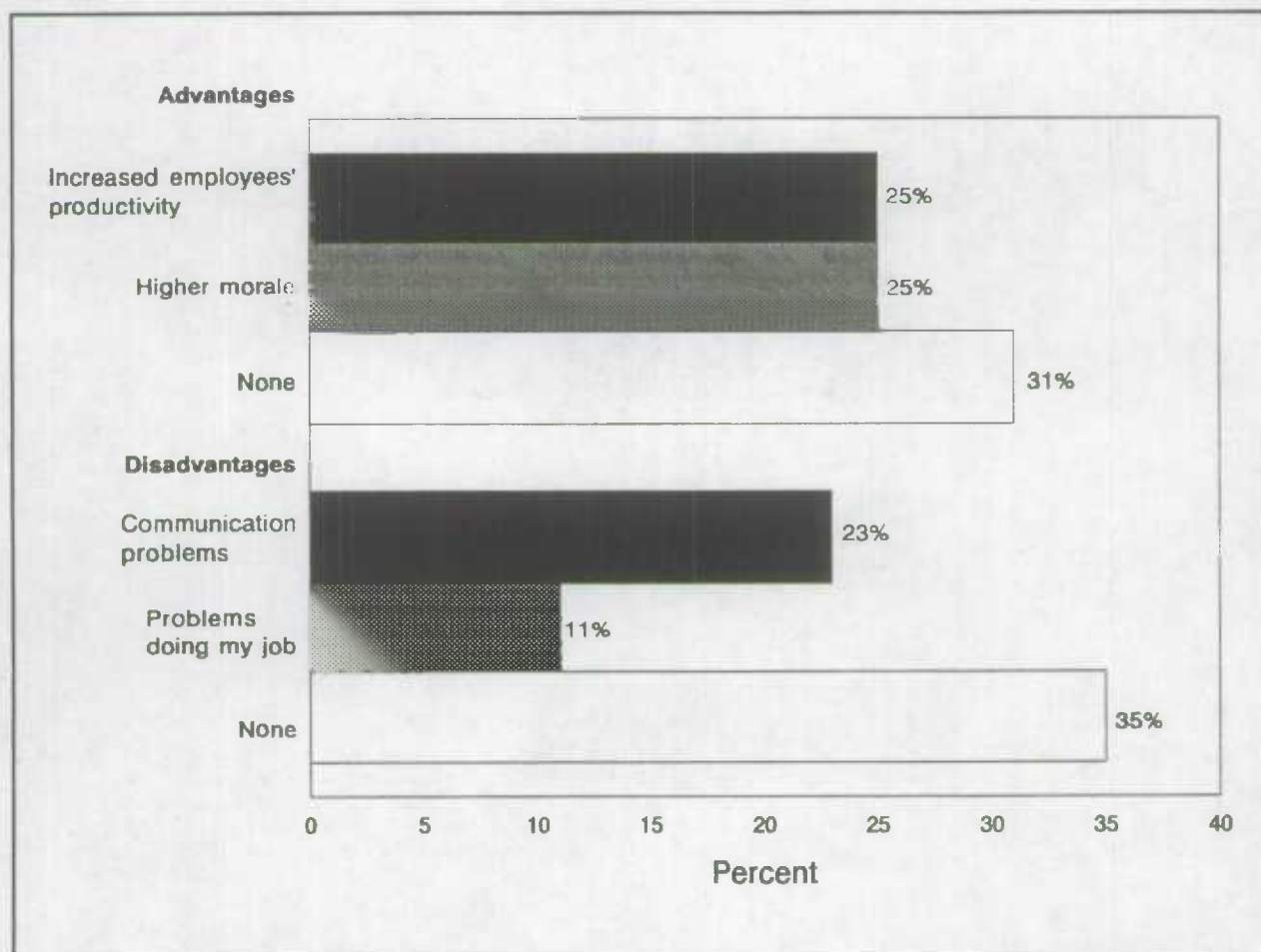
Figure 6. Disadvantages of Telework (Reported by Teleworkers)

Note: Multiple responses were accepted.

For Supervisors

Supervisors tended to see the advantages of the program in terms of satisfying the employees' needs, rather than in any direct benefit to them as supervisors. ("Supervising telework hasn't been a burden to me, nor has it been a godsend. I didn't expect much more than this. What I expected of the whole thing was that my employee's productivity would be maintained and that she would be happier working this way... if this has helped her and she's still doing her job, then everyone's a winner.")

The primary disadvantage cited by supervisors was in communication problems on telework days. However, difficulties in communicating with teleworkers were mentioned by less than 1/4 of managers.

Figure 7. Advantages and Disadvantages of Telework (Reported by Supervisors)

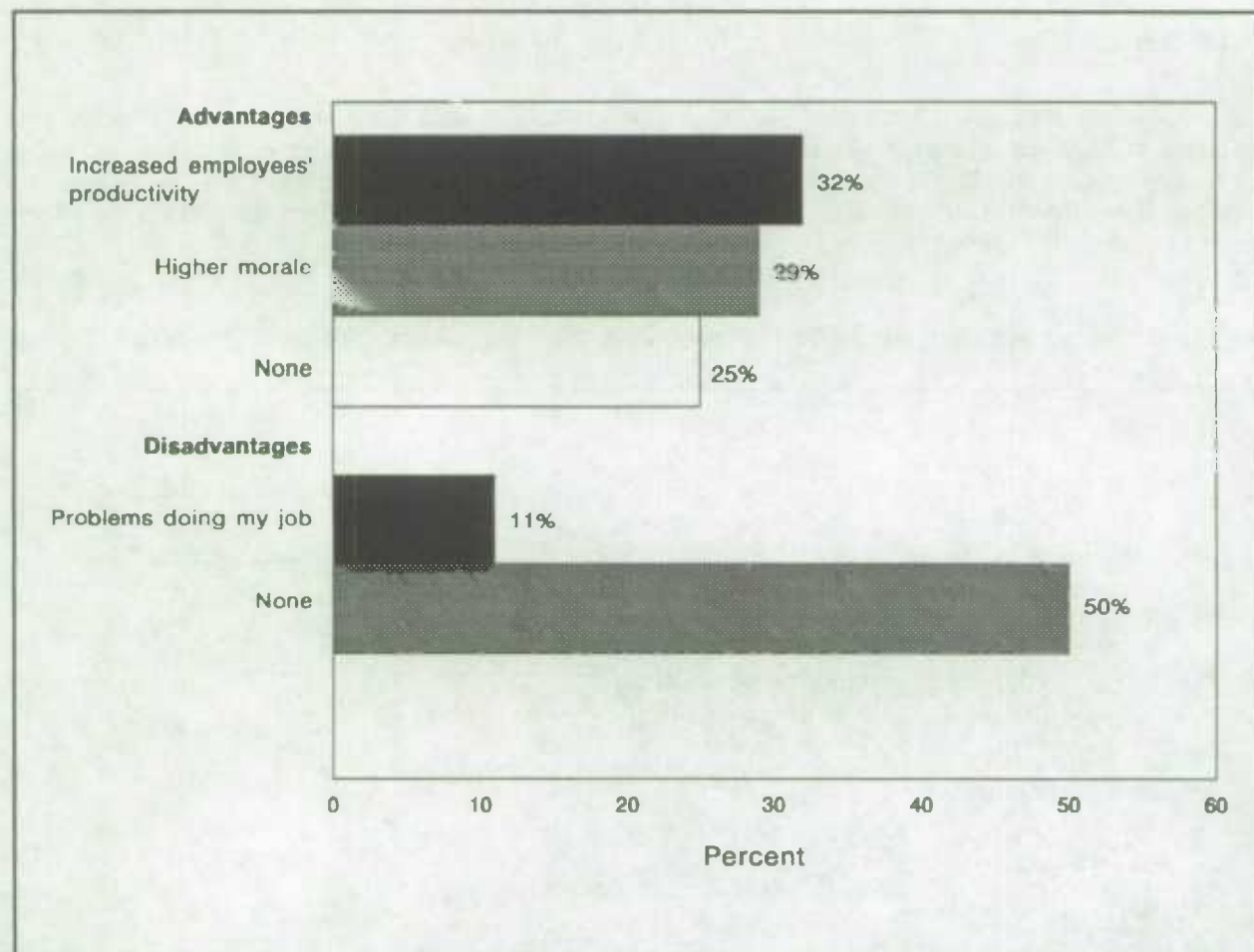
Note: Multiple responses were accepted.

For Statistics Canada

The number one advantage for Statistics Canada (as identified by supervisors) was the productivity gain associated with telework. Supervisors also thought that increased morale had the potential to translate into benefits for the organization.

Half of the supervisors were unable to see any disadvantage for Statistics Canada in having employees telework. Again, communication issues were mentioned as potential problems, identified by roughly 1/4 of the managers interviewed. ("I think the whole organization needs to get over this feeling that when people are working at home you shouldn't bother them, you can't call them. It's something that's affecting everybody's opinion of telework. If they're hesitant to call the teleworker and there are unnecessary delays in critical matters, then the ability of other employees to do their jobs will be hindered.")

Figure 8. Advantages and Disadvantages of Telework for Statistics Canada (Reported by Supervisors)



Note: Multiple responses were accepted.

Statistics Canada's Support for Telework

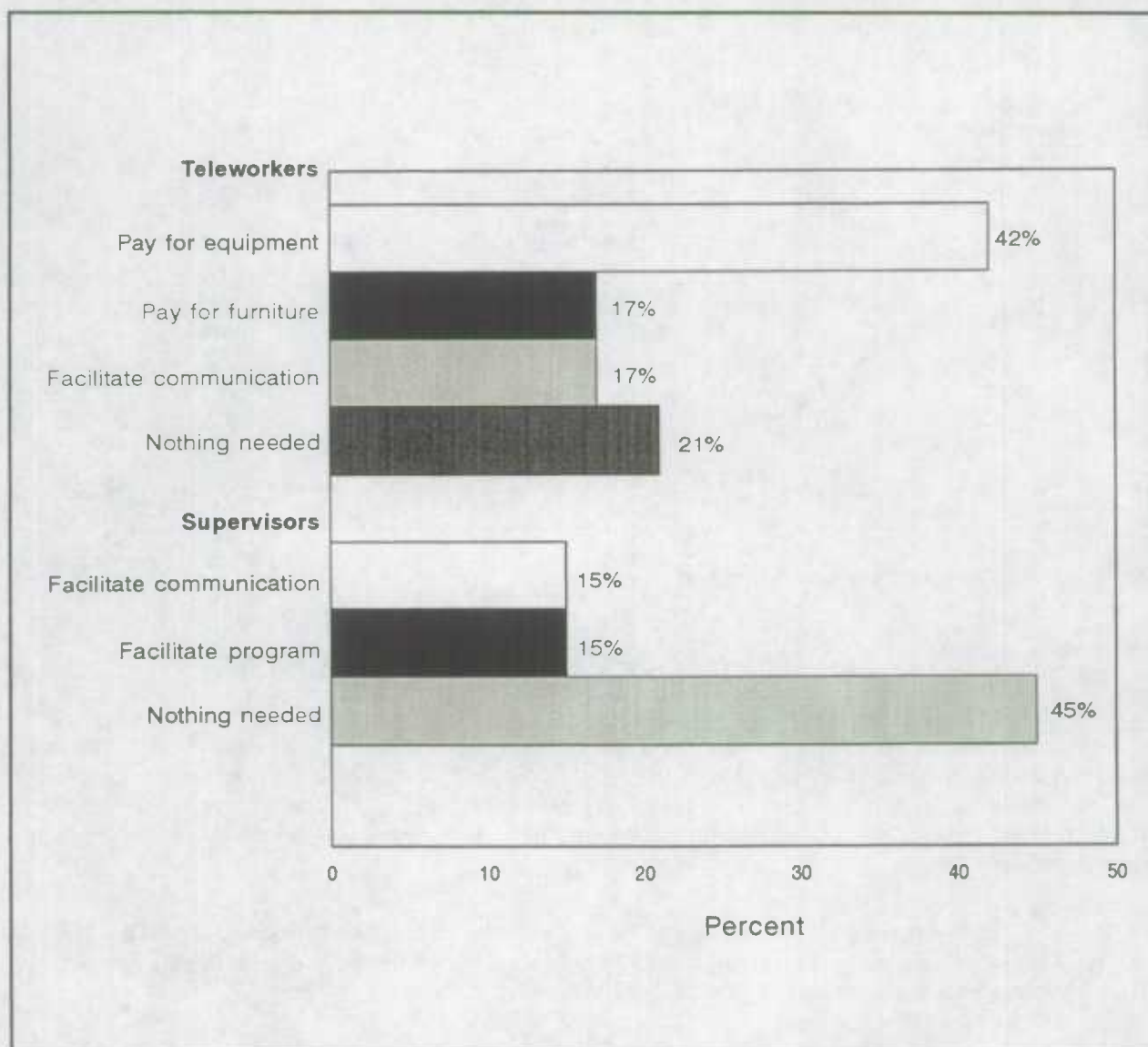
Teleworkers sensed little support for the program from Statistics Canada. Two thirds of the teleworkers interviewed (67%) indicated that they were unaware of any support for the program at the departmental level, other than the availability of the trial itself. However, over one third (38%) noted that Statistics Canada had provided computer hardware, software and other equipment for the home work site.

Half of the managers involved also claimed that there was no particular support for them as supervisors of teleworkers. Forty percent (40%), however, mentioned the information package and training that had been provided at the onset of the trial.

Participating employees had a number of suggestions about what Statistics Canada could do to support telework. Many teleworkers wanted Statistics Canada to pay for hardware, software and furniture for the home work site. Set up of the home office was also a number one concern identified in focus groups.

Supervisors were more likely to think that what Statistics Canada was already doing was enough: 45% of managers thought there was nothing more they needed from the employer in the way of support. Some mentioned they would have liked communication with teleworkers facilitated; others wanted the program formalized. ("Set the ground rules for managers and participants"; "Bring the program out of the closet!")

Figure 9. What Support Would Teleworkers and Their Managers Like from Statistics Canada



Note: Multiple responses were accepted.

Outcome of Focus Group Sessions

Two focus group interviews were conducted with Statistics Canada teleworkers and supervisors at the mid-point of the pilot.

Following are the primary concerns identified by **teleworkers** (ranked in order of importance to participants):

- inaccessibility of "Network A" (confidential and NO dial-in access possible) E-mail from home; lack of availability of computer tools;
- negative supervisor attitudes; supervisor's fear of loss of control or decreased communications;
- selection process ill-defined, inequitable, too subjective; potential for abuse by supervisors.

Following are the primary concerns identified by **supervisors** (ranked in order of importance to supervisors):

- selection process ill-defined, may appear discriminatory if not well thought out; potential to result in employee grievances;
- inaccessibility of "Network A" (confidential and NO dial-in access possible) E-mail from home; lack of availability of computer tools; prohibitive cost of covering start-up costs for everyone;
- work group problems, including loss of team spirit, co-ordination difficulties and co-worker overload.

Recommendations for Future/Continued Telework Programs

Following is a list of recommendations for improving the telework program and for facilitating the implementation of any new program. Most of these are recommendations offered by Statistics Canada participating employees and managers during the telephone interview and in focus groups.

1. **Share the results of this trial widely.** Include executive, managers, teleworkers, colleagues and other interested Department members. Openness preempts misunderstandings and resentment.
2. **Brainstorm with everyone involved in the program.** Get co-workers and supervisors face to face with teleworkers to identify problems and successes, exchange information and improve the program. Do it for this trial and on a regular basis with any future program. Work on department-specific issues such as the provision of telework equipment and remote access to E-mail.
3. **Identify the criteria for telework.** Tasks requiring large blocks of uninterrupted time are best suited to telework. Tasks requiring continuous high levels of interaction are likely not appropriate. Try to keep selection and approval criteria as objective as possible.

4. **Open the program to other employees who meet criteria.** Although some structure is necessary, "checklist" approaches to eligibility will likely not work. There needs to be a mechanism to keep eligibility out of the exclusive domain of supervisor discretion. Having candidates submit proposals for telework, including rationale and job plans, might be a workable alternative. Establishing an approval committee might also remove some of the pressure on individual supervisors. Have periodic reviews for all teleworkers.
5. **Include all involved employees in orientation sessions.** Make sure to invite co-workers and supervisors to future information sessions. Stress that teleworkers want to be contacted at home when needed.
6. **Limit the number of telework days.** Teleworking more than two or three days per week may hinder communication, interfere with the work of others or foster isolation for teleworkers.
7. **Vary the telework days according to needs of the work group.** Many employees and managers need flexibility to deal with peak work demands. Try to avoid fixed telework days. There may not be enough suitable work to take home, say, every Wednesday. Or the employee may need to take an unscheduled telework day to deal with a complex task in a quiet environment.
8. **Have teleworkers phone individual co-workers to touch base.** Ask teleworkers to set the pace by contacting colleagues in the office at least once on each telework day. This sends the message that the teleworker is available if needed.
9. **Recruit Human Resources personnel to help managers develop productivity measures.** Programs will be most successful if it can be demonstrated objectively that flexible work arrangements enhance productivity. Documenting work done at home is not a useful tool, particularly for the time-consuming intellectual tasks that are best done at home. Determine what help managers would like to have and help develop a measurement tool for them to work with.
10. **Make information sharing a regular part of the program.** Have interaction and feedback at least once a month between participants, managers and all others involved. Scan the horizon for news of telework programs in other organizations and share this also.
11. **Work with managers.** Endorse telework at a senior level. Have managers identify their specific apprehensions. Let managers hear their peers discuss the merits of telework. Attitude change can be slow but may be facilitated by having sceptical managers see that telework may enhance, not disrupt, their work life.
12. **Provide teleworkers with access to E-mail from home.** Good communication appears to be the key to the successful implementation of telework. Network personnel should investigate ways to connect teleworkers to the department's E-mail system from home.

Conclusion

Results of the pilot trial indicate that participating employees at Statistics Canada were successfully able to meet their work obligations while teleworking, and without significant disruption to the responsibilities of supervisors, colleagues and clients. This work arrangement was especially well suited to tasks requiring uninterrupted periods of concentration and there was evidence of increased productivity when teleworkers performed such tasks at home. Teleworkers were also able to maintain their roles as team members either by using the phone or by dealing with interactive activities on office days. The personal advantages for teleworkers in terms of increased family time and reduced stress were substantial, and justify continuation of this program given the absence of deleterious effects in the workplace.

Information from focus groups and telephone interviews, and from the questionnaires administered to co-workers, identified one area in which the program might be improved: there was evidence of some reluctance on the part of both co-workers and supervisors to call teleworkers at home. In fact, minor communication problems were a recurrent theme throughout this study. These problems seem relatively easy to resolve and need to be addressed if the program is to achieve the success it deserves.

Appendix A - Costs

Start-up costs associated with the implementation of a telework program are to be expected. This appendix provides a breakdown of these costs as well as those expenses that should be considered "fixed".

Three scenarios are illustrated, ranging from a "fully" equipped telework office to a "partially" equipped one, and to an office requiring a minimal amount of equipment. The costs below are based on the six-month pilot test, held from June 27 to December 31, 1993.

1. Installation of a Telework Office

The cost of a telework office depends on the requirements of the teleworker.

(a) Fully equipped office (long-distance call)

A fully equipped office was set up in the home of one of the participants. This teleworker is living in a small community, approximately 100 kilometres from Ottawa. It was decided to provide this teleworker with the required technical equipment necessary to do her work and test the telecommunications applications from a remote area into Statistics Canada Network B (the non-confidential network). It was also necessary to install some additional technical equipment in the division, to connect her teleworkplace to the Network B personal computer.

As the telephone calls are long distance, it was also decided to install a "business grade" voice line for improved quality (data quality transmission) and time (transmission of data or fax).

Table A1 on the following page provides a list of the technical equipment required in the teleworkplace, the technical equipment required for the Network B PC and the non-technical equipment and supplies provided to the teleworker. The "Price" column indicates the actual price of each item while the "Cost" column indicates if the items were already available (in stock) or indicates the amount the division actually had to expend to purchase the extra equipment required in the telework office.

The E-mail option is not included in the installation costs as this option is not possible through Network A.

Table A2 on page 34 indicates the technical equipment an employee would normally have in an office as well as the additional equipment that was required in the telework office.

(b) Partially Equipped Office

This office requires less equipment than that of the fully equipped office: no fax software is necessary and no business voice grade line is required. Less furniture was also required. Refer to Table A3 for the costs of a partially equipped office.

Table A1. Technical and Non-technical Equipment Costs – Fully Equipped Office

Equipment/Supplies	Price \$	Cost \$
1. Technical Equipment in Teleworkplace		
Sidus 386 PC (including colour monitor, hard drive, keyboard)	2,000.00	In stock
Mouse	146.00	In stock
Line printer, ribbons, paper, etc.	575.00	In stock
Software (WordPerfect, Excel, Windows, manuals included)	800.00	In stock
Business Grade Voice Line installation	125.00	125.00
service charges (\$40 a month for 6 months)	240.00	240.00
Teleplus Canada Plan 4 (\$4 a month for 6 months)	24.00	24.00
long-distance charges	???.*	???.*
Procomm Plus software	100.00	In stock
Fax card + ATI 9600 modem	355.00	355.00
Switch for fax/modem	180.00	180.00
RS 232 cable for modem	25.00	In stock
Subtotal	4,570.00	924.00
2. Technical Equipment for the Division Network B System		
PC to act as remote for file transfers	2,000.00	In place
Wire to Starmaster B	600.00	In place
Modem	339.00	In stock
Procomm Plus software	100.00	In stock
Subtotal	3,039.00	Nil
3. Non-technical equipment and supplies		
Power bar	20.00	In stock
Computer desk	440.00	In stock
Computer chair with arms	175.00	In stock
Diskette holders: floppies (5 1/4)	11.25	In stock
3 1/4 inch diskettes	12.00	In stock
Fluorescent lamp	120.00	In stock
4-drawer filing cabinet	555.00	In stock
Calculator	42.00	In stock
Dictionaries	50.00	In stock

Table A1. Technical and Non-technical Equipment Costs – Fully Equipped Office - Concluded

Equipment/Supplies	Price \$	Cost \$
Miscellaneous:		
- tape dispenser/tape	4.00	In stock
- stapler/staples	8.70	In stock
- paper pads	6.00	In stock
- pens/pencils/erasers	15.00	In stock
- 3-hole perforator	7.75	In stock
- binders (each)	5.10	In stock
- book ends	4.50	In stock
- desk organizer	12.50	In stock
- elastics (large)	0.55	In stock
- pencil sharpener	15.00	In stock
- desk tray set	18.25	In stock
- note pads tray	8.50	In stock
- index tape flag	1.80	In stock
- drawer file folders (100/box)	13.00	In stock
- paper clips	2.35	In stock
- typist copy holder	14.80	In stock
- correction fluid (box)	7.50	In stock
- diskettes - 5 1/4 high density (10/box)	10.40	In stock
3 1/2 high density (10/box)	16.00	In stock
Subtotal	1,261.95	0.00
GRAND TOTAL	8,870.95	924.00

* See Table A5 on page 37 for the actual costs of telecommunications.

Table A2. Equipment Requirements – Fully Equipped Office

Equipment	Normal Office Requirements \$	Additional Requirements \$
1. Equipment in Teleworkplace		
Sidus 386 PC (including colour monitor, hard drive, keyboard)	2,000.00	N/A
Mouse	146.00	N/A
Line printer, ribbons, paper, etc.	N/A	575.00
Software (WordPerfect, Excel, Windows, manuals included)	N/A	800.00
Business Grade Voice Line		
installation	N/A	125.00
service charges (\$40 a month for 6 months)	N/A	240.00
Teleplus Canada Plan 4 (\$4 a month for 6 months)	N/A	24.00
long-distance charges	N/A	???. ^a
Procomm Plus software	N/A	100.00
Fax card + ATI 9600 modem	N/A	355.00
Switch for fax/modem	N/A	180.00
RS 232 cable for modem	N/A	25.00
Subtotal	2,146.00	2,424.00
2. Equipment for the Division Network B System		
PC to act as remote for file transfers	2,000.00	N/A
Wire to Starmaster B	N/A	600.00
Modem	N/A	339.00
Procomm Plus software	N/A	100.00
Subtotal	2,000.00	1,039.00
GRAND TOTAL	4,146.00	3,463.00

^a See Table A5 on page 37 for the actual costs of telecommunications.

Table A3. Equipment Costs – Partially Equipped Office

Equipment	Price \$	Cost \$
1. Equipment in Teleworkplace		
Sidus 386 PC (including colour monitor, hard drive, keyboard)	2,000.00	N/A
Mouse	146.00	N/A
Line printer, ribbons, paper, etc.	N/A	575.00
Software (WordPerfect, Excel, Windows, manuals included)	N/A	800.00
Procomm Plus software	N/A	100.00
Modem	N/A	339.00
RS 232 cable for modem	N/A	25.00
Subtotal	2,146.00	1,839.00
2. Equipment for the Division Network B System		
PC to act as remote for file transfers	2,000.00	N/A
Wire to Starmaster B	N/A	600.00
Modem	N/A	339.00
Procomm Plus software	N/A	100.00
Subtotal	2,000.00	1,039.00
GRAND TOTAL	4,146.00	2,878.00

(c) Office With Minimal Equipment

As technology is rapidly providing greater mobility, the virtual office is becoming more apparent. Hardware acquisitions must take into consideration the need for mobility and, as a result, there is a tendency to keep away from the "permanent" PC to that of portable laptops and notepads.

Table A4 below provides an example of the cost of a laptop along with the most popular software and/or optional equipment, if required.

Table A4. Equipment Costs – Office With Minimal Equipment

Equipment/Supplies	Price \$
Equipment in Teleworkplace	
Laptop (colour)	2,500.00
Mouse	146.00
Software (WordPerfect, Excel, Windows, manuals included)	800.00
External modem (optional)	300.00
External CD-ROM (optional)	300.00
 Subtotal	 4,046.00
minus optional	600.00
GRAND TOTAL	3,446.00

2. Telework Maintenance Costs per Month

Once the start-up costs have been planned, some monthly maintenance costs will be required, especially in the case of a fully equipped office.

(a) Fully Equipped Office (long distance)

Table A5 provides the monthly maintenance costs of a fully equipped office. These costs were obtained from the six-month pilot test.

Table A5. Teleworkplace Maintenance Costs by Month for a Fully Equipped Office

Items	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
A. Supplies								
Ribbon (printer)	----	----	----	10.00	----	----	----	10.00
Paper (printer)	34.49	----	----	----	----	----	----	34.49
Subtotal	34.49	----	----	10.00	----	----	----	44.49
B. Telecommunications (incl. taxes)								
Installation	168.00	----	----	----	----	----	----	168.00
Service charges	32.00	32.00	32.00	32.00	29.86	29.86	29.86	217.58
Equip. rentals	1.60	1.60	1.60	1.60	1.60	1.60	1.60	11.20
Late payment charges	----	----	2.84	0.48	1.61	2.05	----	6.98
Long distance charges	24.59	4.94	54.07	39.49	56.76	34.13	30.42	244.40
Credits	----	----	----	----	0.93	----	----	0.93
Subtotal	226.19	38.54	90.51	73.57	88.90	67.64	61.88	647.23
C. Other								
Moving	N/A	----	----	----	----	----	----	----
GRAND TOTAL	260.68	38.54	90.51	83.57	88.90	67.64	61.88	691.72

(b) Partially Equipped Office

A partially equipped office does not require maintenance unless the equipment fails. During the pilot, no maintenance costs were incurred.

(c) Office With Minimal Equipment

As in the case of a partially equipped office, an office with minimal equipment does not require maintenance unless the equipment fails. Again, during the pilot, no maintenance costs were incurred.

Appendix B - Savings

With telework, savings can be realized by the Department, the divisions and the employees. This appendix will demonstrate the savings that resulted from the six-month trial period for a teleworker working four days a week at home and the potential savings if Statistics Canada decides to implement telework as one of its alternative working options.

1. Departmental/Divisional Savings

Certain savings resulted from the six-month trial. These savings are accounted for in dollar value. Further savings are possible if telework is to become one of the alternative work options at the departmental level.

(a) Accommodation Costs (Overheads)

During the pilot, no formal attempt was made to share central office space. However, there is nothing in the pilot to suggest that telecommuters cannot share central office space.

Table B1 indicates how much time is spent in an office (headquarters) during a year. These data were obtained from the publication *Positioning Government Services Canada for the Future* (Fiona Marie Potter, Telework Advisory Services, Government Services Canada, October 1993).

Table B1. Utility of Space

Days a year (24 hours a day)	365 days (8,760 working hours)
- (52 weeks x 2 weekend days = 104 days)	= 261 days
- (11 statutory holidays)	= 250 days
- (20 days annual leave: the average)	= 230 days
 x (7.5 working hours per 24-hour day)	 = 1,725 working hours
- 8,760 working hours	= 20% utilization

Note: These figures do not include unplanned absences such as illness (where the average annual sick leave request per public service employee is 9.1 days), travel and family-related leave.

In the event that Statistics Canada decides to offer telework as an alternative work option, teleworkers (3-5 days) could share offices. Such an office should contain one "In" box for each telecommuter, a telephone and a PC with appropriate software required to perform their tasks. Scheduling arrangements could be made between those teleworkers sharing an office.

There is no doubt that a reduction of accommodation costs is to be expected if a fairly large and stable number of employees adopt telework and if a functional arrangement of facility-sharing can be established. Tables B2 to B6 indicate the overhead costs for an office space in Census Operations Division, including floor space (average of 100 square feet), electricity, telephone and supplies. Overhead costs for another division may vary, depending on the number of employees in the division. Furthermore, one must not forget to consider that less furniture will be needed in a shared office.

Based on the figures received from the Census Operations Division Administration Unit, it is estimated that the non-salary overhead for each employee in Census Operations Division was close to \$2,357.00 in the fiscal year 93/94. Figures in Tables B2 to B6 were rounded to the dollar.

Table B2. Potential Overhead Costs Savings – Teleworking Five Days a Week

Number of Teleworkers	One Day	One Month	Six Months	Twelve Months
1	10.00	196.00	1,179.00	2,357.00
2	20.00	393.00	2,358.00	4,714.00
3	30.00	589.00	3,537.00	7,061.00
4	40.00	786.00	4,716.00	9,428.00
5	50.00	982.00	5,895.00	11,785.00

Note: Based on 20 days a month.

Table B3. Potential Overhead Costs Savings – Teleworking Four Days a Week

Number of Teleworkers	One Day	One Month	Six Months	Twelve Months
1	10.00	160.00	960.00	1,920.00
2	20.00	320.00	1,920.00	3,840.00
3	30.00	480.00	2,880.00	5,760.00
4	40.00	640.00	3,840.00	7,680.00
5	50.00	800.00	4,800.00	9,600.00

Note: Based on 16 days a month.

Table B4. Potential Overhead Costs Savings – Teleworking Three Days a Week

Number of Teleworkers	One Day	One Month	Six Months	Twelve Months
1	10.00	120.00	720.00	1,440.00
2	20.00	240.00	1,440.00	2,880.00
3	30.00	360.00	2,160.00	4,320.00
4	40.00	480.00	2,880.00	5,760.00
5	50.00	600.00	3,600.00	7,200.00

Note: Based on 12 days a month.

Table B5. Potential Overhead Costs Savings – Teleworking Two Days a Week

Number of Teleworkers	One Day	One Month	Six Months	Twelve Months
1	10.00	80.00	480.00	960.00
2	20.00	160.00	960.00	1,920.00
3	30.00	240.00	1,440.00	2,880.00
4	40.00	320.00	1,920.00	3,840.00
5	50.00	400.00	2,400.00	4,800.00

Note: Based on 8 days a month.

Table B6. Potential Overhead Costs Savings – Teleworking One Day a Week

Number of Teleworkers	One Day	One Month	Six Months	Twelve Months
1	10.00	40.00	240.00	480.00
2	20.00	80.00	480.00	960.00
3	30.00	120.00	720.00	1,440.00
4	40.00	160.00	960.00	1,920.00
5	50.00	200.00	1,200.00	2,400.00

Note: Based on 4 days a month.

(b) Productivity Gains

Overall, supervisors felt that their employees spent significantly more productive time after they began to telework. It is also interesting to note that telework arrangements do not have a negative impact on the supervisor's own productivity; in fact, some managers thought they were more productive because teleworkers were submitting their work on time. See page 18 for additional information.

(c) Absenteeism

Based on the six-month trial period at Statistics Canada, telework is associated with reduced absenteeism.

- Family Leave/Responsibilities

Fewer family leave days and significantly fewer full days due to family responsibilities were taken by teleworkers during the trial period. There was also less work time lost due to family responsibilities.

Furthermore, co-workers significantly reduced their family-related leave.

- Sick Leave

There was no change in the number of days lost for personal health reasons during the pilot.

- Tardiness

Telework had no effect on tardiness for teleworkers although colleagues and co-workers experienced a significant increase in times late due to weather or traffic. Telework may have served to reduce tardiness for teleworkers who did not have to commute as often as others to the office.

2. Sample Employee Savings

Teleworkers are definitely reducing their personal expenses when teleworking. In the case of the four days a week teleworker, the electricity bill increased an average of \$20.00 a month. No additional house insurance was required for the telework office (this issue was checked with the teleworker's insurance agent).

(a) Money Savings

Table B7 shows the costs that were incurred by a long-distance commuter before teleworking and while teleworking four days a week.

Table B7. Teleworker Costs Before and While Teleworking (4 Days a Week)

Elements	Average Costs per Week		Average Costs per Month		Average Costs per Year	
	Before Teleworking \$	While Teleworking \$	Before Teleworking \$	While Teleworking \$	Before Teleworking \$	While Teleworking \$
Gasoline	75.00	30.00	300.00	120.00	3,600.00	1,440.00
Oil change	7.75*	N/A	31.00	10.33*	372.00	124.00*
Parking	10.00	2.00	40.00	8.00	480.00	96.00
Child care	10.00	N/A	40.00	N/A	480.00	N/A
Cafeteria	35.00	2.00	140.00	8.00	1,680.00	96.00
Clothing	10.00	1.50	40.00	6.00	480.00	72.00
TOTAL	147.75	35.50	591.00	152.33	7,092.00	1,828.00

* Oil change is now done every three months (\$31.00 each time).

(b) Commuting Time Savings

Table B8 shows the time it took for the same long-distance commuter to travel to and back from work. It is interesting to note that, in a year, this telecommuter saved an average of 384 to 576 hours in commuting. The statement from Alvin Toffler becomes very evident in this scenario: "The single most unproductive thing people do is to commute to and from work."

Table B8. Commuting Time for a Long-distance (100 Kilometres One Way) Teleworker (4 Days a Week)

Commuting Time (Hours)	Per Week		Per Month		Per Year	
	Before Teleworking	While Teleworking	Before Teleworking	While Teleworking	Before Teleworking	While Teleworking
Minimum 2 hours a day	10	2	40	8	480	96
Maximum 3 hours a day	15	3	60	12	720	144

(c) Other

The pilot did not specifically review the impact of telework on the environment, energy consumption, transportation infrastructure, etc. However, the following table (B9) illustrates the distance travelled before and during the telework pilot and it becomes quite evident that telework will have an impact on the aforementioned areas.

Table B9. Kilometres Before and While Teleworking (4 Days a Week)

Commuting	One Week		One Month		Six Months		One Year	
	Before Tele-working	While Tele-working	Before Tele-working	While Tele-working	Before Tele-working	While Tele-working	Before Tele-working	While Tele-working
From home to office	500	100	2,000	400	12,000	2,400	24,000	4,800
From office to home	500	100	2,000	400	12,000	2,400	24,000	4,800
Total	1,000	200	4,000	800	24,000	4,800	48,000	9,600

Appendix C - Teleworker and Supervisor Quotes from Interviews

1. Intra-organizational Communications

(a) Teleworkers

"I'm more accessible when working at home than when I'm in the office."

"When I'm at home, I'm always reachable no matter what."

"The B.C. and Atlantic regions know they can reach me no matter what time it is. They are happy when I'm working at home."

"My co-workers used to hesitate to call me at home. Now they understand that it's not my day off, but that I'm working."

"Co-workers seem afraid to call me at home. They think they'll be bothering me. They have to understand that if I'm at home it's not my day off - I'm working."

"When I do go into the office, it seems people are just waiting to see me. Some people are really good about phoning me (whenever they need me) at my telework office. Other people are reluctant to call me at home and consider me to be available only on my office days."

(b) Supervisors

"I can get a hold of my employee a lot easier when he's working at home than when he's in the office."

"Those employees who were teleworking were always accessible one hundred percent of the time compared to when they were in the office - that really surprised me."

"I can always reach my employees when they're teleworking. This came as a real surprise to me. They're not available only during their 7 1/2-hour work day minus lunches minus coffee breaks minus trips down the hall. They're there to talk to me all the time. At home they can hear that phone ringing anywhere."

2. Impact on Relationships in the Organization

"My colleagues perceive my working at home as a day off."

"I can be trusted to do my job at home. Some people have comments like 'Oh, another day off'. It seems to me that it's them who can't telework because they would obviously view it as a day off."

"There's a negative attitude towards telework. People think that if you're working at home you're watching soap operas or sleeping. Comments like that might be funny for the first week or so, but after six months, it becomes tiresome."

"Employees who want to telework but can't are very supportive of you. Those who don't want to telework seem jealous of the fact you work at home and tend to come out with sarcastic comments about telework. Not all, but some."

"Just because I'm working at home doesn't mean I can't find a solution to my colleagues' problems. They assume I don't have the necessary information with me. That's starting to change now."

"Every now and then you hear a comment, 'Oh, you're not going to be working tomorrow.' It's like I have to correct them, 'Yes, I am working tomorrow. I'm not working in the office, but I'm working.'"

"Working at home does decrease the amount of communication between me and my co-workers, but I don't think it decreases the amount of relevant, business-related communication."

"I work with a small knit group and their co-operation and support have been great."

3. Work-related Advantages of Telework

(a) Teleworkers

"When I work at home I'm able to accomplish all my duties."

"When I work at home they have to try and find additional tasks for me to do because I'm so caught up!"

"I get a much better feeling about the quality of the work I produce from the home. That's very important to me."

"When I'm working at home, it's nice to plan out your day with a goal in mind and know that you'll be able to reach that goal."

"I like sitting by myself and working."

"When I work at home my productivity increases by at least 45%."

"I am successful in accomplishing more work when at home."

"Teleworking lets you work at your own rhythm."

"What takes me two and a half days to do at work - I do in half a day at home."

"At the office, it takes 30-40 minutes to get to a coffee shop, have my coffee break and then get back to the office. At home, it takes 30 seconds to get to my coffee machine and I drink it while working."

"I feel very positive about working at home. You can work when you're up for it and you're never disturbed. I keep a log, so when I feel I can't work well anymore I just log off, and go skiing or whatever. When I'm ready to work late in the night, I log on - I work exactly when I'm freshest. In fact, when I'm no longer 'fresh', I can stop and go into the office, and I'm fresh again."

"When you have to be at the office between such and such hours, and you're too tired to work anymore, or your problem is not working out, you still have to be there. You tend to kill time. With telework, I never kill time. I just log off when things are going bad instead of looking at the clock or socializing. Same thing for medical appointments and such. If I see the doctor on a telework day, I'm off for that time. If I do it from the office, I'm probably on the employer's time."

"When I work at home I have a greater sense of accomplishment."

(b) Supervisors

"With the level of concentration (my employee's) job requires, he can now spend an hour without any interruptions, any distractions. We all work in 'open concept' offices here. I find it quite horrifying that researchers are expected to work in this environment. Anybody whose job requires an attention span of more than three minutes... well, that's the major gain for him."

"Except that she's able to produce at least twice as much at home as she can at the office, no, her ability has not been affected. We allowed for this though - her co-workers are well versed in what's going on. We have weekly meetings - the pros and cons of telework were explained to my staff - so they know how it works. We have a modem hooked up, so we can modem everything out to her when we need something done. She's fully equipped with the software she needs, has a printer, so in that respect, you wouldn't expect her performance to suffer in any way."

4. **Non-work-related Advantages of Telework**

"I'm sure that I prevented my house from being broken into and robbed by being at home that morning. I live in the country."

"I can see my kids growing up - how they dress and what they bring in their lunch."

"It's putting money in my pocket - my car insurance has gone down, I don't have to pay for parking, gas, lunch or clothes."

"Teleworking helps you balance out your time. If I have a doctor's appointment and I'm gone for an hour - I can make that hour up anytime, be it that evening or over the weekend - it all balances out."

"Since I've been teleworking, my wife loves me more than ever."

"I live an hour out of the city - it makes it easier to get repairmen in the house which is usually a difficult thing to arrange. If I take time to show them where the problem is, I can make up that time at the end of the day."

"I'm able to help out caring for my handicapped child when needed."

5. Work-related Disadvantages of Telework

"I had hoped that I could do a lot more memo-writing and information (write-ups) but events didn't always play out on Monday and Tuesday that would allow me to make full use of my telework day on Wednesday. Unfortunately, I had a rigid day selected on my arrangement. It was always a Wednesday, and that screwed everything up. It would have been much better to take the day whenever events in the office make it ideal. So, I have mixed feelings about what I expected and what I got out of the whole scenario. The arrangement wasn't at all as flexible as it should have been to work well for me."

"I think the benefits to the employee from this program depend on the individual's level of career progress. For me, telework is great. I'm working on a special project and I'm on the verge of retiring, but I think if I were younger, keen on advancement, I might have a different outlook. The old adage, 'out of sight, out of mind' probably applies to some extent to teleworkers. If you want to be seen as eligible for new opportunities, it's probably better to be around the office as much as possible."

"I think that I was put on surplus because I was teleworking."

6. Non-work-related Disadvantages of Telework

"When my husband is at home during the day he gets to thinking I can make a few calls for him, or we can go somewhere, or I can come up and 'we can have a cup of tea'. And I have to tell him, 'What's this "we" business? What do you do when I'm not here? Maybe pretend I'm not here, because I'm at home to do my office work today.' He still has a bit of a problem in this respect."

7. Advantages for Supervisors of Teleworkers

"My employee's productivity has more than doubled since working at home."

"My employee gets much better work done from the home than in the office and productivity is up."

"We were able to update and finalize a lot of projects in a much shorter time by having the individual work at home."

"I was able to tell my manager that a certain project would be done by a certain time by having my employee work at home."

"Teleworking enhanced my employee's ability to perform her jobs."

"My employee needed a change and telework really perked her up - it lifted her morale."

"Telework has enhanced both my employees' abilities to perform their jobs."

"Telework hasn't been a problem for me, but it hasn't been a godsend either - my employee is happier and it shows in her work."

"My productivity went up because I had less employees popping their heads in to talk - I had less interruptions."

"It changed my employee's attitude because people really like to be trusted."

"I feel like I get more from my employee when he's teleworking."

"Supervising a teleworker has made me a better supervisor."

"My work plans are better organized since I've been supervising an employee who works from the home."

"Supervising a teleworker has forced me to be a little more organized."

"My employees seem to pitch in more now. They know I'm not in the office and they know certain things have to be done (in my absence), so they don't wait to be told 'Take care of this or that.' It's automatically done. They don't rely on me as much as they used to."

"My employees work at jobs that require a lot of concentration. The stress level tends to build in them. Sometimes I think it comes from a sense of losing control of their time. When they work at home they're in control, they can organize where they want to go, what they want to do, and when they come back their stress levels are considerably reduced. I find them more relaxed, and they just generally function better. Their satisfaction and their personal dispositions have really improved since they've been doing this. I just can't say enough good things about this program."

"It's difficult to have a teleworker when you're a small team, we get interrupted because we're one less to answer the phone - but the teleworker's productivity has gone up."

8. Disadvantages for Supervisors of Teleworkers

"I'd prefer to have my employees here, when I get short-notice assignments I have to tackle things myself - I guess it's a selfish point of view. It's not that big a deal."

"I'm not a supporter of telework. Even though productivity went up and the pilot project worked out well and her performance was better at home - I ended it because I missed the employee's positive attitude around the office."

"The teleworker would have to be plugged into the network - it'll cost to do that."

"I think some supervisors are afraid to try telework - fear of having grievances filed against them for harassing employees at their home."

"I had trouble getting some staff members to co-operate. I had a couple of them who were trying to prove that telework didn't work - they were trying to come up with excuses that it made more work for those who remained at the office."

"Someone has to pick up the extra pieces in the office when an employee is working at home."

"There is no way I can supervise my teleworking employee when she's at home - I'm not there with her."

"With so many of my staff teleworking we had somebody away every day of the week. Although we arranged to teleconference when necessary, and it's supposed to be the next best thing to being there, it's not. It's hard to hold meetings by phone - you lose information in the link-up and you miss all the subtle interactions of a face-to-face meeting."

"I think we made a mistake initially agreeing on having this employee telework as many days per week as she did. If it had been only the one day, there probably would have been no problem. But when you're away from the office for so many days, life does go on, you tend to miss things, miss meetings, colleagues don't want to disturb you at home. On an ongoing basis, three days per week was a little too much."

"We had some problems from this employee working so many days per week at home. When he did come into the office, he often wanted my undivided attention because he wouldn't be in again for quite a while, and in many cases I wasn't able to plan my day so as to be available."

"For some types of jobs (my employee) performed, it was fine and much easier for him to concentrate when he was free from office interruptions. But for consulting, for teamwork, it just couldn't work out. The first two or three weeks of his telework trial were quite telling in that he didn't manage to work at home at all. The assignments he had at the time were quick turnaround and required input from people (here at the office), and for three weeks solid he was tied to the office."

"Well, she is my most senior employee, and if I have an urgent request requiring quick turnaround, and she's not at the office that day - if I can't find anyone else to do it - I end up doing it myself."

"I'm not too comfortable with telework as a manager. Like any organization, you either grow or die in the face of change and a very strong part of the office culture is the interaction of its people. Telework runs counter to cultivating a feeling of teamwork. My employee's trial worked very well in terms of deliverables, but she's an asset to this organization in more ways than (her ability to deliver). She's a nice person, she interacts well, and has a positive attitude. That influence was missing from the office while she was away."

9. Overall Comments on Telework/Telework Pilot Project

(a) Teleworkers

"The telework project was well monitored, documented and followed through."

"Teleworking should be advertised - it was a fluke that I heard about it and was able to try it."

"I highly recommend teleworking depending on what type of work you do - that's the key."

"I was amazed that I enjoyed teleworking so much - maybe there's a message in there somewhere."

"If I had to return to the central office for five days a week, if I couldn't telework - I would seriously consider handing in my resignation."

"Telework isn't for everyone - you have to be honest and disciplined."

"Teleworking is a great experience. I would encourage everyone to try it."

"I really like the program and I hope it continues."

"It's extremely important to continue training even when teleworking."

"If I had any subordinates I would use telework in three situations:

- I would use it for people who have difficulties with their health. They could then cater to their needs, for example: less stress for heart problems, would be able to take medication when required.
- I would use it on difficult people, those who are complaining all the time - they're always negative. The home is a better environment and in turn the employee is happier and wants to give back to the department. It will change their attitude and they will want to be a team player and would have a positive outlook.
- I would use it on a single parent so there would be less worry about their children and would be there for them and in turn would have a better employee."

"Those who really want to make a career for themselves and advance in promotions should telework, because those people want to show milestones - they want to show mass production rates and good quality, and teleworking allows you to achieve those goals."

"I've been working at home since well before the telework pilot began, and I know there were a few meetings we had at the beginning of the project with teleworkers who were just beginning. I know there were a few negative feelings that came back at that time from those workers who had just begun. I didn't say much then, but I had started teleworking a year before them, and I recognized some of those initial concerns. But it takes time to work out. I don't think you can tell a lot in three months, maybe not even in six months. But after a year of telework I think that if you're the type of person who can telework, you're feeling pretty comfortable by this time, because everything's working. At the beginning there's trouble with modems and faxing and that kind of thing. Well, after a year you have these things sorted out. It's a lot easier."

"I saw no disadvantages. I know there are some who say that the managers will be taken advantage of, but I think that's bull. If a manager's going to be had, he'll be had whether the employee is teleworking or not. Distance makes no difference."

(b) Supervisors

"I would also like to be able to work from the home."

"For a lot of assignments, it's an ideal situation, but for others it might not be as conducive."

"I know that when my employee is working at home the work is getting done so I have no problems with it."

"I think what will be interesting regarding the pilot project will be to see how the staff reacts."

"I myself would like to telework even though I'm a supervisor - private industry has high executives who do it - I'd like to try."

"I'd like to take away the 'taboo' of telework. I'd like to offer it to all employees and also see it offered to all supervisors."

"I'm anxious for the results of the pilot project to help encourage telework."

"Half my employees are teleworking. The way I relate to a teleworker depends on if I trust the individual."

"Telework worked out fine once I had passed that hurdle and realized that home didn't mean (being) lazy, then there was a dramatic change - but I had to get over that reaction that home meant sitting in front of the television watching soap operas - on the contrary, it increased productivity."

"Distance doesn't make any difference - all that telework is, is a work station or cubicle which is further away than three feet. It could be down the hall, on another floor, in a different tower, or it could be in someone's home."

"The public might criticize the government for having employees who work at home. It's okay for private sectors, but when it comes to the government, the public will criticize everything."

"I expect a teleworker to be more independent."

"It's neither an advantage or disadvantage for me - work goes on - I do have a happier employee though."

"If you're asking what I think about the 'official' telework program, my feelings are negative. If you're asking what I think about the concept of working at home on a task basis, it's positive. Home is often a better environment, more conducive to productive work than you get in the office. But we need the flexibility to telework on our schedule... as the jobs come up - as specific tasks come up that can be done at home. But if it's a forced schedule, a rigid program of two days a week, or whatever, then my feelings are negative, because our jobs around here do not lend themselves to that kind of consistency."

"It's not working at home (*per se*) that leads to increased productivity. The same benefits could be derived in other ways, like going to the library and working. The atmosphere at home just lends itself to some types of work, i.e. tasks that don't require interaction - you need a quiet spot. I think you could find that quiet spot in the office environment or at home. It's just a matter of convenience."

"Supervising telework hasn't been a burden to me, nor has it been a godsend. I didn't expect much more than this. What I expected of the whole thing was that my employee's productivity would be maintained and that she would be happier working this way and could achieve a better fit between her work and private life. And if this has helped her and she's still doing her job, then everyone's a winner."

"Supervising telework requires a great leap of faith. A lot of your reactions to day-to-day occurrences depend on your overall trust in that employee. I went into the trial with the preconceived notion that if you were at home, you were idle. I tried desperately not to focus

on their teleworking. Every time I began to (feel suspicious) of their activity, I pictured them sitting across the hall and imagined how I would feel if they were at the office. Things changed dramatically then. Many times it was my old way of thinking that was causing me to mistrust people. I had to get over that initial reaction that being at home meant watching TV when it could very well mean more productive time than you might get at the office."

"A lot of people would like to work at home, but once they get there I get the feeling that they don't want to be home all the time. I think it may be overrated a bit. Employees express an interest in it, then they go on telework, and the next thing you know they're in their office as much as they were before they started. I don't know whether it's the social aspect of the thing or what. I think that allowing them the freedom is enough - let them realize it's not for them. If management fought against telework, employees would put up a hell of a fight."

"I think the organization might have targeted teleworkers' colleagues and staff for some preliminary briefing about the program. Initially, information was aimed at supervisors, management and teleworkers; it was not provided to co-workers. Some issues might have been discussed with them too to help them understand the nature of telework and help them get over misconceptions such as feeling that they can't call a co-worker if he or she is working at home."

10. Disadvantages of Working at the Office

"There are too many distractions and interruptions in the office and it's difficult to get the work done."

"The days I work at the office I'm exhausted when I get home and I know I got a lot less work done."

"At the office I have trouble concentrating because I'm situated next to the fax machine, the coffee machine and the microwave. People gather there to talk and it's very noisy. This is not a favourable situation. I am able to concentrate much better at home."

"When I worked at home I had more energy and I was in a better mood. Now that I no longer telework I find that a lot of my time is wasted and the environment where I work is not very encouraging."

"I'd say that most interruptions at the office are not even work-related, just colleagues socializing."

"What hit me the most was the poor quality of air you breathe in an office building. At the end of the day you're wiped. When I work at home, breathing fresh air from opened windows, I'm ready to put in another day's work at the end of the day."

11. Reaction of Clients

"Clients don't care where your work gets done - as long as they get their reports on time."

"I was surprised that my clients didn't mind my teleworking because they were always able to reach me and if we had to meet face to face, we would simply make arrangements to do so."

"Oh, my clients' attitudes have certainly changed. Clients in the Atlantic regions have no problem calling me at home at 7 a.m., and clients in the Pacific regions at 8 at night. They think it's wonderful that they can access me at their convenience. Let's face it, most people in Ottawa can't be reached at work at 8 p.m. It also serves the Minister's office well, because ministerial staff can reach me when they are keeping late hours."

"I anticipated problems with clients needing my service, and then finding out that the shop was closed. Surprisingly, it was no different from my being in the office on a given day, but off in another building, or in a meeting. Just because you're 'in' doesn't mean you're 'available'. So, as it turned out, clients had no problem reaching me on my telework days and for the duration of my six-month trial, there was never an occasion when a meeting couldn't be arranged when it was needed."

12. Teleworkers' Perceptions of Supervisors' Attitudes

"My supervisor told me my work has been of better quality since I began working from the home."

"Some supervisors think that if you're sitting at your desk down the hall you're working. That's not always the case - you take 45-minute coffee breaks, you stop at other peoples' desks to chit-chat, others stop at your desk to chit-chat, it takes you an hour to have lunch and therefore you produce less than someone who works at home. Just because you're two doors away from your supervisor does not mean you're more productive."

"Some supervisors, even though they see good productivity, are against teleworking and give their employees a real hard time, I've heard some real horror stories. They have to realize that when you're working at home it is not a day off."

"You hear managers saying 'I'll never let my employees work at home' - they're setting a bad example. These comments are not based on fact, it's just prejudiced."

"My supervisor doesn't know about telework and he's not interested in knowing about it. He had no confidence in us - he says he wouldn't know if we were working or doing our laundry."

"Even though my supervisor realized that my productivity was up when working at home, he put a stop to it because he's against teleworking."

"My supervisor feels it's more important to be in the office than to get the work done."

"My supervisor thinks it's not how productive you are, it's that you have to be here."

"My supervisor didn't contact me when I was at home because he didn't want the project to work out."

"I would like teleworking to continue, but we have to better educate management. Even though your productivity is up, they feel that you benefited so much that you owe them because they've allowed you to do this."

"If managers truly understood the briefing behind the program, they would see the advantages they could gain."

"My supervisor seems happier since I've been teleworking because of the increased productivity."

"If you have a supervisor who is supportive, that's half the battle."

"My supervisor's learned to expect more output when I'm working at home. Although I've finished the trial, last month when we were under a deadline, he suggested I take a few days to work at home on my project. So, I think he's come to expect I'll be more productive there."

"The reason I don't telework now is that my new supervisor finds it hard to trust people. He wants a listing specifically of what you plan to do on your telework day, and when you return to the office, he wants to see that you've done it. Well, I can't even do that in the office - you can have great plans, but you can't guarantee you're going to get them done. Some problems take longer than you plan for."

13. Importance of Supervisor Support

"The key to a successful teleworking arrangement is not only the employee's willingness or wanting to work at home - if he doesn't have the true commitment or support from his manager all the advantages that are proven beyond a doubt don't hold water."

"The key to the success of a telework program is not just the employee's willingness, but the commitment of that individual's manager. It doesn't matter how much the clients like or dislike the idea, or what the work to be done. If the manager isn't committed to giving it a try - not just saying they'll try it because they can't come up with a good reason not to - it won't work."

14. Departmental Support (Statistics Canada) - Supervisors

"If the department really wants this thing to take off, they should cough up the money to properly equip the teleworkers."

"The department could educate people more about it - not call it 'telework' or 'work at home' - it's 'work' because that's what people do."

"The big hurdle is to better educate the department on telework."

"My department has done nothing to help me supervise a teleworking employee."

"I think the department gave me a couple of pamphlets on supervising a teleworker."

"Supervising is something best left up to the employee and the supervisor. Maybe supervising a teleworker could be added on to the Supervisory Skills course for managers with very little or no supervising experience."

"If you have good supervisory skills you don't need help from the department."

"We're left to our own devices when it comes to supervising teleworkers. We make our own regulations."

"We push people to try the telework program yet we don't provide them with the proper software."

"It would be nice if each division with teleworkers paid a share toward setting up a network with on-line information and software that we could all access from home. Right now, my office has paid individually for the software I use at home, and they have to do the same for every teleworker. Wouldn't it be better if we had a network we could access run by someone overseeing the telework program from outside the division? In fact, it would be nice to have a division to oversee teleworkers - like they do for CAD. So for all of our common needs, it would be a place we could share information, maybe get an economy scale going on different things that we need."

"I came up short because the program wasn't implemented in such a way that participants' input was heard. For example, I very early identified a problem with my telework arrangement (and requested a change). The communication to me that my suggestion had been turned down was not from the top, so things were being filtered at different levels of management to suit their particular needs. In addition, there wasn't one clear-cut method being tested, so when it came time for feedback in meetings, it was clear that different employees were being subjected to different rules of the game."

"Honestly, I guess I'd have to say nothing. This employee lives out of town, so I know nothing's ever been said about reimbursing her for her calls to the office, but I know they're long distance. I have no problem with the idea, but I know we didn't set up a modem for her for her computer, so, no, I've had no resources from the department to do this. I'd like to provide this sort of support to her if I could, but for one day a week, it's hard to justify."

"Not a heck of a lot. I've been pretty much on my own. They had an information session initially but I felt it was fairly weak in content. There wasn't much there of benefit. They focused on people who worked out of town and the neighbours seeing them doing wash when they were supposed to be working or something - I don't know - to me it was totally inapplicable to the situation here."

"They've come out with some policies on remote access and that's helped a lot - it's explained how these individuals can hook up to various electronic media from home and they become more productive that way. At the moment though, the organization is still working this through - they haven't decided quite which way to go with it."

"I think they could make a policy change on equipment purchasing. We should be able to buy high quality top-of-the-line equipment and put it in our employees' homes. There must be some way we can do that as an organization."

15. Advantages for the Organization

"I've had an employee teleworking on special assignment, and I know I was getting more than 37 1/2 hours a week out of this individual, and I suppose that's pretty good for the organization."

"Since I began teleworking I agreed to share my office space with another teleworker. We're hardly ever there at the same time, so we each have adequate office space, but they're (management) getting what they had been hoping for out of this arrangement. They're saving an office."

"When I'm not feeling 100%, I tend to work anyway when I'm teleworking. I can't justify taking the day off. If I had to go into the office, I'd probably call in sick, and lose the work time."

"It's nice to be able to have an hour for a personal appointment or something that I can easily make up later in the evening - so I can choose my own hours that way. But I notice that even when I haven't run an errand, when I've worked a full day, I'll be doing dishes at dinner or something and I'll think, 'Oh, I've almost finished that memo...I'll just run up and get it done.' So, really, I probably put in more than my 7 1/2 hour day and I'm not sure how I feel about that. I can hear management saying 'All right!'. And I can hear the union saying 'No way'."

"I would like to see telework expand. Then we could have several employees sharing one office on different days and we could save on office space and money."

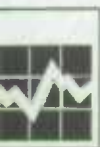
"We're always looking at ways to save money. I'd like to experiment more with teleworking as well as part-time and compressed work week."

"If we want to reduce costs - we'd better encourage telework."

"A big advantage for the department is that they have less space to rent for employees and all the costs associated with it."

16. Disadvantages for the Organization

"I think the whole organization needs to get over this feeling that when people are working at home you shouldn't bother them, you can't call them. It's something that's affecting everybody's opinion of telework. If they're hesitant to call the teleworker and there are unnecessary delays in critical matters, then the ability of other employees to do their jobs will be hindered. I think one way to ensure this doesn't happen is to have the teleworker routinely call co-workers on work-related matters to send the signal that it's OK to call them at home."



ORDER FORM

Summary Report of Statistics Canada Telework Pilot January 1995

Company, organization (please print)	
Client: last name and first name	
Division	
Location: floor, room no., building	
Street address	
City	
Province/State	Postal/Zip code
Country	
Telephone No.:	Fax No.:

	*Canada \$	U.S.A. US\$	Other countries US\$	Quantity	\$ Total
English copy	35.00	42.00	49.00		
French copy	35.00	42.00	49.00		
7 % GST will be added to Canadian orders.					\$ Total

Complete and either	1) Mail to: Nicole Charbonneau Census Operations Division Statistics Canada 4-A5, Jean Talon Building Ottawa, Ontario K1A 0T6	or	2) Fax to: (613) 951-0686	Method of payment <input type="checkbox"/> Credit card (Complete section below.) <input type="checkbox"/> Bill me later. <input type="checkbox"/> Check payable to the Receiver General for Canada.

<input type="checkbox"/> Visa <input type="checkbox"/> MasterCard	Card No.	
Name of cardholder		Expiry date
		M M Y Y
Signature		

For office use only				
FRC	Project No.	Client class	Product No.	Invoice
84600	6099		75F0008XPE	Stats Cust.
Prepared by:	Date	Telephone No.		Charge Cust.
				Mail Cust.
				Ship No.
				Credit card authorization No.:
Canadian orders:	7 % GST			
\$	+		= \$	



STATISTICS CANADA LIBRARY
BIBLIOTHEQUE STATISTIQUE CANADA



1010208770

Ca 005



