

STRIDE CASE STUDIES

Prepared For: The Office of Disability Employment Policy
U.S. Department of Labor

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December 2007

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Introduction

A series of case studies involving teleworking by persons with disabilities was prepared for two primary reasons: 1) to obtain qualitative information that would illustrate the organizational dynamics of teleworking for individual employees and employers; and 2) to illustrate that despite challenges, both employers and employees have benefited from teleworking by people with disabilities.

The majority of employers were drawn from the [national survey conducted by STRIDE](#) at the beginning of the project period. Several additional employers were selected by project staff based upon public information obtained during the project period or by contacting employers known to have teleworkers with disabilities.

Selection criteria included employers (1) with at least three teleworkers with disabilities; (2) with projects which appeared to be innovative or unique; and (3) with a willingness to provide information. ^[1] Many of the employers also allowed telework by newly hired people with disabilities. Organizations were contacted to explain the overall purpose of the STRIDE project, the reasons for the case studies, and the case study process. About half of the employers contacted agreed to participate.

Once an employer had agreed to participate, research staff interviewed teleworkers with disabilities, an organizational representative with responsibility for telework, and frequently supervisors of teleworkers. Usually the research staff first interviewed the organizational representative with responsibility for telework. That person then provided the names and contact information for the teleworkers and supervisors. Research project staff contacted each of those individuals about their participation, with all individuals promised anonymity.

Interviews were conducted by telephone and via written survey instruments that were clarified by follow-up telephone conversations, when needed. Separate sets of questions were prepared for teleworkers, supervisors, and organizational representatives, although there was substantial overlap and a core set of questions across the three sets.

For instance, the employer questions solicited information on: 1) Current status of teleworking in the company or organization (number of teleworkers, types of jobs, telework schedules, etc.)

- § Need or problem being addressed by telework and its history (when and why it was started, key implementation items such as training, etc.)
- § Results to date for the employer or organization (primary advantages and benefits, disadvantages, unintended consequences, etc.)
- § Teleworkers' performances (assessment of productivity, absenteeism and turnover, types of measures used, supervisory and co-worker issues, recruitment and career progression impacts, new employees who telework, etc.)
- § Future of teleworking for the employer and for other employers and organizations (likelihood of changes in number of teleworkers, suggestions to other employers, strategies and approaches by governments to increase teleworking in society, etc.)

Teleworkers' questions and supervisors' questions covered the same general topics although there were differences in the number of questions under each category. Each person interviewed was sent a draft of information they had provided to research staff. Interviewees were asked to review, comment, and alter any material in the draft which she or he felt was incorrect or had been misinterpreted. In most instances, everyone saw not only what they had provided but also the entire draft case. Employers were able to identify proprietary information to be deleted. That did not materially affect any of the case descriptions.

The case studies were prepared with a strong emphasis on their educational value for other employers. From the STRIDE research team's experience, most employers are interested in learning about what works or doesn't work from their counterparts. Therefore, the cases were generally framed to assist employers in understanding the appropriate conditions under which telework will be beneficial for both employers and persons with disabilities. To ensure that the case descriptions would be read by professional human resource staffs, business owners, and people with disabilities, all but two of the cases were limited to a maximum of 10 pages in length. One case was extended because of its importance nationally as a mechanism for working with employers in, and a second case was increased in length due to its involvement with STRIDE placements. Cases were prepared at

various times during calendar years 2006 and 2007.

Teleworking in United Way's 211 System

Overview. The Greater Twin Cities United Way in Minnesota contracts with a large non-profit agency (Minnesota Resource Center) to provide information to callers in the community who are seeking assistance with food, housing, medical, legal and crisis issues. The non-profit agency serves as the employer for eight teleworkers with disabilities, who work from home between 5 pm and 8 am. The program began 11 years ago, and all positions were newly created for the eight teleworkers, who now work 20 hours per week on average. The results and experiences to date should be of interest primarily to communities that have or will have 211 and 311 systems, as well as to companies considering development of teleworking through a contractual relationship.

Need or Problem Being Addressed. The Greater Twin Cities United Way, a non-profit agency, provides 24-hour call center responses to citizens in need for a regional seven-county area including Minneapolis/St. Paul, Minnesota. This confidential and free service provides referrals to appropriate community resources such as health, legal, transportation, counseling, youth services, childcare, food and housing organizations.

The current 211 Service evolved from an earlier program called First Call to Help, which was a mutual partnership between United Way and the Minnesota Resource Center, a non-profit vocational rehabilitation agency. In 1993, there were about out 50,000 calls per year to First Call to Help. While that volume could be handled adequately by the United Way's call center staff, few staff were willing to work second or third shifts, holidays, or weekends. Because of a desire to provide more effective services during those times, and because the Minnesota Resource Center wished to create telework positions for persons with disabilities, a project was started with funding through Hennepin County.

Although it was not principally a business decision at the outset, the partnership now responds to more than 400,000 in bound calls annually. United Way contracts annually with the Minnesota Resource Center (MRC) to manage teleworkers through a contract for after-hours and weekend call services. The overall call center budget is approximately \$1.4 million per year, with 90% of the funds from United Way. United Way regularly prices out the contract to see if a competitor could efficiently provide and afford this service.

Current Teleworking Status. Eight teleworkers with disabilities, six women and two men between the ages of 30 and 70, provide services from their homes during evening and early morning hours. The teleworkers are classified as temporary employees of the Minnesota Resource Center (MRC). They work no more than 20 hours per week and are ineligible for medical and other benefits. Most teleworkers are on Social Security Disability Income and have a cap on how much additional income they can earn per month. The call center employment helps to supplement their public income.

Teleworkers are selected jointly by the MRC project manager with input from the United Way 211 supervisor. Most of the candidates are from the MRC "pool" of individuals seeking work and are individuals with some type of disability which precludes a full-time position. Candidates must have computer skills and good communication skills. Some individuals receive employment preparatory training and computer orientation training. All new hires are required to train initially for 30-40 hours during the day about subject matter content (housing, public assistance, indigent health options, etc.) and the 211 system at the United Way call center. During this paid training period, new hires also listen to actual calls for assistance and periodically receive updated training. All teleworkers are supervised by the MRC project manager, who also has a disability and had previous call center experience.

Many of the current teleworkers have fatigue and stamina issues. Otherwise, there have been few disability accommodations, except for some ergonomic adjustments. For instance equipment was adapted for one teleworker with cerebral palsy to improve ease of movement within his house. For another individual, MRC provided a walk-around telephone, a computer, and an extra phone line for DSL in addition to paying the monthly cost of about \$60. For a husband-wife team of teleworkers, MRC supplied a computer and two phone lines. Under terms of the contract, all equipment and technology costs are MRC's responsibility.

Each teleworker has a flexible schedule by day and by shift. A typical schedule is four to six hours per day with some shifts extending to 8 hours and others being only two hours. All work is performed between the hours of 5 pm and 8 am. Teleworker schedules are set a month in advance by their supervisor but some swapping of hours

and days are permissible as long as the total number of hours (40 over two-week period) is not exceeded.

In addition to basic computer and employment preparatory skills, the home-based teleworkers must have an Internet search, service orientation, be resourceful and self-disciplined, without being too compassionate. Because some callers are in difficult personal situations, teleworkers must be able to provide assistance in a timely manner without becoming overly involved with any caller, which would detract from assisting other callers. In essence, they are not counselors; they refer individuals to needed community resources.

Results. In general, there is agreement among all parties (employees, supervisor, and employer) that the program has worked well in the past and is working well currently. As expected, however, each party has somewhat different perspectives.

Employee Perspectives. Joe and Mary, a husband-wife team of teleworkers, is able to flex their schedule, when the other spouse may need to rest or take a day off to manage disability symptoms. Joe has arthritis, diabetes and pulmonary disease and in 1997, he began to use a wheelchair. Mary had been a nurse and because of lupus, could no longer handle the physical work. The telework jobs help this spousal team to better maintain their health, control their fatigue symptoms and stay out of office buildings, which are ripe with cold and flu viruses. Mary and Joe don't miss having co-workers: when they were in jobs with co-workers their health status was always at risk and vulnerable to the illnesses of others around them.

Debbie, another teleworker, has bad knees which prevent her from sitting or standing for long periods of time. With the home-bound position, she can use her walk-around phone and vary her routine. One of her previous positions had been phone sales, a position which she disliked because of its intrusive nature. Because of the service and responsive orientations of 211, and because of the position's independence and working conditions, Mary is quite satisfied with her current telework position. The downsides are the lack of benefits, no employment career path, and limited face-to-face interaction.

The evening and night shift teleworkers, and their MRC supervisor, met face-to-face for lunch every 3 months to discuss challenges and receive short-term training. That face-to-face interaction has become less frequent. Now, teleworkers interact with co-teleworkers primarily by phone to inform others that they have signed on and there is coverage.

Supervisor Perspectives. Although he has an overall positive assessment of telework, the MRC supervisor noted that special attention must be given to announcing changes in policies and procedures, which cannot be communicated as well via email as in person.

Another area of concern is how teleworker performance is assessed. For individual teleworkers, such factors as number of calls per hour, number of complaints, average call length, and average time between calls are used. Several of these factors, however, are uncontrollable by teleworkers and others do not take into account the complexity of incoming requests. For these reasons, the performance process is less than ideal according to the supervisor. In addition, the software is not entirely reliable which has caused monitoring problems and introduced uncertainty about coverage by teleworkers who are shown not to be working, when in fact, they did. Also sometimes there is a glitch in either the communications software or the database which prevents coverage. When that happens, callers are directed to an answering machine, and responses are provided during daytime hours.

In terms of absenteeism and turnover of teleworkers, there is no doubt about performance. Last year one person left after it was discovered broadband was unavailable in his neighborhood. And one other person quit. Other than that, there has been no turnover, and absenteeism has been minimal in recent years.

211 Employer Perspectives. While satisfied generally with current partnership, given the available funding, the 211 system will be required to pass a call center accreditation process in order to continue providing services. Because of this, it is anticipated that a variety of improvements and changes will be needed within the next two years to meet the new standards. Both technology and human resource components will be affected.

Currently there is no technology available to record calls of the remote teleworkers. While there have been few complaints about the assistance provided, without the ability to record and monitor calls, United Way has no consistent method for ensuring quality control or of rectifying any problems when inadequate assistance is

provided. Presently, only the number of calls answered can be documented for each of the remote teleworkers, an approach considered unsatisfactory. A lower than anticipated number of responses to calls could be due to a low number of inbound calls, intermittent coverage by the teleworkers, or problems in accessing the 211 server--three very different reasons which would require different responses by management.

In addition to technology issues, the nature of the skills needed by the teleworkers is changing. Simple referrals to organizations still occur but are less frequent. Instead of answering a phone and locating the nearest service, teleworkers are now being confronted with more complicated situations. These require the teleworker to have more knowledge of social services, better search skills to identify potential services, and more advanced problem-solving and crisis management skills.

The employer, supervisor, and teleworkers all agreed that the 211 system worked extraordinarily well during the Hurricane Katrina period. Staff received 10 times the normal number of calls during that time and performed exceptionally well in meeting callers' needs and in their reaction times. Employees not only needed to work at least double their normal hours, in some cases they needed to go to the main 211 call center. It proved to be a gratifying experience and one that they are all proud of.

Future. The accreditation process to become a certified call center and referral system will bring a number of significant challenges in 2006 and 2007. To ensure faster, more numerous, and higher quality responses to more complex caller situations, changes will be needed to improve the system, within the availability of resources for this social service system. Possible changes include:

- § Install a new phone system and new technology, including better web-based applications to maintain teleworker cost advantage over in-house call services
- § Upgrade teleworker skills through more and customized online training or adding other teleworkers with more advanced skills
- § Expand the current regional 211 system to new geographical areas throughout Minnesota

Lessons Learned . Based on the experiences to date with the United Way 211 system, a number of key items stand out as strategies to enable more persons with disabilities to telework:

- § Implement training or work experiences to ensure teleworker is job ready
- § Provide telework job try-out experiences on a temporary basis
- § Ensure that job supports are in place to assist teleworkers to succeed

For teleworkers with disabilities who already have health benefits, these 211 positions provide supplemental income through part-time work, without jeopardizing existing and needed medical benefits and social security disability income. The positions are especially appropriate for persons with disabilities who can only work part-time due to chronic and changing illnesses with fatigue, stamina and pain challenges. Telework for many of the 211 representatives enables them to be productive and remain a part of the work world.

Also the 211 experience suggests that the telecommunications infrastructure is a critical component for remote teleworkers. There are still problems with some call center data software, and this has interfered with service delivery by introducing an element of distrust/uncertainty into the tracking and monitoring process. If at all possible, employers should make sure their software allows for goals to be easily measured and to yield data for accurate tracking and measurements. This is an essential element of a remote service delivery process, especially in the absence of a listening in/call monitoring feature.

Because of the importance of an adequate infrastructure for off-site teleworking by persons with disabilities, federal and local workforce programs should consider allocating more resources for start-up technology costs. This would enable more remote teleworkers with disabilities to be engaged in 211-type teleworker positions. Because the United Way 211 service is currently the only one with teleworkers with disabilities in the nation, it can truly serve as a model for other systems, both now and in the next few years.

LIFT—A Human Resource Service for Information Technology Teleworkers

History and Overview of LIFT. LIFT is a non-profit organization which places highly skilled persons with disabilities with employers seeking information technology expertise. The organization began 31 years ago through the efforts of former executives at IBM and another computer firm who decided to help a friend's son with a disability obtain an information technology (IT) position. Their friend's son had been unsuccessful in obtaining employment despite having strong IT credentials.

LIFT works with individuals who have physical disabilities only and makes placements with employers throughout the country. [2] Geography does play a role in placements, however, as all teleworkers generally are expected to work at least one day each week on-site. [3] Nearly all of the teleworkers are new hires for employers, although LIFT has been involved in several instances in which an individual was a company employee, became disabled, and then started teleworking because of his/her disability.

A highly selective evaluative process, as well as the intensity of training restricts the number of individuals who can be placed. In the past 25 years, 218 teleworkers have been placed, and about 95% are still working. Most of the others have retired. Of those still working, about 90% remain with their original employer. Demographically, about 65% of the individuals placed are men, and the average age at placement is between 25 and 35 years of age. All individuals work full-time.

Placements. There are four main phases in LIFT's placement process.

I. Evaluation of Candidates. LIFT receives between 20 and 100 applicants per week from state vocational rehabilitation agencies, non-profit rehabilitation providers, and the Social Security Ticket to Work program. The majority of applicants come from Ticket to Work. [4]

Individuals with cognitive or emotional disabilities are not accepted, only individuals with physical disabilities. Every major type of physical disability has been encountered, with the most common disabilities having been: Quadriplegia; Paraplegia; Muscular Dystrophy; Blindness (various diagnoses); Deafness; Cerebral Palsy; Multiple Sclerosis; amputees; other orthopedic disabilities; and other neurological disabilities/

While there are 20-100 applicants per week, most individuals withdraw their applications after learning what is expected of applicants in the way of skills, testing, commitment, and references. Of every 100 applicants, about 5 remain at the end of phase I.

II. Training. This phase entails matching an applicant's training and aptitude to a company's specific position requirements. Training is totally customized for each situation. Most training is oriented to the teleworker, with more than 800 information technology courses being offered online. Courses about "e-learning" and "e-working" also are provided. Online mentoring is available 24-7.

As appropriate, LIFT staff provides corporate education about managing a teleworker, accommodating an employee's disabilities, and working with a colleague off-site. According to LIFT staff, many employers are aware of teleworking and even have teleworkers with minor or short-term disabilities, but few have had experiences in accommodating teleworkers with severe disabilities, which involve new challenges. [5] In those situations, there is a need for training which will adapt expectations about a teleworker and personalize the teleworker's environment.

Typically, training will be conducted for 4 days a week at the applicant's home and the 5th day at the company. There is wide variation in the length of the training phase--from one week to six months. Because of the differences in time and due to the customized nature of training in each placement, there is no typical cost of training per teleworker.

More than 90% of the applicants, who start, complete this phase.

III. Contractual Employee Phase. Each individual then becomes a contractual employee of LIFT, working with the assigned employer for a one-year period. The majority of current clients are Fortune 500 companies, not medium-sized or small private employers, or government employers.

An individual's salary, as paid by LIFT, is determined by the employer, based on the individual's qualifications and what the client pays for someone in that job title. Five common job titles are: application programmer; software engineer; systems analyst; technical support specialist; and technical writer.

The average annual salary is approximately \$60,000, although there is considerable variation. Beginning and middle manager information technology salaries in government agencies and smaller private firms are significantly lower than those of major corporations. (LIFT staff has found that most of their applicants are highly motivated by compensation levels.) In addition, LIFT provides workers' compensation, unemployment insurance, and a barebones, health benefit plan during this year.

Except for a small number of individuals who realized they were "hot commodities" because of their particular skill sets, all placements in this phase move on to the final phase.

IV. Employer Phase. In the final phase, the IT professional transitions from being a LIFT employee to becoming a company employee. One of the major incentives for individuals is to participate in the employer's health benefit plan, which in all cases has been far superior to that which can be provided by LIFT or nearly any other small employer. Once this phase has been reached, the employer has a highly skilled professional who has been pre-screened and trained for a specific position within their organization. The individual also has worked 12 months on tasks for them before becoming a permanent hire.

In addition, the company has an employee who, based on LIFT placement experiences, is likely to be: 1) creative, having thought outside the box because of his/her disability, and who therefore often can provide unique solutions; or 2) loyal and unlikely to leave voluntarily.

Below are profiles and views of three teleworkers and perspectives from the supervisor of a teleworker placed by LIFT.

Profile— Teleworker A. This individual, approximately 50 years of age and with a master's degree in economics, has been a telework programmer for 16 years with his current employer. Prior to his current employment arrangement, he had not been a telecommuter. When he was hired in 1990, the company incurred expenses of approximately \$10,000 in setting up his telecommuting workstation. Seven years ago the company converted all IT employees to laptops. The company paid approximately \$500 for an additional laptop dock for him to use at home which effectively replaced the original, outdated workstation. His continuing costs are only for a broadband connection.

He is a full-time employee who works in the company's office on Tuesday and Thursday and teleworks Monday, Wednesday, and Friday. While his schedule is fixed, he alters it as necessary because of staff meetings or for a meeting with his supervisor. Due to personal assistant support, he teleworks generally from his residence but also has worked at his parents' home. Whenever he is teleworking, he has daily contact via phone or email with his supervisor. Teleworker A believes that his supervisor views teleworking neutrally, although it requires no more supervisory time than overseeing office-based employees.

"I began by working in one section of my bedroom on a long flat desk we set up which allowed for all my equipment and materials to be very easily accessible. I now have more room and was able to have an office set up in a separate room physically tailored to my situation. Being in a wheelchair, my home office is at least if not more productive than my work office because of the set up."

Teleworker A feels that his work output (quantity and quality) is about the same whether he works at his residence or his office. One aspect he is able to perform better is off-hours support. Because transportation and personal care assistance are limiting factors, he would not have been able to get into the office during off-hours to provide the same level of support as his peers early in his career without teleworking. His availability allowed him to gain the respect of his supervisors and co-workers early on. While he appreciates his company's accommodations and expects to continue teleworking, he cites a few drawbacks: reduced social interaction (not

being in the loop at times, which is becoming more important to him), an expanded workday at times, and possibly an impact on his advancement. While he has supervised non-teleworkers and has been able to advance as well or better than others in the company, because of the size of his department and nature of the company he believes further advancement may be more difficult with his current teleworking schedule because he would need to be on-site more for meetings and direct user contact.

Despite these drawbacks, Teleworker A is satisfied with teleworking because it is more convenient for him. Also telework has been one aspect of his overall positive employment experience at the company, which he says has always treated him well. Because of this positive experience, Teleworker A says he is less likely to consider employment opportunities elsewhere.

Based on his experiences, he believes the most important characteristics of a successful teleworker are discipline, dedication, and a strong work ethic. For someone who may have been out of the workforce for a while, those characteristics may need to be re-learned. Also, because of his experience in being a teleworker as a new hire, he believes that teleworking by some new employees, particularly those in the information technology industry, is appropriate. For a new employee with a severe disability that requires significant time for personal care in preparation for work, Teleworker A feels teleworking can be a tremendous advantage by not requiring commuting time to be added to an already long schedule.

Profile—Supervisor A. This supervisor has 30 staff members who build and maintain custom software to support a national membership organization in the telecommunications field. One of her staff has a disability and teleworks on a scheduled basis. For other IT staff (computer programmers, systems analysts, or project managers) there is no formal telework policy, although staff members occasionally telework. Each request for telework is evaluated based on individual circumstances. All teleworkers work at their homes.

The one individual who works formally as a teleworker does so to ease the physical burden caused by his commute. He is able to work full-time, which the supervisor considers a benefit to him and to the company. Special software which cost approximately \$5000 was installed on the disabled teleworker's home workstation.^[6] No additional costs are incurred currently for this teleworker or the occasional teleworkers, as all teleworkers can access employer software from their work desktop or a shared server. No training about teleworking was required as the individual had teleworked for another employer. The supervisor also has teleworked and considers that experience positively.

While there had been concerns prior to teleworking about the impact on communication and also the ability to manage remotely all teleworkers, those concerns have not materialized. The supervisor believes that teleworkers' productivity and job performances are at least comparable to non-teleworkers' performances:

“There really has been no loss of productivity, and in fact, given the ability for employees to work when they may otherwise have had to take time off, productivity has probably increased. Also, our customers continue to give us high marks for service, so we believe there has been no reduction in service level.”

She views teleworking positively for other reasons as well. There have not been major communication issues, there is no added supervisory time required of her, external customers have not been affected, and absenteeism and turnover have not increased. She notes that teleworkers have supervised other teleworkers and non-teleworkers without harm and is adamant that there will be no detrimental effects to promotions and career paths from teleworking. She believes teleworking improves the firm's ability to recruit and retain employees, and overall, she is very satisfied with teleworking and hopes it will become more formal and available to additional employees.

To ensure that teleworking yields benefits to an employer, the supervisor suggests: 1) Specifying that teleworking days are well-defined in terms of the work that should be accomplished--teleworkers should be managed based on anticipated productivity; 2) Defining a preferred communication method and deciding whether the home, cell or work phone number will be used and then setting standards for checking email and phone messages; and, 3) Defining in advance the degree of flexibility in teleworking schedules (Does the employee need to agree to alter that schedule at any time, which means teleworking schedules cannot be used to guarantee child care arrangements? Or should the schedule be “fixed” to accommodate the teleworker's needs? There is no right or

wrong approach but the degree of flexibility should be decided at the beginning of the process.)

Based on her experience, this supervisor would hire another disabled teleworker. The reason she has not is because there have been no openings in recent years. She would not hire any individual, disabled or able-bodied, who wanted to telework every day, however. She believes that application development requires periodic interaction in person and also that being on-site intermittently is necessary to understand a company's culture.

One of the benefits of the IT area is that it is project and results driven. The life cycle of a project, from analysis to specs, coding, testing and implementation, has fairly well defined estimates for time and resources. Because of this, monitoring employees who work at home is not much different from monitoring employees in the office. Estimates are set and, within certain parameters, either they are met or they are not met; output should not diminish because someone works at home. On the other hand, that person should not be held to a higher standard simply because he or she works at home.

Profile— Teleworker B. This teleworker is a full-time programmer who has been with his current employer for three years. Approximately 50 years of age and with a bachelor's degree, he has teleworked full-time (set schedule, at his home) for the entire three years. Prior to joining his current employer he worked as a teleworker for a large pharmaceutical company for two years, and prior to that, as a teleworker for a large insurance company for 7 years. Because of his previous telework experience, there was no need for training of any kind when he began with his current employer.

Teleworker B has a mobility impairment, and walking requires significant energy. Telecommuting helps reduce his fatigue. He sees no disadvantages for his employer or himself from teleworking. As with many other teleworkers, he believes teleworkers can supervise other teleworkers as well as non-teleworkers. He does not feel that contact with his co-workers suffers or that more communication and coordination problems arise when teleworking. In fact, Teleworker B believes his employer gains from his teleworking in several ways:

- his supervisor spends less supervisory time when he teleworks, than with colleagues in similar position who are not teleworking
- he is absent less than he would be if he worked entirely in his employer's office
- he is less likely to consider employment opportunities elsewhere because of his ability to telework; and his productivity (output and quality) are better, in his view, than when he works in the office

Because Teleworker B believes telework benefits his employer and himself, and because he does not believe his promotional opportunities and career path will be negatively affected, he is very satisfied with his current teleworking arrangement.

Longer-term, Teleworker B sees teleworking expanding and becoming more common at his employer and other employers. During the past six months the company created a separate log-in domain for telecommuters, which has significantly facilitated the telework experience. He also believes his employer has the most secure networking technology currently available, and when other employers acquire that technology, they will have fewer concerns about having staff work at their homes.

Teleworker B suggests that employees wishing to telework should treat their non-office day as if he/she were going to the office: they should have the same routine and above all, the discipline to work at least as well as if they were at his/her office. For persons with disabilities who have appropriate training and experience, he feels they can be hired as new employees and telework as soon as they begin employment.

“An area of concern specific to employees who have disabilities is that of off-hours support. A home office enhances the support capability of any employee by making travel time generally unnecessary. Because travel is more difficult and time consuming for a disabled employee, support capability is enhanced even more than that of an able-bodied employee. For the individual with severe mobility impairments, late night support, which would be virtually impossible without a home office environment, is even a possibility with the proper setup.”

Profile — Teleworker C. This teleworker is an Accredited IT Specialist and Certified Advance Technical

Expert who has worked at major international information technology company for the past 3 years. Teleworker C is 38 years of age and has a bachelor's degree. Prior to joining this internationally renown corporation, he teleworked and considered it a positive experience. He is mobility impaired and uses a leg brace and walking aids.

Two years ago, senior company managers began consideration of a Work-At-Home initiative for the department in which Teleworker C works. Because of his disability and prior experience with telework, he was a vocal supporter to management about the potential benefits of teleworking. Subsequently, the Work-At-Home plan was implemented.

Teleworker C now is a full-time teleworker who works at his residence every day of the week. As part of the initiative roll-out, the company provided training on teleworking to all employees. The company also pays approximately \$400 annually for broadband connection. Employees have a monthly office team meeting but otherwise do not have face-to-face interaction.

According to Teleworker C, there have been both organizational and personal benefits from implementation of full-time teleworking. He believes the company is receiving more and higher quality output from him and his co-workers. He tends to work longer hours than before, due to more comfortable surroundings and not having to devote time and effort to commuting. Also, he says he is absent less, and provides output that is equal to or better than before because he has fewer distractions.

“As someone with a disability, not having to go through the routine of equipping myself with a leg brace and walking aids every work day has improved my quality of life. Physical stress associated with traveling to work each day is completely gone by being able to telecommute. And with that physical stress removed, mentally I am more relaxed and tend to dedicate more time to doing my job.”

Because of his ability to telecommute full-time, he says he has a very high opinion of his department—it was high before the location change occurred and now it has become even greater. He reports that working at home has improved his morale and increased his loyalty and commitment to his employer. He says he is less likely to consider positions in other companies. For the company, he believes this improved employee morale and loyalty means higher productivity from employees along with tangible cost savings from downsizing of offices.

There are few negatives from working at home according to Teleworker C. He does not feel additional supervision is necessary for teleworkers compared to office workers. Nor does he believe teleworkers are precluded from being supervisors of other teleworkers or office employees. He does miss personal interaction with co-workers but does not feel isolated as he has very frequent contact, primarily via instant messaging, with his supervisor and co-workers. (The previously noted monthly team meetings also reinforce interactions.) Nonetheless, he has recommended to management that they create a virtual social climate to maintain team social connectivity.

According to Teleworker C, the company's culture is moving increasingly to virtual teams and because of this, individuals who are successful teleworkers are likely to be rewarded and not penalized in terms of career opportunities. If anything, future promotions, in a company which has more and more departments moving into off-site work environments and in which supervisors support teleworking, will be given increasingly to those who can telework successfully. Teleworker C believes successful teleworkers must be able to focus on important assignments, eliminate distractions, be adept at time management, and establish rules for work-life balance.

Teleworker C is very satisfied with full-time teleworking as it has improved his quality of life, while simultaneously helping his employer. He believes all the tools are currently available for more individuals to participate as teleworkers. There is no doubt in his mind that teleworking can work for new employees with disabilities, and in his view, government agencies should provide incentives to encourage more companies to create teleworking opportunities for people with disabilities.

“I am glad that my department has come to appreciate the cost savings and employee morale associated with allowing us all to work from home. And I don't miss the two hour stuck-in-traffic commute.”

Concluding Observations. LIFT offers information technology employers a compelling value proposition: a highly trained, pre-qualified individual who has successfully completed a contractual internship prior to

becoming a full-time employee. And LIFT is available both to the company and the employee years after the initial placement if desired. For instance, LIFT redesigned workstations for individuals who had been placed 25 years earlier. A LIFT placement also offers employers a concrete opportunity to combine social responsibility with corporate self-interest through its personnel policy. It is no wonder that the list of employers appears like a who's who of the Fortune 500. It is also not surprising that many of LIFT's clients are repeat customers. What is surprising is that LIFT has many more excellent candidates than positions at the present time.

The LIFT model requires a solid commitment and planning effort from both rehabilitation and employer communities. Potential teleworkers must be screened carefully to ensure they are "teleworker-ready" before they are hired by the employer. LIFT conducts ongoing evaluation of teleworkers and guides them to ensure they meet corporate performance standards. The employer advantage is that employer risk in newly hiring a teleworker with a disability is greatly reduced as the person's performance level is known prior to hiring.

The main problem restricting placements is primarily one of cost, according to LIFT. First, there are many employers whose human resource policy is to fill information technology (IT) positions with lower-paid staff, that is, lower salary rates are a higher corporate priority than a quality IT workforce. Second, the IT environment is changing constantly and some employers would rather hire consultants for specialized tasks, rather than permanent employees. Third, there are simply fewer IT jobs in the United States because of the continued outsourcing of positions to India and elsewhere.

Overcoming corporate imperatives for cost reduction, particularly with a variable cost such as salaries, will not be easy. Those large employers intent on reducing the cost of their human capital are unlikely to be persuaded that long-term, they may be better served by having a high-quality IT workforce, than a lower cost IT workforce a continent away. Locating employers that are not driven solely by a cost priority will be one key to enhanced placements.

Another key may be to argue that teleworkers represent the best of both worlds: they can reduce an employer's facility costs and improve productivity, without going to the extreme of being so far away geographically that coordination deteriorates and client relations decline. Employers who believe that teleworkers should appear regularly in their offices to ensure coordination and integration with co-workers would be inconsistent if they also allowed inter-continental outsourcing for non-routine IT objectives.

Besides more information technology positions in the US, additional publicity about successful placements, and enhanced awareness of LIFT through business publications, it is unclear what other changes would increase employer demand. No federal or state laws exist presently that inhibit placements. And while tax incentives always are beneficial, any employer that is focused solely on the cost of their IT human capital is unlikely to be convinced that outsourcing and immediate compensation savings are inferior options.

The benefits to persons with disabilities and to employers from LIFT are tangible and long-term. More employers should recognize and take advantage of the unique personnel whom LIFT can present.

LIFT Employer Placements

Insurance

Aetna Insurance Company
 Allstate Insurance Company
 AON Corporation
 Blue Cross/Blue Shield of Delaware
 The Boston Company
 Hartford Insurance Group
 Metropolitan Life Insurance Company
 Mutual of New York
 New York Life Insurance Company
 Northwestern Mutual Life
 Northwestern National Life Insurance Co.

Banking and Finance

Bank of Boston
 Bank of Hawaii
 Chem Network Processing Services, Inc.
 Continental Bank
 Dun & Bradstreet Corporation
 Federal Reserve System
 First of Denver
 First Federal Savings and Loan
 First Interstate Services Company
 First National Bank of Chicago
 Home Federal Savings & Loan Assoc.

Phoenix Mutual Life Insurance Company
The Prudential Insurance Company
St. Paul Fire and Marine Insurance Co.
Transamerica-Occidental Life
UNUM Group Life & Health

Manufacturing

AT&T
AT&T Information Systems
AT&T Technologies, Inc.
AMAX Corporation
BOC Gases
Gould, Inc.
Honeywell, Inc.
Hughes Aircraft, Inc.
IBM
Inland Steel Company
International Harvester
3M Company
Motorola, Inc.
Polaroid Corporation
Rockwell, International
RCA Corporation
Standard Oil of Indiana
Storage Technology Company
TRW
Union Oil Company of California
Verizon
Verizon Wireless

Marine Midland Bank, N.A.
Mercantile Trust-M Tech
MGIC Investment Corporation
Morgan Stanley & Co., Inc.
Northern Trust Company
Valley National Bank

Consumer Goods and Other

Abbott Laboratories
Allergan Pharmaceuticals
Amoco Corporation
Ann Taylor, Inc.
Armour Company
Baker & Taylor Books
Colgate Palmolive Company
Dynachem
Educational Testing Service
Ethicon
Ethicon Endosurgery
Jewel Companies, Inc.
Johnson & Johnson
State of Kansas
Kraft Foods
Libby McNeil and Libby
McDonald's Corporation
Montgomery Ward and Company
Moore Business Forms
NECA
Nestle Company, Inc.
Networking & Computing Services
Novartis
Ortho Biotech, Inc.
PepsiCo, Inc.
Quaker Oats Company
Time, Inc.
TWA, Incorporated
United Airlines
Wakefern Food Corporation
Walgreen Company
State of Wisconsin

Source: <http://www.lift-inc.org/clients.html>

A Telework Culture

Overview. Since its founding, this information technology corporation has become known internationally. It has sales in excess of \$3 billion annually and continues to expand at a rate of more than 15% annually. It competes with large and medium-sized technology companies in a variety of different market segments.

While the original impetus for remote work at this company came from employees wanting more flexibility in their schedules and work locations, there also was a business need which required non-traditional scheduling--bringing together team members from throughout the world to discuss project tasks. Today, working from home for some part of the work week is common and has become ingrained in its corporate culture. More than 50% of headquarters staff is estimated to work remotely.

Official company-wide data does not exist about the proportion of employees who work remotely or their demographic characteristics, such as gender and age.^[7] Nor is information tracked centrally about schedules. According to a company representative, working remotely one day a week is the most common schedule, but many other patterns exist, and there are some individuals who work primarily from home. The predominant offsite location for remote workers is a residence.

Decision-making about working remotely is completely decentralized, and the conditions are determined on a case-by-case basis by a manager and an employee, based on individual and team tasks. Communications with co-workers are emphasized even while working remotely.

A company official said working remotely has not required greater supervisory time or increased absenteeism, although there are no quantitative data available to support this assertion. Teleworking is not viewed as negatively affecting an employee's promotional opportunities or ability to supervise other employees. According to interviews with company teleworkers, the primary disadvantages to date have been with minor glitches in technology and with an expansion of the traditional work day.

The company encourages remote work by reimbursing employees for internet connection fees and cell phone costs. Also, the company has tutorials available for phone and internet meetings as well as setting up a virtual private network.

Two profiles of full-time company employees who work remotely are provided below. Their jobs existed before these individuals began working remotely, and neither of the individuals was hired specifically because of their interest in working remotely. Both employees are deaf.

Teleworkers' Perspectives.

Profile —Teleworker A. Teleworker A is a programmer who has worked at the company for 10 years. He has a bachelor's degree in mathematics and is between 35 and 40 years of age. Because of software limitations, he rarely worked remotely when he first started at the company. Several years ago he began working remotely intermittently and about six months ago, he arranged with his manager to work remotely one day each week. Normally he works a fixed schedule, but he changes the schedule as meetings are required or personal circumstances (vacations, sick days, physician appointments etc.) warrant. Teleworker A, in conjunction with his manager, picked a day which typically was relatively quiet and did not have a meeting which required his presence.

Although there was some reluctance on the part of his manager and that person's manager about Teleworker A working remotely, he requested a schedule change to reduce the time he spent in rush hour traffic and personal stress, along with saving money and maintenance costs for his car. Teleworker A uses VPN, Tarantella, web conference, and IM (all provided by the company) as well as a video relay service from the state's telecommunications agency.^[8]

He discovered that he could do more than 90% of the same work at home as on site, and to date, he is very satisfied with his remote work schedule experience. Not everything has gone smoothly, however. Soon after he

began teleworking he realized that some internal websites remained behind the firewall, inaccessible from his home computer. Further, there were several other unanticipated annoyances and surprises:

- § Not meeting in person, to use the whiteboards to discuss design or issues in a visual way (e.g., drawing data model diagrams and scenarios)
- § Not taking walks or coffee breaks with colleagues
- § Having different software on his desktops at work and his home computer
- § Having a slower home printer, which is a problem for long documents that often reach 100 pages in length

Teleworker A still has a problem with some meetings. Because he is new to the video relay service, he finds attending a meeting in person to be more satisfactory as he can see people speaking while watching the interpreters. Moreover, if speakers draw examples and lists on the whiteboard, he prefers seeing that in person.

Teleworker A believes the remote working experience has been beneficial for the company as well as himself. He considers his productivity to be as high as when he is in the office, and his interactions with both co-workers and his manager have not suffered in his view. This is significant issue as about half of his group's work involves meeting or working together in person. While he is expected to be fairly autonomous in conducting his other tasks, he still has a weekly session with his manager to discuss his workload and activities. He interacts several times a day with co-workers and colleagues via email and more frequently via instant messaging or in person at other times when a new project is beginning or when deadlines occur. [\[9\]](#)

While Teleworker A anticipates his own remote work to continue with the same frequency in the future, he believes that teleworking opportunities could become significant for individuals with disabilities, particularly for those in information fields such as software development. Teleworker A believes working remotely is well-suited for individuals who are self-reliant, goal-oriented, semi-autonomous, and proactive. Other practical steps that improve working at home in his view are (1) minimizing distractions by setting clear expectations with family members; (2) having a home computer that matches or surpasses one's work computer, together with the necessary software (VPN, IM, etc.); and (3) planning in advance to perform work on site that is a prerequisite for subsequent work at one's residence.

“I feel empowered that my manager trusts me to work at home when I want to or need to.”

Finally, based on his personal experiences, Teleworker A believes that working remotely could be useful for a new employee with a disability. However, he believes a new employee should work remotely only after he/she becomes acquainted with co-workers, understands the group's work procedures and processes, and determines how to perform the necessary tasks at his/her residence.

“The interesting aspect is that my group is split into teams working in different countries. My perspective of these teams in other countries is as if they were working “at home at different parts of the day”; we find and use ways to communicate and share information/ideas, and once in a while we travel and visit each other. if people work in different countries can work on the same project, why not the same for people working in the office and remotely?”

Profile —Teleworker B. Teleworker B, a divisional manager, is in his early 40s. He has worked at the company for nearly 10 years and has worked remotely since he began. Before joining the company, he teleworked and his manager now works remotely full-time from her residence. Teleworker B has an agreement with his manager that he may work remotely as frequently as he desires, provided his productivity does not suffer. By his own choice, he limits his remote work to one day a week. The schedule is usually fixed, although he does alter it because of meetings or other unanticipated items which arise.

Teleworker B's primary motivations for working remotely are to reduce stress from his commute and to focus more precisely on assignments. He feels he is able to complete more documentation and solo tasks when working off site. Isolation has been a drawback from working at home, but not to the extent that he believes it will affect his career opportunities. Teleworker B views remote work as an important employment benefit, and he is very satisfied with his current work schedule.

This teleworker believes the company is encouraging remote work and that it will become more prevalent in the

future for two reasons: (1) teleworking saves the company money by reducing office space; and (2) more employees will request flexible scheduling if they are forced to live farther away from headquarters. Although remote work will increase at the company in coming years, Teleworker B does not believe it is appropriate for a new employee, with or without a disability, until that new employee has bonded with his or her work group. He does not have a precise time for that bonding process, however, as he feels it will vary according to the individual, the tasks, and work group members.

Teleworker B advises other companies that may be considering telework to identify appropriate positions as the first step. Then the experiences of other companies with substantial telework should be examined in detail. Finally, Teleworker B suggests that a company educate its managers about the potential productivity, morale, and other benefits from allowing employees to work remotely.

Concluding Observations. Working remotely is viewed positively by the company's representative and the two employees interviewed. According to all three individuals, telework has proven beneficial to both employees and the company. They feel that employee morale and loyalty are higher because the company is responding to individual employee's needs. And while no quantitative data were available, in most companies higher morale and loyalty lead to reduced absenteeism and fewer resignations.

All three individuals believe that telework at the company is likely to increase in the future. They feel working remotely is especially well-suited to their company's global business communication requirements and its intensive knowledge-based tasks. And the decentralized decision-making process allows managers to determine if remote work will enable employees to meet their goals.

For all these reasons, it is not difficult to understand why telework work has become prevalent at the company. And while remote work addresses some of the company's particular conditions, such as intensive knowledge-work and its international footprint, which do not exist to the same degree in other companies and organizations, the approach could be adapted to numerous other organizations.

Video Relay Service. Video Relay Service (VRS) is a nationally-mandated telecommunications service that enables real-time, two-way communication between deaf, hard-of-hearing, and speech-disabled individuals using a videophone, and telephone users. Each state has an initiative through one of its state agencies.

In Texas, a VRS user connects to a Video Interpreter (VI - an interpreter who works for VRS provider), then gives the phone number of a hearing person to the VI. The VI then places the telephone call to the hearing party. The VRS user sees the VI on video conference equipment, and they can see each other and sign to each other if desired. The VI talks via voice to the hearing party. The VI serves as the key link in relaying the conversation back and forth between the parties. A voice telephone user also is able to initiate a VRS call by calling a VRS center, usually through a toll-free number.

VRS is a popular service because the conversation between the VRS user and the VI flows much more quickly than with a text-based TRS call. In addition a VI is able to express the mood of both parties, interpret the mood of the hearing person in sign language, and voice the mood of a signing person, which are not possible with text-based relay service. Consequently, VRS is much more like a normal telephone conversation in which the emotions of each party are readily identified by inflections of the voice. Like all TRS calls, VRS is free to the caller.

See: <http://www.puc.state.tx.us/relay/relay/vrelay.cfm>

Telework Arizona: A State Government Innovation

Overview of Arizona State Government's Telework Program. The State of Arizona is one of the pioneers in telecommuting and telework. Nearly 18 years ago, state government began a pilot project in conjunction with AT&T to determine the feasibility of telecommuting as a trip reduction strategy. Based on positive results from that pilot, a formal telecommuting program began in 1993 through executive order. In 1996, the Governor mandated a telecommuting program for all major state departments, and subsequent governors have reinforced that program through new executive orders. The current goal is a minimum 20% participation rate among full-time, state employees in Maricopa County, which encompasses Phoenix and most of the state workforce. That goal has been achieved with more than 4,200 teleworkers identified in the latest reporting period. [\[10\]](#)

Conditional upon management approval, any state employee may telework, at any frequency. In reality, most employees telework one or two days a week at their residences. Before an employee may telework, he/she must complete an 11-item survey to determine his/her suitability for telework. [\[11\]](#) Most state employees (83% in a survey of the workforce) believe their job tasks can be performed via telecommuting, and currently there is a wide variety of jobs which are undertaken through telework: research and analysis, programming, administrative functions, technical analysis, claims review, medical transcription, and call center activities.

Because of the importance of telework to many employees, they often are willing to use their own equipment when departments and agencies are unable to provide computers and cell phones to employees. Some departments do loan equipment to employees to use at their residences. Others take advantage of a statewide nonprofit program of donated computers, which have been refurbished and then loaned to employees who otherwise could not telework.

Training for successful telework is considered essential in the State of Arizona. According to a state official, both teleworker training and supervisor training are required to participate and they undergo training together. Supervisors and teleworkers participate in several exercises which help them anticipate what it will be like to work apart from the office one or more days a week. These exercises help them identify and resolve potential complications before they become problems. Understandings reached during these training sessions become part of a formal teleworking agreement which is signed before teleworking begins.

Benefits of Teleworking for State Department and State Employees. Research and data collection have been an integral part and guide for the state's telecommuting program since its inception. Arizona utilized an outside evaluator for a large assessment of its early telework activities, and results from that assessment continue to support the effort. Surveys still are used whenever a new agency begins its telework initiative.

Over the years, such surveys have shown consistently that after a start-up period of six months, nearly all teleworkers and a large majority of their supervisors believe there is increased productivity from telework. The increased productivity is due to fewer interruptions and distractions, the ability of employees to work at peak performance times, and reduced stress from commuting. It was found also that telecommuting employees work more effectively and perhaps harder—so that they will be able to continue teleworking. [\[12\]](#) For employees, there were benefits of improved morale and a more positive attitude toward their jobs, because of their ability to control some aspect of their work schedule.

Other beneficial outcomes have been identified:

- § Supervisors have become more focused on accomplishments, which often requires more communication between themselves and their employees about expectations, itself a positive activity
- § Increased communication about goals has reduced the amount of necessary supervisory time [\[13\]](#)
- § There have been no discernible differences among those who telework and those who do not in their rate of promotions, although there could be many reasons for this finding
- § Very few employees--only 11% of all teleworkers in the large evaluation--felt they were missing important workplace information when they teleworked, a result which is probably due to the predominant schedule of being away from their offices only one or two days a week

§ A relatively small percentage of co-workers (one in four) who do not telework believe that teleworkers makes their job more difficult, perhaps because supervisors and teleworkers have training exercises dealing with the burden of telework on co-workers.

While the large majority of telework experiences in Arizona have been positive and nearly 20% of a large and diverse workforce is a notable accomplishment, there is still resistance and limitations placed on the number of teleworkers by some supervisors and senior level managers. Not everyone can telework, and right now, only one in five state employees actually does work off-site even for a limited amount of their work week. Nevertheless, state officials are very satisfied with the progress they have made, their current teleworking initiative, and future prospects.

Teleworker Profiles

Teleworker A. This administrator has an extensive history with telecommuting. He worked previously for the State of Arizona, resigned, and then 11 years later in 2005, was rehired as the statewide director of an administrative office. With a disability since childhood (juvenile rheumatoid arthritis--JRA), upon his rehiring, this person started telecommuting extensively--upwards of 80% of his time. Currently he telecommutes one or two days per week. His weekly schedule varies due to a significant number of meetings outside the office, which occur because of his administrative responsibilities, training offsite, and personal, but job-related volunteer service on boards of several nonprofits and Governor's Councils.

Telecommuting is a major convenience for this administrator because of difficulties he has in utilizing the Phoenix metro bus system from his home. The most convenient transportation option for him is leaving his house early in the morning to catch an express service bus. Because of the time required to become ready for work, however, that transportation option is unavailable on a regular basis. His second transportation option, leaving at a later time, forces him to use a couple of local (non-express) busses and requires transfers.

Because of his disability, Teleworker A has need for personal assistant care and frequent breaks throughout the day. Physical accommodations at his state office include power door openers, desk alterations, a trackball mouse, and Dragon voice recognition software. Because he worked primarily from his house for 11 years before taking his current position, and because of his extensive telecommuting experience, no accommodations were needed or implemented by the State of Arizona at his house.

Teleworker A believes that telecommuting not only is much more convenient but that it enhances his efficiency. By working at home, he need not go through the extensive preparation of readying himself for work or spending time on the actual commuting. He believes also that telecommuting would be beneficial for a new state employee with a disability if telework would help the individual accomplish his/her job tasks and if telework was an appropriate accommodation.

In coming years, Teleworker A thinks that there is likely to be further expansion of telecommuting within state agencies, particularly as the cost of fuel continues to escalate. Although the formal telecommuting program has been in effect since 1993, it is still viewed as something quite new. And while many upper and mid-level managers telework, few entry level workers, and the bulk of the state's workforce, telecommute. This leaves a large of pool of potential telecommuters in coming years.

Supervisor B. This individual supervises 20 staff professionals involved in state and federal judicial proceedings. One of the supervisor's staff professionals is a full-time employee, who telecommutes part-time. This employee requested teleworking only after she was diagnosed with her disability, and she requested it as a reasonable accommodation under the ADA. How frequently she teleworks depends on the circumstances of her disability. Some weeks she does not telework at all. Some weeks she teleworks four days. The telecommuter, who performs legal research, always works at home. No physical or telecommunications accommodations were required as necessary computer equipment was in place prior to the initiation of telecommuting.

Results to date have been satisfactory. According to the telecommuter supervisor, she has remained productive. She does miss out on some normal office social interaction, and according to the supervisor, telecommuting requires that their communication be more extensive than with his employees who do not telecommute. Also, even though telecommuting is necessary to perform her job, there has been some jealousy from co-workers.

Supervisor B does not believe that teleworking will affect promotional opportunities or the career path of this

individual. However, because telecommuting has been discouraged generally by superiors, for the foreseeable future, the one telecommuter may be the only person in this office who will be authorized to telecommute.

Teleworker C. This employee has been performing research and analysis for about 9 years with a state government agency. Trained as a lawyer, he began teleworking five years ago once his department initiated teleworking after one of the gubernatorial directives. His employing agency did not incur any costs in setting up his home telework environment, and the telework training he received was mostly devoted to rules and policy review, and in his view, unnecessary. Currently, he works at home a few days each month on a flexible schedule.

His motivations for telecommuting are primarily personal: to save time and avoid the commutes. Telework has proved beneficial for his convenience and has not detracted from his work performance. He believes his work output and work quality are the same regardless of where he works. He feels telecommuting has not changed much of anything about his job—his job commitment, absences due to sickness, impacts on co-workers, and interactions with his supervisor have been unaffected. And despite placing a high value on social interaction with co-workers and colleagues, he does not feel that intermittent telecommuting has reduced his job satisfaction.

While his own supervisor views telecommuting negatively, Teleworker C believes supervisory time is no different when overseeing telecommuters or office employees performing the same functions. In addition, he believes telecommuters probably can supervise other telecommuters as well as office workers. Overall, he is satisfied with his telecommuting arrangement and does not believe his career opportunities will be impeded by telecommuting.

According to this teleworker, telecommuting is likely to increase somewhat in coming years because the Phoenix commuting situation is becoming worse for him and other state employees. He feels that a new state employee with a disability could telework satisfactorily, provided this employee could work without supervision. Working independently is the most important characteristic of a successful teleworker, according to this employee.

Next Steps in Arizona. Because of the positive experiences over the past decade with teleworking and the support for the program from different governors in both political parties, it is likely that telework will be used more aggressively by state agencies as a business strategy to attract and retain qualified employees. According to a state official with detailed knowledge of the program, that expansion may be quite pronounced in coming years as leaders and senior officials of departments and agencies recognize the strategic value of telework. Most new teleworking is likely to occur from adoption of telecommuting by existing employees in mid-level job titles. A small number of new telecommuting positions may occur with new employees and at entry-level ranks. There will also be future positions that are virtual, that is positions which are full-time telework.

Most of the impetus for expansion of telecommuting will be due to the state's need to attract and retain employees and be facilitated by technological improvements and a worsening of commuting conditions for state employees. Yet increased telecommuting for other purposes also may be a factor. For example, the Arizona Department of Administration in October 2006 incorporated telework as one pandemic planning strategy. All divisions were asked to identify their critical function employees and then lead them to internal websites where employees negotiated telework agreements with their supervisors, received instructions on available remote connectivity services, and performed their critical business functions from home as a test of emergency planning.

Within the context of a general increase in telecommuting, state officials believe that employees with disabilities who telework will increase also. Some growth will occur because the state workforce is likely to include more persons with disabilities due to Phoenix's tight labor market, and the state's continuing need for qualified employees as Arizona's population expands. To increase significantly the number of employees with disabilities who telework, however, may require a new initiative. One option would be for State agencies to work with organizations and companies that assist employees with disabilities with employment issues. One official indicated that state agencies are likely to hire more employees with disabilities in a telecommuting position (part-time) if they had a larger pool of trained applicants, more refined placement services, and possibly short-term job supports.

Arizona's progress has been quite remarkable not only for a state entity but for any type of organization. And

they share freely their information about what has worked and what has not, including step-by-step suggestions for designing and implementing various stages of a telework program. Officials in other states and organizations have access to extensive practical information on the state's excellent website. See:

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

Disabled Teleworker Case Vignettes

Introduction. Not all organizations could be developed into full case studies for a variety of reasons. In the course of contacting organizations for possible case studies, a number of organizations were identified which deserve to be profiled. Several of those organizations are described below. Subsequently, information is provided about teleworking in specific federal departments and agencies. While this information was collected several years ago, it is unlikely that major changes have occurred in either the incidence of teleworking or the ranking of departments and agencies.

Organizations.

Working Solutions, a 10-year-old call-services company based in Plano, Texas, employs between 2,000 and 5,000 agents, depending upon the season. All agents work as independent contractors. Because of such factors as job flexibility for agents and the company's selection and training process, employee turnover is extremely limited—less than two percent according to a senior company executive. Some agents are persons with disabilities. <http://www.workingsol.com/home.htm>

Alpine Access, a nine year old company based in Denver, utilizes home-based call agents, all of whom are company employees. Publicly announced client partners for Alpine Access include Office Depot, J.Crew, 1-800-Flowers, and the Internal Revenue Service. One of the primary advantages cited by the company is its access to quality employees from throughout the country, and they identify a number of previously untapped labor pools from which they draw applicants:

- § At-home parents
- § Retirees
- § People with physical disabilities
- § Veterans/military
- § Residents in rural areas

According to company information, their calling agents are more highly trained and experienced than those of other calling firms with approximately 80% of their agents having some college background and on average, having between 15 and 20 years of experience. Full-time agents receive medical, dental, vision, and matching 401(k) benefits while part-time employees receives pro rata benefits. Individuals may be promoted from agents to team leaders, coaches, account managers, and so forth while continuing to work from home.

Approximately 2% to 3% of all applicants ultimately become employees, a percentage which will prevent a large number of persons with disabilities from becoming home-based agents. <http://www.alpineaccess.com/external/index.html>

Return to Work began as a disability advocacy group in 1998. In recent years it has focused increasingly on injured soldiers returning home from combat in Iraq and Afghanistan. Return to Work (R2W) now provides evaluation, training, placement and supported employment, and service learning for active duty members. Individuals located in Colorado and Florida receive services in-person while individuals located elsewhere are provided services virtually. In 2006, R2W received an anonymous grant of more than \$1 million to support its services to the US Army Community Based Health Care Organization (CBHCO) and to other military service members returning from Iraq and Afghanistan.

Persons with disabilities unrelated to combat also receive services. According to information provided by the founder and president of R2W, the organization has won multiple state and federal contracts to provide vocational rehabilitation services. Their services benefits from advanced, web-based technologies which have been donated by companies, for instance an elaborate case management system.

Everyone (counselors, job developers, and other staff) at R2W works from home via the Internet, often using free video chat methods to provide services. For example, several cases in Colorado are being handled by a counselor in rural New York via telephone, e-mail, and video chatting. According to material provided by the

president of R2W, they have found the video chat technique to be particularly effective in improving relationships and enabling counselors to isolate issues needing early attention.

Some of R2W's staff are themselves disabled teleworkers. R2W also has arranged for persons with disabilities to telework. One such individual is a webmaster for a nursing home. <http://www.return2work.org/>

Teleworking in Federal Government Departments. All federal government departments and agencies were surveyed about teleworking in 2004 by the U.S. Office of Personnel Management. Question 9 on the 2004 OPM Telework Survey was:

Please answer the following question concerning disability and medical conditions:

- a. Number of employees using telework as a reasonable accommodation for a qualified disability? _____
- b. Number of employees using telework as an accommodation for a temporary disability or temporary medical reasons? _____

Based on the responses to question 9a, there were 699 disabled federal teleworkers at that time. This number of disabled federal teleworkers represented about one-half of one percent of all federal teleworkers (140,694). An additional 3,300 federal teleworkers had temporary disabilities or medical conditions. That number represented 2.34% of all federal teleworkers. The combined number of permanent and temporarily disabled federal teleworkers comprised approximately 2.85% of all federal teleworkers in 2004.

The distribution of disabled teleworkers varies significantly across departments and agencies. Many agencies had no permanently disabled teleworkers at that time, whereas nearly 10% of Federal Trade Commission teleworkers were disabled.

Table A shows the ranking, in descending order, by proportion of disabled teleworking employees in departments and agencies. Besides the Federal Trade Commission, at least 1% of teleworkers were disabled in seven other federal entities:

- U.S. Nuclear Waste Technical Review Board
- Access Board
- Federal Reserve
- Commodities Futures Trading Commission
- Department of Energy
- Department of Education
- Pension Benefit Guaranty Corporation

Four other agencies, NASA, SEC, HUD, and Agriculture were immediately below them in terms of their percentages.

Table B shows the ranking, in descending order, by the absolute number of disabled teleworking employees in departments and agencies. There were more than 100 disabled teleworking employees in both the Treasury Department and the Department of Defense. Departments and agencies with more than 20 disabled teleworking employees included:

- Health and Human Services
- Agriculture
- Justice
- Social Security Administration
- Education
- Interior

Table A.
Ranking of Departments and Agencies by Proportion of Disabled Teleworkers

Department/Agency	Number of Eligible Employees	Total Number of Teleworkers	# of Employees Using Telework for TEMPORARY MEDICAL Reasons	# of Employees Using Telework for a Disability	Disabled Teleworkers as % of Agency Teleworkers
Federal Trade Commission	815	31	2	3	9.7%
U.S. Nuclear Waste Technical Review Board	16	15	1	1	6.7%
Access Board	24	19	3	1	5.3%
Board of Governors, Federal Reserve	49	49	2	2	4.1%
Commodity Futures Trading Commission	500	50	4	1	2.0%
Equal Employment Opportunity Commission	1,692	727	26	13	1.8%
Department of Energy	12,468	1,246	121	17	1.4%
Department of Education	3,859	1,576	99	20	1.3%
Pension Benefit Guaranty Corporation	516	192	3	2	1.0%
National Aeronautics and Space Administration	17,058	1,186	101	11	0.9%
Securities and Exchange Commission	3,883	648	25	6	0.9%
Department/Agency	Number of Eligible Employees	Total Number of Teleworkers	# of Employees Using Telework for TEMPORARY MEDICAL Reasons	# of Employees Using Telework for a Disability	Disabled Teleworkers as % of Agency Teleworkers
Department of Housing and Urban Development	7,168	1,088	3	10	0.9%
Department of Agriculture	71,034	4,066	252	36	0.9%

Farm Credit Administration	287	128	1	1	0.8%
Department of Defense	183,844	21,318	649	147	0.7%
Department of Treasury	100,439	29,362	704	198	0.7%
Department of Health and Human Services	59,654	11,331	275	72	0.6%
Small Business Administration	3,323	328	4	2	0.6%
National Archives and Records Administration	1,767	170	0	1	0.6%
Department of Interior	31,548	3,580	192	20	0.6%
Social Security Administration	10,628	4,441	76	23	0.5%
Court Services and Offender Supervision Agency	1,016	205	7	1	0.5%
National Labor Relations Board	1,319	447	15	2	0.4%
Environmental Protection Agency	12,894	3,585	70	16	0.4%
Department/Agency	Number of Eligible Employees	Total Number of Teleworkers	# of Employees Using Telework for TEMPORARY MEDICAL Reasons	# of Employees Using Telework for a Disability	Disabled Teleworkers as % of Agency Teleworkers
Office of Personnel Management	2,803	1,910	40	8	0.4%
Nuclear Regulatory Commission	3,138	789	26	3	0.4%
Department of Transportation	26,445	3,553	92	13	0.4%
Department of Homeland Security	38,573	1,938	59	7	0.4%
Department of State	1,240	1,019	3	3	0.3%

General Services Administration	11,219	2,874	47	5	0.2%
Department of Justice	46,127	18,604	159	31	0.2%
Department of Labor	15,649	7,845	26	13	0.2%
Federal Communications Commission	1,969	634	8	1	0.2%
Department of Commerce	24,779	9,627	104	9	0.1%

Table B.**Ranking of Departments and Agencies by Absolute Number of Disabled Teleworkers**

Department/Agency	Number of Eligible Employees	Total Number of Teleworkers	# of Employees Using Telework for TEMPORARY MEDICAL Reasons	# of Employees Using Telework for a Disability	Disabled Teleworkers as % of Agency Teleworkers
Department of Treasury	100,439	29,362	704	198	0.7%
Department of Defense	183,844	21,318	649	147	0.7%
Department of Health and Human Services	59,654	11,331	275	72	0.6%
Department of Agriculture	71,034	4,066	252	36	0.9%
Department of Justice	46,127	18,604	159	31	0.2%
Social Security Administration	10,628	4,441	76	23	0.5%
Department of Education	3,859	1,576	99	20	1.3%
Department of Interior	31,548	3,580	192	20	0.6%
Department of Energy	12,468	1,246	121	17	1.4%
Environmental Protection Agency	12,894	3,585	70	16	0.4%
Department/Agency	Number of Eligible Employees	Total Number of Teleworkers	# of Employees Using Telework for TEMPORARY MEDICAL Reasons	# of Employees Using Telework for a Disability	Disabled Teleworkers as % of Agency Teleworkers
Equal Employment Opportunity Commission	1,692	727	26	13	1.8%

Department of Transportation	26,445	3,553	92	13	0.4%
Department of Labor	15,649	7,845	26	13	0.2%
National Aeronautics and Space Administration	17,058	1,186	101	11	0.9%
Department of Housing and Urban Development	7,168	1,088	3	10	0.9%
Department of Commerce	24,779	9,627	104	9	0.1%
Office of Personnel Management	2,803	1,910	40	8	0.4%
Department of Homeland Security	38,573	1,938	59	7	0.4%
Securities and Exchange Commission	3,883	648	25	6	0.9%
General Services Administration	11,219	2,874	47	5	0.2%
Federal Trade Commission	815	31	2	3	9.7%
Nuclear Regulatory Commission	3,138	789	26	3	0.4%
Department/Agency	Number of Eligible Employees	Total Number of Teleworkers	# of Employees Using Telework for TEMPORARY MEDICAL Reasons	# of Employees Using Telework for a Disability	Disabled Teleworkers as % of Agency Teleworkers
Department of State	1,240	1,019	3	3	0.3%
Board of Governors, Federal Reserve	49	49	2	2	4.1%
Pension Benefit Guaranty Corporation	516	192	3	2	1.0%
Small Business Administration	3,323	328	4	2	0.6%
National Labor Relations Board	1,319	447	15	2	0.4%
U.S. Nuclear Waste Technical Review Board	16	15	1	1	6.7%

Access Board	24	19	3	1	5.3%
Commodity Futures Trading Commission	500	50	4	1	2.0%
Farm Credit Administration	287	128	1	1	0.8%
National Archives and Records Administration	1,767	170	0	1	0.6%
Court Services and Offender Supervision Agency	1,016	205	7	1	0.5%
Federal Communications Commission	1,969	634	8	1	0.2%

SERVICE 800's Home-based Customer Service Representatives

Introduction. SERVICE 800 was founded in 1989 to help service organizations measure the quality of the services they deliver. Generally SERVICE 800 is engaged by companies that wish to collect data from customers about the services they have been provided by the company's representatives. Data on customer satisfaction are typically obtained shortly after customers are provided services.

SERVICE 800 has offices in London, England and Minneapolis, Minnesota. The large majority of the company's employees are customer service representatives. All such representatives work from their homes. Indeed, when the company was founded, one of the guiding principles was to provide employment for mothers who wished to stay home and work. Currently, approximately 200 service representatives work from their homes, 20 hours per week, a minimum of four hours per day. [\[14\]](#)

Each customer service representative must have computer knowledge, telephone skills, and an electronic set-up with a high speed internet connection, a personal home computer (Windows XP), a virus protection program and firewall, a separate dedicated voice phone land line (no VOIP or cell), an approved long distance provider, and a quiet work space. Representatives are responsible for their own set-up, provided they meet the company's specifications. SERVICE 800 reimburses representatives for phone calls. [\[15\]](#)

SERVICE 800 has a formal recruiting and selection process. Candidates who pass a set of initial minimum requirements are then selected by a recruiting coordinator. Nearly all new representatives then receive training about process and procedures, probing techniques, adherence to scripts, phone etiquette, and so forth. The company considers this training essential for effective performance by the customer representatives.

Because all representatives work from their homes, SERVICE 800 has achieved significant cost savings from not having a large infrastructure. Another major benefit, according to a senior company official, has been the loyalty and commitment of customer representatives—turnover is low and some representatives have been with the company for 10 years. The company takes pride as well in knowing that their approach allows individuals unable to leave their homes to become employed again.

SERVICE 800 has significant challenges as well with having a workforce that is almost entirely off-site. The two primary challenges has been (a) communication with the customer representatives and (b) supervision of the representatives. The latter has been especially challenging.

Communication is addressed by encouraging networking among the representatives, conducting regular telephone and web-based meetings among team members, and generally promoting a “we are family” philosophy. There are four calling teams in North America, each with 40 representatives. A team meeting typically will cover a variety of topics such as reviewing process and procedures, submitting telephone bills for reimbursement, discussing unique problems related to a calling program, introducing new members, and making personal Announcements such as an engagement or birth of a child. Minutes for these meetings are distributed among participants.

Besides these team meetings, customer representatives are encouraged to contact their supervisors/team leads as often as they find it necessary via email or phone call. Further, supervisors and team leads are responsible for sending a daily message to their teams. These messages usually contain work available for the day or specific work direction for the team to follow that day and a “thought for the day” with some inspiring phrase or message.

Monitoring and oversight of the representatives, according to the company, is a work in progress. Everyone is required to log into a website to start work and to log off when she is done. These records must match the hours the customer representative reports. [\[16\]](#) Data regarding the representatives' interviews are monitored through a web-based application. The company currently has the ability to see how many attempts are made and interviews completed by a representative for different time periods (per hour, per day, per week). Quotas per se are not established, although there are expectations about how many interviews a representative should conduct

for a specific client program.

In addition, many of the representatives are required to record every interview conducted but this has proven ineffective due to some incompatibilities from instant messaging programs and screen savers. SERVICE 800 is currently working on a VOIP solution that will allow all calling resources to record every interview they conduct.

With this company and job-related information as background, it is now time to describe the perspectives of several individual customer service representatives. Five current customer representatives have disabilities, and all of them were hired, as all customer representatives are, as new employees who work at home. Four representatives provided information and perspectives about their telework experiences.

Profile--Teleworker A. This teleworker has been in her position for approximately 18 months. She works 20 hours a week, including weekends, and it is rarely the same times each day. Her schedule is entirely her choice. She had no prior experience with telework, yet her four hours of training at the SERVICE 800 office were sufficient in her view. She is middle-age and a high school graduate with some additional formal education.

Teleworking not only provides Teleworker A with the flexibility she needs for her working and personal life, teleworking is the sole reason she is able to work. She has serious pain issues due to lower back problems which prevent her from sitting for more than 30 minutes at a time. Teleworking allows her to work from her bed with a laptop computer and table so she is able to lie back when necessary. Before her back problems intensified, she worked a couple of jobs in normal settings. Then her part-time jobs became too stressful physically. When she found employment with Service 800 she was thrilled:

It filled my needs on nearly ever level, monetarily, physically and I knew it would be a job I would enjoy. I'm lucky enough to still be able to do a job out in the 'real world' once a week so I do get to interact with others. Service 800 has been a life saver on many levels I don't know how I would survive without the money and the pride I feel everyday knowing I do something with value.

On days when she works, she always is in contact with her supervisor, usually via email. Isolation is not an issue for her as she also has contact with colleagues via email when she works, and participates in the monthly team meetings.

She takes pride in being good at her job. She believes the most important characteristics of a successful teleworker are: 1) keeping focused; 2) meeting deadlines; and 3) enjoying one's job. From her perspective, there are no drawbacks from telework, and she is very satisfied with her current employment situation. She is certain that she will continue teleworking in coming years.

She strongly believes that persons with disabilities can be hired successfully as a new employee who teleworks. Also she feels that teleworkers can supervise other teleworkers. (She has no experience with teleworkers supervising non-teleworkers.)

More generally, Teleworker A cites her company's history as demonstrating that home-based employment can work:

“Our company is a perfect example of anyone, disabled or not, being able to work from home. It's how the company started.”

Profile--Teleworker B. This teleworker has been a SERVICE 800 employee for about 10 years and concentrates primarily on quality control checking, while performing limited customer service. Teleworker B, who has some junior college education and training as a medical secretary, had never worked at home or in a teleworking situation before being hired, at the age of 46, by SERVICE 800. Training for her position at SERVICE 800 consisted principally of on-site calling role-playing with a trained person listening and making suggestions.

She works 20 hours per week, but her schedule is flexible both in the days of the week and in the hours she works each day. She spent between \$1500 and \$2000 on a phone line, computer, software, and printer to create her home office, and she spends \$25 monthly for a high speed connection.

Her experience with teleworking has been quite positive. Working at home allows her to be in control of the fatigue and stamina associated with her MS. She can quit working when her hands or eyes are not functioning well and rest when too fatigued. While the

lack of interaction with co-workers is a disadvantage, that type of interaction is not a high priority for her in terms of job satisfaction. In addition, whenever she works she has interaction via email with co-workers, and there are newsletters, picnics, regular teleconferences, and the annual Christmas party which promote interaction.

“I feel good about being able to earn money and feel productive.”

Teleworker B’s view, based on her 10 years at SERVICE 800, is that home-based employment will become increasingly common in the future. She believes that there will be enhanced technology and also an increasing number of individuals will want to work from their homes. Teleworkers, in her opinion, can supervise other teleworkers, and persons with disabilities can telework at the outset of their employment. She believes the most important characteristics of a successful teleworker are listening skills, honesty in one’s work schedule, and accuracy in recording comments in customer service tasks. Those characteristics can be as common with new employees as with employees with more experience.

Because she is satisfied with her teleworking, does not think her promotional possibilities are diminished by teleworking, and appreciates being able to work, she says she is less likely to consider job opportunities elsewhere. She intends to continue teleworking for the foreseeable future.

“There are alternatives for stay at home moms or the disabled to consider for employment opportunities. SERVICE 800 is a great company to work for.”

To help other individuals with disabilities who would like to telework, Teleworker B suggested the creation of a special website that would be restricted to persons with disabilities.

Profile--Teleworker C. This visually-impaired teleworker has been performing customer service work for SERVICE 800 for two years. She is part-time and has a very flexible schedule, which allows her to work in the mornings while a child is in school and also for her to take afternoon classes at a local school for the blind. Approaching 40 years of age and with a two-year college degree, Teleworker C lost her vision in 2004. Her home-based work enables her to pick her own hours, work with the public, and work in a setting without having to hire a driver for transportation.

The hiring process was relatively easy and quick, even though she had not ever teleworked previously. She applied for a position with SERVICE 800, and after being selected, spent an hour role-playing which served as her training. One-time worksite accommodations expenses for a computer and Jaws software were provided by the state services for the blind agency. Her only continuing expenses are for a monthly cable modem internet charge.

Teleworker C’s experiences have been very positive. She receives high marks from the SERVICE 800 quality department, has been invited by a large local healthcare company which recognized her customer service representative skills, and has served as a mentor/trainer to another representative who was blind. She attributes much of her success to her home-based environment:

“I am more focused at home. When I worked for (large company) I was talking to other co-workers a lot. I still performed my job duties, but I feel I am 100 percent focused working from home. I don’t have distractions.”

She communicates daily via email and telephone with her supervisor. She has no contact with co-workers except during the monthly team meetings. If offered another position with another company, Teleworker C said she would try that out. However, she would continue to work for SERVICE 800.

Teleworker C feels that working from home does not present obstacles to being a supervisor of others. And she has no hesitation in recommending that persons with disabilities start out teleworking as new employee. To Teleworker C, the most important characteristics of a successful teleworker are: 1) patience; 2) kindness; 3) understanding; and 4) willingness to perform to the best of one’s ability.

Teleworker C is extremely satisfied with her current position:

“I would like to state that this has been the very best opportunity for me. Being disabled was hard to accept at first, but once I put my mind to it, I proved to myself that even though I am disabled, I can work. Jobs are very limited in my area. This job has taught me I can do anything. I truly love my job with SERVICE 800.”

Profile--Teleworker D. This 64-year old teleworker began 10 years ago with SERVICE 800. She had worked for 15 years previously in customer service, although finding the SERVICE 800 position required nearly a year as few firms were hiring people who could work only in their homes. Teleworker D is unable to work in an office, being chemically sensitive and having an environmental illness. Her formal education includes a high school diploma.

Teleworker D is required to work at least 20 hours per week, and she has chosen to work a fairly regular schedule of four hours everyday, Monday through Friday. Each morning she logs in and then logs out when she is finished in the afternoon. If any problems occur she contacts her supervisor by email or telephone. That has occurred very rarely, however. She spent approximately \$1,000 for a computer and a headset for her phone and pays monthly for high speed internet connections.

Because all employees are home-based, they reside in different locations around the world, and because of the nature of the job tasks, Teleworker D has minimal contact with co-workers: only a monthly call with her calling team and supervisor, as well as an annual picnic and a Christmas party in December. Teleworker D does not view this lack of interaction as a serious drawback, however, as she prefers working independently.

Her primary motivations for teleworking are to have a job and be a self-sufficient and productive individual. She believes that she is well suited to being a successful teleworker, because such individuals need to be self-motivated and self-disciplined as well as having a pleasant phone voice, good communication skills, and a quiet location devoid of distractions.

While teleworking is fine for her, she believes that it may not be appropriate for all people or for all new employees at other companies. She feels it would depend upon what the company requires of the employee and what skills the particular employee possesses.

Teleworker D is very satisfied with her telework position and plans on working for years to come. She says:

“It provided an income, made me feel like a productive person, and kept me in touch with the outside world... I am 64 years old. I plan on working until the day I am no longer here on this earth.”

The Home-based Culture. SERVICE 800 is a fairly unique company. The company was designed to provide home-based customer service employees, management are very satisfied with the results to date, and their plan is to expand the number of home-based employees whenever their workload requires additional personnel. Because of the home-based culture at SERVICE800, the experiences of its representatives are quite atypical of situations nationwide. With management fully supporting home-based employment, there are no supervisors who are lukewarm about telework. Nor are there issues with promotions and career paths being affected negatively by teleworking--teleworkers have been promoted to supervisory positions and some supervisors telework.

Company management believes that teleworking will become more common in the future. They have noted that increasing numbers of individuals possess the tools and equipment, including a home office, to work remotely. More individuals, particularly stay-at-home mothers, and persons with disabilities are seeking part-time employment as well. Because a larger pool of individuals now has the tools and capabilities of working, and there are improvements in the technology of measuring the performance of remote workers, the company believes teleworking will be expanding. Tax relief would be an incentive to employ more persons with disabilities as customer service representatives, according to a company official. Even so, according to this same official:

“Teleworkers are the way of doing business for SERVICE 800.”

Arise's Certified Professional Teleworking Model

This expanded case was developed at two different times in the STRIDE project. Part A was prepared in late fall 2006 and focused on presenting information about Arise Virtual Solutions and from individual teleworkers who had been working with Arise. Part B, a second set of interviews, was conducted approximately 12 months later with individuals who were recruited, selected, and trained by the Minnesota Resource Center (MRC or Resource, Inc.) in conjunction with Arise. The second set of interviews enabled the STRIDE staff to probe further about training issues, obtain information about the recruitment and selection priorities of Arise, and secure information from individuals who had participated in STRIDE activities.

Part A

Overview—Arise Virtual Solutions, Inc. Arise Virtual Solutions, Inc., formerly WillowCSN, (now Arise) is the leading provider of virtual call center services in North America. The company contracts with large- and medium-sized corporations and associations to provide customer service call center services, utilizing service representatives called certified professionals, who perform work in their homes. In late 2006, Arise had approximately 3,200 agents, with plans to increase that number to more than 10,000 in coming years. In late 2006, Arise added 12 new major clients.

The virtual contract call center model provides a number of advantages for clients. First, traditional call centers have higher overhead costs because of building and real estate expenses. Second, traditional call centers have difficulty providing consistently good services for peak load periods and at atypical hours (late evening and very early morning) because of employees' reluctance to work short shifts and to travel at night. (About four of every ten Arise corporate clients want 7-day per week, 24-per day coverage.) Third, turnover at traditional call centers normally is quite high, leading to inconsistent service and increased recruitment, selection, and training costs.

Besides the advantages of the virtual call center approach, Arise offers their corporate clients well-trained agents who can provide superior service for more complicated transactions. Increasingly, clients not only need services to be provided around the clock, every day of the week, but a team of certified professionals who can provide more detailed explanations and responses to unstructured situations. In addition, Arise has responded to clients' desire for pay-for-performance contracts--all of their new contracts are of this type, rather than fixed, cost-plus contracts.

Arise's growth has been facilitated by the Internet and web technology. The virtual agent model, the term used now is certified professional, started in 1997 as a consortium of Bell South, the State of Florida, and Florida State Services for the Blind. From 1997 through 2002, all training was offered in person at Florida sites. To enhance recruitment and selection opportunities, training became web-based in 2002. This change allowed increased access to military spouses, retirees, stay-at-home parents, and persons with disabilities and has enabled training for new clients to be performed more rapidly and without travel expenses for the agents.

The virtual agent/certified professional model is quite different than the traditional call center operation for employees as well as clients. Each certified professional is required to incorporate as a small business and establish a separate business checking account. Arise then deposits funds directly in those accounts, and certified professionals pay themselves from those business accounts. Agents also pay for their own computer, high speed internet connection, and \$39.50 per month for Arise's technology costs.^[17] Agents must pay their own taxes, with Arise providing workshops on tax matters and other small business topics.

For the most part, certified professionals are guaranteed an average wage per hour, with final compensation being determined by either the number of minutes on the phone or the number of completed calls. The average starting wage is between \$10 and \$14 per hour. Some agents have opportunities for incentives, based on encouraging customers to accept offers for discounted promotions. Also, some agents can earn up to \$20 per hour by staffing higher stress positions such as the American Automobile Association's emergency line.

Agents typically work 10 to 65 hours per week, based principally upon a teleworker's desire, assuming his/her performance meets acceptable standards. Most agents provide services to more than one client, which Arise has found beneficial for both clients and teleworkers. Service levels for clients are generally higher as customers

encounter more positive agents. And because certified professionals do not handle the same type of calls at all times, they tend to be less tired, more refreshed, and higher performing. Arise uses interactive voice response (IVR) to monitor quality of certified professional calls.

Unlike in most traditional call centers, there are promotional opportunities for some teleworkers. Some agents have become specialists in providing technology support to other agents, while others have become involved in advising applicants. Still others are promoted to a group leader role and supervise a number of other agents. Finally, some agents find a niche in training agents about new services or new clients' products. Arise's contractors can join a national group of certified professionals. This association offers health benefits and also helps provides a forum for interaction which reduces the isolation that some certified professionals feel. At any given time, certified professionals can chat online and instant message both their group leader and other co-workers as necessary.

Recruitment and selection of certified professionals are crucial elements in the virtual teleworker model. Successful teleworkers must be technology savvy, entrepreneurial, disciplined, self-starting, and able to set and work their own hours. They must also have strong communication skills, be willing to ask for help if needed, and adapt to, and learn, new technologies. Based on past experience, Arise had determined that only about 15% of applicants are suited to become a certified professional. The average age of an Arise agent is 38, and more than 80% of agents have had previous call center experience. About 70% of agents are women, and 30% are bilingual. Approximately 4% of Arise's current certified professionals have disabilities. Profiles of three Arise certified professionals with disabilities are provided below. All of these individuals have extensive experience working for Arise. [\[18\]](#)

Teleworkers Perspectives.

Profile--Teleworker A. Teleworker A is in a wheelchair. He used to become sick regularly but hasn't had a cold, let alone anything more serious, in more than four years. He is simply not around people as much because of his work setting and lack of commuting to and from a regular office. Arthur has a college degree, performed an internship at the University of Miami in the early 1980s, and has an information technology background. He has also been a teacher's assistant. Currently he resides in Fort Lauderdale, Florida.

His current primary client is Time Magazine where his goal is to market higher priced options to callers. In the past he has also worked with General Electric and Office Depot, and is planning on beginning a new assignment with Staples. He also previously worked on emergency calls for the American Automobile Association (AAA) but found those to be too stressful for his liking. His average hourly wage is in the range of \$12-\$13 now and will be increasing to approximately \$15 per hour with his Staples work.

He has worked with Arise for 10 years, and is highly complimentary about the firm. He said Arise provides individuals with multiple opportunities to succeed so if one job does not prove satisfactory, an agent can try another. Further, the firm shows confidence in agents who perform well--once an agent's performance reaches an acceptable level and an agent demonstrates they are working satisfactorily, there is less monitoring her/his calls. The primary negatives of the job have been technology glitches, which can disconnect temporarily an agent from the system, and few co-worker relationships.

In terms of scheduling, Teleworker A generally works early in the week and in the early afternoons, which are heavy calling times and also, coincidentally, are the times when he feels best. He said he is able generally to determine his own schedule. Other real advantages of the job are that he does not need to commute, he saves money on clothes and transportation, and he can prepare for new tasks by studying in advance. He particularly likes the independence of telework, noting that he is free of petty oversight situations and abhorrent supervisors. He also believes that advancement opportunities at Arise are important, although he personally has no desire to become a group leader.

Profile--Teleworker B. Teleworker B has an anxiety disorder: agoraphobia. While this disorder sometimes is associated with fear of public spaces and open spaces, strictly speaking an agoraphobic is afraid of encountering embarrassing situations from which there is no easy escape. Persons with agoraphobia usually have no fear of people per se, which is one reason why Telework B thinks telework can be an ideal employment option for agoraphobics--it allows them to stay within their safety zones. Pamela, who does not like to be outside or around

people, has recently also developed carpal tunnel.

Teleworker A has an information technology background. She was in an early class on e-learning and worked for two years with the National Institute for Telecommuting. Her accomplishments include being named the TeleAgent of the Year in Florida. For Arise, she currently provides Level 1 technical support for Palm's PDAs and Teleflora, an online flower ordering company based in Los Angeles. In the near future, she intends to begin working with Apple as her third client.

Teleworker B is part of a group of six TeleAgents who went through training together and have become friends over time. Members of this group also have mentored newly hired agents. To be a successful certified professional, she believes an individual must be very self-disciplined and computer literate. While not everyone has the requisite skills to be a TeleAgent or finds a good fit with telework tasks, she believes no one should let their personal reluctance or fears prevent their applying to Arise's program. If one is successful, she notes the personal satisfactions can be substantial as one feels they are making a contribution.

The financial benefits from telework must be viewed in perspective according to this teleworker, who has a daughter. Teleworker B is on Medicare and receives SSDI. While she has to monitor carefully how many hours she works to avoid exceeding an income limit, overall she says she is just able to get by because her monthly medication costs are approximately \$465. Her hope is that government regulations will be changed to allow her to work more and still be on SSDI without losing medical benefits. She cited the impracticality of small business rates for medical insurance, as they are much too high for someone with her level of income.

Profile--Teleworker C. As a quadriplegic with C2 and C3 incomplete, Teleworker C has limited use of several fingers. He is able, however, to type in his role of helping applicants to start the Arise admission process. He basically serves as a support, helping new applicants with technology problems. His work utilizes skills and training he developed in receiving a two-year technical degree from a local community college.

In his prior employment as a programmer, this teleworker found it too difficult to commute and the work too taxing. Even though he now works 30-40 hours per week, he is less tired than in his prior job. Further, Arise helped him to regain his speech, as it was a requirement of the position, and his speech has improved steadily from conversations with customers. He said he has few difficult customers, which also makes his job less stressful and taxing than before.

Other advantages of his job are: scheduling flexibility ("it is wonderful"), rewarding tasks, and his home-based location, which allows him the energy to travel for himself when he desires. He said he has no sense of being isolated, because of his frequent interaction with customers. An enormous advantage of his current position is that he is able to perform necessary therapy every morning, which maintains his health. Despite his considerable physical limitations, he said he has no need for a personal assistant, and his wife is able to work full-time outside of the home.

Teleworker C believes many individuals with disabilities who are not currently working could become certified professionals. He said the most important characteristics are dedication and reliability--a certified professional will become successful if she/he does what she/he says they will do. And he likes the compensation approach in which a certified professional's pay is determined primarily by the number of calls they handle--the more calls there are, the more compensation an agent receives.

Part B

The following four teleworkers became certified professionals by successfully completing training at the Minnesota Resource Center (MRC) and passing all Arise requirements. Their experiences were of considerable interest because of MRC's role in providing training assistance.

Profile--Teleworker D. This veteran has been working for ARISE about one year and is very pleased. He has a flexible, part-time schedule of his own choosing, both by days of the week and during the day. He has had numerous prior jobs, although none included call centers or teleworking. He is 57 years of age and has some college coursework. Personally he spent \$200 in one-time expenses to set up his at home work station; additional, unknown costs were incurred by the Veteran's Administration and the Minnesota Resource Center. Also he has on-going expenses for broadband.

He received two types of training prior to his first client assignment. At the outset, the Minnesota Resource Center provided two weeks of instruction about Arise, including its admission process. These included computer-based materials, which he feels are superior to print materials. Once he was selected, Arise provided 10 days of training about clients' needs, programs, and contacts. Teleworker D believes that both sets of training were adequate and necessary in preparing him for his current activities, which focus on the admissions process for new recruits.

Communication by phone, email, and instant messaging occurs throughout his workday both with his supervisor and his clients. Co-workers are extremely supportive as well. And according to Teleworker D, Arise has mentors and technicians who provide support when necessary: program issues are handled by a support department that is very proficient and personal concerns or difficulties can be shared with personal mentors that each agent has for each client. He feels these supports are adequate.

Despite his varied employment background, Teleworker D had practically no employment opportunities prior to becoming associated with Arise. Also, he had doubts about his ability to complete the admissions process and begin teleworking. Now he is able to work as his disability allows, his biggest barrier is his own self-management, and his image of himself has improved substantially.

Financially, he finds the financial benefits limiting, despite new incentives being given to some teleworkers.^[19] His pay is less than \$20,000 annually, comparable to work at other customer call centers, but far less than he earned previously. He believes there will be opportunities to increase his earnings in the future, based upon what he sees as other possible incentive opportunities. The pay cut he took, however, was unanticipated, and he does not have resources to update his home electricity situation or buy replacement, energy efficient windows, which would reduce his heating costs from being at home all the time. As an independent contractor, he receives no benefits from Arise but does receive medical benefits from the Veteran's Administration.

Teleworker D feels the two most important characteristics of a successful teleworker are communication and self-worth. There is no doubt in his mind that teleworkers can supervise other teleworkers or that teleworkers can supervise non-teleworkers. Because he does not believe that many jobs require a physical presence at a particular location, he sees teleworking as expanding in coming years. In his view, teleworking by new employees with disabilities is a viable option, although it is not for everyone. He believes the programs and techniques used by Arise are top-notch in preparing new agents for their tasks.

Teleworker D suggests that the number of teleworker opportunities for persons with disabilities could be increased considerably if there was additional financial assistance provided to offset start-up costs of agents. As noted earlier, in his own situation, his home working environment could be improved if he had resources for energy efficient windows, additional insulation, and electrical upgrades.^[20] Also he suggests that some persons with disabilities need to be more assertive about teleworking:

“... more intimidating to think of the process than once initiated... just go for it and the rest will fall in place”

Presently, with the cost of gas, no other viable employment options, and disability setbacks, he is focused on being the best he can be at his current position. He is very satisfied with his current employment situation and is not seeking opportunities with other companies.

Profile--Teleworker E. With a B.A. in English/Communication, prior work experience in two call centers, approximately 20 years of paralegal and legal secretary experience, and previous background as a teleworker, Teleworker E was a very attractive candidate for Arise. To prepare for the admissions and testing process, the Minnesota Resource Center (MRC) provided a review of the Arise training materials. This MRC training occurred intermittently over a period of two months. For someone with her background and training, she did not consider the training essential as it was duplicative of what was on the Arise site. She does believe however the admissions process was thorough and applicable to the activities she has been performing. Once hired, Arise then trained her on its system and sample clients.

Teleworker E needed a computer, desk, printer, chair, incorporation fees, telephone service, and access to the

Internet. All set-up costs were paid by the MRC. She has continuing costs for the internet, telephone, Arise technical support, paper and supplies, and fees paid to Arise for classes related to future client opportunities. She has a part-time flexible schedule, although if she takes on a new client her schedule has to adapt to the training class schedule. The number of hours worked are dependent on the minimum and maximum hours set by Arise for each client. For example, her current client requires a minimum of 15 hours per week, and she may exceed that number if other hours are available.^[21] She has worked with Arise since spring 2007.

Interaction with co-workers is not that important to Teleworker E. She has no issues with isolation, and she frequently interacts with two colleagues on a weekly basis. Otherwise her interaction with other contractors is through the “chat room” when working for a client.

Teleworking affords this teleworker the flexibility she needs to work around her disabilities, which limit and restrict her mobility. Many times, she is in pain in the morning and it is not until the afternoon that she is able to move around without pain and restriction. Often, her hands are swollen which restricts her ability to type, write, lift or pick up items.

Her employment with Arise allows her to work and earn an income that supplements the social security benefits she receives, but she is not entirely satisfied with several aspects of the arrangement. First, her pay rate is \$8.50 per hour, and because Arise provides no benefits, she must restrict her hours to avoid surpassing the current earnings threshold.^[22] Otherwise she would lose her medical benefits from social security. Teleworker E believes that if the objective of teleworking by persons with disabilities is to encourage individuals to eliminate social security benefits, then only employers that provide benefits should be utilized, or another federal agency should provide medical benefits.^[23]

A second area of concern has been communication with Arise, or rather the lack of communication. Some communications from Arise go through the MRC, rather than to her directly, which she finds personally insulting. She believes that the label of “disabled” has been a hindrance with Arise in establishing a working, business, professional relationship. Arise has treated her as if she needed a guardian or someone to intervene on her behalf, when in fact, she is an intelligent, educated, competent individual with physical, not mental, limitations.

Third, Teleworker E feels that Arise could improve a number of administrative procedures with its contractors. Although Arise provides classes/training to contractors on specific client requirements and needs, she does not know who her supervisors are.^[24] Nor is she happy about feedback from Arise employees:

“One of the many mysteries in the world of Arise is I don’t know who exactly the supervisors are and when you are directed to an individual (e.g. in payroll) that individual does not respond to your concerns or attempt to resolve issues amicably for both parties.... I believe it is Arise’s responsibility and obligation to provide support to its contractors, thereby assuring the success and wellness of the contractor.”

In sum, she has had no problems or concerns about teleworking activities per se, only her working relationship with Arise. She is somewhat satisfied overall with the supplemental income she have been able to earn but not sufficiently satisfied to rule out looking for other teleworking opportunities.^[25] At this time she is focusing on her health, and if it improves, she may be able to expand her work opportunities.

Profile--Teleworker F. This teleworker has worked for Arise for about 8 months. She is approximately 30 years of age with an associate’s degree in medical administration. This qualifies her to perform medical transcription, insurance, billing, and a variety of other activities in the health information, administration field. Her prior employment does not include call center tasks or teleworking, although she has been a certified nursing assistant, cashier, casino employee, and retail bakery worker. She has a lower back injury which now precludes any type of physical labor.

Similarly to many other Arise teleworkers, she works a part-time flexible schedule which she has chosen. Also like other Arise contractors recruited in conjunction with the Minnesota Resource Center (MRC), she received training to help become an Arise certified professional. Her training was about four weeks in length, although she feels that she may have been able to absorb the material in

less time. Once she was selected to be an Arise contractor, she received an additional three weeks of computer-based training on how to use their system for call transfers, and secure log in as well as using client application tools such as books, resources, databases, and chat rooms. Teleworker F believes the Arise training was appropriate for the tasks that she has performed.

Expenses to become a contractor included \$1200 for a new computer, \$200-\$300 for classes, \$100 for phone for 3 months of internet/phone, \$40 for a headset, and about \$120 for three months of Arise technical support. All of these costs were paid by the state rehabilitation agency or the MRC. Her only continuing new expense is a monthly fee for high speed internet/phone service.

Her experience with teleworking to date has been somewhat mixed. Her primary motivation for teleworking is to have a flexible schedule and make a decent income. She is proud of her ability to be responsible for her own schedule. And she is able to earn money from her contracting as the hourly pay range is between \$8.50 and \$13 per hour. She however, has found the teleworking environment to be lacking in social interaction. There is no companionship from co-workers as many of the professionals with whom she has contact live half a continent away. And the interaction she has with co-workers and others at Arise she considers quite impersonal. She realizes that some isolation comes from teleworking but she nevertheless prefers more interaction. This is one reason why she also works in a part-time retail position near her home.

Longer-term, Teleworker F is unsure about her commitment to teleworking. She is satisfied with her work now and not likely to seek employment elsewhere. Also she believes the self discipline required to be a teleworker is a positive as is working independently, provided one has the attributes and personality to do so:

“You don’t receive a lot of supervision or direction. You have a great deal of responsibility to make sure you are meeting certain standards—i.e. job performance, hours, revenue....It is a great alternative to working outside the home but [a person must] keep in mind you are pretty much working with yourself and you need to be a very responsible and self disciplined person in order to make this work. You have little supervision and a lot of decisions are made using your own judgment—you must be very confident that you know your applications, policies, and procedures.”

However, Teleworker F does not believe she can advance at Arise. Further the impersonal aspects of the job and the business bother her to the point where she said: “I am just a number to these people. ACP# ____.” (This number was deleted to maintain confidentiality.)

She believes that persons with disabilities who have substantial self-discipline and an independent personality could be well suited to teleworking even as a new employee. She thinks teleworking is a fantastic option for a person who has limited mobility, is unable to drive, or does not have resources to use local public transportation. She strongly recommends that more publicity be directed to appropriate government agencies that teleworking options exist for those with suitable backgrounds and personalities.

Profile--Teleworker G. Teleworker G’s prior employment background includes customer service (wholesale and retail), administrative support, reception work, quality assurance, marketing, travel coordination, and operations management. As part of her customer service experience, she took calls, generated orders, and performed collections. She is in her mid-50s and has a high school diploma and some community college courses in algebra.

This teleworker was injured and now has a physical disability involving her back. Prior to her injury, she worked 45-60 hours per week and was always on the go. After her injury, she was unable to secure employment, despite her background:

“Employers are extremely hesitant to hire someone knowing you have limitations especially when it comes to your back...most positions have minimum physical qualifications which tend to rule me out immediately.”

She was referred to the Minnesota Resource Center (MRC) by a state department of vocational rehabilitation counselor who saw her as a candidate for teleworking. Teleworking provides a very good environment for Teleworker G, and the schedule flexibility is especially appealing:

“Doing telework out of my home through Arise, I am able to arrange my schedule around the breaks needed to alternate between sitting/standing/ walking and the medications which have a tendency to make me lethargic and sleepy. My flexible schedule also allows me to work around numerous doctor appointments.”

Before she became an Arise contractor in July 2007, Teleworker G received training from the MRC on customer service in general and methods for using Arise systems in particular. This training, which also focused on quality assurance standards and expectations, was conducted over a six-week period for 3-4 hours per day. In addition she received preparatory instruction about the Arise admission process and test simulations using computer based materials (videos, presentations). [\[26\]](#)

As part of the process of becoming a contractor, she spent approximately \$1500 remodeling a spare room into an office and making necessary improvements in electrical and telephone connections. She has ongoing expenses for a separate phone line and for a high speed internet connection.

Once confirmed as a contractor, Teleworker G began client-specific training using the client’s software and website. In general, this training lasts approximately two weeks. In her view, a slightly longer period of hands-on training should be provided. Arise also has provided employment supports through skills enhancement and mentors, who are Arise agents who started out as rookies and have now become much more skilled. Teleworker G believes these supports at Arise are beneficial and adequate to address issues and problems of beginning agents.

During her four months at Arise, Teleworker G has never met a colleague, as her co-workers are dispersed across the United States. The contact she does have with co-workers has been entirely through instant messaging and business-related. Further, she does not have regular communication with her supervisor, because she has no supervisor per se. Yet she does not feel isolated at all. In fact, she enjoys not having the interruptions, and when asked what she would change about her job, she said, “nothing.”

Prior to becoming a contractor, Teleworker G was concerned that she would not succeed at teleworking. Yet, teleworking successfully has given her a sense of self-worth through contributing financially as well higher self-esteem by working for herself, rather than for others. She has substantial pride in accomplishment and believes that along with a proper attitude are the key characteristics of a successful teleworker. Despite having no benefits at the present time, Teleworker G says that she very satisfied with her contracting opportunities and is very likely to continue in that capacity.

This transformation can best be described in her own words:

“My disability caused great emotional damage to me. I felt segregated at work. I was no longer contributing financially or physically to my family. My social life decreased dramatically. I became extremely depressed. I was then referred to DVR about 9months after my injury. My DVR counselor turned my life around by referring me to this program! I now feel worthwhile, I am able to contribute financially to my family, and I have great pride and increased self esteem in what I have accomplished.”

In the future, Teleworker G sees increasing numbers of companies moving to teleworking because such workers are more productive. In her opinion, teleworking by persons with disabilities could be increased by offering telework through all Workforce Centers and Social Security Income offices. In addition, financial assistance would aid this effort as would informing state rehabilitation staff more completely about when teleworking may prove useful for persons with disabilities. Also, she feels that disabled individuals sometimes are too reluctant about new opportunities. Her advice to other persons with disabilities about teleworking: *“Do it and accept any training offered!”*

Observations. Arise’s business model has evolved through years of customization and adaptation to both technology and market conditions. The company’s expansion illustrates that its telework business model is meeting a true market need of corporate clients by offering enhanced service levels at lower cost than traditional customer call operations. Also Arise offers a dispersed workforce that is important to some corporate clients who are particularly concerned about customer service during regional disasters. With certified professionals spread geographically across the country, the likelihood there will be loss of technology and major blackout periods

without customer service is minimized.

Because of the virtual aspect of Arise's business and their continuing need to recruit potential new agents from non-traditional populations, there may be increased employment opportunities for returning veterans with disabilities and individuals who have been receiving workers compensation. Certified professional teleworker positions offer:

- § flexibility of scheduling and home bound employment, two excellent job characteristics for persons with disabilities as these characteristics allow individuals to tailor work around their health needs, other jobs, or personal situations
- § tasks mostly involving inbound calls, instead of outbound sales, thus reducing job-stress and pressure
- § a certified professional association for obtaining various types of group benefits if desired
- § an opportunity which enables individuals to feel productive as they are a contributing member of the workforce.

There will be limits to how many persons with disabilities can become certified professionals, however. First, some individuals will have difficulty with the start-up expenses, which may be as high as \$2,000, if a person does not have a suitable computer. From the teleworker profiles, several individuals required assistance from state or federal programs but not everyone may be able to obtain outside assistance. Second, because of the upfront costs and the monthly fees, a certified professional's net pay may be less than that of employees at traditional call centers. Whether the tradeoff of lower pay is offset by flexibility with scheduling and other benefits is a decision for each applicant. Third, some individuals will find the contractual option with Arise to be more complex than holding a traditional position. Not everyone is suited to incorporate as a new business entity, set up a new bank account, document business costs, or deal with taxation as a sole proprietor. Fourth, applicants on some types of supplemental public assistance income must determine the number of hours they can work without loss of major medical benefits. This is especially important for individuals with pre-existing conditions.

Based on the experiences to date, it is clear that some applicants will certainly not have the requisite skills to participate, and no doubt some proportion of applicants will have the necessary skills but not have the interest or motivation to move forward at this time. Some individuals will find the application process to be daunting or even intimidating. This is especially likely for individuals who have been out of the workforce for years. One test is timed and demands working quickly with various computer screens. Another involves an interview, which will instill test anxiety in some applicants. Those who pass these two tests then enter an e-learning course that is fast-paced, as a number of remote certified professionals are trained in the same course. Both the admissions process and training present mini-barriers to potential certified professionals. However, those individuals who are able to receive training prior to the actual Arise tests, such as those individuals who received MRC's customized training, appear better prepared. And those who survive the entire admissions process will have demonstrated their abilities to react quickly to screens and voice input from several callers and multi-task, along with problem-solving and service skills more generally. Additional supports for consumers may be desirable as well, although that was not the case with the four teleworkers described previously.

What proportion of applicants is able to pass through the application and training processes cannot be determined now. The number of applicants and placements have been too few in number to state with confidence what proportion of applicants will be able to become certified professionals. The experiences generally have been good to date, however, which is promising.

The Hartford's Pioneering Customer Services Group

Company and Program Background. The Hartford is one of the oldest and largest investment and insurance companies in the United States. Founded in 1810, the company is a leading provider of automobile and homeowners products, business insurance, investment products, life insurance, and group and employee benefits. Recognized for the diversity of its product portfolio and distribution networks, The Hartford serves customers through independent agents and brokers, financial institutions, affinity groups, and via the Internet.

The Hartford Customer Services Group was established in 1998 in Ft. Washington, Pennsylvania, a Philadelphia suburb, to handle calls for third-party clients involved in healthcare products and services for seniors, including Medigap, long-term care, dental, vision, and pharmaceutical services. The Hartford Customer Service Group is the primary service provider for AARP Healthcare Options, a suite of health care products offered by AARP (formerly the American Association of Retired People) to more than 36 million AARP members. [27]

The Fort Washington center and a similar center in Allentown, Pennsylvania, have approximately 1000 customer service and sales representatives who handle more than 17 million contacts per year. While the call center's primary focus was customer service, over the years HCSG built a telemarketing group of 450 telesales professionals has been added.

According to The Hartford Customer Services Group's chief operating officer, Jay Fleming, its growth strategy has been supported in part by a three-legged stool: a bilingual leg, a flexibility leg, and a telecommuting leg. The telecommuting leg began in 1998 with a pilot program to retain two individuals who had physical disabilities which prevented them from working in the office. Over the next two years several more requests to telecommute due to special needs were received, and telecommuting increasingly was viewed as a retention solution for employees (or their family members) with disabilities. HCSG began formal expansion of the telecommuting program in 2004. [28]

Telecommuting Today. Currently HCSG has 215 full-time employees taking calls at their homes. About 25 of these home-based employees have special needs regarding disabilities, with the majority caring for others in their households who have disabilities. The option to work from home allows these employees to maintain meaningful employment and benefits in spite of their special needs and to reduce the strain on their personal lives, thereby allowing them to concentrate more on their job performance. Although no precise demographic information was compiled for this case, it is estimated that approximately 70 percent of all home-based employees are female.

According to recruitment information from the company, customer service representatives are expected to handle both inbound and outbound call functions and provide an overview of the AARP Healthcare Options benefits and services.

Additionally, representatives send information packages to individuals who are interested in enrolling in one of the insurance products.

Qualifications for customer service representatives include the ability to identify customer needs by using the "listen, acknowledge, make a statement, and ask a question technique;" strong verbal communication skills; an ability to learn new programs and procedures quickly; technical proficiency with a PC in Windows 2000 environment; and an orientation to detail. If candidates meet or exceed these qualifications, pass a required skills assessment test, and are selected, they begin a seven-week, paid-training schedule that includes three weeks of classroom training and four weeks of on-the-job training.

Representatives are paid a base starting salary of \$28,000 and have an opportunity to earn monthly bonuses, which can range up to \$400 monthly. All full-time representatives of the Hartford Customer Service Group, which is nearly everyone, are offered comprehensive benefits from the time they begin training. This includes medical insurance, dental insurance, life insurance, 401k, tuition reimbursement (after 6 months), and paid time off.

Currently only employees with at least 6 months of experience onsite at either the Fort Washington or Allentown centers are eligible to telework because of the training and experience needed to sell the highly complex and regulated products and services. This

stipulation is noted when new representatives are recruited, as a section within the heading of career path opportunities. Before employees begin telecommuting, they are provided training on ergonomics, issues related to email and personal computers at external, off-site locations and several other matters.

Performance Metrics. What began as an accommodation to retain high performing employees has expanded for other reasons as well. First and foremost, senior management was impressed by various performance measures for the home-based representatives. According to Jay Fleming, the HCSG COO:

All of the performance metrics for telecommuters are as good as or better than those of the staff in the centers. Staff are more productive at home and our employee retention rate is phenomenal. The turnover rate for at-home workers is ninety percent less than the rate for our contact center, which is already best-in-class."

Some of the difference in performance between the at-home workers and in-office workers was attributed to the at-home workers being more experienced, because of the six-month in-office requirement. But the difference in performance was too large to be explained by that alone. In fact, senior management said that all the traditional metrics (handle time, quality, and sales) have been superior for the at-home workers. And a closer inspection of metrics for individual employees found that in all cases, the representatives with disabilities or caring for those with disabilities, performed better once deployed to their homes.

Not only has the turnover rate for at-home workers been remarkably low—in the low single digits in a field known for its high turnover--since the program has started, not a single at-home worker has left to go to another call center operation. Some at-home workers have retired and some have stopped working, but none has exited to a competitor. Having a low turnover rate directly affects costs in a large customer service operation. Because the products are complex and well-trained employees are required, a low turnover rate reduces recruiting and training costs. HCSG estimates its low turnover rate reduces training costs per employee by about 2/3rds, saving HSCG more than \$6,000 per employee.

There are other benefits as well. Home-based representatives, unlike office-based employees, often are willing and able to work split shifts because no transportation is required. Split shifts allow HCSG to have a more flexible staffing approach which enables it to extend its service hours and handle peak load periods in an industry that has daily and seasonal workload fluctuations.

Home-based representatives also are beneficial in at least two other respects. First representatives do not need office space within the call centers. The HCSG recently renegotiated its office space lease and generated cost savings from 30,000-35,000 square feet it no longer needs. In addition, at-home employees are viewed positively within the company in terms of disaster recovery procedures and also regionally in terms of pandemic planning.

For employees, there has also been an evolution regarding the purposes of their home-based work. While the first two individuals were accommodated for personal matters affecting job performance, the reasons for at-home telecommuting have grown to include caring for family members and latchkey children situations. More recently, high gasoline prices have been cited as a reason for requesting at-home work. And in eastern Pennsylvania, absenteeism due to winter snow storms also can be mitigated to some extent by working at home.

So what started as an accommodation to retain a couple high performing employees has now grown into a program with numerous advantages for the company as well as its employees. Furthering the entire expansion have been technological advancements which have made it easier to deploy at-home customer service representatives. However, none of the expansion would have occurred if the objective performance metrics had not been superior.

There have been few drawbacks or disadvantages to home-based work according to senior management. Initially there were some issues with technology interfaces and DSL and cable modem snafus, but those have diminished due to improved high-speed, fiber-based DSL. Nor have there been any significant communication, coordination, jealousy, or isolation issues related to co-workers. Extensive data gathering by a Hartford

employee showed no animosity toward co-workers who worked at home. And while isolation has not proven to be a negative consequence in general, some effort is being made to inform individuals that social networking can occur virtually and not only in an office setting.

Another potential problem for both the company and high performing employees is whether telecommuting would affect the career paths of these employees. HCSG has a management rotation program to groom talented individuals, and two or three individuals have chosen to work at home despite being informed that doing so would preclude their participation in the management rotation program. This is not considered a major problem however, as senior management believes the individuals are likely to return to an office-setting and the management rotation program, once they finish caring for a family member or complete school.

Forthcoming Initiatives. When telecommuting from home was initiated in the late 1990s, this was a relatively new concept, and acceptance by The Hartford headquarters staff was tepid. Because the HCSG has substantial independence as a business entity, the program evolved gradually, the performance metrics have been solid, and business volume has grown, corporate acceptance is no longer a concern. In fact, the home-based program encompassing the three components (telecommuting, bilingual, and flexibility) is now viewed as a pinnacle program within The Hartford, having generated positive national recognition for the company.

The program will continue to expand in all likelihood. By the end of 2008, approximately 300 of HCSG's 1000 customer service and sales employees will be working at home as each quarter, about 20 new representatives become home-based. [\[29\]](#) In addition, by the end of 2008 most managers of home-based customer service agents will be working at home. Based on the results of a pilot project in 2007, the plan is for managers to telecommute full-time for several weeks and then return to the office one day a week, for several weeks, to ensure they are still attuned to HCSG's organizational culture and plans. [\[30\]](#)

Another new development for HCSG will be small, at-home virtual workforces outside of eastern Pennsylvania. In late 2007, HCSG started new initiatives in Charlotte, North Carolina and in Reno, Nevada, which will employ a total of about 40 new at-home employees. There is a possibility of additional venues in other locations based on the performance of these two locales.

To expand opportunities for home-based employment of individuals with disabilities, HCSG believes additional federal, state, and private resources must be targeted to training of disabled candidates in PC proficiency, customer and telephone service, and writing and email. Also new resources should be provided for home-based work stations, perhaps in conjunction with state and local rehabilitation agencies that usually have authority to expend resources for this purpose. Above all, HCSG believes that more individuals with disabilities could be employed at home in customer service positions if paths could be developed to provide more possible candidates with appropriate qualifications and training. Put differently, a larger number of persons with disabilities will be able to telecommute, if and only if, there are many more persons with disabilities in the pool of possible new hires. If more candidates can be identified, more can be placed, as job openings exist.

Synthesis and Implications of Case Studies

Main Models. The case studies capture the substantial variety that exists in teleworking by persons with disabilities. Based on the cases, there appear to be several categories, or models, currently:

1. Disability-centered teleworking—This is exemplified by targeting a pool of persons with disabilities from a rehabilitation agency, vendor, or other source in which specialized training and support is provided to potential teleworkers. LIFT, United Way 211, and by the original Arise approach, when it began as Willow are examples of this model. These may begin as pilot projects in which a concerted effort is made to have an agency serve as the employer, at least for part of the time. Or an agency can work in partnership in providing teleworker training and support.
2. Home-based teleworking drawing upon disabled individuals—This includes SERVICE 800, the current Arise approach, The Hartford Customer Service Group, as well as other companies such as Working Solutions and Alpine Access. This model offers telework to persons with disabilities, just as they do for other non-disabled individuals. Some employers may require some work experience onsite before telework is offered.
3. Incidental or intermittent teleworking--This allows persons with disabilities to participate but having a disability is incidental. These are initiatives which were started for general corporate purposes or other reasons, such as the State of Arizona (reduce traffic congestion) and the anonymous company (corporate culture).

Another possible typology would be employee-centered programs and business-centered programs. Using this typology, the cases would be classified as follows:

Employee with a disability-centered

LIFT

Arise (original)

Business-centered

United Way 211

SERVICE 800

Arise (current)

The Hartford Customer Service Group

Working Solutions, Alpine Access

State of Arizona

Anonymous company

Yet another approach would be to categorize the cases along a continuum in which there is a varying degree of engagement of, or focus on, persons with disabilities. The employee-centered programs as well as United Way 211 began initiatives exclusively with persons with disabilities. These programs are closely tied and partnered with rehabilitation agencies. At the other end of the continuum are the State of Arizona and the anonymous company where disability was inconsequential when teleworking began. In Arizona, the primary objective of teleworking was, and continues to be, to reduce transportation congestion while for the anonymous company, the culture is oriented to telework for all employees. [\[31\]](#)

Because each of these teleworking programs has multiple dimensions, all of the categorizations are somewhat imperfect. Not only is there fluidity across the models to some extent, a number of programs have evolved over time. Arise began as a telework program for blind individuals and now has a workforce which is largely non-disabled. The Hartford Customer Service Group began as a traditional call center, then began a very limited initiative to retain several individuals with disabilities, and now has evolved into in a more widespread home-based program encompassing other teleworkers, the majority of whom still do not have disabilities.

In addition, it must be remembered that the categories and typologies are based only on the cases identified and researched in this project. It is unknown if these are truly representative of all teleworking programs involving persons with disabilities. For varying reasons, case studies could not be completed on many other organizations

during this project period. [\[32\]](#) Declinations were received directly or indirectly from:

- U.S. Postal Service, Office of the Inspector General
- Bonneville Power Administration
- U.S. Selective Service
- U.S. Department of Defense (several Defense Finance & Accounting Service units and two US Army units, all of which were located outside the metropolitan DC area);
- California Employment Development Department
- Commonwealth of Virginia
- Oklahoma Call Center
- Wisconsin Department of Transportation
- Tennessee Valley Authority [\[33\]](#)

It is quite likely that most of these agencies and organizations would have been in either a model 2 or model 3 and in the business-centered typology, but that cannot be known for certain without having developed a case study.

Because of the differences in program objectives and participating teleworkers, it is inappropriate to view any one of the models as being superior to the others. Individuals seeking employment through Arise, United Way 211, and SERVICE 800 do not have the same background and qualifications in general as candidates selected, trained, and placed by LIFT. Average compensation for teleworkers with disabilities who are placed through LIFT is \$60,000 but there are individuals who earn considerably more. In contrast, entry level teleworkers with disabilities performing customer service tasks at other employers are paid less than \$20,000 at times. Some employers provide an array of fringe benefits whereas others do not. All types of options should exist so that different candidates can achieve their respective employment goals, whether they are trained as an application programmer, software engineer, customer service representative, or helpline agent and whether they are seeking part-time or full-time positions.

Implications for Practice. Because of the wide variety of case approaches, a comprehensive list cannot be developed of the necessary and sufficient elements for a successful telework program involving persons with disabilities. [\[34\]](#) At a minimum, however, STRIDE staff believe the following conditions strongly increase the likelihood of a successful initiative of teleworking by persons with disabilities:

- § To ensure a pool of potential candidates, rehabilitation/referral agencies need a thorough understanding of telework, constraints and objectives of employers, and types of candidates best suited to telework.
- § Employers must be involved early in the process to ensure they are guiding the effort, that necessary skills will be taught to candidates, and that the specific job tasks of the teleworkers are meeting employers' needs. Employers should be involved in the hiring process, particularly in determining which skills will be required. Employers also must understand at the outset that some persons with disabilities will require schedules to accommodate their medical appointments and disabilities and that some individuals may need employment supports.
- Teleworker candidates should receive customized training and employment supports for a specific employer, in addition to any basic training provided to all candidates. Customized training is required because the working environment and teleworkers' backgrounds will be vastly different in scope and length for a new hire with little or no prior work history, a new hire with related work history, and an existing employee who transitions to telework because of a disability challenge. Training also may be different depending on whether the person is teleworking full-time (or part-time) or is splitting time between an office and home.
- Employers that are reluctant to begin a telework program or hire new employees to telework should consider work trials or internships. These are often valuable as are part-time positions or splitting time between an office and home setting, if that is possible.
- Employee performance should be assessed early, ideally after one or two months, with appropriate remedial activities and further employment supports, if needed.

Because of the selection and recruitment process, individualized, customized training, and employment supports for some individuals, telework placement costs frequently will be twice those for the same population group who may not be teleworking. These additional costs require an employment agency or social service group to perform

constant marketing of teleworking to a variety of employers.

The cases yielded other practical information for the future. There were findings from the cases that are somewhat at odds with either prevailing views or practices in the past. For instance, communication problems were not found to inhibit teleworking. Perhaps that should not be surprising given that a teleworker can communicate with his/her supervisor or co-worker not only by telephone and email but also via one of the instant messaging providers. Also few teleworkers seem to be worried about becoming isolated by working at home, and jealousy problems with co-workers who are not teleworking do not seem to exist.

Compared to the past, supervisory concerns about a teleworker not being as productive at home as in an office setting also appears to be less. No doubt there are many supervisors who still believe that an employee out of his line of sight will be less productive, but improved technology and methods for measuring employees' output make visual oversight less necessary for many jobs. And if wary supervisors know their superiors are supportive of teleworking, then they are likely to be less concerned.

Prior telework experience also appears not to be the prerequisite that it was in the past. Now more organizations seem willing to place more emphasis on an employee's qualifications and aptitude than on their specific prior employment. Surely wider availability of technology and training have contributed to this more flexible outlook. Other issues that have surfaced in the past as inhibiting teleworking, such as legal liability for home accidents and ergonomic issues were hardly mentioned by any companies or teleworkers.

Teleworking also may not be the huge barrier to advancement as it once was thought to be. Few teleworkers in the cases thought their promotional opportunities would be restricted by teleworking, and company and organizational officials generally had the same views. Of course, the cases represent a set of companies and jobs that in many ways are unrepresentative of all companies and positions. And there were at least two teleworkers in senior positions who thought they may need to reduce their teleworking to advance. Teleworking, at least full-time teleworking, still appears to be uncondusive to managing large numbers of office-based employees.

[\[35\]](#)

What has been most remarkable across the cases has been the very small number of teleworkers who have cited any drawbacks from teleworking per se. While some teleworkers have been dissatisfied with their compensation levels and benefit packages, only a handful have identified problems which would not exist if they were in a comparable office-setting. These have been as minor as not having the same quality of office equipment or personal comfort levels due to temperature extremes. Most everyone else has been positive or very positive about their teleworking, whether they do it full-time or intermittently. Although some teleworkers interviewed in the cases were selected in all likelihood because of their favorable opinions, many others appeared to be quite willing to provide independent views about their companies and their work. Not one person indicated they definitely intended to stop teleworking.

For many reasons, most companies and teleworkers believe that teleworking will expand in the future. That is perhaps the most important implication of the cases for practice—the trend is definitely toward more companies becoming involved with telework and more positions being held by teleworkers.

Implications for Policy. For teleworking by persons with disabilities to be successful, there must be a congruence or positive fit between three elements: employee skills, employer needs, and specific job tasks. If there is incongruence in this fundamental fit, no amount of assistance will overcome the incongruity. Yet, if there is congruence, financial assistance will increase the number of persons with disabilities who can be placed. And financial assistance will increase the success rate for placements. The question is: How should limited financial resources be invested?

Based on the placement process of STRIDE, the case studies, and our prior experiences, future funds for telework by persons with disabilities should be directed primarily to service provision by third-party organizations and companies. Our rationale for this recommendation is:

1. Third-party organizations have the specialized knowledge about telework involving disadvantaged populations;

2. Third-party organizations have established candidate flows of disadvantaged populations as they are frequently the primary types of clients served. They also understand the very different needs of individuals, some of whom wish to be employed full-time to obtain health and other benefits, some of whom wish to earn below \$700 monthly to maintain current SSDI benefits, and some of whom are free to alter their schedules as they have benefits provided by spouses.
3. Third-party organizations should be able to access funds from state and federal government agencies that provide daily services to persons with disabilities. Obtaining such funds for workplace accommodations was a need identified by numerous teleworkers in the case studies.
4. At least some third-party organizations can provide the basic skills (writing and editing, phone etiquette, work simulation), customer service, problem solving, and computer training necessary for a telework position. In the absence of such training, which is rarely provided by a company, the candidate pool will be limited to individuals with recent jobs or higher-skilled individuals.
5. Third-party organizations often can provide employment supports, if necessary: job coaching, case management, etc. which can be quite important for individuals who have usually been out of the workforce for between 1-10 years. And the third party agency can work with the employer to help the teleworker troubleshoot and resolve other issues that arise both before and after employment.
6. Finally, employer involvement is likely to be strongest and most long-lasting when it is developed and secured in collaboration with a third-party organization over a period of years. Sporadic placement efforts usually prove ineffective.

An alternative would be to allocate funds to employers that then obtain services through contractual agreements with third-party organizations. This is likely to be more expensive, and we do not see how that would be superior in practice to providing the funds directly to third-party organizations.

Funding should be available to support rehabilitation programs and the individuals they serve who wish to become teleworkers. We see no justification for restricting assistance only to a certain group such as individuals who may require less inexpensive assistance, or those who may require more intensive and more costly assistance, or individuals seeking certain types of telework positions. [\[36\]](#) Choosing between targeting funds only to either entry-level applicants with mild disabilities or to individuals with severe disabilities who are attempting to re-enter the workforce is inappropriate. While a greater number of entry-level individuals with mild disabilities might be assisted, because the training will be less intensive and the financial supports, if any, for start-up costs will be lower, the needs of returning servicemen with more severe disabilities may be more acute. Also, while there appears to be a greater need and desire among employers for entry-level positions (customer service, word processing, scheduling), there are telework jobs available for persons with disabilities who have stronger credentials in information technology and research.

There are numerous challenges to teleworking by persons with disabilities. Many individuals have had long periods of unemployment, suffer from low self esteem, have fatigue and stamina constraints, do not possess fundamental job skills, possess unrealistic employment expectations, and require assistance and support as they re-enter the workforce. Yet, the potential of teleworking for individuals with disabilities is beginning to be realized. The conceptual leap for many businesses and organizations is no longer the issue, now that teleworking has become more common. No longer is it a question of responding to “why do this” as it is of “how do we do this?” Although we have yet to move entirely away from the “early adopters” stage of an innovation, many more organizations are now beginning to have at least a handful of teleworkers with disabilities. With appropriate financial assistance, many more individuals with disabilities could enter productive teleworking employment positions. Regardless of whether their disability was related to military training, teleworking for persons with disabilities is increasingly a viable option that helps individuals, employers, and society.

[1] Prior to starting the case study process, up to two cases had been tentatively reserved for projects in which telework by persons with disabilities had ceased. Despite contacting several employers, no employer agreed to share information about the termination of their teleworking initiative.

[2] LIFT has made many placements in New York/New Jersey, Research Triangle Park in North Carolina, Chicago, Silicon Valley, and California more generally.

[3] This is the expectation at the beginning of placements but schedules may change once an individual is placed, as occurred with Teleworker C, whose schedule is described later in this case.

[4] LIFT is paid by the rehabilitation agencies, Social Security Ticket to Work, or other referring organization, and receives no payments based directly or indirectly on the applicant's salary. Additional revenues come from training fees involving employers. Currently LIFT has two full-time employees and several part-time consulting specialists.

[5] The cost of accommodations has ranged from next to nothing to as high as \$18,000. LIFT finds that accommodations currently rarely exceed \$600.

[6] The initial \$5000 cost would not be duplicated today if another teleworker was hired. The current technology used by the company would cost no more for that employee to work at home today than to work in the office. According to the supervisor, aside from special technology for special disabilities, the costs of telecommuting have become zero for the company.

[7] Because of the decentralized decision-making about teleworking, it is unknown if any employees with disabilities have been hired who began working remotely immediately. Nor is it known if any employees with disabilities working remotely have stopped.

[8] See the appendix for a more detailed description of VRS in Texas.

[9] Teleworker A believes working remotely will not affect his promotion opportunities as he can perform the same work at home as at his office, and according to him, the company concentrates on outcomes and delivering results, rather than intermediate activities.

[10] Note that this information about teleworking pertains to all state teleworkers. The State of Arizona does not compile data on state employees with disabilities who telework.

[11] The questionnaire is available on the web page at <http://www.teleworkarizona.com/mainfiles/visitor/pilotprototype.htm>. Once on the page, click on "Self Assessment Tool".

[12] Ninety-two percent of the teleworkers and seventy-two percent of the non-teleworkers disagreed with the statement that they would get less work done if they worked from home part of the time.

[13] Only 24% of non-teleworkers, presumably mostly supervisors, believed that it takes more time to supervise a teleworker.

[14] Some representatives work as much as 40 hours per week, and some who normally work 20 hours per week actually have longer hours during peak calling periods and when filling in for others who are on vacation. Nonetheless, the general work schedule is 20 hours per week.

[15] SERVICE 800 provides a competitive wage structure and a 401K program for service representatives.

[16] SERVICE 800 also has a web-based application which documents actual time worked.

[17] That was the fee in late 2006.

[18] Additional information about Arise is available at <http://www.arise.com/Content/default.asp>

[19] To enhance recruitment of new agents, Arise had several promotions that reduced the cost to applicants such as reducing the cost of the background check by 50%. That promotion continues while at least one of the other promotions has since been discontinued.

[20] Besides financial assistance for those specific items, Teleworker D would like to see some incentives from the federal, state, or county governments to support people who work at home. According to Teleworker D, home-based employees reduce wear and tear on local roads, consume less energy, and generate less pollution. He is unsure whether this incentive should be a direct grant to "work from home" individuals or some type of credit for setup and maintenance of a home-based telework environment.

[21] Available hours must be divided by the number of contractors servicing the same client so that is a factor in determining if more work is possible. Most contractors will work with more than one client in order to attain the number of hours they prefer.

[22] These social security medical benefits cost Teleworker E about \$93 per month. She is also technically eligible for medical assistance through a Minnesota county program, but that starts only after she has expended \$350 per month, which in reality means she receives no medical assistance through that program.

[23] Teleworker E suggested that a stipend needs to be provided for one year while an individual is participating in a federal demonstration project.

[24] The MRC, according to Teleworker E, attempts to provide support but she does not feel it is their responsibility, now that she is working with Arise. Also she has been told that individuals at the MRC are her “coach” but she believes her “supervisor” should be someone at Arise.

[25] She is unsure whether she would recommend that others contact Arise about employment. She believes teleworking can work for a new employee with a disability if they are provided accurate information about likely working hours, wages, and costs. With accurate information, an applicant can then decide if the Arise arrangement will meet his/her needs.

[26] Teleworker G said the financial help provided by MRC and DVR those first few months was a blessing. The resources she received alleviated stresses related to money issues and allowed her to concentrate on training.

[27] This partnership with AARP was extended recently through 2009. By 2014, it is estimated that AARP will have nearly 14 million health insurance customers, making it the largest source of health insurance for Medicare recipients.

[28] For individuals seeking further information about the other two legs or the history of HCSG telecommuting, there are two articles available online: (1) the online edition of *Call Center Magazine*, Issue #1909, page 59, September 2006, by Richard Webster, available at: <http://www.callcentermagazine.com/shared/article/showArticle.jhtml?articleId=192202527> and (2) an article by Carol Patton in *Human Resources Executive Online*, May 16, 2006, available at <http://www.hreonline.com/HRE/story.jsp?storyId=5176412> .

[29] Normally 20 HCSG customer service representatives begin to work at their homes one quarter and then the next quarter, 20 HCSG sales employees begin working at their homes.

[30] Eight front-line managers working at home have been supervising at-home customer service representatives. HCSG is studying whether at-home supervisors and managers can supervise in-office customer service representatives, an issue which arose recently for the first time.

[31] In neither situation is there assistance provided by a third party in recruitment and selection. Nor is telework training provided prior to hiring. Post-hiring employment support is provided by the anonymous company but not by State of Arizona departments and agencies.

[32] Most organizations did not specify why they did not want to participate although staff from two of the organizations listed felt their efforts should not be deemed a “best practice.”

[33] Both the Wisconsin Department of Transportation and Tennessee Valley Authority have terminated telecommuting or home-based programs oriented to persons with disabilities. Up to two cases had been planned to learn why employers terminated such programs. Neither organization agreed to provide information. Attempts to contact other employers which had teleworkers with disabilities in the past, such as American Express Bank and a major public transit agency in the Southwest, proved unsuccessful also.

[34] The earlier Wisconsin DOT and Tennessee Valley Authority initiatives were quite different than any of the cases developed for this project, which is another reason why staff believe successful programs cannot be reduced to a small number of essential elements.

[35] This may be more than a perception problem. It may be a real problem currently, given the way work is managed hierarchically in most organizations.

[36] Besides some fundamental personal traits such as diligence, perseverance, and scheduling responsibility, there was minimal unanimity about what characteristics are most important for successful teleworking.