CONNECT Minnesota®

Minnesota's Telework-Force

June 14, 2012

Broadband usage is transforming the workforce across the United States from one where an employee is present in a physical office building to one allowing for remote work where an office is not required. As described in the Telework Enhancement Act of 2010, the term that refers to this is "telework" or "teleworking," and is defined as a "…work flexibility arrangement under which an employee performs the duties and responsibilities of such employee's position, and other authorized activities, from a [location] other than the location from which the employee would otherwise work."[1]

In Minnesota, teleworking has the biggest impact in the Minneapolis-St. Paul metro area. Throughout the year the average commuter in the Minneapolis-St. Paul metro area spends 225 hours, or 9 days, traveling to and from work.[2] A reduction of this time spent traveling can make a major difference in an employee's personal life. Teleworking can also help Minnesota workers save money - as by spending less time driving, they spend less money on gas and reduce costs associated with vehicle maintenance.[3] All the while, teleworkers can maintain a better balance between their home and work lives.

In addition to the benefits employees have, Minnesota employers that allow their employees to telework have a greater opportunity to recruit new staff and stimulate productivity. As a matter of fact, businesses report productivity growth of 20-25% by allowing employees to telework.[4]

The environmental benefits of telework include less air pollution, conservation of natural resources, and a reduction in traffic congestion.[5] In Minnesota, the state's eWorkPlace Initiative promotes and encourages the use of the Internet for work at home arrangements.[6]

How many Minnesotans are taking advantage of the opportunities presented by teleworking, and how many Minnesotans, both employed and not employed, would telework if given the opportunity? As part of its 2011 Residential Technology and its 2011 Business Technology Assessments, Connect Minnesota explored how teleworking is impacting Minnesota's workforce, and how it can be implemented as a tool to help the state's job market.

Among the findings from this survey:

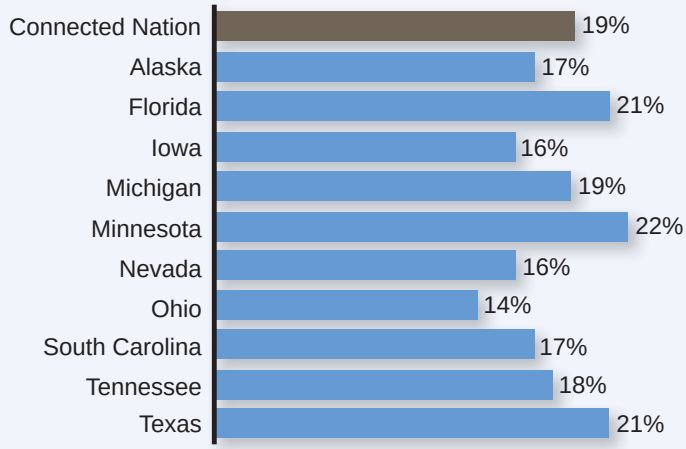
- Approximately **570,000** Minnesotans, or 22% of the workforce in the state, telework. That represents a larger share of employees than any other state surveyed by Connected Nation.
- Nearly **one-quarter** of Minnesota teleworkers (23%) say they telework every day, rather than commute to and from work. On average, Minnesota teleworkers say they work from home 1.6 days per week (or 80 days per year).
- The average teleworker in Minnesota saves approximately **1,934 miles** per year on their commute, the equivalent of a road trip from Minneapolis, MN to Los Angeles, CA.
- Each teleworker saves an average of **$343.16** on car maintenance and prevents **1,411 pounds** of CO_2 emissions entering the atmosphere. Across the state, this equals nearly **$196 million** saved and **804 million** fewer pounds of CO_2 emissions each year as a result of teleworking.
- Aproximately **695,000** employed Minnesotans would telework if their employer allowed it, and **157,000** Minnesotans who are currently unemployed said they would be interested in working if telework was an option.
- Over **4 out of 10** Minnesota businesses with 50 or more employees (43%) allow employees to work from home.
- Nearly **one-half** of Minnesota businesses in the Financial and Professional Services sector (48%) report that they allow their employees to telework. Statewide, even though less than **one-quarter** of Minnesotans who are employeed telework, three out of ten businesses (30%) report that they allow teleworking.

1 http://www.gpo.gov/fdsys/pkg/PLAW-111publ292/pdf/PLAW-111publ292.pdf
2 ACS 5-year estimate 2006-2011 based on median commute time one way and 250 work days in a year. Commute times were calculated from the Metropolitan Statistical Area of Minneapolis-St. Paul MN counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright. http://factfinder2.census.gov
3 http://www.hhh.umn.edu/news_events/Features/eWorkPlace.html
4 http://www.494corridor.org/telework.php
5 http://www.eworkplace-mn.com/TeleworkBenefits/tabid/244/Default.aspx
6 http://www.eworkplace-mn.com/

Minnesotans and Teleworking

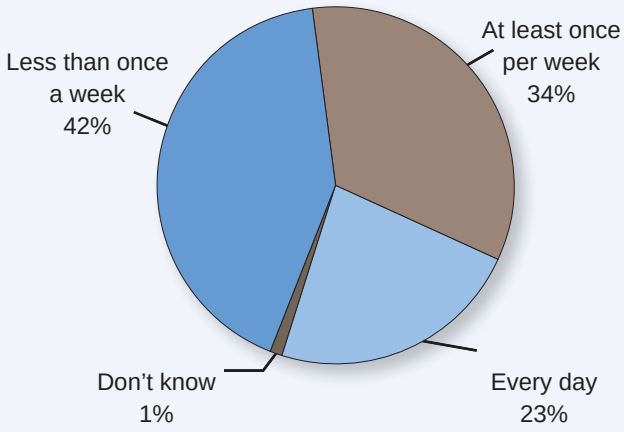
According to Connect Minnesota's 2011 Residential Technology Assessment, 22% of Minnesota adults who are employed full-time or part-time say that they work from home, or telework (Figure 1). This means that approximately 570,000 Minnesota adults work from home using the Internet instead of commuting to a typical workplace during normal business hours. This is higher than other states surveyed by Connected Nation, and a two-point increase from 2010, when 20% of Minnesota's workforce teleworked.[7]

Figure 1.
Employed Residents who Telework



Approximately 132,000, or 25%, employed Minnesotans who telework do so every day of the week (Figure 2). Another 192,000, or 34%, of employed Minnesotans telework at least once per week, and an additional 239,000, or 42%, of employed Minnesotans work from home less than once per week.

Figure 2.
Teleworking Frequency in Minnesota



On average, Minnesota teleworkers work from home at least 1.6 days per week, or about 80 days per year. That translates into approximately 1,934 miles that the average Minnesota teleworker does not have to commute annually, which is roughly a drive from Minneapolis, MN to Los Angeles, CA.[8]

In addition, each teleworker saves $343.16 a year on average on car maintenance and prevents 1,411 pounds of CO_2 emissions entering the atmosphere.[9] Across the state, this equals nearly $196 million saved and 804 million fewer pounds of CO_2 emissions each year as a result of teleworking.

7 Connect Minnesota 2010 Residential Technology Assessment
8 Based on an average daily round-trip commute of 24.2 miles (http://nhts.ornl.gov/2009/pub/stt.pdf)
9 Based on 80 work days during the year, 24.2 miles round trip commute, with an average automobile operating costs of 17.74 cents per mile (http://www.commutesmart.info/download/AAA_DrivingCosts2011.pdf), and an average automobile efficiency of 26.6 mpg (http://www.future-pundit.com/archives/004903.html) producing 19.4lbs. of CO_2 emissions per gallon of fuel consumed (www.epa.gov/climatechange/emissions/downloads/GHGCalculator.xls).

Demographic Breakdown of Minnesota Teleworkers

A demographic examination shows that a wide variety of Minnesotans telework, yet in many ways teleworkers stand out from the Minnesota workforce (Table 1):

Table 1.
Demographics of Minnesota Teleworkers

Gender	Among Employees who Telework	Among Employees who do not Telework
Male	52%	52%
Female	48%	48%
Age		
18 to 24	14%	14%
25 to 44	50%	42%
45 to 64	33%	40%
65 or older	3%	4%
Children at Home		
Households with children	54%	42%
Households without children	44%	57%
No answer/refused	2%	1%
College Education		
No college education	11%	23%
College education	88%	75%
No answer/refused	1%	2%
Annual Household Income		
Less than $25,000	5%	9%
$25,000 to $74,999	34%	47%
$75,000 or more	51%	28%
No answer/refused	10%	16%
County of Residence		
Rural	16%	26%
Non-Rural	84%	74%

There is no significant difference between the share of men and women who telework in Minnesota. The same is true for employed men and women in Minnesota who do not telework. Teleworkers do tend to be younger, though, as a larger share of the non-teleworking workforce is age 45 or older. Teleworkers also tend to have higher education and higher annual incomes, with over one-half of teleworkers (51%) earning $75,000 or more (compared to only 28% of employed Minnesotans who do not telework). More than one in four employed Minnesotans who do not telework (26%) live in rural counties, compared to only 16% of teleworkers. In addition, many parents in Minnesota are using teleworking as a way to balance their work and home lives, as over one-half of teleworkers (54%) report having children at home, compared to only 42% of employees who do not telework. This means that approximately 310,000 employed Minnesota parents are able to spend more time at home, promoting job satisfaction and decreasing the amount of time they have to spend driving back and forth to work.

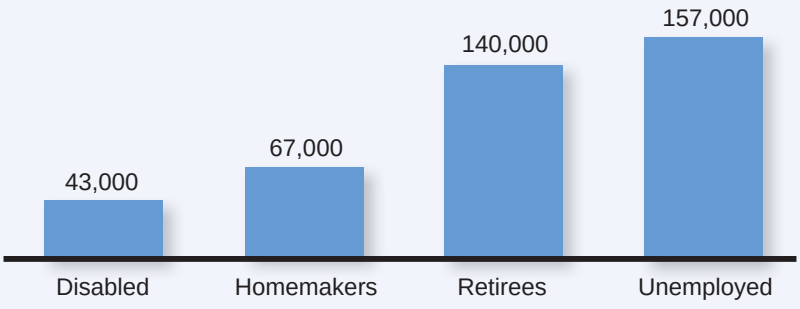
Growing Minnesota's "Telework-Force"

In addition to the hundreds of thousands of Minnesotans who currently telework, many more are interested in teleworking. Across the state, 27% of employed adults - about 695,000 Minnesotans - would telework if their employer allowed it (Figure 3). This means nearly one-half (49%) of all employed adult Minnesotans currently telework or would do so if given the opportunity. However, teleworking is not for every Minnesotan, as 51% of employed Minnesotans (representing approximately 1.3 million Minnesota adults) say they are not interested in teleworking or don't know if they would telework even if allowed to by their employer.

Figure 3.
Interest in Teleworking among Employed Minnesotans

The prospect of working from home is also popular with Minnesotans who are not currently employed. There are 37%, or approximately 407,000, Minnesota adults who are currently employed who would be likely or somewhat likely to work from home if given the opportunity to telework (Figure 4). This means that approximately 140,000 retirees, 43,000 adults who do not work due to a disability, 67,000 homemakers, and 157,000 unemployed Minnesotans would telework if given the opportunity.

Figure 4.
The Potential Impact of Telework on Minnesota's Workforce



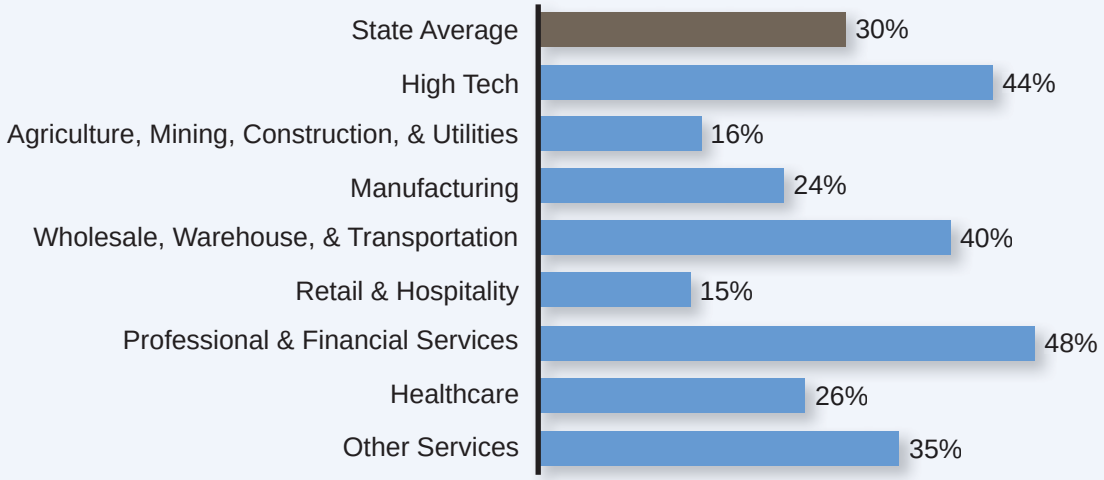
At the time of the 2011 Minnesota Residential Technology Assessment, the Bureau of Labor Statics reported that the unemployment rate in the state of Minnesota was between 6.5% and 6.7% during June and August of 2011.[10] Of the unemployed who were asked if they would be interested in working from home, 71% said they would be willing to telework if given the option to do so. Teleworking is clearly of interest to the unemployed in the state and should be considered when recruiting out-of-work Minnesotans.

10 http://www.bls.gov/

Minnesota Businesses that Allow Teleworking by Sector and Size

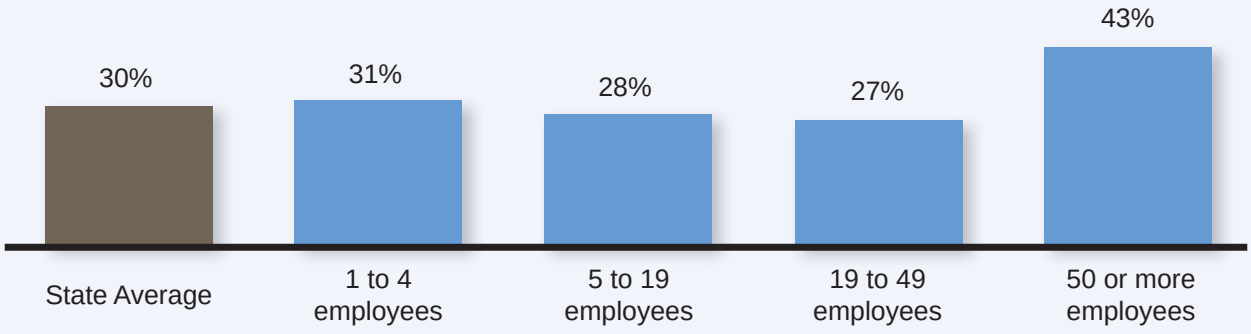
Although only 22% of employed Minnesotans telework, a slightly larger share of Minnesota businesses say they give their employees the ability to telework. According to Connect Minnesota's 2011 Business Technology Assessment, 30% of Minnesota businesses, or 44,000 businesses statewide, allow employees to work from home instead of commuting (Figure 5). This includes almost one-half of the businesses (48%) in the Professional and Financial Services sector.

Figure 5.
Percent of Minnesota Businesses that Allow Employees to Telework by Sector



Large businesses are more likely to offer teleworking as an option for employees than smaller businesses (Figure 6).[11] In fact, 43% of Minnesota businesses with 50 or more employees allow employees to work from home. Nearly one-third of Minnesota's smallest businesses (31% of businesses with fewer than five employees) allow their staff to telework.

Figure 6.
Percent of Minnesota Businesses that Allow Employees to Telework by Size



11 http://www.shrm.org/Research/SurveyFindings/Articles/Documents/09-0425%20Workplace%20Flexibility%20Survey%20Report-Executive%20Summary.pdf

Conclusion

Across Minnesota, teleworking helps reduce the workforce's impact on the environment, while reducing travel costs and helping employees balance work and family time. Currently over half a million employed Minnesotans telework, but there are nearly 700,000 who say they would join their ranks if given the opportunity to do so. Plus, there are an additional 407,000 Minnesota adults who say they would join the workforce if empowered to do so via teleworking.

All of these facts point to the benefits that teleworking can provide for the entire state. Because of the benefits for businesses as well as employees across the state, Connect Minnesota supports programs to increase the popularity and frequency of teleworking in every sector. Businesses, employees, and the state all win when Minnesota employees are given the freedom to telework.

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Methodology and Definitions

2011 Residential Technology Assessment

Between June 22 and August 14, 2011, Connect Minnesota conducted random digit dial telephone surveys of 1,200 adults across the state. Of the 1,200 respondents randomly contacted statewide, 202 were called on their cellular phones, and 998 were contacted via landline telephone. Of these 1,200 respondents, 832 said that they subscribe to home broadband service. The results of this survey have been compared to similar surveys that Connected Nation conducted across ten states in 2011 (Alaska, Florida, Iowa, Michigan, Minnesota, Nevada, Ohio, South Carolina, Tennessee, and Texas). Altogether, Connected Nation surveyed 12,004 residents across these ten states in 2011 for this study, including 1,202 residents who telework.

Multiple attempts were made to each working telephone number on different days of the week and at different times of the day to increase the likelihood of contacting a potential respondent. To ensure a representative sample, quotas were set by age, gender, and county of residence (rural or non-rural), and the results were weighted to coincide with 2010 United States Census population figures. For the purpose of setting quotas and weighting, "rural" respondents are defined as living in a county that is not a part of a Metropolitan Statistical Area (MSA), as designated by the United States Office of Management and Budget. Weighting and design consultation were provided by Lucidity Research.

Surveys were conducted by Thoroughbred Research Group. On average, the survey took approximately 12 minutes to complete after the respondent agreed to participate. Based on the effective sample size, the margin of error = $\pm$ 3.2% at a 95% level of confidence for the entire population. As with any survey, question wording and the practical challenges of data collection may introduce an element of error or bias that is not reflected in this margin of error.

2011 Business Technology Assessment

Connect Minnesota conducted a telephone survey of 802 business establishments state¬wide between October 4 and October 28, 2011. Data were collected by Thoroughbred Research Group, located in Louisville, KY. The purpose of this survey was to set benchmarks for technology adoption and barriers to adoption; determine best practices by identifying which applications Minnesota businesses use most often; and measure the average price and speed of broadband service among business establishments across Minnesota. On average, these surveys took approximately nine minutes to complete.

Sample quotas were established by company size (5 brackets) and industry sector (8 sectors). Within these 40 cells, a randomly-drawn sample of businesses listed with Dun & Bradstreet was contacted for the survey. Altogether, this sample included 181 businesses with 50+ employees, 207 businesses with 20-49 employ¬ees, 212 businesses with 5-19 employees, and 202 businesses with 1-4 employees. In cases where the respondent's information regarding the number of employees at the establishment differed from the informa¬tion provided by Dun & Bradstreet, the respondent's answer was used in determining business size quotas. Connect Minnesota intentionally over-sampled large businesses to ensure a sample that was large enough to analyze and compare to smaller businesses. Prior to public release, business survey results were peer reviewed by broadband policy experts at the University of Minnesota, Crookston.

In addition to the size and sector quotas, the data were subsequently weighted to ensure that the sample was representative of all employer business establishments statewide, with targets determined according to the 2009 United States Census Bureau's County Business Pattern report, the most recent data that were available at the time the survey was conducted. Weighting of the survey data and research consultation were provided by Lucidity Research LLC, located in Westminster, MD.

This sample provides a margin of error of ± 4.9% at the 95% confidence level for the total sample of 802 businesses. This sample error accounts for sample weighting, using the effective sample size.

The Residential Technology Assessment and the Business Technology Assessment were conducted as part of the State Broadband Initiative (SBI) grant program, funded by the National Telecommunications and Information Administration (NTIA). The SBI grant program was created by the Broadband Data Improvement Act (BDIA), unanimously passed by Congress in 2008 and funded by the American Recovery and Reinvestment Act (ARRA) in 2009. To learn more about Connect Minnesota and its programs please visit www.connectmn.org or e-mail us at info@connectmn.org.

APPENDIX:
Select sample sizes

2011 Connect Minnesota Residential Technology Assessment

	All Respondents *n=*	*Employed* *n=*
All Responses	1,200	725

Q: Which of the following describe the way you work from home, when you do so?

	All Respondents *n=*
Work at home using an Internet connection, instead of commuting to usual workplace (teleworkers)	154
Do not telework or are not employed	1,046

2011 Connect Minnesota Business Technology Assessment

	All Respondents *n=*	Respondents That Allow Teleworking n=
All Responses	802	268