

AUGUST 10, 2016

# Consolidated Telephone Company

## Broadband Impact Study



Engineering



Outside Plant



Consulting



***VantagePoint***

2211 N Minnesota St. Mitchell, SD 57301 | 605-995-1777 | [www.vantagepnt.com](http://www.vantagepnt.com)

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## EXECUTIVE SUMMARY

Consolidated Telephone Company (CTC) contracted Vantage Point Solutions (VPS) to assist them in conducting a Broadband Impact Study for customers who recently received broadband connections as a result of a 2015 Border-to-Border Broadband Development Grant Program award. The program funds the expansion of broadband service to areas of Minnesota that are unserved or underserved. The purpose of the Study was to ascertain how broadband is impacting the lives of customers connected via the grant program.

The project entailed three main components:

- Developing and conducting a survey of 468 customers located in the communities of Fairview Township (Gull Lake area) and in South Brainerd/Fort Ripley, Minnesota.
- Analyzing the survey results; and
- Providing this Report that discusses broadband impact data on a national level as well as analyzes survey results and Key Findings.

On May 25, 2016, VPS launched a survey of 35 questions utilizing the online survey tool Survey Monkey. The net result of marketing efforts (more fully described in the Survey Analysis section) yielded 131 completed responses, representing 28% of CTC's customer base in the surveyed area. Typically an outstanding completion rate for this kind of survey is 20%.

Survey respondents represented the following basic key demographics:

- 56% were 55 or older;
- Approximately half have annual household income levels above and below \$75,000;
- 72% of households do not have children residing under the age of 18;
- 65% live in South Brainerd/Fort Ripley with 34% residing in Fairview Township/Gull Lake Area.

The survey grouped questions in a number of vertical areas including customer satisfaction, internet usage, education, work practices, telehealth and quality of life.

The survey produced a significant amount of data that is discussed thoroughly in this Report.

From the data and analysis, ten of the Key Findings are highlighted and discussed in the Survey Analysis section of this Report. The top ten findings span a variety of verticals and demographic information. The most important relate to the older adult population and economic development. Namely that – over half of customers surveyed are over the age of 55 and over 20% have a home-based business that relies on high-speed internet.



## **Top Ten Key Findings of the Survey**

- Customer service and reliability of connection are more important than pricing of services.
- Almost half of respondents own four or more personal computing devices; and 70% responded that they own two smart phones.
- Customers may need increased bandwidth to support their internet usage.
- Less than 2% of older adults surveyed do not use the internet.
- The older adult population surveyed is far more connected than the older adult population nationally.
- The internet plays a critical role in enabling customers to work where they live with more than half of households using their home internet for work; and 14% reporting that they “telework.”
- Over 20% of customers have a home-based business or farm with 36% reporting that the internet reduced their overall operating costs.
- Almost 9% of customers have plans to start a home-based business in the next 1-3 years.
- Nearly a third (30%) of customers are utilizing their home internet connection for health care services or to interact with health care providers with 25% indicating they would use telehealth services if it were an option.
- Two-thirds of customers stated that the internet is very important for their family with almost 40% saying that they could not live in home without a reliable high-speed internet connection.

These Key Findings show that CTC customers are fully adopting the broadband technology in their home. Customers are utilizing the internet connection for web-streaming video programming, web-surfing, educational purposes, and a significant number rely on broadband for work. Having a reliable high-speed connection is enabling families to operate business out of their home and contribute to the local economy. As noted above almost 40% of families could not live in a home without it.



## NATIONAL OVERVIEW

Today broadband is not a luxury, but rather a necessity. People need access to broadband in order to (among other things):

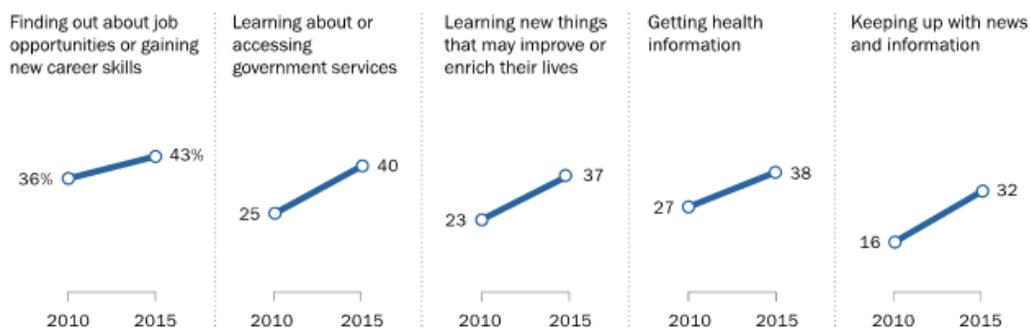
- Apply for jobs;
- Access government services;
- Work from home or a secondary location;
- Access educational services, conduct research;
- Conduct business and support business services directly tied to revenue;
- Stay connected to family;
- Watch web-based programming;
- Obtain news and information;
- Participate in social media.

However, access to broadband is not the only issue. Individuals, families, and organizations must also utilize broadband to benefit from it. For example, according to a PEW Survey conducted in July of 2015, “non-broadband adopters<sup>1</sup> are increasingly likely to view lack of broadband as a disadvantage in key areas of life.” The below chart shows the disadvantage has increased significantly in all areas over a 5 year period.

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### Non-broadband adopters are increasingly likely to view lack of broadband as a disadvantage in key areas of life

*% of non-broadband users who believe those without home broadband are at a major disadvantage in these situations*



Source: Survey conducted June 10-July 12, 2015. Sample size = 2,001.

PEW RESEARCH CENTER

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<sup>1</sup> Non-broadband adopters is defined as either those without access to broadband or those who have access but do not go online for a variety of reasons.



Specifically, the PEW research<sup>2</sup> found that:

- 40% of non-high speed users say that being without broadband is a major disadvantage for learning about or accessing government services, compared with 25% in 2010.
- 37% say that lacking broadband at home is a major disadvantage for learning new things that might enrich their lives, up from 23% in 2010.

Multiple national surveys such as the one from PEW have captured the importance and the impact of broadband on the quality of life of individuals and families. The following data provides a general overview of data that illustrates the impact of broadband on business, education, and the older adult population.

### **Broadband and Education**

In education, “access to high-speed broadband is now as vital a component of K-12 school infrastructure as electricity, plumbing, air conditioning and heating.”<sup>3</sup> In 2012, the State Educational Technology Directors Association (SETDA) published a groundbreaking report entitled “*The Broadband Imperative: Recommendations to Address K-12 Education Infrastructure Needs.*”<sup>4</sup> The report focused not only on recommendations for what kind of infrastructure will be needed at educational facilities to support student-learning (1 gig per 1000 students by the year of 2017), but also discussed the importance of home internet access for students. Broadband enables students to, among other things<sup>5</sup>:

- Access innovative learning tools and resources;
- Interact with teachers and obtain classroom assignments;
- Conduct research;
- Obtain tutoring assistance;
- Utilize dynamic educational content.

Students that do not have access to broadband at home are at a disadvantage from their peers that do have broadband access. The term “homework gap” refers to this growing problem.

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<sup>2</sup> John Horrigan and Maeve Duggan, *Home Broadband 2015 Report*; Pew Research Center, December 21, 2015. <http://www.pewinternet.org/2015/12/21/home-broadband-2015/>.

<sup>3</sup> <http://www.setda.org/priorities/equity-of-access/the-broadband-imperative/>

<sup>4</sup> [http://www.setda.org/wp-content/uploads/2013/09/SETDA\\_BroadbandImperative\\_May20Final.pdf](http://www.setda.org/wp-content/uploads/2013/09/SETDA_BroadbandImperative_May20Final.pdf)

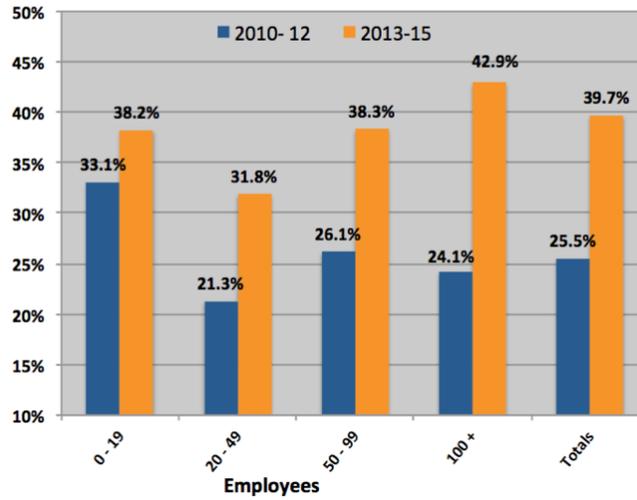
<sup>5</sup> See id. at pages 3-5.



## **Broadband and Business**

In today's world, broadband is the economic engine of any locality. For example, Strategic Networks Group (SNG) surveyed 10,400 US businesses and found that broadband is more critical than ever in driving economic development.<sup>6</sup>

**Broadband enabled 39.7% of all new jobs from 2013-15, up from 25.5% from 2010-12**



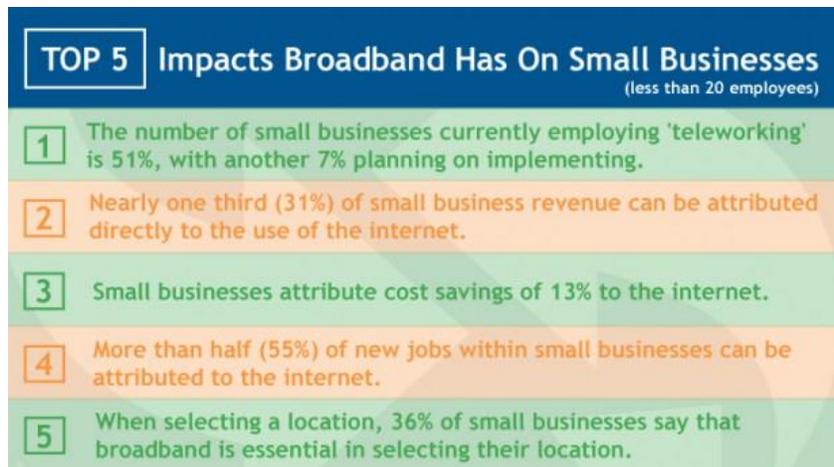
SNG's research also shows that if communities dedicate themselves to driving broadband utilization and achieve a meager 10% success rate, business revenues will increase 24% while costs will decrease by 7%. Broadband is critical for job creation, keeping jobs in a community and revenue generation. In addition, SNG found that broadband directly impacts small businesses in the following ways.<sup>7</sup>

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<sup>6</sup> <http://sngroup.com/information-resources/research-library>. SNG is the world leader of broadband econometrics and they work to help countries, states, counties, and municipalities maximize the impacts of broadband investments. <http://sngroup.com/about-sng/about-sng/>

<sup>7</sup> <http://sngroup.com/information-resources/research-library>





## Older Adults

The final area we want to discuss is the older adult population. The older adult population faces challenges that are unique when it comes to broadband access and usage. For example, according to a 2014 PEW Internet study, the older-adult community<sup>8</sup>:

- Experiences physical challenges to using technology;
- Possesses skeptical attitudes about the benefits of technology;
- Has difficulties in learning to use new technologies.<sup>9</sup>

Moreover, “only one in three U.S. senior citizens have a broadband connection at home, part of a wider problem of isolation and marginalization.”<sup>10</sup> Yet, older adults need broadband as much as everyone else in order to stay connected to family, access health care and government services and even to generate revenue through e-commerce opportunities.

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<sup>8</sup> Aaron Smith, *Older Adults and Technology Use*; April 3, 2014. <http://www.pewinternet.org/2014/04/03/older-adults-and-technology-use/>

<sup>9</sup> For these reasons, there are now programs that specifically assist adults over the age of 55 with digital literacy. For example, OATS is a New York City based non-profit dedicated to providing technology training, education and support to older adults.

<sup>10</sup> See OATS Press Release published on Business Wire. <http://www.businesswire.com/news/home/20150715005199/en/OATS-Launches-Program-Increase-Broadband-Technology-Adoption>.



In 2014, 14.5% of the population was over the age of 65.<sup>11</sup> The National Aging in Place Council (NAIPC) says that “more than 90 percent of older adults would prefer to age in place rather than move to senior housing. But the group acknowledges that a gap exists between their desire and the reality of the modifications their home may require.”<sup>12</sup> Broadband is a big part of what can help the older population age in place and improve their quality of life.

In 2012, the Foundation for Rural Service (FRS) issued a white paper entitled, “*Aging in Place and the Role of Broadband.*” FRS found that “broadband access provided by small, rural telephone companies, coupled with recent health care reforms and cutting-edge technology, is making it possible for more rural seniors to comfortably and safely spend their final years in their own homes.”<sup>13</sup>

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<sup>11</sup> U.S. Department of Health and Human Services, Administration on Aging Statistics;  
[http://www.aoa.acl.gov/Aging\\_Statistics/index.aspx](http://www.aoa.acl.gov/Aging_Statistics/index.aspx).

<sup>12</sup> Michele Lerner, *New online Service Targets Aging-in-place residents*; Washington Post, January 19, 2016;  
<https://www.washingtonpost.com/news/where-we-live/wp/2016/01/19/new-online-services-targets-aging-in-place-residents/>

<sup>13</sup> National Telecommunications Cooperative Association Press Release; “*Broadband Makes Aging Place Possible for Seniors Living in Rural America.*” <https://www.ntca.org/2012-press-releases/broadband-makes-aging-in-place-possible-for-seniors-living-in-rural-america.html>.



# SURVEY ANALYSIS

## Background

To obtain key information from customers regarding the impact of broadband on the daily lives of individuals and families, VPS - with input from CTC, designed a customer survey consisting of 35 questions. Questions ranged from topics covering basic demographic information to customer satisfaction and personal usage.

On May 25, 2016, VPS launched the online survey utilizing Survey Monkey. The potential sample for the survey effort consisted of 468 households located in Fairview Township (Gull Lake area) and in South Brainerd/Fort Ripley. An incentive of winning an iPad was presented to participants.

Notifications regarding the survey were marketed via the following:

1. CTC sent email notifications to the approximately 150 customers for which emails existed;
2. On behalf of CTC, VPS sent postcards to customers who did not receive an email notification;
3. The survey link was presented to customers on the CTC website; and
4. On behalf of CTC, VPS made live calls to the entire universe of customers to inform them of the survey and assist them in conducting the survey over the phone if desired. Callers also obtained email addresses from a number of customers who preferred to receive a link via email. CTC subsequently sent email notifications to those customers.

After nearly two month's effort, the survey closed on July 20, 2016. The net result of efforts yielded 131 completed responses, representing 28% of CTC's customer base in the surveyed area. Typically an outstanding completion rate for this kind of survey is 20%.

## Demographics

Survey respondents represented the following basic demographics:

- 54% completing the survey were female;
- 56% were 55 or older;
- 80% have at least a 2-year associate or tech degree;
- Approximately half have annual household income levels above and below \$75,000;
- 72% of households do not have children residing under the age of 18;
- 97% own their home;
- 65% live in South Brainerd/Fort Ripley with 34% residing in Fairview Township/Gull Lake Area.

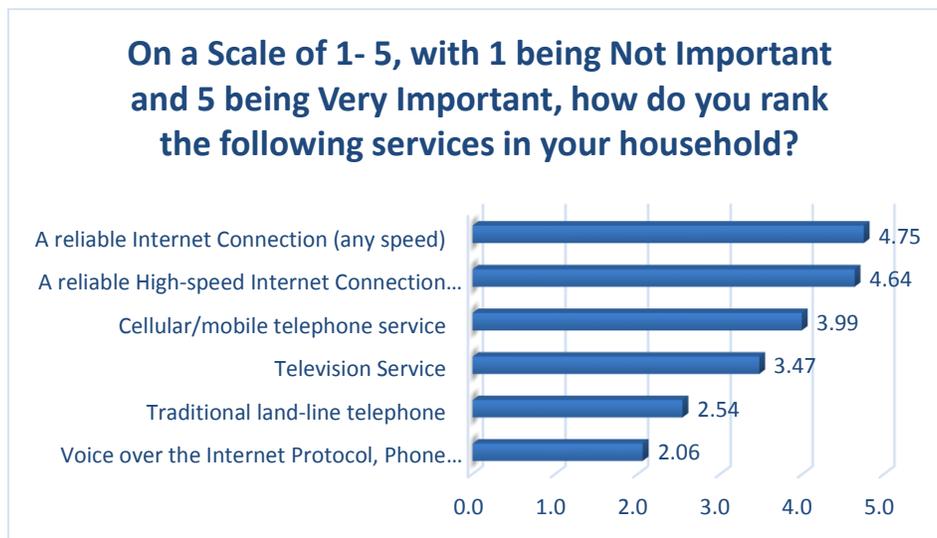


## Survey Verticals

The Survey contains several groupings of questions that delve into various verticals; i.e. customer satisfaction, internet usage, education, work practices, telehealth and quality of life. The following provides an overview of the results from each of these verticals.

### Customer Preferences and Satisfaction

Asked to rank the importance of provider services on a scale of 1-5, “reliable internet connection” is the most important followed by “high speed” and cellular and television services. Traditional landline and VoIP are seen as the least important services, by a significant margin.

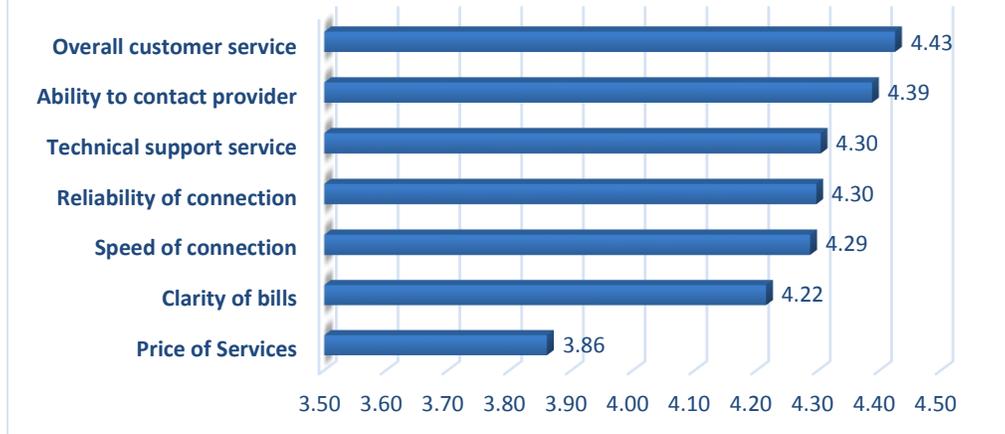


### Customer Satisfaction

This next question was designed to ascertain what customers view as the most-important customer satisfaction attribute. Interestingly, customer satisfaction is influenced more by “overall service” (4.43) and an “ability to contact provider” (4.39) than what may be seen as the most important metrics in some markets – “reliability” (4.30) and “speed” (4.29). However, each attribute clearly weighs heavily with satisfaction as each one ranked higher than a “4” with the exception of “price” (3.86). At first glance, it appears that there is an opportunity to provide faster service for a marginally more expensive rate.



**On a Scale of 1- 5, with 1 being Very Dissatisfied and 5 being Very Satisfied, how do you rank the following aspects of your current home Internet access?**



### **Connected Devices**

Participants were asked to provide the number of personal computing devices and cell phones in each household. This helps us understand the household demand on the home internet connection. Nearly half (49%) reported owning four or more personal computing devices (computers, tablets, game consoles, etc.) not including smartphones. More than 70% of households reported owning at least two smart phones.

### **Internet Usage**

The survey examined how respondents are utilizing their home internet connection. Streaming video obviously requires more bandwidth than the typical application. The survey results showed that nearly two-thirds of households access Netflix (63%) and/or YouTube (64%) from their home connection. Nearly half (49%) access Amazon video.

Beyond “what” they do, respondents were asked how often they go online. Two-thirds 67% reported accessing social media and surfing the web and conducting online shopping on daily basis. A little less than a third (30%) reported streaming video or music and conducting online banking on a daily basis. Skype, telehealth and job seeking activities were conducted less than 4% of the time on a daily basis. The below chart shows the full data for frequency of online activities.



**Q.6 How often does your family use your home Internet connection for the following activities?**

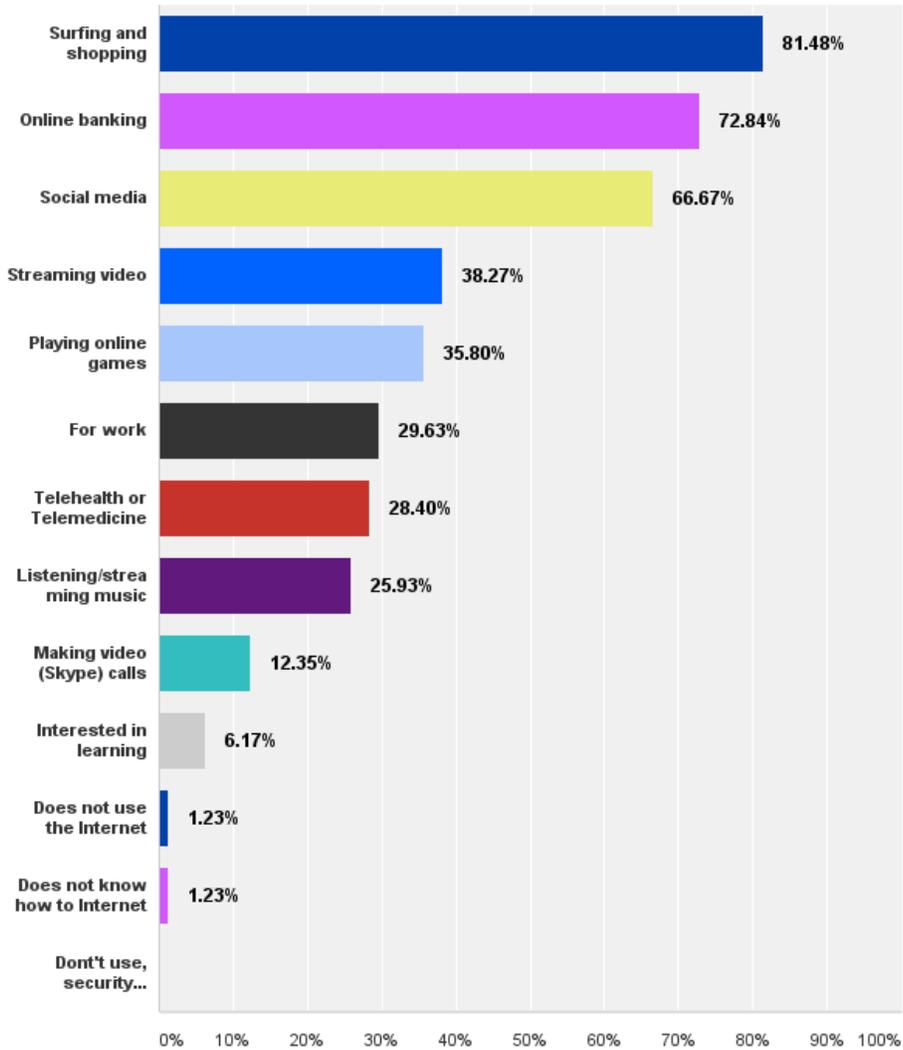
Online Activity	Daily	2-3 times per week	Less than once per week	Never
Listening/streaming Music	29%	17%	26%	28%
Streaming videos or other television programs	30%	22%	23%	24%
Playing online games	22%	19%	11%	48%
Making video (Skype) calls	2%	7%	30%	61%
Surfing the web and online shopping	67%	21%	11%	2%
Online Banking	29%	42%	16%	13%
Social Media	67%	15%	9%	9%
Telehealth or Telemedicine (directly interacting with health care providers)	4%	5%	33%	59%
Job seeking activities (searches, applications)	2%	6%	19%	73%

The survey asked one more question regarding home internet activities but focused specifically on the older adult population. Respondents over the age of 55 revealed that the most common activities conducted online are general web surfing/shopping (81%), online banking (73%), and social media (67%). Only one percent do not use the internet while 6% expressed an interest in learning.



**Q7 If you or someone in your household is over the age of 55, how do you (they) use the home Internet Connection? Please select all that apply:**

Answered: 81 Skipped: 50



## **Education Needs**

Less than one-fourth (23%) of respondents have K-12 school age children in the home who need connection to the internet for homework, school projects or for required classroom assignments. An additional 16% of households reported having a higher education student living at home that needs access to the internet.

## **Working from Home**

More than half (56%) of households surveyed use their home internet connection for work. Of those that do – almost 37% use the internet daily for work while 14% indicated that they only occasionally (few times a month) use the internet for work.

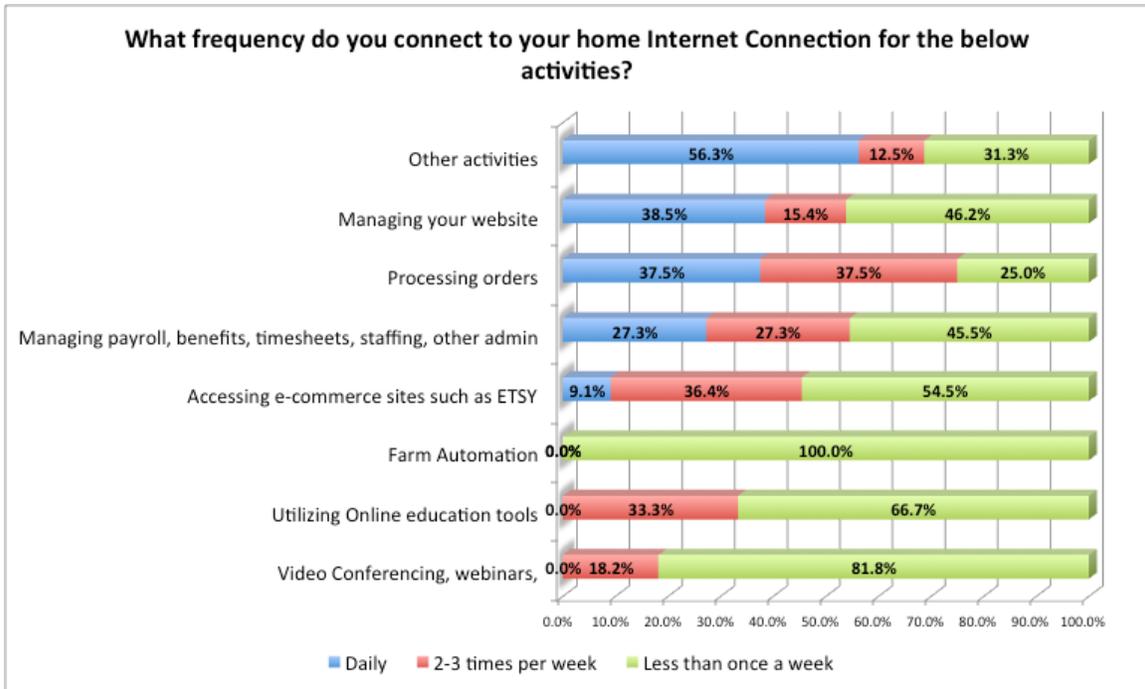
Digging deeper, almost 14% responded that they telework. Telework is defined as “Employer approved work from home 1 or more days of the week”). Almost 11% of teleworkers do so 5 days a week while just less than 10% telework one or two days.

## **Home-based Business**

The survey also asked about home-based businesses. Just over one out of five (20.16%) indicated they indeed have a home-based business with about a quarter of these (5% of all respondents) owning a farm.

With only 26 home-based businesses, these individuals were asked how often they used the internet for their home-based business.





Nearly a third (32%) stated that a reliable, high-speed internet connection is very important to their home-based business or farm. Additionally, 36% reported that having a reliable high-speed internet connection reduced overall operating costs of their home-based business or farm. Respondents offered the following examples as ways broadband access is helping to reduce costs.

- Enables getting work done faster;
- Saves time by placing online supply orders; easier to order parts and products;
- Helps get back to customers quickly; communications are easier;
- Less travel for seminars/conferences – can do this online;
- Can conduct meetings online;
- Able to ship items from home ; less trips for shipping;
- Data plans are too expensive and unreliable;
- Dish plans are too expensive and unreliable;
- Billing times reduced;
- Enables website capabilities;
- Easier to gain information to help run business more efficiently;
- Educational tools are easier to access (research and information).

Finally, almost 9% responded that they have plans to start a home-based business in the next 1-3 years. This is a significant number as this indicates local business growth and jobs staying in the community.

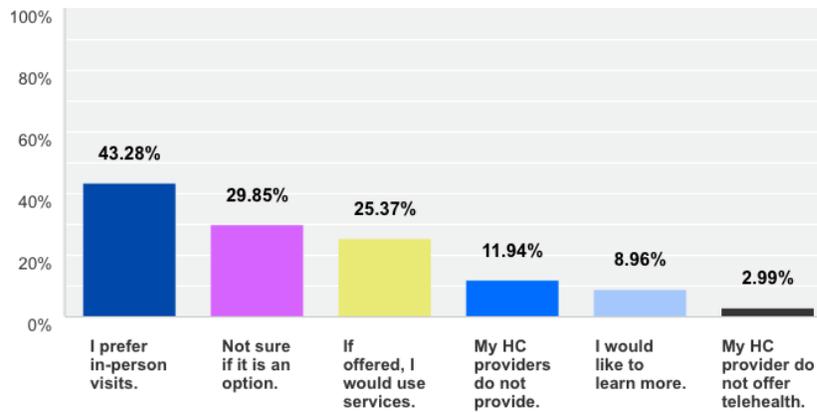


## Telehealth

Nearly a third (30%) stated that they utilized their home internet connection for health care services or to interact with health care providers. As you can see from the below responses, more than 25% responded that if telehealth were an option – they would use those services. On the other hand, more than 43% responded that they prefer to have in-person visits indicating a hesitancy in adopting telehealth or telemedicine services.

### Regarding telehealth or telemedicine, please select all that apply:

Answered: 67 Skipped: 64



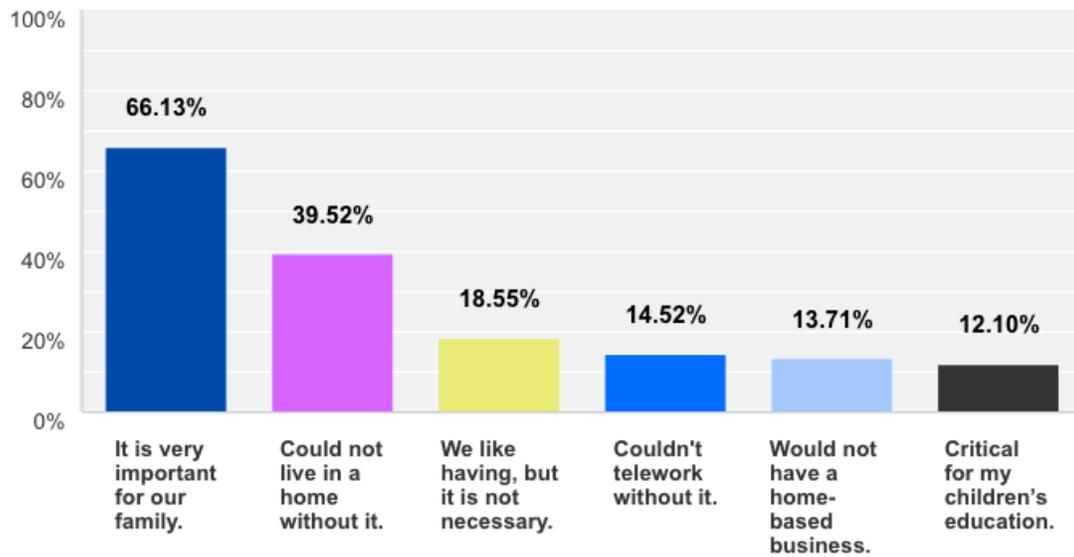
## Quality of Life

While all of these questions relate to the impact of broadband on the quality of life for individuals and families, we asked one question to measure the perceived importance of broadband by the respondents. Results are listed below. Respondents were asked to select all that apply.



## How important is having a reliable home Internet Connection for your quality of life? Please select all that apply:

Answered: 124 Skipped: 7



## FINDINGS

Based on the survey and the data presented in the National Overview section of this Report, we present the following Key Findings (identified by the bolded arrow statements) broken down by survey section.

### Customer Preferences and Satisfaction

From the customer preference and satisfaction questions, we learn several things regarding what is most important to customers. In all, there are three Key Findings from this section of the survey. The first two are related:

- **Non-cellular telephone services are the least important services offered to customers.** Having a reliable high-speed internet connection is the most important service by a significant margin.
- **Customer service and reliability of connection are more important than pricing of services.**

On a national level, cost and pricing of services is the biggest barrier to internet adoption and usage. However, since respondents have already “adopted” the technology – cost is not a barrier to usage.

Additionally - it appears that there may be an opportunity to provide faster service for a marginally more expensive rate providing customer service satisfaction levels remain high. Customers appear to be very satisfied with customer service and that is of critical importance to respondents.

The last Key Finding of this section is regarding devices.

- **Almost half of customers own four or more personal computing devices; and 70% responded that they own two smart phones.**

This indicates that there are a significant number of devices accessing the home internet connection on a daily basis. Most likely, this is one of the factors respondents considered when ranking a reliable internet connection as the most important household service. Customers need increased bandwidth to continue to support such a large number of household devices.

### Internet Usage

The survey gained information to learn more about what respondents are doing when they “go online.” The following two Key Findings:



- **Almost two-thirds of customers are going online daily for social media or other web-surfing activities with 30% of customers reporting that they web stream video and/or music on a daily basis.**

Streaming video requires more bandwidth than other activities. However, more and more – streaming video is found on social media, on news sites and on shopping sites. When you considering the number of devices accessing the internet in each household and take into account what respondents are doing when they “go online,” this indicates that:

- **Customers may need increased bandwidth to support their internet usage.**

### **Older Adults**

Over half of survey respondents are over the age of 55. According to the State of Minnesota Demographic Center<sup>14</sup>:

- The number of Minnesotans turning 65 in this decade (about 285,000) will be greater than the past four decades combined.
- Around 2020, Minnesota's 65+ population is expected to eclipse the 5-17 K-12 population, for the first time in history.
- The total number of older adults (65+) is anticipated to double between 2010 and 2030, according to our projections. By then, more than 1 in 5 Minnesotans will be an older adult, including all the Baby Boomers.

On a national basis, the older adult population is the least-engaged in online activities. As previously discussed – access to and adoption of technology is one of the factors that helps older adults “age in place” by providing them with the ability to stay connected to family, access important information online and to avoid isolation.

From this survey we were able to gain important information regarding internet usage among the older adult population in these communities.

- **Less than 2% of older adults do not use the internet.**
- **More than two-thirds of older adults are surfing and shopping on the web, conducting online banking activities and utilizing social media.**

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<sup>14</sup> <https://mn.gov/admin/demography/data-by-topic/aging/>



This indicates that:

- **The older adult population is far more connected than the older adult population nationally.**

Considering that 97% of respondents own their own home and are rooted in the community, it appears that respondents are likely to prefer to “age in place” if at all possible. The internet adoption and usage data indicates that the older adult community is actively engaged and embracing of technology in their home.

### **Education**

Less than a quarter of respondents reported having a school-age child living in the household with only 16% reporting having a higher education student living at home. Of those that have school-aged children:

- **Just over one quarter of customers reported that their K-12 student accessed the internet 1-3 times a week for educational needs.**

Access to the internet is very important for students of all ages. However, since less than a quarter of respondents have a child under the age of 18 in the home, we do not have additional Key Findings on education usage.

### **Working from Home and Home-based Businesses**

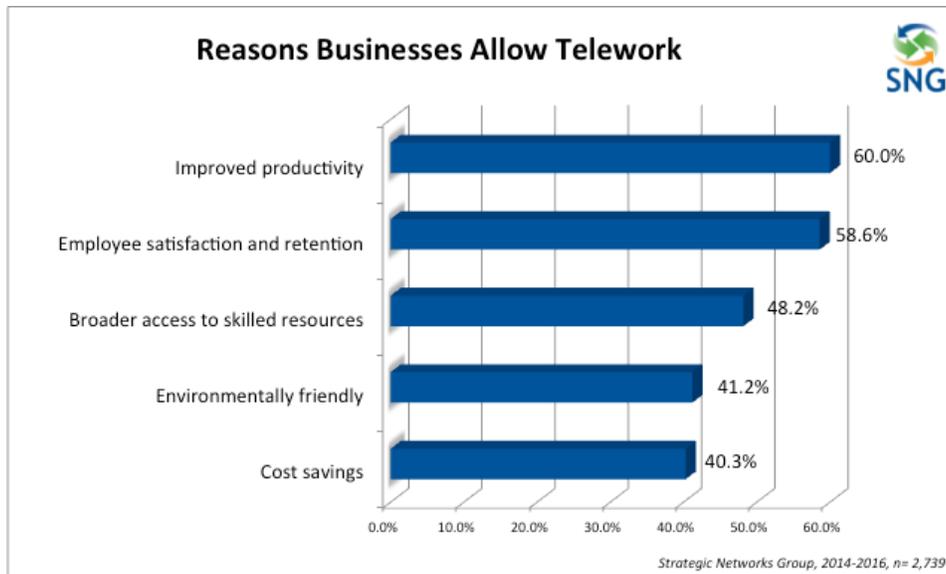
Apart from the data regarding older adults, the information gathered regarding how respondents are utilizing their home internet connection for work provides the most important Key Findings of the survey.

In order to achieve a work/life balance, more and more individuals are working from home. In addition, more employers have telework policies that enable their employees to work from home for one or more days. According to SNG research<sup>15</sup>, the top 2 reasons for allowing teleworking are improved productivity and employee satisfaction.

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<sup>15</sup> <http://sngroup.com/information-resources/research-library>





With respect to our survey, keep in mind that over 80% of respondents have at least a 2-year associate or technical degree and more than half are over the age of 55. From the survey results it is clear that:

- **The internet plays a critical role in enabling customers to work where they live with more than half of households using their home internet for work; and 14% reporting that they “telework.”**

As previously discussed, the internet is the economic engine of a locality driving economic development and job creation. This bears out in our survey showing that:

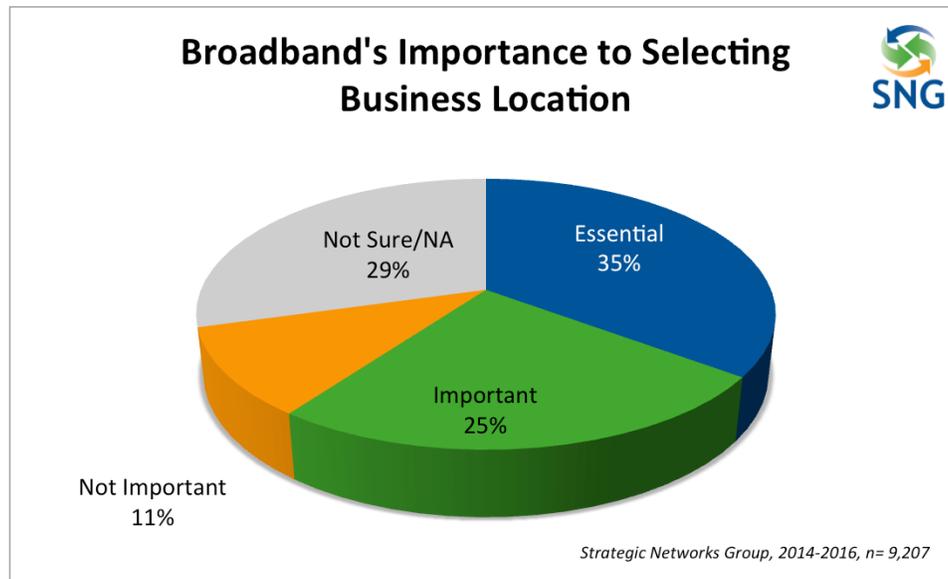
- **Over 20% of customers have a home-based business or farm with 36% reporting that the internet reduced their overall operating costs.**

Not surprisingly, almost a third of respondents stated that a reliable internet connection is very important to their home-based business. Taking that one step further – we asked respondents if they had plans to start a home-based business.

- **Almost 9% of customers have plans to start a home-based business in the next 1-3 years.**

This is significant data showing that the internet is enabling local business growth, job creation and job retention in the community.

To further emphasize that point, SNG data<sup>16</sup> shows how important broadband is to the selecting a business location.



### Telehealth

Telehealth or telemedicine refers to online health care services. A growing trend, telehealth enables doctors and patients to interact, send files, and share information over the internet. Particularly in rural areas, telehealth enables patients to receive critical care at home without having to drive significant distances to see a doctor.

In our survey:

- **Nearly a third (30%) of customers are utilizing their home internet connection for health care services or to interact with health care providers with 25% indicating they would use telehealth services if it were an option.**

One of the main issues with telehealth services is that both the patient and the doctor need to have reliable, high-bandwidth connections. For that reason, we only asked one question to gauge the interest in telehealth services in the community.

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<sup>16</sup> <http://sngroup.com/information-resources/research-library>

## Quality of Life

We asked one question that measured the importance of broadband on the quality of life. As we discussed in our national overview, broadband is no longer a luxury – but is now a necessity for individuals and families. Our one Key Finding regarding the importance of internet is that:

- **Two-thirds of customers stated that the internet is very important for their family with almost 40% saying that they could not live in home without it.**

## Demographic Breakdown

We reviewed the survey results broken down by the two geographic areas (Fairview Township/Gull Lake and South Brainerd/Fort Ripley) and while we do not have any Key Findings generated from this analysis, we wanted to highlight a few interesting points.

- 32% of the Customer households located in South Brainerd/Fort Ripley had school age children living in the home as opposed to only 19% of Customer households in Fairview Township/Gull Lake area;
- Almost 65% of Customers responding were over the age of 55 in Fairview Township/Gull Lake area as opposed to 53% of Customers located in South Brainerd/Fort Ripley.

Overall, survey results from both geographic areas largely mirror the overall results with a few noteworthy exceptions:

- More older adults in Fairview Township/Gull Lake area utilizing their home internet connection for streaming video (48% to 32%) and Skype (20% to 8%) than in South Brainerd/Fort Ripley area.
- Of those customers that telework, more do so in the Fairview Township/Gull Lake area (24% to 9%) than in the South Brainerd/Fort Ripley area.
- Of those customers that have a home-based business, 5% more were located in the Fairview Township/Gull Lake area (24%);
- Of those customers that utilize telehealth services, more are located in the Fairview Township/Gull Lake area (40% to 28%);
- Almost 60% of the Customers responded that they could not live in home without a high-speed broadband connection in Fairview Township/Gull Lake area while only 28% of Customers located in South Brainerd/Fort Ripley responded the same way. However, Customers from both areas equally felt that high-speed broadband was very important for their family.



## **Conclusion**

The purpose of the State of Minnesota Border-to-Border Broadband Development Grant Program is to fund the expansion of broadband service to areas of Minnesota that are unserved or underserved. CTC received a Border-to-Border grant and connected two communities that met the grant criteria.

The Key Findings of the Study show that CTC customers are fully adopting the broadband technology in their home. Customers are utilizing the internet connection for web-streaming video programming, web-surfing, educational purposes, and to stay connected.

Of particular importance to a rural community, a significant number rely on broadband for work. Having a reliable high-speed connection is enabling families to operate businesses out of their home and contribute to the local economy. As noted above, almost 40% of families could not live in a home without it. Reliable high-speed broadband is a requirement for the business community.

Broadband is no longer a luxury service. Almost half of customers own four or more personal computing devices with more than two-thirds owning two smart phones. This is a good indicator of the need for broadband services. Minnesotans in general, will need robust broadband infrastructure to keep up with the demand for devices.

Finally, the older adult population surveyed is far more connected than the older adult population nationally. This is significant here as previously noted by the Minnesota State Demographics Center, “the number of Minnesotans turning 65 in this decade (about 285,000) will be greater than the past four decades combined.” Communities across the State will continue to face challenges associated with residents aging in place. Broadband is a key tool in assisting older adults in Minnesota stay connected to their communities and families.

