



Peterborough Internet Connectivity Study


Executive Summary

Prepared for
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Town of Peterborough, New Hampshire

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Harrisville, New Hampshire

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A large, light blue, stylized letter 'A' is positioned in the lower-left quadrant of the page. It is partially overlaid by a wide, light blue, curved swoosh that extends from the left side towards the right, mirroring the design of the Accelara logo.

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Background & Methodology

In September 2015 the Town of Peterborough, NH Office of Community Development commissioned Accelara Research to conduct research among internet users in Peterborough and 16 neighboring towns in the eastern Monadnock Region to explore satisfaction with current levels of regional internet service and interest in greatly increased internet access speeds. The study was fielded between October 3rd and November 8th.

Sampling & Response

- Total response: 666 respondents, of which 656 arrived by November 8th when data collection closed.
 - Respondents were invited to participate through of publicity efforts including announcements at public events, news releases and articles, mailouts by business organizations and company partners, etc.
 - Response is not projectable to regional population due to self-selection bias – respondents are older (40 to 70), highly educated users interested in residential and business internet connectivity.
- Respondents were invited to participate in an online survey about internet connectivity
 - Incentive: \$100 Visa Gift Card grand prize drawing, contributed by a local benefactor.

Survey Instrument

Respondents participated in a 64 question 10 to 15 minute survey hosted at Accelara's research website. The domain name, <http://InternetConnectivity.org> was registered by Accelara for study use. Respondents were routed through two primary survey tracks:

- Track 1: Business internet connectivity (if work in Peterborough or one of other 16 regional towns)
 - Town work in, Work location (home / not home), employer, work on internet
 - Business profile – own or rent, # employees, headquarters, client location, industry
 - Job responsibilities, internet decision-making
 - Business internet access (asked of managers, IT and access decision-makers) including:
 - Business internet service provider
 - Connectivity satisfaction, reasons for dissatisfaction
 - Business internet uses, change in use with future very high bandwidth service, impact on likely business expansion
 - Cost / month & price sensitivity to likely adoption
 - Internet upload and download speeds
- Track 2: Residential internet connectivity (if live in Peterborough or one of other 16 regional towns)
 - Town live in, household composition, own or rent, number of adults and children, internet service
 - Work details for other HH residents – work status, work at home, work on internet, employer status
 - Residential internet access
 - Residential internet service provider
 - Connectivity satisfaction, reasons for dissatisfaction
 - Residential internet uses, change in use with future high bandwidth service
 - Importance of good internet service to household
 - Devices used to access internet from home
 - Cost / month & price sensitivity to likely adoption
 - Internet upload and download speeds
 - Residential non-internet users were asked why they don't have service in the home
- Residential respondents were also asked about internet use at their public library
 - Likely use of very high bandwidth access at library
 - Likely use of computers and related equipment at library
 - Frequency of likely use
 - Reasons for non-use
- All were asked basic demographics – age & education.

The live survey may be viewed at http://readersurvey.org/internetconnectivity/pbb15_.asp.

Statistical Confidence

- The 95% statistical confidence interval for a total sample of n=656 is +/- 3.7% in the middle of the statistical range (e.g., 40% or 50% response)
 - At a 95% level of confidence, 19 of 20 random samples are likely to show results within this range
- Confidence intervals grow smaller when results are closer to the ends of the range (e.g., 10% or 20%), and when sample sizes are smaller, as is the case in some of the tables that follow.
 - Confidence intervals for samples of n=450 is +/- 4.5%
 - Confidence intervals for samples of n=250 is +/- 6.1%
 - Confidence intervals for samples of n=100 is +/- 9.6%
 - Confidence intervals for samples of n=50 is +/- 13.6%

Reader Notes

Data in this report is extracted from detailed tabulations found in "Accelara - Pboro I-net Connect Detailed Tabulations 11-9-15.xlsx". Findings in this report include Total Sample profiles with comments by town and internet service provider. Verbatim comments are provided in "Accelara - I-net Connectivity Verbatim Comments 11-10-2015.pdf".

For most tables in this report, 95% or more of respondents provided answers and the base of those answering is not shown. Tables where response rates are under 95% indicate both percent response and number of respondents answering.

Detailed Findings

BACKGROUND & WORK QUALIFICATION

TOWN WHERE RESPONDENT RESIDES

1. Which town do you live in? response required to continue

Three in five respondents live in Peterborough, while one in ten live in Greenfield and just over one in twenty live in either Hancock or Dublin. Only residents of Peterborough and the other 16 prelisted towns were asked about residential internet connectivity issues later in the study.

Base: Total sample	N=656
Peterborough	62.3%
Greenfield	9.1%
Hancock	6.3%
Dublin	6.1%
Temple	2.3%
Sharon	2.1%
Francestown	1.7%
Jaffrey	1.5%
Rindge	1.4%
Mason	1.2%
Bennington	1.1%
Antrim	1.1%
New Ipswich	.5%
Harrisville	.5%
Wilton	.3%
Greenville	.2%
Lyndeborough	-
Other (please specify):	2.4%

WORKLIFE

RESPONDENT WORK STATUS

2. How would you describe your work life? (please select one) response required to continue

Two-thirds of Peterborough respondents and three-fourths of those from other prelisted towns are in the workforce. Roughly half work full-time, and another one in eight are self-employed. One in five are retired.

The proportion of retired respondents is higher in Peterborough (one in four) and lower in surrounding prelisted towns (one in ten).

	<u>Residence location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Total sample	N=656	N=409	N=231
In The Workforce (NET)	70.0%	64.8%	77.5%
Work full-time (35+ hours/week)	47.6%	43.0%	54.1%
Self-employed	13.3%	13.0%	13.4%
Work part-time (<35 hours/week)	6.9%	6.1%	8.7%
Seeking employment	2.3%	2.7%	1.3%
Not In The Workforce (NET)	26.8%	32.0%	19.5%
Retired/unemployed by choice	19.2%	24.4%	11.3%
Volunteering extensively	4.0%	4.2%	3.9%
Homemaker / parent at home	2.6%	2.0%	3.9%
Student	1.1%	1.5%	.4%
All other (please specify):	3.2%	3.2%	3.0%

TOWN WHERE RESPONDENT WORKS

3. Which town do you work in? response required to continue

Respondents in the workforce were asked about the location of their work. Half work in Peterborough, including two-thirds of those who reside in Peterborough and one-fourth of working residents of surrounding prelisted towns.

	<u>Residence location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Working respondents	N=444	N=254	N=176
Peterborough	50.2%	66.1%	25.0%
Greenfield	4.7%	.8%	10.8%
Hancock	3.4%		8.5%
Dublin	2.9%	1.2%	5.7%
Jaffrey	1.8%	1.2%	2.8%
Rindge	1.4%	1.2%	1.7%
Temple	1.1%		2.8%
Bennington	1.1%	.4%	2.3%
Antrim	1.1%	.8%	1.7%
Sharon	.9%		2.3%
Mason	.9%		2.3%
Wilton	.7%	.8%	.6%
Francestown	.7%	.4%	1.1%
New Ipswich	.5%	.4%	.6%
Harrisville	.5%		1.1%
Lyndeborough	.2%	.4%	
Greenville	.2%	.4%	
Other (please specify):	27.7%	26.0%	30.7%

WHETHER WORK IS LOCATED AT HOME

4. Where do you work? response required to continue

The large majority of respondents work from home at least some of the time. Three in ten work at home all of the time and nearly half work from home at least some of the time

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Work in a prelisted town	N=322	N=223	N=98
ALWAYS / SOMETIMES WORK AT HOME (NET)	76.7%	75.8%	78.6%
I always work at home	29.8%	29.1%	31.6%
When I'm working, I sometimes work at home	46.9%	46.6%	46.9%
When I'm working, I never work at home	18.0%	18.8%	16.3%
Other (please specify):	5.3%	5.4%	5.1%

WHETHER SELF-EMPLOYED OR WORKS FOR OTHERS

5. Which of these best describes your worksituation?

One-third of employed respondents are self-employed, while three in five work for firms or organizations that are not their own.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Work in a prelisted town	N=322	N=223	N=98
I'm employed by a firm or organization, not my own	58.4%	56.8%	61.9%
I'm self-employed	33.1%	35.6%	27.8%
Some of each	8.4%	7.7%	10.3%

WHETHER JOB INVOLVES WORKING ON THE INTERNET

6. Does your job involve working on the Internet? response required to continue

Virtually all employed respondents' jobs involve working on the internet, and two-thirds work on the internet almost all the time.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Work in a prelisted town	N=322	N=223	N=98
Almost all the time	67.4%	69.1%	63.3%
Some of the time	29.2%	27.8%	32.7%
Infrequently	3.4%	3.1%	4.1%

RESPONDENTS' EMPLOYERS

WHETHER BUSINESS OWNS OR RENTS THEIR PROPERTY

7. Does your business own or rent their business property in [TOWN WORK IN]? (please select all that apply)

Slightly under half of respondent's employers own their business properties (two in five Peterborough business respondents, just over half in other towns). One in five Peterborough respondent companies rent their business property. Slightly over a third neither rent nor own business properties, presumably because they work at home.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Works in any prelisted town	N=322	N=223	N=98
Own a business property	45.4%	41.8%	54.2%
Rent a business property	16.1%	20.0%	7.3%
Own undeveloped land for future business	.3%	.5%	-
Don't own or rent a business property	36.0%	36.8%	34.4%
Don't know	3.2%	2.3%	4.2%

NUMBER OF EMPLOYEES EMPLOYED LOCALLY / TOTAL IN COMPANY

8. How many employees work in your business locally? How many in total? (please use whole numbers and decimals, not fractions or ranges)

On average, respondents' local companies employ about 40 employees at their local location, although average total company size across all company locations is much larger. Two in five respondents are the sole employee at their local work location, while another three in ten work in very small local offices with just two to ten local employees. The remaining three in ten work at companies with over 10 local employees.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Works in any prelisted town	N=322	N=223	N=98
# Employees At Your Location In [Town Work In]			
Base: Answering	N=288	N=201	N=86
One	38.9%	40.3%	36.0%
Two To Ten (Net)	30.9%	31.3%	30.2%
2 to 5	17.4%	16.9%	18.6%
6 to 10	13.5%	14.4%	11.6%
11 Or More (NET)	30.2%	28.4%	33.7%
11 to 50	16.0%	15.9%	16.3%
Over 50	14.2%	12.4%	17.4%
Mean:	38.9	37.7	40.9
# Total Employees Throughout Company			
Base: Answering	N=250	N=173	N=76
ONE TO 10 (NET)	48.0%	51.4%	40.8%
One	21.2%	22.5%	18.4%
2 to 5	15.2%	15.0%	15.8%
6 to 10	11.6%	13.9%	6.6%
11 to 100 (NET)	22.0%	21.4%	22.4%
11 to 50	14.4%	13.9%	15.8%
51 to 100	7.6%	7.5%	6.6%
OVER 100 (NET)	30.0%	27.2%	36.8%
101 to 1,000	19.6%	16.8%	26.3%
Over 1,000	10.4%	10.4%	10.5%
Mean:	5,729	2,946	12,137

COMPANY HEADQUARTERS & BRANCHES – LOCAL / ELSEWHERE

9. Is your company headquartered in [TOWN WORK IN]? Does it have offices elsewhere?

Seven in ten work in companies headquartered locally. Half work at companies where their local office is the only office for the company, while one in six work at the Peterborough headquarters for companies with other outside offices and three in ten work in branch offices of companies headquartered elsewhere.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Works in any prelisted town	N=322	N=223	N=98
% not Answering	4.0%	2.2%	7.1%
% Answering	96.0%	97.8%	92.9%
Table base: Answering	N=309	N=218	N=91
My worksite here is our only location	53.4%	54.6%	50.5%
Our head office is here with other offices elsewhere	15.9%	16.1%	15.4%
My worksite is a branch office – headquarters are elsewhere	30.7%	29.4%	34.1%

WHERE COMPANY CUSTOMERS / CLIENTS ARE LOCATED

10. Where are your or your company's customers and clients located? (please select all that apply)

Just under half of respondents' companies serve customers and clients in the local Monadnock region, while just over one in four serve customers and clients regionally throughout New England. One in three serve customers throughout the U.S., and three in ten serve international customers.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Works in any prelisted town	N=322	N=223	N=98
Locally in the Monadnock region	44.9%	43.4%	48.4%
Regionally in New England	28.7%	28.3%	29.5%
Nationally	32.2%	31.1%	34.7%
Internationally	29.0%	30.1%	26.3%

INDUSTRY EMPLOYED IN

11. In which of the following industries do you work? (please select all that apply)

One in five respondents work in the Financial / computer / software / accounting / legal / information services and one in six work in Educational or training services, One in ten work in either Medical or hospital services, Writing / editing / graphics / creative services, or B2b product or service providers.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Works in any prelisted town	N=322	N=223	N=98
Financial, computer, software, accounting, legal or information services	21.6%	22.4%	19.8%
Educational or training services	16.3%	13.9%	21.9%
Medical or hospital services	10.3%	9.4%	12.5%
Writing/editing/graphics/creative	10.0%	13.0%	3.1%
Business to business product or service provider	10.0%	11.2%	7.3%
Manufacturing	6.9%	6.7%	7.3%
Retail	6.3%	6.3%	6.3%
Other business-to-business services (please specify)	5.3%	5.8%	4.2%
Residential personal care services (e.g., childcare, senior care, people with disabilities, etc.)	4.1%	3.6%	5.2%
Social Services provider	4.1%	4.0%	4.2%
Artist, crafts person	3.1%	3.6%	2.1%
Construction	3.1%	1.8%	6.3%
Video or audio production	3.1%	3.6%	2.1%
Other personal services (please specify)	2.8%	3.1%	2.1%
Agriculture/forestry	2.5%	2.2%	3.1%
Restaurant	1.6%	1.8%	1.0%
All Other (please specify)	21.3%	19.7%	25.0%

RESPONDENT JOB RESPONSIBILITIES

12. How would you describe your job responsibilities? response required to continue

The study attracted a high proportion of top management and professional respondents – over one in four (three in ten in Peterborough) have top management responsibilities at work, and a similar proportion are professionals. One in ten are in middle management, and one in twenty are in IT / computer / network management or support jobs.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Works in any prelisted town	N=322	N=223	N=98
Top management	28.3%	31.4%	21.4%
Professional	28.3%	26.5%	31.6%
Middle management	9.3%	8.5%	11.2%
Sales	6.2%	7.2%	4.1%
Administrative support	6.5%	6.7%	6.1%
IT / computer / network management or support	5.9%	5.4%	7.1%
Service	3.7%	4.5%	2.0%
Tradesman	3.4%	2.2%	6.1%
Operative / craftsman	.9%	.4%	2.0%
Other (please specify):	7.5%	7.2%	8.2%

INVOLVED IN INTERNET SERVICE DECISIONS AT WORK

13. Are you involved in decisions about internet service and/or networking at work? response required to continue

The strong majority, three in five, are directly involved in workplace decisions about internet service and networking.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Works in any prelisted town	N=322	N=223	N=98
Yes	59.3%	59.6%	59.2%
No	40.7%	40.4%	40.8%

BUSINESS INTERNET SERVICE

PRIMARY INTERNET SERVICE PROVIDER AT BUSINESS

14. Who is the primary internet service provider at your business in [TOWN WORK IN]?

Respondents in top or middle management positions, IT or network/internet management, and all who are involved in internet service decisions at work were asked a series of in-depth questions about work internet connectivity and its impact on their businesses.

Comcast Cable and Fairpoint Communications are the leading ISPs in the region, each serving two in five respondent businesses. Comcast has strong presence in Peterborough where it serves half of respondent businesses while Fairpoint serves only one in three. In surrounding towns the situation is reversed – half of respondent business use Fairpoint while Comcast only serves one in five. Other ISPs divide the remaining 5% of the business.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
Comcast Cable	41.4%	51.2%	19.8%
Fairpoint Communications	38.2%	31.3%	54.2%
WiValley	2.2%	2.3%	2.1%
A satellite service provider:	1.3%	.9%	2.1%
Verizon Wireless	1.3%	1.8%	-
Another cellular provider:	.6%	-	2.1%
BayRing networks	.3%	-	1.0%
All other (please specify):	2.5%	.9%	6.3%
Don't know	12.1%	11.5%	12.5%

SATISFACTION WITH CURRENT BUSINESS INTERNET SERVICE

15. How satisfied are you with your current business Internet service in [TOWN WORK IN]? response required to continue

This internet-oriented set of business respondents is less than very satisfied with current levels of internet service. Only just over a third are satisfied with present service, and most of those wouldn't mind better services. One in four is neither satisfied nor dissatisfied, acknowledging room for improvement. The remaining two in five are dissatisfied with available internet connectivity services and find it insufficient for their needs. One in seven are very dissatisfied and find their service a continuous source of problems.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
Very Satisfied / Satisfied (Net)	36.4%	37.0%	34.4%
Very satisfied – provides everything I might ever want	7.0%	6.9%	6.3%
Satisfied – it's great for now, but I wouldn't mind better service	29.4%	30.1%	28.1%
Neither satisfied nor dissatisfied – it gets me by, but it could be better	25.2%	26.4%	22.9%
Dissatisfied / Very dissatisfied (NET)	38.3%	36.6%	42.7%
Dissatisfied – it's not really enough for my needs	23.6%	23.6%	24.0%
Very dissatisfied – it's a continuous source of problems	14.7%	13.0%	18.8%

REASONS FOR INTERNET SERVICE DISSATISFACTION AT WORK

17. Why do you say you are [DISSATISFIED / VERY DISSATISFIED] with your internet access? (please select all that apply)

The two leading sources of dissatisfaction are slow download speeds and slow response time, followed closely by intermittent service disruptions, service not being fast enough to do what they'd like to use it for, slow upload speeds, and slowdowns at certain times of day. Two in five find the service to be limited, poor quality and unreliable, and find it difficult to make video calls.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Dissatisfied with internet access at work	N=120	N=79	N=41
Slow download speeds	81.7%	78.5%	87.8%
Slow response time	78.3%	77.2%	80.5%
Intermittent service / service dropouts	70.0%	69.6%	70.7%
Service is not fast enough to do things I'd like to use it for	67.5%	60.8%	80.5%
Slow upload speeds	67.5%	64.6%	73.2%
Slows down at certain times of day	60.8%	59.5%	63.4%
Service is limited, poor quality and unreliable	44.2%	43.0%	46.3%
Difficult to make video calls	43.3%	40.5%	48.8%
Better service is available but it's too expensive	6.7%	6.3%	7.3%
All other reasons (please specify)	17.5%	15.2%	22.0%

BUSINESS INTERNET ACCESS COST/MONTH

18. About how much does your business spend per month to get internet access to your business in [TOWN WORK IN]?
(please use whole numbers and decimals, not fractions or ranges) Monthly internet service: \$ _____

Only half the business respondent base were able to report business' monthly internet costs. Among those who knew the costs, one-third paid between \$20 and \$50 per month for service, another third paid between \$51 and \$100, and the remaining third paid over \$100 for service.

On average, businesses in the region pay approximately \$150 per month for their internet service, although that average is skewed higher by a small proportion of businesses that paid as much as \$1000 to \$2000 per month for very high bandwidth service.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
% not Answering	45.9%	46.1%	44.8%
% Answering	54.1%	53.9%	55.2%
Table base: Answering	N=170	N=117	N=53
\$20 - \$50 per month	31.8%	25.6%	45.3%
\$51 to \$75	18.2%	19.7%	15.1%
\$76 to \$100	13.5%	15.4%	9.4%
\$101 to \$150	14.7%	15.4%	13.2%
\$151 to \$200	8.2%	8.5%	7.5%
\$201 to \$500	10.0%	12.8%	3.8%
Over \$500	3.5%	2.6%	5.7%
Mean:	\$147.67	\$140.66	\$163.12

In Peterborough, Fairpoint business customers pay far less for business service than Comcast customers – half pay less than \$50 per month.

	Total Sample	<u>Comcast</u>		<u>Fairpoint</u>	
		All bus. Home-based	All bus. Home-based	All bus. Home-based	All bus. Home-based
Base: Peterborough businesses only – Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=111	N=31	N=68	N=29
% not Answering	45.9%	47.7%	48.4%	30.9%	17.2%
% Answering	54.1%	52.3%	51.6%	69.1%	82.8%
Table base: Answering	N=170	N=58	N=16	N=47	N=24
\$20 - \$50 per month	31.8%	10.3%	18.8%	46.8%	37.5%
\$51 to \$75	18.2%	17.2%	31.3%	19.1%	25.0%
\$76 to \$100	13.5%	13.8%	25.0%	14.9%	20.8%
\$101 to \$150	14.7%	24.1%	6.3%	6.4%	4.2%
\$151 to \$200	8.2%	13.8%	12.5%	4.3%	4.2%
\$201 to \$500	10.0%	20.7%	6.3%	4.3%	4.2%
Over \$500	3.5%			4.3%	4.2%
Mean:	\$147.67	\$143.68	\$105.68	\$108.81	\$104.22

CURRENT BUSINESS INTERNET USES

19. How does your business use the internet currently? (Please only indicate activities that use the internet, not local or on-site activities hosted on your own network) (please select all that apply)

All business respondents involved in management and IT report their businesses use the internet for email and related communications. Five in six use it for searching, and three-fourths for uploading and downloading very large files.

Half use the 'net for video teleconferencing and streaming, and a substantial two in five minority operate their businesses from the cloud, link into company networks via VPN, host websites, or are involved in real-time collaboration. Nearly one in three use it for remote real-time operations like remote-controlled equipment or remote network management.

	Workplace location		
	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
% not Answering	28.3%	27.6%	29.2%
% Answering	71.7%	72.4%	70.8%
Table base: Answering	N=225	N=157	N=68
Email and other communications	96.9%	98.1%	94.1%
Searching	82.7%	81.5%	85.3%
Uploading/downloading very large files	74.7%	75.2%	73.5%
Video teleconferencing/streaming	51.1%	50.3%	52.9%
Operating business from the cloud	40.0%	39.5%	41.2%
Link into company network (VPN)	40.0%	38.2%	44.1%
Hosting a website	39.1%	38.9%	39.7%
Real-time online collaboration	37.8%	37.6%	38.2%
Remote real-time operations (e.g., remote- controlled equipment, remote network mgt.)	30.7%	31.8%	27.9%
Other (please specify)	7.1%	6.4%	8.8%
Virtual reality	3.6%	3.8%	2.9%
Don't use the internet in any way			

WHETHER COMPANY IS LIKELY TO EXPAND IN CURRENT WORKLOCATION

20. How likely is your company to expand in [TOWN WORKIN]?

One in six Peterborough business respondents report that their companies are very likely to expand in the same town, compared with nearly none in other towns, and just under half (45%) are likely to expand in Peterborough, compared with just over a third (37%) in other prelisted towns.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
% not Answering	29.6%	29.0%	30.2%
% Answering	70.4%	71.0%	69.8%
Table base: Answering	N=221	N=154	N=67
Very likely	12.2%	16.2%	3.0%
Likely	30.3%	28.6%	34.3%
Unlikely	57.5%	55.2%	62.7%

HOW IMPROVED CONNECTIVITY WOULD INFLUENCE COMPANY EXPANSION

21. If your business internet access were greatly improved to reach the new broadband standards or higher, how would that influence your company's plans for the following activities? Would it:...

Four in five business management / IT respondents report that having access to higher-speed internet service would enable their businesses to operate more profitably or efficiently, both desirable outcomes. One in four feel that it would enable business expansion in their current community (one in three in towns other than Peterborough).

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
% not Answering	37.6%	36.9%	38.5%
% Answering	62.4%	63.1%	61.5%
Table base: Answering	N=196	N=137	N=59
Enable your business to operate more profitably or efficiently	79.1%	82.5%	71.2%
Enable your business to expand in [TOWN WORK IN]	28.6%	25.5%	35.6%
Expand your business nationally	14.3%	11.7%	20.3%
Expand your business globally	13.3%	13.9%	11.9%
Other (please specify)	8.2%	5.1%	15.3%

HOW BUSINESS WOULD USE GREATLY IMPROVED INTERNET ACCESS SPEEDS

22. How would your business use greatly improved internet access speeds? (Please only indicate activities that use the internet, not local or on-site activities hosted on your own network) (please select all that apply)

Only two-thirds commented on how improved internet access might be deployed in their companies. Among these, most agree that it would improve email and other communications and increase large file uploading/downloading speeds. Three in five indicate it would increase their video teleconferencing & streaming, and over half say it would increase real-time online collaboration.

Looking more closely at home-based businesses in Peterborough, seven in eight would use improved access to increase uploading and downloading of very large files, and among home-based Comcast customers, two-thirds would increase real-time online collaboration. Among Fairpoint business customers in Peterborough, one-third of all businesses including home-based businesses say greatly improved internet access speeds would make it more likely for them to host a website in-house.

	<u>Workplace location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
% not Answering	30.3%	29.5%	31.3%
% Answering	69.7%	70.5%	68.8%
Table base: Answering	N=219	N=153	N=66
Improve email and other communications	80.4%	82.4%	75.8%
Increase uploading/downloading very large files	71.7%	70.6%	74.2%
Increase video teleconferencing/streaming	59.4%	61.4%	54.5%
Increase real-time online collaboration	53.4%	49.7%	62.1%
Improve links into company network (VPN)	43.8%	42.5%	47.0%
More likely to operate business from the cloud	38.8%	36.6%	43.9%
Increase use of remote real-time operations (e.g., remote-controlled equipment / network mgt.)	34.2%	35.3%	31.8%
Make it more likely to host a website in-house	20.1%	22.9%	13.6%
Increase use of virtual reality	13.2%	13.1%	13.6%
Other (please specify)	5.0%	3.9%	7.6%
None of these – it wouldn't make any difference	5.5%	5.9%	4.5%

PRICE SENSITIVITY TO ADOPTION OF BUSINESS CONNECTIVITY UPGRADE

23. Often upgrades in service are accompanied by slightly higher prices. How likely do you think you would be to upgrade to the new broadband standards if the cost were [30% higher / 20% higher / 10% higher / same] than you pay now?

Regardless of location, most businesses are likely to shift to higher bandwidth services. Two-thirds are likely to shift if the price were 30% higher, although only three in ten are 'Very likely'.

Applying a simple rule of thumb for projections, it can be hypothesized that all 'Very likely' respondents will upgrade in the first year, and another half of 'Likely' respondents will upgrade in year 2. Thus, a 30% increase in current access costs are likely to result in 30% conversion in the first year, and 49% conversion by the end of the second year. Using this formula, the general price-volume curve would be:

Likely business adoption

Increase in Cost of service	End of Year 1	End of Year 2
30% higher	30.2%	49.3%
20% higher	35.5%	54.7%
10% higher	50.0%	67.7%
same as pay now	75.2%	83.8%

Workplace location

	Total Sample	Peterborough	Other prelisted towns
Base: Top mgt, Middle mgt, IT or involved in internet decisions	N=314	N=217	N=96
% not Answering	29.3%	28.6%	30.2%
% Answering	70.7%	71.4%	69.8%
Base: Answering	N=222	N=155	N=67
Very likely / likely @ 30% higher (NET)	68.5%	67.7	70.1%
Very likely to upgrade	30.2%	29.0%	32.8%
Likely to upgrade	38.3%	38.7%	37.3%
Very likely / likely @ 20% higher (NET)	73.8%	74.3%	72.7%
Very likely to upgrade	35.5%	35.8%	34.8%
Likely to upgrade	38.3%	38.5%	37.9%
Very likely / likely @ 10% higher (NET)	85.4%	85.6%	84.8%
Very likely to upgrade	50.0%	47.9%	54.5%
Likely to upgrade	35.4%	37.7%	30.3%
Very likely / likely @ current cost (NET)	92.4%	91.7%	93.8%
Very likely to upgrade	75.2%	71.7%	83.1%
Likely to upgrade	17.1%	20.0%	10.8%

RESIDENTIAL INTERNET SERVICE

FULL-TIME / PART-TIME LOCAL RESIDENT OR TRANSIENT

27. Which of these best describes your living situation in [TOWN LIVE IN]?

Virtually all residential respondents live in the region full-time.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=656	N=409	N=231
Full-time resident	97.2%	97.1%	97.4%
Part-time or summer resident	2.0%	2.2%	1.8%
Visitor or temporary resident – just passing through	.2%	.2%	
Other (please specify):	.6%	.5%	.9%

OWN OR RENT PROPERTY IN RESIDENTIAL TOWN

28. Do you own or rent a home or property in [TOWN LIVE IN]?

Roughly seven in eight own their homes (five in six in Peterborough), while one in ten rent.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=656	N=409	N=231
Own a residential property	86.1%	83.3%	91.2%
Rent a residential property	9.0%	10.6%	6.1%
Other (please specify):	4.9%	6.1%	2.6%

NUMBER OF ADULTS & CHILDREN RESIDING IN HOME

29. How many people live in your [TOWN LIVE IN] residence (including yourself)?
response required to continue. (please enter whole numbers, not ranges)

Two-thirds of respondent households have two adults and another one in six have just one (one in five in Peterborough, one in ten in the towns). One in six respondent households have 3 or 4 adults and a few have more than 4.

One in four households have children. One in ten have just one child, another one in ten have 2 children, and one in twenty have 3 or more children.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=656	N=409	N=231
Number Of Adults 18 Or Older			
Just 1 adult	17.0%	20.4%	10.9%
2 adults	64.9%	63.3%	67.7%
3 or 4 adults	15.6%	13.5%	19.2%
5 or 6 adults	1.4%	1.2%	1.7%
More than 6 (includes group homes with 22, 35, 60, 200, 286 & 300)	1.1%	1.5%	.4%
Mean # adults:	3.94	4.88	2.26
Number Of Children Under 18			
Zero - no children (no answer = zero)	72.7%	74.3%	68.0%
Just 1 child	11.9%	11.2%	13.9%
2 children	10.7%	10.3%	12.1%
3 or 4 children	3.8%	3.4%	4.8%
5 or more (includes group homes with 13 and 150)	.9%	.7%	1.3%
Mean # children (including HH with none):	.76	.85	.61
Mean # children (HH with children):	2.71	3.29	1.89

HAVE INTERNET SERVICE AT RESIDENCE

30. Do you have internet service at your residence in [TOWN LIVE IN]? (please select all that apply) response required to continue

Perhaps because this study was conducted online and promoted as important research on internet connectivity in the area, virtually all qualified residential respondents have internet access at home.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=656	N=409	N=231
Yes	97.8%	98.3%	97.0%
No	2.2%	1.7%	3.0%

WORK STATUS OF OTHER ADULTS IN HOUSEHOLD

31. How would you describe the work life of other adults in your household? (please select all that apply))

Nearly three-fourths (two-thirds in Peterborough) of respondent households with more than 1 adult have other working adults. Half of the households have other adults that work full-time, and one in seven have other adults that work part time.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Live with 1 or more other adults	N=521	N=322	N=199
Other adults work (NET)	71.5%	69.0%	75.6%
They work full-time (35+ hours/week)	49.8%	46.1%	55.8%
They work part-time (<35 hours/week)	14.9%	15.7%	13.7%
They are self-employed	13.4%	11.9%	15.7%
Seeking employment	3.1%	4.4%	1.0%
Other non-working adults	44.2%	48.6%	37.1%
Homemaker / parent at home	9.7%	10.3%	8.6%
They volunteer extensively	9.7%	9.7%	9.6%
Retired/unemployed by choice	23.1%	26.3%	17.8%
Student	10.9%	11.3%	10.2%
All other (please specify)	1.9%	1.3%	3.0%

WORK STATUS OF ALL ADULTS IN HOUSEHOLD

2. How would you describe your work life? (please select one) response required to continue

31. How would you describe the work life of other adults in your household? (please select all that apply))

Among the total sample, including the respondent, four in five respondent households have working members. Three in five have full-time working members (just over half in Peterborough, three-fourths in other prelisted towns). Half have other non-working adults, and one in four have retired adults (one in three in Peterborough, one in five in other towns). One in ten have a homemaker or parent at home. One in ten have adults that volunteer extensively, and another one in ten have students in the home

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=656	N=409	N=231
HH Adults work (NET)	78.4%	72.4%	87.9%
Work full-time (35+ hours/week)	61.4%	54.8%	72.7%
Self-employed	19.8%	19.1%	21.2%
Work part-time (<35 hours/week)	17.4%	17.4%	18.6%
Seeking employment	4.7%	6.1%	2.2%
Other non-working adults	46.2%	51.6%	39.8%
Retired/unemployed by choice	27.4%	32.3%	20.8%
Homemaker / parent at home	10.1%	9.8%	11.3%
They volunteer extensively	10.2%	10.5%	10.4%
Student	9.3%	9.8%	9.1%
All other (please specify)	4.1%	3.9%	4.3%

OTHER ADULTS IN HH WORK AT HOME (HH HAS OTHER WORKING ADULTS BESIDE RESPONDENT)

32. Where do the other working adults in your household work? (please select all that apply)

Most households in the study have adults (other than the respondent) that work from home at least sometimes, and one in seven have other adults that always work from home.

	Total residents	Residence location	
		Peterborough	Other prelisted towns
Base: 1 or more other working HH adults	N=359	N=212	N=147
Always at home	14.0%	14.7%	13.1%
Sometimes work at home	57.6%	61.1%	52.4%
Never work at home	28.7%	25.6%	33.1%
Other (please specify)	2.2%	1.4%	3.4%

WHETHER ANY ADULTS IN HH WORK AT HOME (ALL HOUSEHOLDS WITH WORKERS)

4. Where do you work? response required to continue

32. Where do the other working adults in your household work? (please select all that apply)

Among the four in five respondent households where any member works, one in four have members that always work at home (nearly one in three in Peterborough), and three in five have members that work at home at least sometimes.

	Total Sample	Residence location	
		Peterborough	Other prelisted towns
Base: Household has any working adults	N=468	N=269	N=188
Always at home	27.8%	31.2%	24.5%
Sometimes work at home	59.8%	62.1%	56.4%
Never work at home	30.3%	28.6%	33.5%
Other (please specify)	5.1%	4.1%	5.9%

WHETHER ANY ADULTS IN HH ARE SELF-EMPLOYED OR WORK FOR OTHERS

5. Which of these best describes your worksituation?

33. Which of these best describes the work situation of the other adults in the household? (please select all that apply)

Among the four in five households where any members work, just over a third have self-employed adults and nearly three-fourths have adults that work for other firms or organizations. One in eight have adults that do some of each..

	<u>Residence location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Household has any working adults	N=468	N=269	N=188
Employed by a firm or organization, not their own	71.6%	71.0%	72.3%
Self-employed	35.9%	39.8%	31.4%
Some of each	13.5%	13.8%	13.3%

JOBS OF ANY ADULTS IN HH INVOLVE WORKING ON INTERNET

6. Does your job involve working on the Internet? response required to continue

34. Do any of their jobs involve working on the Internet?

Underscoring the likelihood that this is not a random population sample, four in five respondents in households with working adults report that at least one adult works on the internet almost all the time. Another one in eight households have adults that work on the internet at least some of the time. Only one in twenty respondent households with working members have no adults that work on the internet at least some of the time.

	<u>Residence location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Household has any working adults	N=463	N=265	N=187
Almost all the time	82.9%	83.4%	81.3%
Some of the time	11.7%	12.8%	10.7%
Infrequently	5.4%	3.8%	8.0%

PRIMARY RESIDENTIAL INTERNET SERVICE PROVIDER AT HOME [INCLUDING HOME-BASED WORKERS]

14. Who is the primary internet service provider at your business in [TOWN WORK IN]?
38. Who is your primary residential internet service provider at home?

Nearly all respondents in the study qualified as residents of either Peterborough or the other prelisted towns.

In general, Fairpoint provides half of the region’s households with internet service while Comcast accounts for two in five regional households. However, in Peterborough, half the residential service is provided by Comcast and only two in five households are served by Fairpoint.

The situation is far different among the towns, where three in five receive service from Fairpoint and only one in six from Comcast. The remaining one in eight regional households receive service from a variety of small vendors (one in ten in Peterborough, one in five in other towns).

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Home or work at home internet service	N=625	N=402	N=223
Fairpoint Communications	47.7%	39.6%	62.3%
Comcast Cable	40.2%	52.2%	18.4%
Verizon Wireless	3.4%	2.5%	4.9%
A satellite service provider	2.7%	1.7%	4.5%
WiValley	2.2%	2.2%	2.2%
Another cellular provider	.8%	.2%	1.8%
AT&T Wireless	.3%	.5%	-
FirstLight Fiber	.2%	.2%	-
All other (please specify):	1.8%		4.9%
Don't know	.8%	.7%	.9%

SATISFACTION WITH CURRENT RESIDENTIAL INTERNET SERVICE

15. How satisfied are you with your current business Internet service in [TOWN WORK IN]? response required to continue [RESIDENCE IS SAME AS WORK-AT-HOME SERVICE]

39. How satisfied are you with your current residential internet service in [TOWN LIVE IN]? response required to continue

One in three residential internet users (including those whose work service is the same as their home service) are satisfied with their internet service, although fewer than one in ten are very satisfied. Two in five, are dissatisfied with their current service, and one in six are very dissatisfied and say that their service is a continuous source of problems.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Home or work at home internet service	N=625	N=402	N=223
VERY SATISFIED / SATISFIED (NET)	35.4%	37.8%	30.9%
Very satisfied – provides everything I might ever want	8.8%	8.5%	9.4%
Satisfied – it's great for now, but I wouldn't mind better	26.6%	29.4%	21.5%
Neither satisfied nor dissatisfied – it gets me by, but it could be better	25.1%	25.6%	24.2%
DISSATISFIED / VERY DISSATISFIED (NET)	39.5%	36.6%	44.8%
Dissatisfied – it's not really enough for my needs	22.9%	21.4%	25.6%
Very dissatisfied – it's a continuous source of problems	16.6%	15.2%	19.3%

REASONS FOR DISSATISFACTION WITH HOME INTERNET ACCESS (EXCLUDING 'WORK AT HOME')

41. Why do you say you are [DISSATISFIED / VERY DISSATISFIED] with your [RESIDENTIAL] internet access?

Slow download speeds, intermittent service disruptions and slow response time are the leading sources of discontent in residential service.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Dissatisfied with residential / work at home I-net service	N=296	N=183	N=113
Slow download speeds	62.5%	63.3%	61.1%
Intermittent service / service dropouts	62.1%	63.9%	59.3%
Slow response time	59.4%	61.1%	56.6%
Slows down at certain times of day	52.2%	50.6%	54.9%
Service is not fast enough to do things I'd like to use it for	49.5%	47.2%	53.1%
Slow upload speeds	47.8%	48.9%	46.0%
Service is limited, poor quality and unreliable	32.4%	32.8%	31.9%
Difficult to make video calls	28.7%	27.8%	30.1%
Better service is available but it's too expensive	13.3%	14.4%	11.5%
All other reasons (please specify)	15.0%	15.6%	14.2%

Secondary causes of dissatisfaction include slowdowns at certain times of day, slow upload speeds, and for Fairpoint customers, lack of bandwidth to do things they want to do online.

REASONS WHY GOOD INTERNET SERVICE IS IMPORTANT TO HH

42. Why is good Internet service important to your household? (please select all that apply)

Good residential internet service is important to the vast majority of respondents to comfortably use online information services, travel booking, shopping and banking, keeping in touch with family and friends, and for general recreation and entertainment, as well as business uses and the ability to work at home, and education. Half consider it valuable for maintaining/enhancing property value for future resale, and one-third like good internet service because it allows relatives and guests to work from their home when visiting.

	Residence location		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
Online information, booking reservations and travel, shopping and banking	88.0%	88.0%	87.9%
Keep in touch with family and friends	79.5%	81.8%	75.3%
Recreation and entertainment	75.0%	74.8%	75.3%
Business uses, ability to work from home	73.7%	70.5%	79.4%
Education	66.5%	65.3%	68.6%
Maintain / enhance value of my property for future resale	54.1%	54.5%	53.4%
Visiting relatives' & guests' ability to work in [HOME TOWN]	31.1%	33.0%	27.8%
Other (please specify)	6.3%	6.8%	5.4%

DEVICES USED TO ACCESS INTERNET FROM HOME

43. Which of these devices are used to access the internet from your home? (please select all that apply)

Respondents access the internet from many platforms. Nearly all have laptops/portable computers, four in five use smartphones, two-thirds own tablets or desktop computers. Chromebooks and other network-based computers have limited market penetration – only one in six households use them.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
Laptop / portable computers	90.2%	89.6%	91.5%
Smartphones	82.2%	80.3%	85.7%
Tablets	69.6%	68.4%	71.7%
Desktop computers	64.6%	63.7%	66.4%
Chromebooks and other network-based computers	15.0%	16.4%	12.6%

HIGH-BANDWIDTH USES FOR INTERNET AT HOME

44. Which of these high-bandwidth uses do you and others in your household do on the Internet? (please select all that apply)

Residential respondents consider most of their online communications and browsing uses to be high bandwidth, even checking weather and sports. Four in five use social media, three in four store photos, videos and files online, and two-thirds stream movies and TV shows.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
E-mail and other communications	99.7%	99.5%	100.0%
Online shopping, banking, or bill paying	96.0%	95.8%	96.4%
Checking news, weather, or sports	95.2%	96.0%	93.7%
Use social media (e.g., Facebook, twitter, etc.)	78.4%	78.6%	77.9%
Store photos, videos and files online	76.8%	74.4%	81.1%
Stream movies & TV shows (e.g., Netflix, Roku, Hulu)	69.9%	70.1%	69.4%
Play to internet music (e.g., Pandora, Apple Music, internet radio, etc.)	60.3%	60.0%	60.8%
Access and store your own online data or your business data	60.1%	61.4%	57.7%
Take online classes, webinars, homework	57.9%	56.2%	60.8%
Videoconference (Skype, FaceTime, etc.)	51.8%	53.5%	48.6%
Play online computer games	33.2%	32.1%	35.1%
Real-time group activities	13.0%	12.9%	13.1%
Remote-controlled toys and machines	4.3%	3.7%	5.4%
Virtual reality	2.7%	3.5%	1.4%
All other high-bandwidth uses (please specify)	7.7%	7.0%	9.0%

MONTHLY COST FOR HOME INTERNET ACCESS

*45. About how much do you spend per month to get internet access to your residence?
(Please use whole numbers and decimals, not fractions or ranges. If your internet service is part of a larger bill like your cable or phone service, please estimate the amount that is specifically for internet service. If you don't know, please ask whoever in your household might know.)*

On average, residential respondents pay roughly \$75 per month for internet access. One in four pay \$40 or less, nearly a third pay between \$41 and \$60, one in five pay between \$61 and \$99, and the remaining one in five pay \$100 or more.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
% not Answering	10.6%	9.8%	12.1%
% Answering	89.4%	90.2%	87.9%
Table base: Answering	N=572	N=369	N=203
\$40 or less	29.4%	24.9%	37.4%
\$41 to \$60	29.2%	30.6%	26.6%
\$61 to \$99	20.6%	22.8%	16.7%
\$100 to \$149	10.1%	10.3%	9.9%
\$150 or higher	10.7%	11.4%	9.4%
Mean:	\$73.11	\$76.42	\$67.08

In Peterborough, residential respondents pay an average of \$80 per month for Comcast service and \$53 per month for Fairpoint service. Note that both companies offer service bundles that may not spell out the specific costs for internet service, so internet service costs for both companies may be slightly overstated.

	<u>Residential ISP (not work)</u>	
	Comcast	Fairpoint
Base: Peterborough residents only	N=163	N=116
% not Answering	8.6%	10.3%
% Answering	91.4%	89.7%
Table base: Answering	N=149	N=104
\$40 or less	15.4%	50.0%
\$41 to \$60	34.9%	28.8%
\$61 to \$99	25.5%	12.5%
\$100 to \$149	11.4%	5.8%
\$150 or higher	12.8%	2.9%
Mean:	\$80.79	\$53.16

HIGH-BANDWIDTH HOME USES WOULD ADD OR CONTINUE WITH IMPROVED ACCESS

46. Which of these online activities would you still do or add if your residential internet service were greatly improved to much higher speed internet access? (please select all that apply)

Respondents generally report that higher bandwidth in their home would lead to increased use of most typical residential internet services including all forms of communication, browsing and streaming. A few additional types of online service would also be appealing to a majority of respondents if higher bandwidth service were available, including storing more data online, taking online classes and videoconferencing.

	Residence location		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
% not Answering	5.6%	5.4%	6.1%
% Answering	94.4%	94.6%	93.9%
Table base: Answering	N=604	N=387	N=217
E-mail and other communications	95.2%	95.9%	94.0%
Checking news, weather, or sports	92.2%	93.0%	90.8%
Online shopping, banking, or bill paying	90.9%	91.2%	90.3%
Stream movies & TV shows (e.g., Netflix, Roku, Hulu)	82.6%	82.9%	82.0%
Store photos, videos and files online	78.8%	76.5%	82.9%
Use social media (e.g., Facebook, twitter, etc.)	75.2%	76.2%	73.3%
Play internet music (e.g., Pandora, Apple Music, internet radio, etc.)	69.0%	66.7%	73.3%
Access and store your own online data or your business data	68.5%	69.0%	67.7%
Take online classes, webinars, homework	67.1%	65.1%	70.5%
Videoconference (Skype, FaceTime, etc.)	64.2%	65.9%	61.3%
Play online computer games	34.9%	32.6%	39.2%
Real-time group activities	24.5%	24.3%	24.9%
Virtual reality	10.1%	10.6%	9.2%
Remote-controlled toys and machines	8.8%	6.5%	12.9%
All other (please specify)	7.6%	7.0%	8.8%

HOW HIGHER SPEED SERVICE WOULD MAKE A DIFFERENCE

47. How would having much higher speed internet service make a difference in your life? (please select all that apply)

As with business uses, residential internet users believe that higher speed access would help them run their lives more efficiently and improve their communication with family and friends. Half say it would improve their recreational experiences and nearly half feel it would make it easier to sell residential property. Two in five say that high bandwidth access would help them run their business from home or telecommute, and nearly a third believe it would allow guests and friends to visit longer since they could work online. One in four believe it would allow them to remotely monitor activities of children and elder parents when they are away from home. Only one in ten believe it would not improve their lives.

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
% not Answering	5.0%	3.7%	7.4%
% Answering	95.0%	96.3%	92.6%
Table base: Answering	N=608	N=394	N=214
I could otherwise run my life more efficiently.	75.8%	76.1%	75.2%
I could better communicate with family & friends.	64.3%	65.2%	62.6%
I could have better recreational experiences	52.1%	53.6%	49.5%
It would be easier to sell my residential property	45.7%	44.4%	48.1%
I could run my business or telecommute from home.	38.2%	35.5%	43.0%
Adult children and other guests could visit longer since they would be able to work here.	30.6%	29.4%	32.7%
I could look in on my children / elder parents while away from home	24.0%	23.1%	25.7%
All other differences due to higher speed internet access (please specify)	15.6%	16.5%	14.0%
None of these - faster Internet would not improve my life	9.4%	7.9%	12.1%

PRICE SENSITIVITY TO ADOPTION OF RESIDENTIAL CONNECTIVITY UPGRADE

48. Often upgrades in service are accompanied by slightly higher prices. How likely do you think you would be to upgrade to much higher speed internet access if the cost were [30% higher / 20% higher / 10% higher / same] higher than you pay now?

Among respondents to the study, residential adoption of higher bandwidth internet service is not quite as high as potential business adoption, but still fairly strong. Three in five are likely to adopt the new service if prices were 30% higher than now.

Using the same rule of thumb for basic projections (all 'Very likely' will adopt in the first year, and another half of the 'Likely' will adopt in the second year), the price volume curve would be:

Likely residential adoption

Increase in Cost of service	Likely residential adoption	
	End of Year 1	End of Year 2
30% higher	27.6%	43.5%
20% higher	33.8%	49.1%
10% higher	42.6%	56.7%
same as pay now	72.9%	81.1%

Residence location

	Residence location		
	Residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
% not Answering	27.0%	26.7%	27.7%
% Answering	73.0%	73.3%	72.3%
Base: Answering	N=467	N=300	N=167
Very likely / likely @ 30% higher (NET)	59.3%	58.0%	61.7%
Very likely to upgrade	27.6%	23.7%	34.7%
Likely to upgrade	31.7%	34.3%	26.9%
Very likely / likely @ 20% higher (NET)	64.4%	62.4%	68.1%
Very likely to upgrade	33.8%	30.3%	40.0%
Likely to upgrade	30.6%	32.1%	28.1%
Very likely / likely @ 10% higher (NET)	70.7%	68.5%	74.8%
Very likely to upgrade	42.6%	40.6%	46.5%
Likely to upgrade	28.1%	28.0%	28.4%
Very likely / likely @ same cost as now (NET)	89.2%	88.3%	90.9%
Very likely to upgrade	72.9%	72.3%	74.0%
Likely to upgrade	16.3%	16.0%	16.9%

REASONS FOR NOT HAVING INTERNET AT HOME

52. Why don't you have Internet access at home? (please select all that apply)

Because so few qualified respondents do not have internet at home, results are from a very small, likely unstable base. The primary reasons stated are the price of service, limited availability, and the ability to use public hotspots.

Base: Live in a pre-listed town / no internet at home	N=16
% not Answering	12.5%
% Answering	87.5%
Table base: Answering	N=14
There is service, but it's too expensive	28.6%
Service is limited, poor quality and unreliable at home	28.6%
Service is not available in my location	21.4%
I use the internet in public spaces like hotspots and libraries	21.4%
Service is not fast enough to do things I'd like to use it for	7.1%
I use the internet at work – don't need it at home	7.1%
Any other reasons? (please specify)	35.7%
I don't use the internet at all	-
I don't care about using the Internet	-
I don't have a computer, smart phone or other Internet device	-
I don't know how to use the internet	-
I might be interested but haven't gotten started yet	-

LIBRARY INTERNET SERVICE

LIKELY USE OF VERY HIGH BANDWIDTH INTERNET AT LOCAL LIBRARY

53. *If the [TOWN LIVE IN] public library had public access to very high bandwidth internet, how likely would you be to use it?*

Only three-fourths of the residential population responded to the question about likely library use of very high bandwidth internet access. Among those that volunteered an opinion, one in four (three in ten in Peterborough) were at least likely to use library access, but only one in fourteen was 'Very likely' (one in ten in Peterborough).

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
% not Answering	27.0%	26.7%	27.7%
% Answering	73.0%	73.3%	72.3%
Base: Answering	N=467	N=300	N=167
Very likely / Likely (NET)	27.0%	29.6%	22.6%
Very likely	7.7%	9.4%	4.8%
Likely	19.3%	20.2%	17.8%
Unlikely	73.0%	70.4%	77.4%

LIKELY USE OF TRAINING AND PUBLIC COMPUTER EQUIPMENT AT LIBRARY

54. *If training and public computer equipment were available at the [TOWN LIVE IN] public library, how likely would you be to use it? response required to continue*

However, nearly all volunteered an opinion regarding whether they would be interested in computer training and equipment at the library. Results are about the same as results for using high bandwidth at the library – one in four are likely or very likely to take advantage of training and public computer equipment offered at a local library.

(Reminder: this is not a population sample – most respondents are savvy computer and internet users responsible for internet service and network service decisions).

	<u>Residence location</u>		
	Total residents	Peterborough	Other prelisted towns
Base: Residents of any prelisted town	N=640	N=409	N=231
Very likely / Likely (NET)	27.2%	29.8%	22.6%
Very likely	6.1%	6.4%	5.7%
Likely	21.1%	23.5%	17.0%
Unlikely	72.8%	70.2%	77.4%

PUBLIC EQUIPMENT WOULD USE AT PUBLIC LIBRARY

55a. What public equipment would you use at your public library? (please select all that apply)

Among likely library equipment users, from three in five to just under half to would use the hotspot, computers or printer equipment. Three in ten would use tablets or iPads and/or meeting spaces with projection equipment. One in five would use Chromebooks.

	Total Sample	Residence location	
		Peterborough	Other prelisted towns
Base: Likely to use town library equipment	N=177	N=124	N=53
Public Wifi hotspot (internet access on your equipment)	62.6%	66.9%	52.8%
Computer	55.2%	51.2%	64.2%
Printer	47.7%	47.9%	47.2%
Tablet or iPad	30.5%	33.1%	24.5%
Meeting space with projection equipment	29.3%	27.3%	34.0%
Chromebook or Laptop	20.1%	20.7%	18.9%
Projection equipment	12.6%	11.6%	15.1%
None these	12.1%	9.9%	17.0%

PUBLIC LIBRARY EQUIPMENT WOULD CHECK OUT FOR USE AT HOME

55b. What equipment would you check out for use at home if it were available to borrow from your library? (please select all that apply)

Two-thirds of likely library equipment users would check out library equipment for use at home. One-third would use a tablet or iPad, and one in four would use Projection equipment or printers.

	Total Sample	Residence location	
		Peterborough	Other prelisted towns
Base: Likely to use town library equipment	N=177	N=124	N=53
% not Answering	8.5%	10.5%	3.8%
% Answering	91.5%	89.5%	96.2%
Table base: Answering	N=162	N=111	N=51
Tablet or iPad	31.5%	35.1%	23.5%
Public Wifi hotspot (internet access on your equipment)	27.2%	27.0%	27.5%
Projection equipment	25.9%	27.0%	23.5%
Printer	21.6%	21.6%	21.6%
Chromebook or Laptop	17.3%	19.8%	11.8%
Computer	13.0%	11.7%	15.7%
Meeting space with projection equipment	7.4%	7.2%	7.8%
None these	35.2%	32.4%	41.2%

FREQUENCY MIGHT USE PUBLIC COMPUTER EQUIPMENT AT THE LIBRARY

56b. How often do you think you would check out public computer equipment for use at home?

On average, likely users in Peterborough would expect to use the library or equipment 38 times a year, while users in other towns would only use them around 16 times a year.

		<u>Residence location</u>		
		Total Sample	Peterborough	Other prelisted towns
Base: Likely to use town library equipment		N=177	N=124	N=53
Daily	(350)	.6%	.8%	
Several times a week	(150)	9.2%	11.5%	3.8%
Once a week	(50)	12.6%	15.6%	5.8%
Several times a month	(36)	17.8%	18.9%	15.4%
Once a month	(12)	20.1%	25.4%	7.7%
Rarely or never	(0)	39.7%	27.9%	67.3%
Mean:		31.4 x/yr	38.0 x/yr	15.8 x/yr

REASONS FOR NOT USING TRAINING OR PUBLIC COMPUTER EQUIPMENT AT LIBRARY

57. Why wouldn't you use training and public computer equipment at the library? (please select all that apply)

When asked why they wouldn't use the training and equipment at the library, respondents confirmed earlier suggestions that they already own the equipment they need, and that they are experienced users that don't need training.

		<u>Residence location</u>		
		Total Sample	Peterborough	Other prelisted towns
Base: Not likely to use town library equipment		N=464	N=287	N=177
I have my own equipment and don't need public equipment		92.8%	94.7%	89.8%
I am an experienced computer and internet user and don't need training at the library		73.1%	73.8%	72.2%
I am too busy		24.7%	23.0%	27.3%
I would need childcare		3.9%	3.5%	4.5%
The library is too far away		4.1%	3.9%	4.5%
I have no transportation to the library		.4%	.4%	.6%
I would be worried about being responsible for using expensive equipment		.7%	.4%	1.1%
I have no interest in using computers or the Internet		-	-	-
All other (please specify)		12.2%	10.6%	14.8%

INTERNET SPEED TESTS

INTERNET SPEED-TEST RESULTS

*58. What download and upload speeds do you get from your internet service right now?
Please take a minute to check your upload and download speeds with this NH state speed test.*

Not all respondents were able to access the speed test, which did not work for dial-up or satellite service connections. Fortunately, most were able to complete the speed test.

Those that did generally report strong internet download speeds, with one in three having service faster than 7 Mbps, and one in seven getting download speeds of 50 Mbps or more. However, one-third had lower download speeds of 4 Mbps or less, while one in seven had speeds between 4 Mbps and 7 Mbps.

Workplace download speeds in Peterborough were slightly higher than residential download speeds (32 Mbps vs. 26 Mbps, on average). Upload speeds, at approximately 6.6 Mbps on average, are only about a fourth the speed of download speeds.

	Total Sample	Residence location		Workplace location	
		Peterborough	Other prelisted towns	Peterborough	Other prelisted towns
Base: Total sample	N=656	N=409	N=231	N=223	N=98
Internet download speed (Mbps)					
Base: Answering	N=494	N=299	N=181	N=157	N=76
Less than 1 Mbps	4.0%	3.7%	5.0%	3.8%	7.9%
1 to 4 Mbps	29.4%	28.4%	32.0%	21.7%	35.5%
Over 4 to 7 Mbps	14.8%	12.0%	19.3%	10.8%	11.8%
Over 7 Mbps to 49 Mbps	36.4%	39.8%	30.9%	41.4%	34.2%
50+ Mbps	15.4%	16.1%	12.7%	22.3%	10.5%
Mean (Mbps):	25.0 Mbps	26.1 Mbps	19.7 Mbps	31.8 Mbps	16.6 Mbps
Internet upload speed (Mbps)					
Base: Answering	N=485	N=297	N=174	N=157	N=74
Less than 1 Mbps	39.6%	34.3%	50.6%	31.2%	54.1%
1 to 4 Mbps	18.1%	16.8%	20.1%	18.5%	14.9%
Over 4 to 7 Mbps	21.2%	30.6%	6.9%	19.7%	8.1%
Over 7Mbps to 49 Mbps	18.1%	15.5%	20.7%	26.8%	23.0%
50+ Mbps	2.9%	2.7%	1.7%	3.8%	
Mean (Mbps):	6.63	6.51	5.27	8.56	4.81

LOCATION OF SPEED TEST

59. Where did you take this test from?

(This information is critical to our being able to improve broadband at this address.) response required to continue

Overall, three-fourths took the speed test from their home location and one in five took it from work. Two in five respondents who work in either Peterborough or other prelisted towns took the speed test from work locations.

	Total Sample	Residence location		Workplace location	
		Peterborough	Other prelisted towns	Peterborough	Other prelisted towns
Base: Total sample	N=656	N=409	N=231	N=223	N=98
% not Answering	6.6%	6.6%	5.6%	5.4%	5.1%
% Answering	93.4%	93.4%	94.4%	94.6%	94.9%
Table base: Answering	N=613	N=382	N=218	N=211	N=93
From my work location in [WORK TOWN]	21.5%	15.7%	28.4%	42.7%	39.8%
From my home location in [TOWN LIVE IN]	72.6%	79.3%	65.1%	53.1%	59.1%
From another location (neither home nor work)	5.9%	5.0%	6.4%	4.3%	1.1%

DEMOGRAPHICS

RESPONDENT AGE

61. How old are you?

Participants in this research skew older than the general population. Only one in ten respondents were younger than 40 years old, one in six were 40 to 49, one in four were 50 to 59, three in ten were 60 to 69, and one in six were 70 or older.

	<u>Residence location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Total sample	N=656	N=409	N=231
Under 18 (16)	.6%	1.0%	
18 to 19 (18.5)	.2%	.2%	
20 to 29 (24.5)	2.8%	2.5%	3.5%
30 to 39 (34.5)	8.0%	6.7%	9.6%
40 to 49 (44.5)	17.1%	15.1%	21.5%
50 to 59 (54.5)	24.2%	22.0%	27.6%
60 to 69 (64.5)	30.4%	32.9%	25.0%
70 to 79 (74.5)	13.7%	14.9%	12.7%
80 and over (84.5)	2.9%	4.7%	
Mean years old:	56.7	58.1	54.4

RESPONDENT EDUCATION

62. What is the highest level of school you have completed or the highest degree you have received?

Respondents are highly educated – seven in ten have at least a 4-year college degree (three-fourths in Peterborough, three in five in other towns). Another one in five have at least some college or a 2-year degree (one in six in Peterborough, one in four in other towns). Fewer than one in ten were only high school graduates and very few have trades education.

	<u>Residence location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Total sample	N=656	N=409	N=231
Did not graduate high school	.6%	1.0%	
High school graduate or equivalent (e.g., GED)	6.2%	4.7%	9.3%
Trade school	1.2%	.5%	2.2%
Some college, but did not graduate	12.1%	10.4%	15.6%
2-year college	8.5%	7.4%	9.8%
4-year college	34.0%	33.7%	33.3%
Master's / Doctoral / Professional / other advanced degree	36.8%	41.7%	29.3%
Other degrees (please specify):	.5%	.5%	.4%

ENTERED DRAWING FOR \$100 VISA GIFT CARD

64. *Thanks for supporting our efforts to explore Internet Connectivity in this area! Enter our drawing for a \$100 VISA gift card you can use to pay your internet bill, go out to dinner or shop anywhere you'd like!*

Where can we reach you if you are one of the lucky winners?

Over two-thirds entered the incentive drawing for a \$100 VISA gift card.

	<u>Residence location</u>		
	Total Sample	Peterborough	Other prelisted towns
Base: Total sample	N=656	N=409	N=231
Entered drawing	69.2%	70.9%	66.2%
Anonymous	30.8%	29.1%	33.8%