

**WORLD INTERNET PROJECT
NEW ZEALAND**

**The Roll-out of Ultra-Fast Broadband
(UFB) in New Zealand, 2015**

A Report to the Ministry of Business,
Innovation and Employment (MBIE)

Charles Crothers
Tasi Urale
Philippa Smith
Allan Bell

Acknowledgements

The data collection and analysis for this report were funded by the New Zealand Government through the Ministry of Business, Innovation and Employment (MBIE). At the Ministry of Business, Innovation and Employment (MBIE), Nadia Jones and Paul Alexander steered their aspects of the project while, at Crown Fibre, Rohan MacMahon and Sam Vernon provided helpful advice, as did Jamie Horrell, NZRS. At Chorus, Liam Gunson and, at Ultrafast Fibre, Peter Glensor were notably helpful. Thanks to the fibre companies for their assistance.

We extend our thanks to Andy Gibson and Melissa Miller for their contribution to the analysis, Susan Shaw for proofreading, to David Fougere and Jeanette McKee at Phoenix Research, and both Vanessa Simpson and Mary Wignall at Infield, and their team, for conducting the telephone and face-to-face surveys, and to Ben Parsons, Grace Meikle and Katrina Van Loon at BuzzChannel for their generosity in supporting and administering the online component of the survey.

Please cite as:

Crothers, C., Urale, P. W. B., Smith, P., & Bell, A. (2016). *The Roll-out of Ultra-Fast Broadband (UFB) in New Zealand, 2015: A Report to the Ministry of Business, Innovation and Employment (MBIE)*. Auckland, New Zealand: Institute of Culture, Discourse & Communication, Auckland University of Technology.

Institute of Culture, Discourse & Communication
Auckland University of Technology
Auckland
New Zealand
wipnz.aut.ac.nz

Executive Summary

The New Zealand Government's Ultra-Fast Broadband (UFB) initiative aims to enable 75 percent of New Zealanders to access the internet using UFB by the end of 2019 and, in its second stage, to enable at least 80 percent of New Zealanders to do so by 2022. The 2015 survey of the World Internet Project New Zealand, with the support of the Ministry of Business, Innovation and Employment, extended its range of questioning to elicit detailed information on UFB in New Zealand.

New questions were developed and added to the survey concerning the UFB situation. This report presents an analysis of the usage, attitudes and demographics of accessing the internet through UFB of the resulting sample of 1377 New Zealanders. It should be read in conjunction with the main 2015 WIPNZ report.¹

Respondents were asked how they found out about UFB, and about their reasons for using it or not, and their degrees of satisfaction (if they are users). The sample has been analysed into six categories: 1 UFB available: Users; 2 UFB available: Non-users; 3 Future UFB: Likely to use; 4 Future UFB: Unlikely to use; and 5, those who believe they will never have UFB available to them because they live in rural or small town areas which will not be serviced. The 6th, residual category is those who answered 'Don't know' to these questions.

Finding out about UFB

A broad range of ways of finding out about UFB was reported – by both those who had taken up UFB and those who had not. The main means for UFB users were direct contact with a retail provider, word of mouth and media news stories.

Reasons for using UFB (or not)

Those who had already acquired UFB, and those intending to do so, had similar reasons for their decisions. They reported that they value speed, reliability, the ability to have multiple devices or users online, similar costs to non-UFB connections, and more content and applications. The UFB non-adopters gave reasons such as too-high costs (for connection and then operation), seeing no increased benefit over existing connections and concerns about disruptions, etc. (i.e. reliability).

Satisfaction with connection

A high proportion of those connected to UFB expressed satisfaction with the process: 39 percent were moderately satisfied and 34 percent were *very* satisfied. Many of the points of dis/satisfaction were common across all levels and included: communication, installation, performance and general service.

The socio-demographics of UFB

The demographic distribution of UFB connection status largely mirrors the social differences that the wider WIPNZ survey finds for the internet in general. Older people are less likely to have UFB. There is marked stratification by income: the proportion of people who have UFB connections rises with household income.

¹ Crothers, C., Smith, P., Urale, P. W. B. & Bell, A. (2016). *The Internet in New Zealand 2015*. Auckland, New Zealand: Institute of Culture, Discourse & Communication, Auckland University of Technology.

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Introduction

The fifth two-yearly WIPNZ survey was conducted between September and November 2015. Both telephone and internet surveys were used, and the final sample numbered 1377 respondents. Besides aiming for adequate representation of the adult New Zealand population, the sample design attempted to best fit the spatial configuration of existing, scheduled and possible UFB roll-out areas and UFB users. The main WIPNZ survey was supported by MBIE, which also commissioned an assessment of the UFB roll-out as part of the survey. This report presents findings from the UFB component of the full 2015 WIPNZ study.²

In order to provide New Zealand internet users with more-advanced capabilities, the New Zealand Government has adopted a nine-year Ultra-fast Broadband (UFB) initiative with \$1.35 billion of Crown investment; the build began in Whangarei in December 2010. Availability of UFB is predicted to deliver \$33 billion in economic benefits and also social benefits. The UFB Initiative is supported by a Rural Broadband Initiative (RBI) with special attention given to serving state and state-integrated schools; this aspect is not covered in this report.

The first stage of the UFB programme aims to enable at least 75 percent of New Zealanders to access UFB fibre from their premises by December 2019 (UFB1). The extension of the programme will take the reach to at least 80 percent of New Zealanders by 2022 (UFB2). Crown Fibre Holdings, the company which manages the Government's investment in UFB, is currently undertaking a commercial tender process which included a long list of potential towns for which commercial bids to extend the UFB network were sought. The inclusion of these further towns will allow an additional five percent of the population to be reached. The UFB1 roll-out is referred to in this report as 'scheduled' while UFB2 is 'possible'.

As at the end of the fieldwork period, November 2015, the UFB build was complete in 11 towns (and, by March 2016, in 15). Annual (including regional breakdowns) and quarterly data on the UFB roll-out are prepared by the New Zealand Government, based on data supplied by the fibre companies. This allows for plotting of the progressive availability of UFB in urban areas and provides information on the extent to which this was taken up at the time of the fieldwork (late 2015). At that point, urban UFB roll-out was complete only in Whangarei but with towns and cities in the Waikato, Bay of Plenty and Taranaki regions close behind, while the roll-out in Auckland, Gisborne/Hawke's Bay and Wellington has taken longer. Uptake by households actually connected to UFB is currently highest in Northland and Bay of Plenty and lowest in West Coast/Tasman. By December 2015, 60 percent of the build in UFB1 areas had been completed with a reported uptake (for households and businesses) of 18.6 percent.

The study aimed to clarify four matters concerning UFB in New Zealand:

- The characteristics of those who are actual or potential UFB users or non-users
- How respondents heard about the availability of UFB in their areas
- The reasons for adoption/non-adoption of UFB access
- The degree of satisfaction with the connection process and information related to it.

² Crothers, C., Smith, P., Urale, P. W. B. & Bell, A. (2016). *The Internet in New Zealand 2015*. Auckland, New Zealand: Institute of Culture, Discourse & Communication, Auckland University of Technology.

Methodology

Questions

The 2013 and 2015 WIPNZ questionnaires already included several questions concerning the types of access that households have to the internet.³ A set of additional questions designed to capture detailed information to meet MBIE's objectives was developed with the Ministry and pilot tested during early interviews of the survey.

The questions were designed to identify the situations of several groups of households in relation to UFB:

- Those in areas where UFB is available who have chosen to connect (UFB available: Users).
- Those in areas where UFB is available who have chosen (so far) not to connect (UFB available: Non-users).
- Those in areas where UFB is likely to be available over the next few years (under current scheduled roll-out programmes)⁴ and who consider themselves as likely or not likely to take up UFB connections (Future UFB: Likely to use, and Future UFB: Unlikely to use).
- Those in areas never likely to obtain UFB service, e.g. rural areas (never UFB).

In addition, there is a large group of 'Don't knows', some of whom had not heard of UFB and so were not asked the UFB-relevant questions. Others had heard of UFB but were unaware of whether their area was wired for it, although some of these did answer the relevant UFB-related questions so their answers are included with that group.

The key survey questions relating to UFB were asked of different UFB status groups (Table 1).

Table 1. Which groups were asked which UFB questions

Group	Situation	How heard?	Why (Why not)?	Satisfaction with connection
UFB available: User	Q5A2	Q5A3	Q5A4	Q5A5
UFB available: Non-user	Q5A6	Q5A7	Q5A8	
Future UFB: Likely to use	Q5A9/10		Q5A11	
Future UFB: Unlikely to use	Q5A9/10		Q5A12	

³ Q5A. What type of internet connection, if any, do you have at home?

Q5A2. Is your household connected to fibre optic broadband, such as Ultra-fast broadband/UFB or do you have an ADSL or VDSL connection?

⁴ 'Under current UFB roll-out programmes' are those areas scheduled to receive UFB under the first phase of the programme roll-out (to 75 percent of the population) together with areas which, as subjectively perceived by respondents, may receive UFB under the second phase of the programme (UBF2). This latter group is amongst a long list of small towns currently being assessed as candidates for UFB roll-out provision.

Sampling

The sample design of the WIPNZ 2015 survey was adjusted to ensure better coverage of the different UFB groups and, in particular, to validate whether or not a respondent claiming to have a UFB connection was likely to be correct – in relation to objective information about their property. Information about connections to UFB was sought from the four fibre companies (Chorus, Enable, Northpower Fibre, Ultrafast Fibre) and some relevant information was obtained from three of these. Commercial sensitivity forbade obtaining individual property information about UFB connections but it was possible to obtain information about whether UFB was available in the street outside a particular property and one company provided more detailed information. We sampled (about 100 cases) amongst those households specifically identified as having connected to UFB (within the limits of our information sources). In addition, we attempted to obtain information about the UFB status of households and asked households for their addresses so we could check this. Understandably, this led to a high non-response rate, at least on the property address question. We were also able to identify households which were in towns or other areas where it is known that UFB is yet to be laid. Using unweighted data, we found that 98 could be confirmed objectively as having UFB connections, of which 85 percent claimed in the survey to be connected. Of those claiming UFB status, we were able to confirm less than a third (31 percent) as having UFB potential.

As discussed in the main report, the data were weighted to best approximate census proportions and to align with the sampling design – including extra procedures to obtain better coverage of UFB users. Crown Fibre Holdings (the Crown-owned company that manages investment in UFB infrastructure) collects data which can broadly ascertain the proportion of New Zealand households which have UFB access. This figure indicates that over 50 percent of households in UFB areas already have access, and the take-up rate amongst households with access was 16.4 percent during the period of fieldwork.

In sum, we weighted the data to reflect our best understanding of the likely distribution of UFB take-up amongst New Zealand households, but this should not be taken as a confident inference about the ‘population’ of households.

Results

UFB Status Groupings

Table 2 below takes all 1258 users and shows the percentages of them that use different types of internet (those without internet connections were excluded from this portion of the survey and are not included in this report). Dial-up is understandably rare, although its share is not miniscule; if we extrapolate to the wider user population, roughly 40 out of every 1000 people still use dial-up internet. Broadband is defined as high-speed internet such as ADSL, VDSL and fibre/UFB. It is by far the most popular (93.2 percent) and a lower percentage (43.9) accesses the internet through a mobile device and network (including from home). ‘Other’ internet options include satellite and represent a very small percentage (1.4 percent) of users. Multiple responses are possible.

Table 2. Q5A Percentages of internet users using four types of internet from home

Dial-up	4.4%
Broadband	93.2%
Mobile	43.9%
Other	1.4%

Base: n = 1258

Respondents could indicate that they access the internet in several ways; the broadband–mobile combination is particularly prevalent. Some 40 percent of the relevant sample reported accessing the internet using both of these, although a bigger group uses only broadband, and the ‘mobile only’ portion of users is very small (as is the portion of those accessing the internet using neither broadband nor mobile).

In Table 3 below, percentages are given for several UFB-related or UFB-specific questions. Question Q5A6 asked about knowledge of the availability of UFB at respondents’ addresses. In Table 3C, 67.4 percent of respondents reported having this knowledge. Just a quarter said that UFB is available and under half (40.8 percent) that it is not available. In addition, a quarter of respondents were not sure about their connection availability, and 8.1 percent claimed to have never heard of UFB.

Table 3E shows the proportion of all survey respondents who fall into each of the UFB categories (graphed in Figure 1 below). Just on one-sixth of respondents have UFB (16.3 percent), while 18.4 percent have UFB available but have chosen not to connect at this time. Some 22.5 percent expect to have UFB available in future and intend to connect then. There are few (2.6 percent) who think they will never have a connection available in their area.

Q5A9 asked participants who knew UFB was not currently available at their addresses (Table 3D) to indicate whether or not they knew if it would be accessible in the future and, if so, when. The largest group (27.2 percent) responded that they knew that UFB would come at some stage but were unsure about when this would happen. Some 21.5 percent thought UFB would be available within the next year. However, 9.2 percent reported that, as far as they knew, UFB would never be installed at their addresses. Many did not know about future availability (23.8 percent). These same respondents, who had a home connection that was not UFB, were then asked how likely they would be to connect to UFB once it became available in their area (Q5A10), with 59.5 percent reporting that they were ‘Very likely’ to connect, 34.0 percent reporting ‘Somewhat likely’ and only a small percentage (6.6 percent) reporting that they were unlikely to connect. It can be speculated that this is due to the fact that most respondents interested enough in UFB to know whether or not it is available at their addresses will also be individuals with high levels of interest in the technology and, consequently, will be more likely to connect.

Table 3. Counts and percentages for UFB-related questions

		Frequency (Count)	Percentage
Table 3A			
Q1 Do you currently use the internet?	Yes	1258	
Table 3B			
Q5A2 Is your household connected to fibre optic broadband? (n = 1377)	No connection/No answer	202	14.7
	UFB/Fibre optic	224	16.3
	Not fibre – i.e. have either ADSL or VDSL	760	55.2
	Don't know if connection is fibre or not	170	12.3
	Person in household answering survey is not decision-maker on internet product used	22	1.6
Table 3C			
Q5A6. Do you know if fibre broadband/UFB is currently available for connection at your address? (n = 951)	Yes, it is	253	26.6
	No, it's not	388	40.8
	Heard of UFB but don't know if available	232	24.5
	Never heard of UFB	78	8.1
Table 3D			
Q5A9. Do you know whether fibre broadband/UFB will be available for connection at your address at some stage? (n = 388)	Yes, in the next year	84	21.5
	Yes, in the next 2–3 years	49	12.7
	Yes, in the next 4–5 years	21	5.5
	Yes but don't know when	106	27.2
	No, will not be available	36	9.2
	Don't know	92	23.8
Table 3E			
UFB User types (n = 1377)	UFB Available: Users	224	16.3
	UFB Available: Non-users	253	18.4
	Future UFB: Likely to use	310	22.5
	Future UFB: Unlikely to use	22	1.6
	Never UFB	36	2.6
	Don't know	414	30.1
	Internet non-users	119	8.6

Clearly, decision-making about internet access is an issue shared (at least to some extent) in most households; only a few respondents (1.6 percent – Table 3B) preferred not to answer since they were not sufficiently involved in relevant household decision-making.

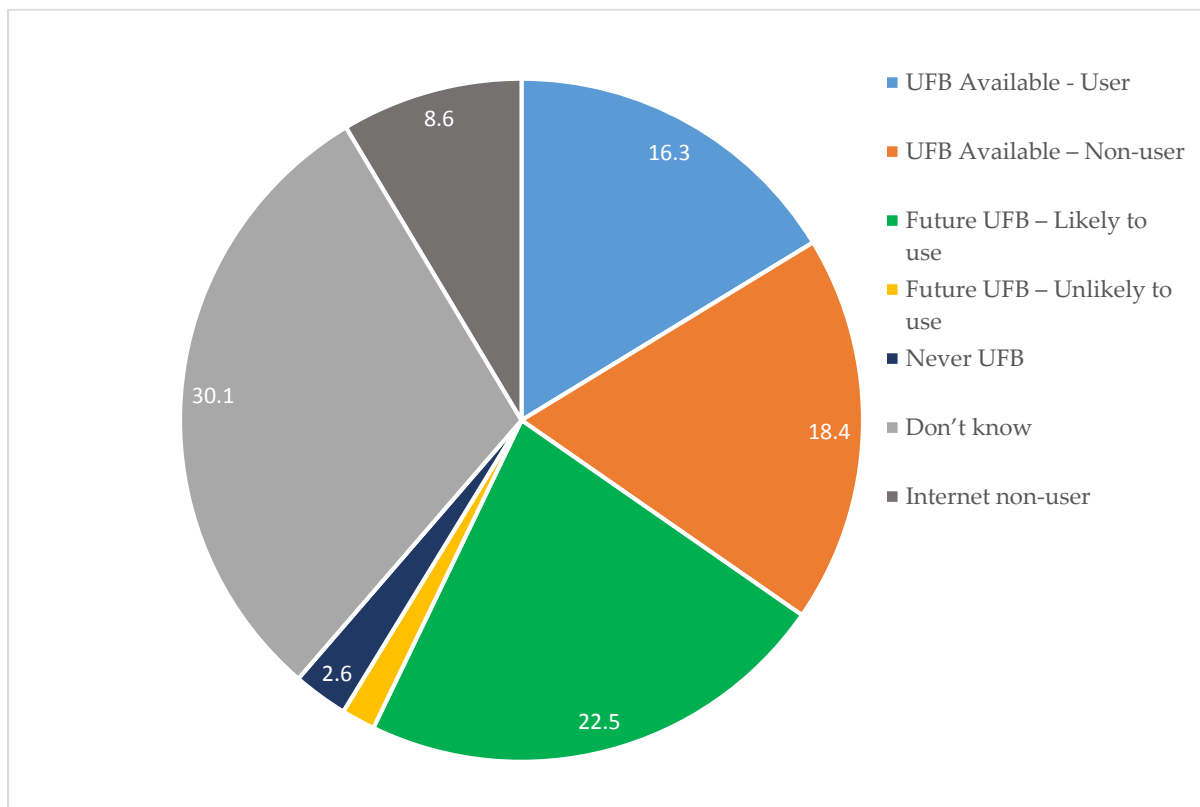


Figure 1: UFB Status of respondents (n = 1377)

Group 1: UFB Available - Users

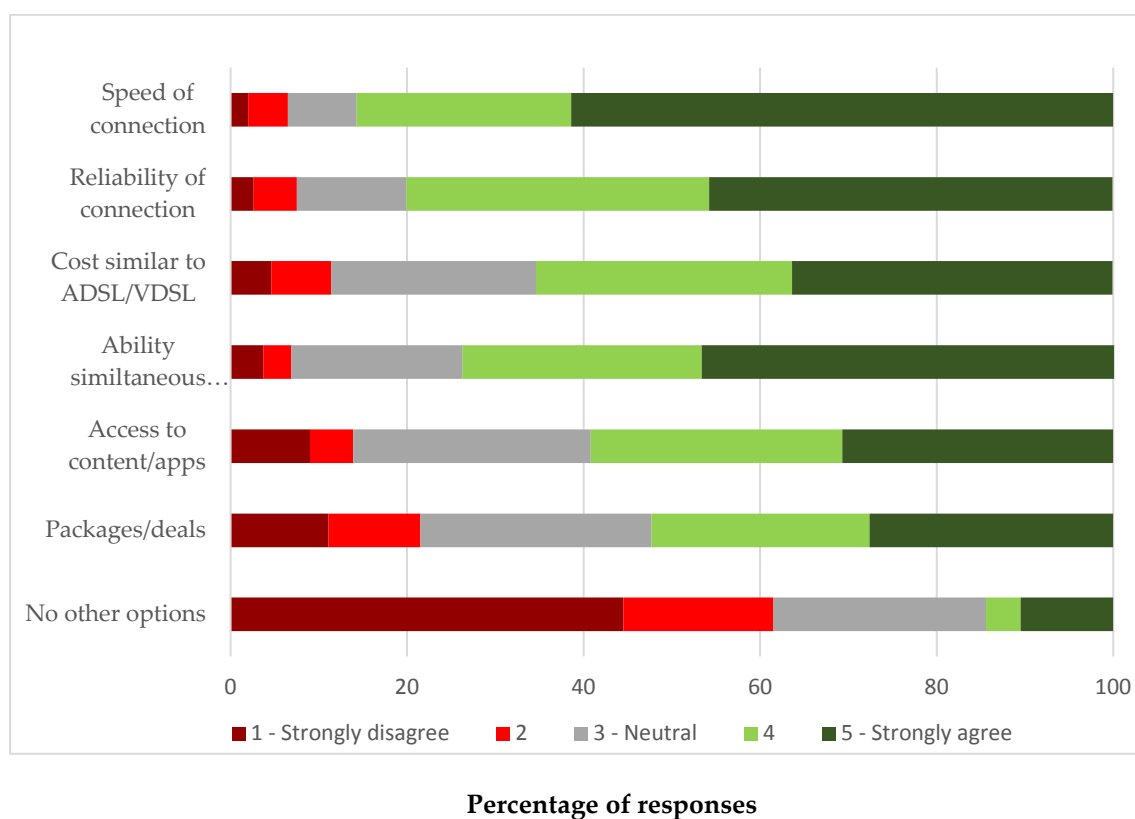
Table 4 below shows how current UFB users found out about UFB. The most common sources of information about UFB are direct contact with a retail service provider, word of mouth or a media news story. Other significant sources are an advertisement, a UFB company leaflet that is delivered to the mailbox or a leaflet from a retail service provider received via the mailbox.

Figure 2 below shows current UFB users’ levels of agreement or disagreement with several possible reasons for their decisions to connect to UFB. Generally, most users (61.5 percent) disagreed or disagreed strongly with the suggestion that they connected to UFB because there were no other available connections.

Table 4. Percentages for Q5A3 – How UFB users found out about UFB (multiple responses possible)

UFB company leaflet in mailbox, e.g. Chorus, Enable, Northpower Fibre, Ultrafast Fibre	12.0%
UFB company website	7.3%
UFB company advertisement	5.4%
Retail service provider leaflet in mailbox, e.g. Spark, Vodafone, etc.	10.8%
Retail service provider website	5.0%
Retail service provider advertisement	9.8%
Leaflet in mailbox, not sure whether fibre company or retail service provider	5.2%
Website, not sure whether fibre company or retail service provider	2.1%
Advertisement, not sure whether fibre company or retail service provider	13.2%
Media news story	16.4%
Direct contact with retail service provider (phone/face to face)	29.9%
Word of mouth	19.6%
Government website/publication	10.7%
Other, please tell us	7.9%

Base: n = 224

**Figure 2.** How much current UFB users agreed or disagreed with several statements concerning their reasons for connecting to UFB

By contrast, close to two-thirds of users strongly agreed that speed was a reason why they connected. Similar but less strong tendencies towards agreement can be seen for reliability of connection and the ability of UFB to handle multiple users and/or devices. Between 50 and 60 percent of respondents agreed or strongly agreed that their reasons for connection were either the ability to access more internet content or applications, or the offer of an attractive broadband/phone/content package or deal.

Thirty-nine respondents also gave open-ended responses to Q5A4 – see Table 5 below – and these responses were categorised. Note that many open-ended responses actually fell within the seven categories given as answer options in the questionnaire (see Figure 2 and Appendix 1), so there is some overlap of categories between Table 5 and Figure 2. In commenting on an answer, one respondent said in relation to taking up UFB: “We had to, main reason was faster, basically been pushed by provider”. Another stated as the reason for uptake: “Convenience, we already had cable in place”.

Table 5. Grouped open-ended responses for Q5A4 on reasons for connecting (in tables with low ‘n’, percentages are rounded up)

Speed of connection	27%
Attractive cost	26%
Deals/Subsidies from ISPs for switching to UFB	12%
Reliability of connection	12%
No other broadband options available	8%
Relented to growing pressure/nuisance from retailers/govt	2%
Adopted due to inevitable need for technology in future	7%
Ease of installation/Convenience	7%

Base: UFB users giving open-ended responses to question (n = 39)

Table 6 gives responses to Q5A5. Most current UFB users (72.9 percent) were at least moderately satisfied with the UFB connection process and few (4.6 percent) were very dissatisfied with it. There were 212 people who gave open-ended answers to this question (see Table 7 below). That is, almost all UFB users who reported levels of satisfaction regarding the initial Q5A5 question also gave open-ended responses. These responses were categorised and then cross-tabulated in Table 7 with the initial Q5A5 responses. This determined the valence of the response: that is, whether an aspect commented on, such as on-site installation, was more positive or more negative.

Table 6. Satisfaction with fibre connection process

Q5A5. Overall, how satisfied were you with the fibre broadband connection process?	Very dissatisfied	4.6%
	Moderately dissatisfied	8.2%
	Neutral	14.2%
	Moderately satisfied	39.0%
	Very satisfied	33.9%

Base: UFB users (n = 224)

Table 7. Open-ended answers to Q5A5, split by satisfaction on Q5A5 (table is percentaged by columns)

Q5A5. Overall, how satisfied were you with the fibre broadband connection process? Was that...						
Open-ended answers	Very dissatisfied	Moderately dissatisfied	Neutral	Moderately satisfied	Very satisfied	Total
Communication	18.2%	22.2%	15.4%	17.4%	15.5%	17.0%
On-site service/installation	27.3%	55.6%	23.1%	14.0%	18.3%	20.8%
UFB performance	27.3%	16.7%	15.4%	38.4%	26.8%	29.2%
Ambiguous	9.1%	0.0%	15.4%	3.5%	8.5%	6.6%
General service provided	18.2%	5.6%	30.8%	26.7%	31.0%	26.4%

Base: UFB users who also provided an answer to the open-response question (n = 212)

Respondents' open-ended responses were examined in relation to each of the cells in Table 7 and examples were chosen as relatively representative of each category. Note that these open-ended responses were able to be coded under several different categories (e.g. communication, UFB performance, etc.).

On the issue of the quality of communication during the installation process, one user who rated satisfaction as 'Moderately dissatisfied' said: "It took ages". Another respondent who gave the same rating stated: "Didn't get back to me for 6 weeks". At the other end of the spectrum, one respondent who rated satisfaction as 'Very satisfied' said: "Easy sign up and install".

Concerning on-site service/installation, a respondent who rated satisfaction as 'Very dissatisfied' said: "It interrupted our landline for one and half months..." This contrasted with a respondent who gave a 'Very satisfied' and said: "The people who installed it were very quick, efficient, and courteous and it was set up within days".

One rater under the 'UFB connection' category indicated being 'Very dissatisfied' with the installation process. That person was unhappy with the router supplied although it is unclear what aspect of the router performance this referred to. On the other hand, a respondent who was 'Very satisfied' with UFB performance stated: "the broadband connection was slow and this was a better upgrade".

Some respondents' evaluative statements were not directed towards any aspect of the installation process in particular. A respondent who gave a 'Neutral' response said: "I was neither satisfied nor dissatisfied, it was just a necessary evil". Another who gave the rating 'Very satisfied' said this was because "...it was all done with no hassles".

Lastly, some respondents gave wide-ranging evaluations across aspects of the connection process, coded in Table 7 as 'General service provided'. One such comment from a respondent who was 'Very dissatisfied' with the connection process, ran: "Clumsy, lengthy, cut us off from all phone for several days and internet for two weeks, charged us full rate for a temporary slow connection and forgot to switch us to the full speed service when available, failed to give various discounts promised". By contrast, a 'Very satisfied' respondent said: "Didn't take long to connect and was available straight away". Clearly, there has been a wide range of individual experiences in relation to UFB connection.

Group 2: UFB Available - Non-users

Question Q5A12 asked UFB non-users about their levels of agreement with several reasons for not connecting to UFB. These results are shown in Table 8. A majority of participants disagreed or strongly disagreed with the proposition that they do not have the skills to use UFB. That is, a large percentage of participants indicated that an inability to use UFB is no reason for them not to connect in the future. Slightly more respondents agreed rather than disagreed on whether they perceived a benefit from UFB over conventional broadband. More agreed that initial or ongoing connection costs are reasons for not connecting in the future.

Table 8. Q5A12 – Reasons for not adopting UFB

	1 - Strongly disagree	2	3 - Neutral	4	5 - Strongly agree
Don't see a benefit to household over current broadband connection	21.4%	16.2%	19.9%	19.3%	23.2%
Don't have the skills or knowledge to use it	45.5%	21.0%	20.8%	7.4%	5.2%
Cost of connecting to fibre too high	23.7%	13.0%	19.6%	18.1%	25.7%
Ongoing monthly cost of fibre connection too high	17.3%	12.8%	25.2%	20.1%	24.6%
Concerns about installation delays/disruptions	32.4%	16.6%	26.9%	11.7%	12.4%

Base: Respondents with a home-internet connection other than UFB (n = 269)

UFB non-users were also asked how they found out about UFB (Table 9 below). Evidently, media coverage has done much to alert non-users to UFB (24.9 percent), although word of mouth was even more important (29.5 percent). Some 10–13 percent of respondents declared UFB company leaflets, retail service provider leaflets, retail service provider advertisements or other advertisements (of unknown source) as the ways in which they found out about UFB. Note that multiple responses were allowed for this question.

Table 10 (below) shows how UFB non-users who gave open-ended responses (n = 86) found out about UFB. Interestingly, the most common response was 'Seeing installation on the street' (53 percent). A notable percentage (17 percent) say that they found out about UFB through their 'Own initiative'. As with previous open-response questions, some of the responses given overlap with initial categories.

Table 9. How found out about UFB (other than UFB users) | Multiple responses possible

UFB company leaflet in mailbox	11.8%
UFB company website	4.6%
UFB company advertisement	6.2%
Retail service provider leaflet in mailbox, e.g. Spark, Vodafone, etc.	10.1%
Retail service provider website	7.1%
Retail service provider advertisement	10.3%
Leaflet in mailbox, not sure whether fibre company or retail service provider	6.0%
Website, not sure whether fibre company or retail service provider	6.2%
Advertisement, not sure whether fibre company or retail service provider	13.0%
Media news story	24.9%
Direct contact with retail service provider (phone/face to face)	7.5%
Word of mouth	29.5%
Government website publication	4.3%

Base: Respondents with a home-internet connection other than UFB (n = 898)

Table 10. Grouped open-ended answers to questions asking how UFB non-users found out about UFB

UFB company advertisement	2.6%
Retail service provider advertisement	0.6%
Leaflet in mailbox, not sure whether fibre company or retail service provider	1.5%
Advertisement, not sure whether fibre company or retail service provider	1.3%
Media news story	2.0%
Word of mouth	2.9%
Government website/publication	0.6%
Don't know	1.0%
Through work	11.8%
Advertising	5.4%
Seeing installation on the street	53.4%
Own initiative/Curious	17.0%

Base: Respondents with home-internet connection other than UFB who gave open-ended responses to this question (n = 86)

Group 3: Future UFB - Likely to Use

Intending UFB users were asked to indicate their levels of agreement or disagreement with various reasons that explain why they may choose to adopt UFB (Table 11 below). First, looking at reasons *for* connecting, a large majority of answers indicate the importance of speed, reliability, cost and an ability to have multiple devices/users in the household. ‘Ability to access more internet content or applications’ and ‘A broadband/phone/content package or deal’ were also important, although less strikingly so. These latter two options may reflect, respectively, the relatively small proportion of overall internet content that requires UFB capabilities (e.g. streaming 4k video) and few extant broadband/phone/content deals (at the time of data collection) that include UFB connections.

Table 11. Why future UFB users may adopt UFB

	1- Strongly disagree	2	3- Neutral	4	5- Strongly agree
Speed of fibre connection	4.8%	2.9%	11.8%	20.7%	59.8%
Reliability of connection	4.6%	2.1%	10.8%	27.4%	55.1%
Cost similar to ADSL/VDSL connection	4.4%	3.3%	20.2%	24.2%	48.0%
Ability to have multiple devices/users in the household accessing the internet simultaneously	5.9%	6.4%	18.4%	26.9%	42.5%
Ability to access more internet content or applications	5.7%	8.7%	26.6%	27.7%	31.3%
A broadband/phone/content package or deal	7.6%	8.8%	26.9%	30.1%	26.6%

Base: Respondents with a home-internet connection other than UFB (n = 541)

Group 4: Future UFB - Unlikely to use

Analysis of UFB non-users’ agreement or disagreement with various reasons for *not* connecting to UFB results in a less clear picture (see Table 12). Some 60–70 percent agreed or strongly agreed with the categories ‘Don’t see a benefit to household over current broadband connection’, ‘Cost of connecting fibre too high’ and ‘Ongoing monthly cost of fibre connection too high’.

Table 12. Why future UFB non-users may NOT adopt UFB

	1 - Strongly disagree	2	3 - Neutral	4	5 - Strongly agree
Don't see a benefit to household over current broadband connection	13.7%	4.3%	22.3%	23.4%	36.3%
Don't have the skills or knowledge to use it	46.1%	20.6%	13.7%	6.5%	13.1%
Cost of connecting to fibre too high	3.7%	4.9%	31.8%	19.8%	39.8%
Ongoing monthly cost of fibre connection too high	5.3%	7.0%	19.9%	28.3%	39.6%
Concerns about installation delays/disruptions	8.3%	26.7%	26.4%	21.7%	16.9%

Base: Respondents with a home-internet connection other than UFB (n = 41)

Participants were more ambivalent about concerns over installation delays and disruptions (about half gave either 'Disagree' or 'Neutral' responses). But a majority of users disagreed with the suggestion that they are unlikely to adopt UFB due to lack of the skills/knowledge needed to use the technology. This was similar to the views of current UFB users.

UFB non-users' open-ended responses concerning their not adopting UFB are shown in Table 13. The most common comments offered were that future installation was intended or that the person did not have the authority to have UFB installed. The comments indicated that respondents made this point not because they were being overruled by someone else in the household (e.g. the bill-payer), but because they are tenants rather than property owners, with perhaps a quarter of responses indicating UFB access was being blocked by neighbours.

Table 13. Open-ended responses to why non-UFB users may not adopt UFB

Not worth the effort	11%
Waiting after application or currently being installed	3%
Not in a position of authority to purchase/install UFB	25%
No need	13%
Intend to in future	25%
Not sure/Unavailable	4%
Not worth expense/Cheaper options preferred	7%
Installation worries	4%
Concerns over too much use	3%
Previous obligations	3%
Moving residence	3%

Base: Respondents with a home-internet connection other than UFB who gave open-ended responses to this question (n = 93)

The Socio-Demographics of UFB

The WIPNZ survey gathered extensive socio-demographic information from respondents. The main dimensions on which there is difference in the general findings of the survey are gender, age, ethnicity, region, area, household income and composition. Results for these and other variables, cross-tabulated by UFB user groupings, are presented in Table 14 below. Note that these demographics represent what respondents self-reported, which is not necessarily identical with other classifications, e.g. for ethnicity or urban/rural.

Gender

There is still a small gender gap in general internet usage in New Zealand. Having a UFB connection reflects this but there is a more significant difference gap in intention to connect. Women are more likely than are men to be 'Don't knows'.

Age

In the wider WIPNZ 2015 survey and its predecessors, age is the most consistent stratifying variable for internet use and attitudes. This holds true for UFB. For people older than 80 years, there is a very low percentage that has UFB (5.4 percent). For the 50–79-year age bracket, that rises to between about 10 and 15 percent. For age groups under 50, there is an average UFB take-up of around 20 percent.

It is noticeable that there is much less age differentiation across the 'Likely to connect in future' group, some 20–30 percent for most groups (except for the oldest and youngest) – aspiration is not distributed by age difference. The proportions of those who 'Don't know' their UFB status grade quite consistently across age groups, with close to half of those under 30 years not knowing their UFB status, compared to some 20 percent for those aged 50 and over.

Ethnicity

A person's ethnic group may affect their access to UFB. Relatively more New Zealand Europeans, and fewer Māori, have connections, but Pasifika have the second-highest connection rate at 14.3 percent. However, it is noticeable that just 8.6 percent of Pasifika people intend to have connections in future, compared to 21 to 24 percent of other groups.

Region

Relatively more South Islanders claim to be connected but the proportion not connecting is slightly higher. Those in the northern North Island (from Waikato and Bay of Plenty Regional Council areas northwards) are more likely not to know about their connections.

Table 14. Demographic distribution of different UFB statuses (percentages across rows)

		UFB avail- able: User	UFB avail- able: Non- user	Future UFB: Likely to use	Future UFB: Unlikely to use	Never UFB	Don't know	Internet Non- user
		%	%	%	%	%	%	%
Gender	Male	16.5	18.7	27.4	2.0	2.8	26.0	6.7
	Female	16.0	18.2	18.2	1.2	2.4	33.6	10.3
Age group	16–19	21.2	16.1	7.6	2.5	0.0	46.6	5.9
	20–29	18.0	15.1	19.2	1.2	1.2	42.9	2.4
	30–39	20.0	19.1	22.8	3.7	3.3	31.2	0.0
	40–49	19.0	23.4	27.3	0.4	3.5	26.0	0.4
	50–59	14.5	17.8	33.6	1.4	3.7	22.0	7.0
	60–69	13.0	19.0	26.1	0.5	3.3	25.0	13.0
	70–79	9.6	19.1	18.3	1.7	2.6	20.0	28.7
	80+	5.4	12.5	1.8	1.8	1.8	17.9	58.9
Ethnic group	NZE	16.8	19.0	24.2	2.1	3.0	26.1	8.9
	Māori	8.8	17.7	22.1	0.0	2.7	32.7	15.9
	Pasifika	14.3	11.4	8.6	1.4	0.0	42.9	21.4
	Asian	11.3	26.6	21.0	0.0	3.2	37.9	0.0
	Other	12.0	16.0	0.0	0.0	0.0	72.0	0.0
Region	Northern Nth Is	15.3	19.8	22.4	1.5	1.6	33.0	6.4
	Southern Nth Is	17.5	16.3	25.9	1.1	3.4	26.6	9.1
	South Island	25.5	23.6	19.9	0.9	1.9	21.3	6.9
Area	Urban	17.5	19.7	22.7	1.3	2.0	29.5	7.3
	Rural towns	4.2	12.5	29.2	0.0	0.0	54.2	0.0
	Rural	6.4	6.4	20.0	4.0	8.0	31.2	24.0
Household income	Up to \$35k	8.5	15.1	13.1	1.5	2.5	27.6	31.7
	\$35k – \$49k	9.9	18.4	21.7	1.3	2.6	35.5	10.5
	\$50k – \$99k	20.2	20.2	24.3	2.6	3.3	26.6	2.8
	\$100k – \$140k	19.6	19.6	27.8	1.4	3.8	26.8	1.0
	\$140k+	24.9	16.4	35.0	0.0	2.3	20.9	0.6
Household composition	Single	6.9	18.3	14.3	2.9	1.7	32.0	24.0
	Couple	12.4	18.3	25.6	1.3	3.8	26.1	12.4
	3 adults	16.0	10.4	23.6	3.5	2.1	33.3	11.1
	4 or more adults	26.4	24.5	11.9	0.0	2.5	32.7	1.9
	Single parent	12.8	19.1	19.1	2.1	2.1	34.0	10.6
	Couple and 1 or 2 children	23.9	18.7	28.7	2.0	2.8	23.1	0.8
	Couple and 3 children	13.6	17.8	22.9	0.0	3.4	42.4	0.0
	Couple and 4 or more children	16.1	20.5	25.9	0.0	0.0	33.0	4.5

Base: full sample (n = 1377)

Area: Urban/Rural

Ascertaining the urban/rural status of a household has been made more difficult by limited availability of appropriately classified data from Statistics New Zealand, which no longer reports much data on an 'urban area' basis. Local government reorganisation has constituted many 'Districts' straddling both urban and rural categories. The procedure used – as in earlier WIPNZ surveys – was to ask each respondent whether they considered themselves to be living in an urban or a rural area, and then, for those who chose 'urban', which of a list of New Zealand urban settlements they lived in. Some respondents living in small towns consider themselves 'rural' and there are some who are in 'rural living' situations on the outskirts of towns.

The urban/rural internet divide is also evident in UFB connection status, although this disparity is being tackled under the Government's Rural Broadband Initiative. In urban areas, 17.5 percent of participants have UFB, compared to 6.4 percent for those who classed themselves in the survey as living in the country, and only 4.2 percent for those in rural towns with fewer than 1000 people.

Household income

Again, as with internet usage at large, UFB access is highly stratified by household income. UFB connection rises from 8.5 percent for households earning less than \$35,000 annually to 24.9 percent for those whose incomes exceed \$140,000. Only 13.1 percent of the lowest bracket intend to have UFB in future, compared to 35.0 percent of the top bracket.

Household composition

Household type was categorised by relating numbers of adults to numbers of children in the household – although there is some additional information about the relationship status of the respondent.⁵ Larger households and those with one or two children are more likely to have UFB – with the particular exception of single parents, who are less likely to have UFB.

⁵ Sole adults are split between those who are single and those who are ex-married, those in two-adult households, who were almost always in a relationship, and those with larger numbers of adults including both singles (presumably in flatting groups) and couples.

Appendix 1

World Internet Project (NZ) – UFB questions

There are different pathways through these questions for each of the groups identified in the report.

Q5A. What type of internet connection, if any, do you have at home?

1. *Dial-up/Phone modem*
2. *Broadband (includes ADSL, VDSL, Fibre, UFB and the wireless use of that broadband connection through any device)*
3. *Mobile phone connection*
4. *Other – please specify (Q5Ax)*
5. *Can't connect to the internet at home*

Q5Ax. Other Q5A

Q5A2. Is your household connected to fibre optic broadband, such as Ultra-fast broadband/UFB, or do you have an ADSL or VDSL connection?

1. *UFB/Fibre optic*
2. *Not fibre – i.e. have either ADSL or VDSL*
3. *Don't know if connection is fibre or not*
4. *Person in household answering survey not decision-maker on internet product used*

Q5A3. How did you find out about fibre broadband/UFB?

1. *UFB fibre company leaflet in mailbox (e.g. Chorus, Enable, Northpower Fibre, Ultrafast Fibre)*
2. *UFB fibre company website*
3. *UFB fibre company advertisement*
4. *Retail service provider leaflet in mailbox (e.g. Spark, Vodafone, etc.)*
5. *Retail service provider website*
6. *Retail service provider advertisement*
7. *Leaflet in mailbox, not sure whether fibre company or retail service provider*
8. *Website, not sure whether fibre company or retail service provider*
9. *Advertisement, not sure whether fibre company or retail service provider*
10. *Media news story*
11. *Direct contact with retail service provider (phone/face to face)*
12. *Word of mouth*
13. *Government website/publication*
14. *Other – please specify (Q5A3x)*

Q5A3x. Other Q5A3

Q5A4. How much do you disagree or agree that each of the following was an important reason for connecting your household to fibre broadband?

1. *Speed of fibre connection*
2. *Reliability of connection*
3. *Cost similar to ADSL/VDSL connection*
4. *Ability to have multiple devices/users in the household accessing the internet simultaneously*
5. *Ability to access more internet content or applications*
6. *A broadband/phone/content package or deal*
7. *No other broadband options available*

Q5A42. Were there any other reasons your household decided to connect to fibre broadband?

Q5A5. Overall, how satisfied were you with the fibre broadband connection process? Was that...

Very dissatisfied

Moderately dissatisfied

Neutral

Moderately satisfied

Very satisfied

Q5A52. Can you please explain your reasons for that rating?

Q5A6. Do you know if fibre broadband/UFB is currently available for connection at your address?

Q5A7. How did you find out about fibre broadband/UFB?

1. UFB/Fibre company leaflet in mailbox (e.g. Chorus, Enable, Northpower Fibre, Ultrafast Fibre)

2. UFB/Fibre company website

3. UFB/Fibre company advertisement

4. Retail service provider leaflet in mailbox (e.g. Spark, Vodafone, etc.)

5. Retail service provider website

6. Retail service provider advertisement

7. Leaflet in mailbox, not sure whether fibre company or retail service provider

8. Website, not sure whether fibre company or retail service provider

9. Advertisement, not sure whether fibre company or retail service provider

10. Media news story

11. Direct contact with retail service provider (phone/face to face)

12. Word of mouth

13. Government website/publication

14. Other – please specify (Q5A3x)

15. Don't know

16. Refused

Q5A8. How much do you disagree or agree that each of the following is an important reason for not connecting your household to fibre broadband?

1. *Speed of fibre connection*

2. *Reliability of connection*

3. *Cost similar to ADSL/VDSL connection*

4. *Ability to have multiple devices/users in the household accessing the internet simultaneously*

5. *Ability to access more internet content or applications*

6. *A broadband/phone/content package or deal*

7. *No other broadband options available*

Q5A82. Are there any other reasons your household has not connected to fibre broadband?

Q5A9. Do you know whether fibre broadband/UFB will be available for connection at your address at some stage?

Q5A10. How likely is your household to connect to fibre broadband when it becomes available for connection?

Q5A11. How much do you disagree or agree that each of the following would be an important reason for connecting your household to fibre broadband?

1. *Speed of fibre connection*

2. *Reliability of connection*

3. *Cost similar to ADSL/VDSL connection*

4. *Ability to have multiple devices/users in the household accessing the internet simultaneously*

5. *Ability to access more internet content or applications*
6. *A broadband/phone/content package or deal*
7. *No other broadband options available*

Q5A112. Are there any other reasons your household may connect to fibre broadband?

Q5A12. How much do you disagree or agree with each of the following as an important reason your household is unlikely to connect to fibre broadband?

1. *Speed of fibre connection*
2. *Reliability of connection*
3. *Cost similar to ADSL/VDSL connection*
4. *Ability to have multiple devices/users in the household accessing the internet simultaneously*
5. *Ability to access more internet content or applications*
6. *A broadband/phone/content package or deal*
7. *No other broadband options available*

Q5A122. Are there any other reasons your household is unlikely to connect to fibre broadband?

Q5Ax. Other Q5A122