



# Ultra Fast Broadband in Business - Seizing the Opportunity



Crown Fibre Holdings

*Ultra-fast broadband for New Zealanders*

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## Foreword **Graham Mitchell, CEO, Crown Fibre Holdings**

Ultra Fast Broadband (UFB) has the potential to bring real social and economic benefits to New Zealand. To harness that potential companies need help to identify how UFB can benefit them, thus stimulating demand. Crown Fibre Holdings has been established to manage the Government's \$1.5 billion investment in UFB infrastructure. Leveraging the benefits of that investment will be a key driver of success for businesses as they compete in the 21<sup>st</sup> century.

The Government's objective is to accelerate the roll-out of UFB to 75 percent of New Zealanders by the end of 2019, concentrating in the first six years on priority users such as businesses, schools and health services, plus green field developments and certain tranches of residential areas.

Extending the reach of broadband services tends to be well-correlated with increasing business productivity and economic growth<sup>1</sup>. New Zealand is a remote country, so its ability to remain competitive in a global marketplace is clearly linked to the quality of its telecommunications infrastructure. Therefore, with over 280 responses received, it is pleasing to see a majority of business indicated they are likely to take up UFB services within a year of them becoming available.

It is critical to the success of the UFB initiative that we engage the entire business community in a conversation about what UFB means and how to make the most out of it. This survey is an example of co-operation to build this engagement. Crown Fibre Holdings is grateful for the support of TUANZ, and believes this survey is a useful benchmark of businesses' understanding of UFB. We hope future surveys will reflect a growing knowledge base.

## Introduction **Pat O'Connell, Chairman, TUANZ**

The Telecommunications Users Association of New Zealand (TUANZ) is highly conscious of the need to ensure that fibre is not only deployed, but used. Understanding local barriers to uptake and surveying which services and applications end users want, is an important part of building a more specific view of potential UFB demand. We know that businesses need to be planning now to maximise their use of ICT infrastructure. Crown Fibre Holdings and its partners in Local Fibre Companies plan to lay the first fibre in the UFB initiative before Christmas. We'd like to thank our members and associates for their response to this survey and encourage their continued close engagement. Together we're helping shape New Zealand's telecommunications future.

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<sup>1</sup> For example "Broadband Infrastructure Investment in Stimulus Packages", Qiang, World Bank 2009: <http://www.worldbank.org/>

## 1. Background

During October 2010 the TUANZ membership and others who had opted to receive communications from TUANZ were surveyed. There were 283 responses; it should be noted that not all questions were answered by all respondents. As one would expect given the nature of the TUANZ membership, the survey responses were skewed in favour of the corporate market (over 50% of respondents reported 100 or more employees), and Auckland firms were most represented (38%).

Also in line with the TUANZ member base, businesses in the information, media & telecommunications (25%), and education & training sectors (24%) were most represented. Thus it should be assumed that to some extent survey responses have been received from companies which through self-selecting may have a higher level of awareness of UFB than non-respondents.

More than 52% of respondents were in management positions such that they could expect to be well informed about the company's use of telecommunications and their cost. Emphasising the fact that optic fibre services have already been deployed in many CBD locations, around 64% of respondents said they already had at least one fibre service. Accordingly the responses were segmented into those with some current fibre, and those without.

It may be noted that a demand survey modelled on this one is currently being prepared for New Zealand Government agencies. It is intended that the results be used to guide the public sector requirements for UFB services.

## 2. Executive Summary

The survey confirms that it would be reasonable to expect strong demand for Ultra Fast Broadband in the business community (see **Section 3**). When asked about their likelihood to connect to UFB within a year of it being available, 82% of all respondents said they were likely, highly likely or definitely would connect. Around 95% of all respondents said they would connect if UFB was available in their area. Some 58% of businesses currently without fibre would do the same. In the main, existing contracts appear unlikely to stand in the way of UFB uptake: 66% of respondents without any current fibre services are on one year contracts and around 60% of all respondents are on contracts expiring before the end of 2012.

A fairly price sensitive business telecommunications market was depicted, with price perceived by most as the greatest barrier to connecting to UFB, but also one of the key drivers to uptake, along with speed / bandwidth (**Section 4**). Those without any fibre services were especially concerned about price, with 87% of non-fibre users perceiving it as a barrier to uptake and nearly 77% seeing it as a main driver for connecting to UFB. Non fibre users were more likely than those with at least one fibre connection to expect upfront costs to get connected, with more than 75% assuming a medium range cost, for example to buy or lease new hardware.

For businesses already using at least some fibre, some 23% would wish to purchase dark fibre. The survey shows some demand for pricing information about dark fibre (though Layer 2 services have wider interest). Some businesses (12%) would consider forming buying clubs or shared service organisations to purchase UFB.

Survey respondents foresee (**Section 5**) the main benefits of UFB as including future strategy, staff productivity, staff location and customer relationship management. Around 70% of all respondents said they would consider investing in collaborative tools, Voice Over IP and cloud based applications and services to leverage the benefits of UFB. Remote working attracted an unusually high degree of interest, and indicates New Zealand's potential strength as a lifestyle location of choice for employees from abroad. Respondents also selected Voice Over IP and HD video conferencing as the two additional products for purchase.

With regard to capability (**Section 6**), some 60% of all respondents said they wanted to receive information and advice to make use of UFB, focussed around price and speed/bandwidth. However, of those with no current fibre services, more than a third said they had no need to understand the potential benefits of UFB, nor any need to know more about applying the potential benefits to their business model. Clearly, further engagement and education is needed to reach this portion of the business sector. These results are in line with overseas trends. The high proportion of information seekers, with one third willing to pay to receive more information, is a particularly positive sign.

In terms of current services (**Section 7**), nearly 50% of all respondents said they were paying more than \$200/month and 31.5% said they were paying more than \$1000/month for broadband. Reports that New Zealanders experience comparatively low broadband speeds were confirmed by the survey, and non-fibre users' wishes for speed were comparatively modest. When the responses of fibre users only were considered, just 44% said they are enjoying speeds of more than 30Mbps at their head office.

Those who have at least one fibre connection want greater speeds than those who have not. More than 55% of existing fibre users are seeking speeds of 100Mbps symmetrical (equal speeds downstream and upstream). More than 72% of those without fibre said they would be happy with services of up to 100Mbps. Looking to the future, UFB will make available speeds of 100Mbps downstream and 50Mbps upstream to NZ households, while large businesses will be able to access speeds of 1Gbps and above.

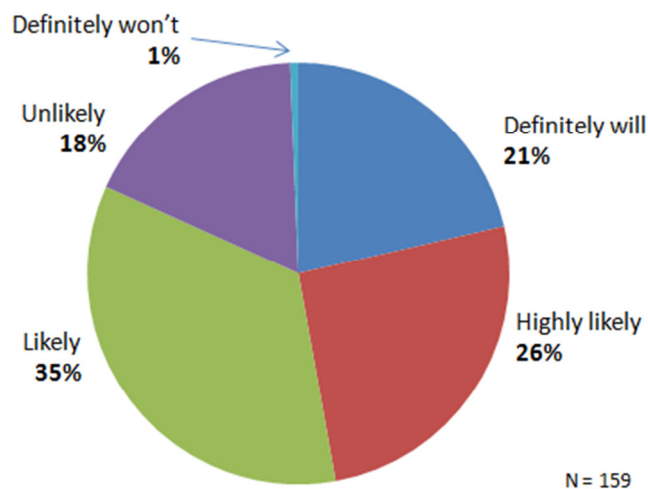




### 3. How Likely Are Businesses To Connect?

Intention to take-up UFB services appears strong. The telecommunications industry should be optimistic and act to convert this interest into uptake. Of all respondents asked about their likelihood to connect to UFB within a year of it being available, 82% said they were "likely to", "highly likely to" or "definitely will" connect. In a separate question, asked earlier in the survey, more than 95% of all respondents said they would connect if fibre was available in their area.

**Figure 1:** What is the likelihood that your business will connect to UFB within a year of it being available?



TUANZ Chairman, Pat O’Connell, stresses the importance of a caveat to this finding; that users are as yet ignorant of the specific offering they’ve indicated they will take. He believes they need to know more about what service they would get and how they would do so. This is borne out later in the survey, by interest in receiving more information.

## 4. What are the Drivers of and Barriers to Uptake?

**“The only way I could get our senior executives interested in coming to a workshop would be to tell them we could quadruple our bandwidth and for a quarter of the current price ... Even then it would be difficult to get them there.”**

*Kevin Drinkwater, CIO Mainfreight*

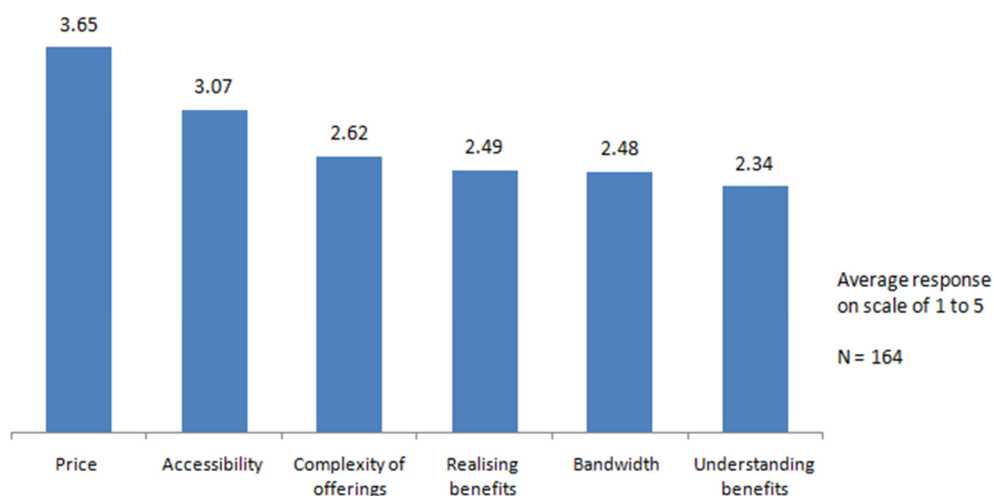
Speed / bandwidth and price were considered strong or very strong drivers for businesses to connect to UFB across all segments. These considerations are clearly top of mind for most businesses at this time, with 84% identifying speed and bandwidth as their principal motivators and 76% choosing speed.

Correspondingly, more than 85% of respondents in all segments (those with at least one fibre connection as well as those not on fibre) saw price as a medium to very high barrier to connecting to UFB, with accessibility the next greatest barrier perceived. Interestingly, being able to apply the benefits of the technology to a company’s business model was a marginally greater hurdle to uptake than understanding those benefits in the first place.

**"There are always barriers to uptake of any new technology and UFB is nothing different. Customers can always find a reason to stick with what's been tried and tested. But New Zealand stands to benefit so very much from UFB, more so than most countries, and the upside is so great that we simply cannot ignore the potential it offers."**

*Doug Wilson, CIO, Automobile Association*

**Figure 2:** What do you perceive to be the greatest barriers to connecting to UFB?



Of all respondents to this question, more than 63% perceived upfront costs to connect to UFB. This expectation increased to 77% among those with no current fibre services, and decreased to 56% for those with at least one fibre connection. There was a perception among all segments that there would be an upfront cost to buy or lease new hardware and 62% of all respondents thought this would be in the medium range.

The survey demonstrated that there is considerable opportunity in the telecommunications market right now. Sixty-six percent of those with no current fibre services are on one year contracts. Around 60% of all respondents to this question are on contracts expiring by the end of December 2012. More than 57% said they would see their existing provider as delivering them UFB based products and solutions. Of interest, 12% of those with at least one fibre connection said they would form a new structure, for example shared service organisation or buying club.



## 5. What Will Businesses Use UFB For?

**"If we just used ultrafast broadband to get our email quicker and to open web pages faster, it would be a good thing, but the UFB promises so much more than that. It's a true step-change both to our economy and our nation itself. We have a mature, well-educated population that lives in paradise and if we can connect them to the rest of the world and finally defeat that 'tyranny of distance' that has defined New Zealand's economy for so very long, we can have the best of both worlds. The UFB is a major step towards that goal."**

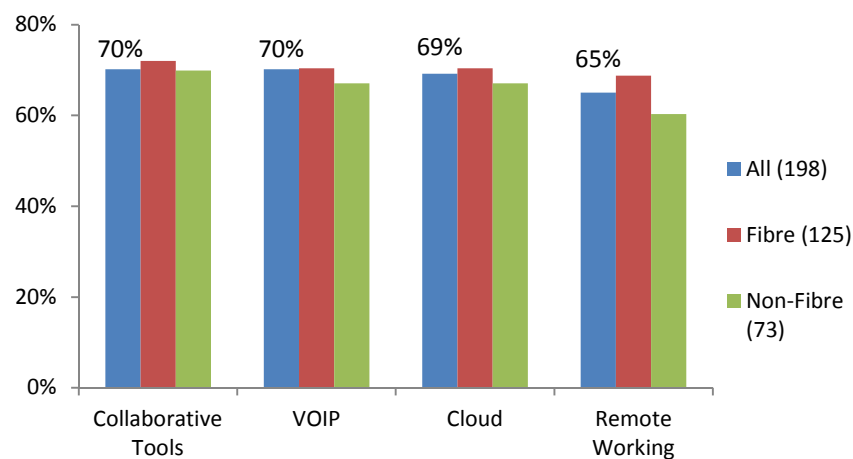
*Pat O'Connell, CIO, Rank Group*



Businesses with and without fibre gave surprisingly similar answers when rating their expectations about the part of their business model they thought improved speeds and data capacity would have the greatest effect on. Future strategy, staff productivity, staff location and customer relationship management (CRM) were all areas which business broadband users thought would experience the greatest impact. More fibre users than non fibre users (by about 10%) foresaw a positive effect on staff location and CRM.

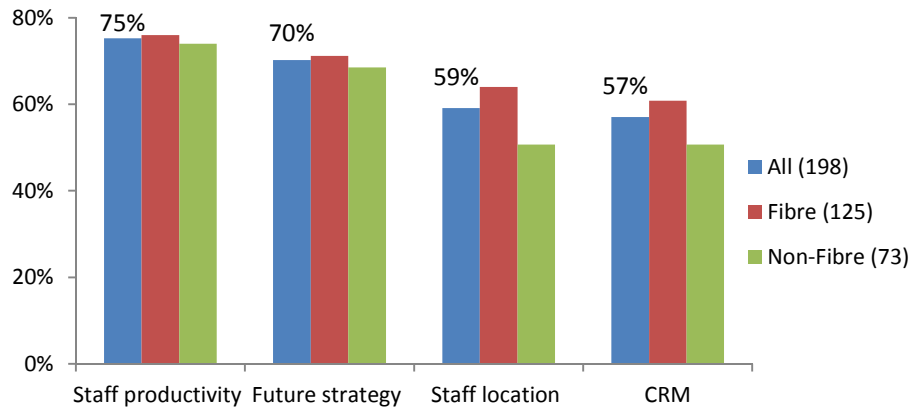
Collaborative tools (70%), Voice Over IP (70%) and cloud based applications and services (69%) were the areas most businesses said they would consider investing in to use UFB. Remote working engendered high interest with more than 65% of all respondents indicating a willingness to invest. Perhaps surprisingly, product development was not seen as an area in which businesses would invest to leverage UFB, with only 19% of all respondents indicating they see value here.

**Figure 3:** *In which areas of your business would you consider investing to use UFB?*



Nearly 73% of all respondents said they would wish to purchase voice over internet services in addition to broadband and nearly 40% said they would wish to purchase high definition video conferencing. These percentages did not vary greatly across segments.

**Figure 4:** In which areas would improved speeds & data capacity have a “great” or “good” effect on your current business model?



When asked about desired speeds and capacity of new UFB products, more than 52% of all respondents sought speeds of more than 100mbps symmetrical. The expectations of business users who aren’t experiencing fibre are comparatively low when compared against the whole base. Seventy-two point two percent of those of those without fibre would be happy with services of up to 100 Mbps. Of note, some 23% of those currently on fibre would wish to purchase dark fibre.

## 6. How Will Capability Need to Improve?

**“Ninety-nine point nine percent of people in business, including IT people, don’t actually have a good idea (about) what they are going to get or the benefit to them.... Everybody knows they want more, faster, but they can’t actually determine what more is.”**

*Kevin Drinkwater, CIO Mainfreight*

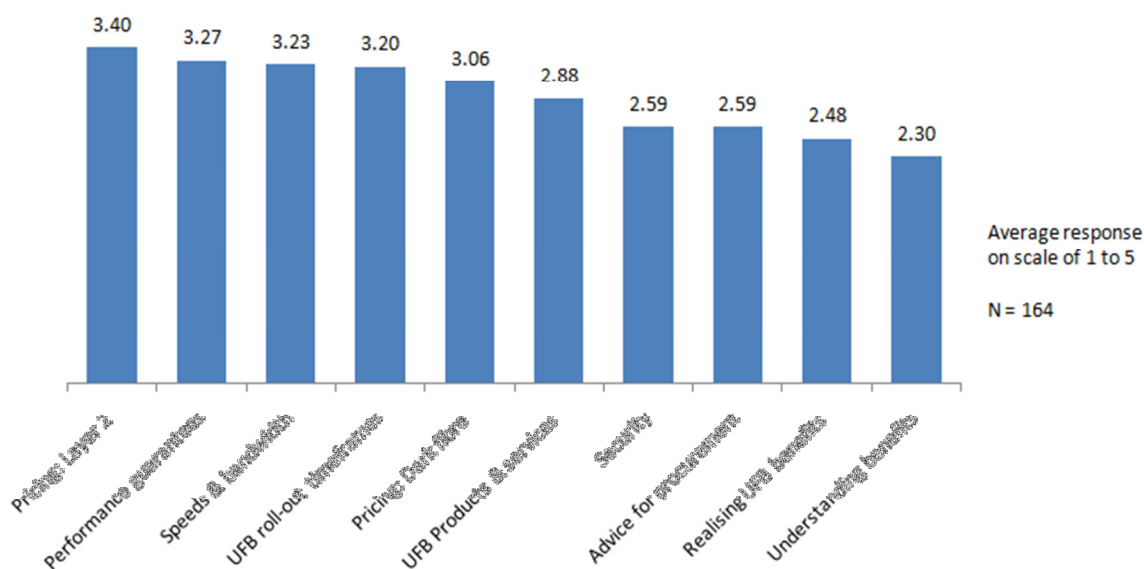
Unsurprisingly, given pricing, speeds and bandwidth were among the greatest drivers to connect, and price the greatest barrier, these were among the top three subjects which all segments of respondents to this question wanted to know more about. Of those with at least one fibre connection, performance guarantees and dark fibre pricing were of greatest interest, with 77% expressing a medium to great need to know more about both. Interest in dark fibre pricing outweighed that of lit fibre pricing for this group. Of those with no current fibre services, just over 80% also expressed a medium to great need to know about roll-out timeframes.

Around 60% of all respondents wanted to receive information and advice to make use of UFB, with more than 30% prepared to pay to receive it. Strikingly, of those with no current fibre services, 41% said they had no need to understand the potential benefits of UFB and around 33% said they had no need to know more about applying the potential benefits to their business model.

**"Boards and C-level executives have got to come to terms with the implications of this technology. We're not just talking about "more, better, faster" here - this is a fundamental change to the way we connect with each other. Boards and executives should be asking how they can take advantage of this change, will their suppliers be ready, will we ourselves be ready when our customers have access to 100Mbps speeds and demand so much more from us. This is the key question for boards in the years ahead."**

*Doug Wilson, CIO, Automobile Association*

**Figure 5: What would you like to know more about?**



**"It's important that we get people from each sector to champion the UFB (initiative). It's not until a designer hears from another designer about how it's changed the way they do business that it really starts to sink in. We need to hear from the people on the ground about how UFB has changed their lives - designers, software developers, trucking companies, orchardists, wine makers, consultants, business owners, the lot."**

*Chris O'Connell, Director of Strategy, Radar Guidance*

The need to build capability in communities receiving broadband is widely acknowledged. The recent "Innovation: New Thinking, New Directions"<sup>2</sup>, report on 400 firms commissioned by the Australian Industry Group and conducted by the Innovation Review Steering Committee has similar findings to this survey in this regard:

*"The perceived gap...is in building awareness and driving readiness within industry itself, especially in those sectors that are typically removed from changing dynamics in telecommunications and IT. A concerted effort is required to demonstrate the value of ubiquitous connectivity and inspire creative thinking about the new possibilities for innovation in business models that are emerging. Review participants believe that this effort will be most effective if driven by industry, for industry."*

<sup>2</sup> Source:

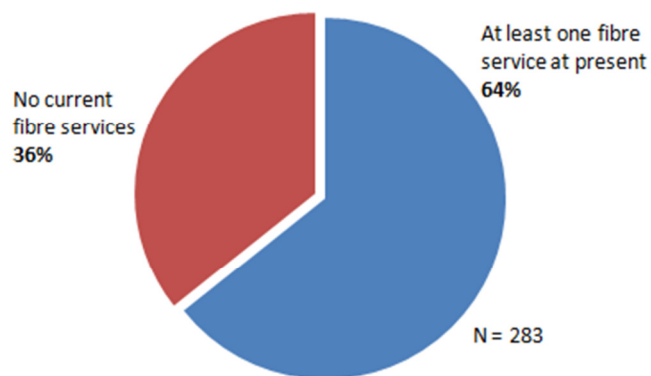
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## 7. What Current Services Do Businesses Use?

Current Internet speeds experienced by all respondents are perhaps surprisingly low given 64% said they have at least one current fibre service. Just 29% of respondents to this question reported maximum downstream speeds of more than 30 Mbps at their head office. Of non-fibre users, 75% reported current speeds of less than 10 Mbps at their head office. Thirty-one per cent of non-fibre users have speeds between 5 and 10 Mbps at their head office. Around 13% of respondents to this question didn't know what speed their business was purchasing.

**Figure 6:** *Do you have a fibre connection at present?*

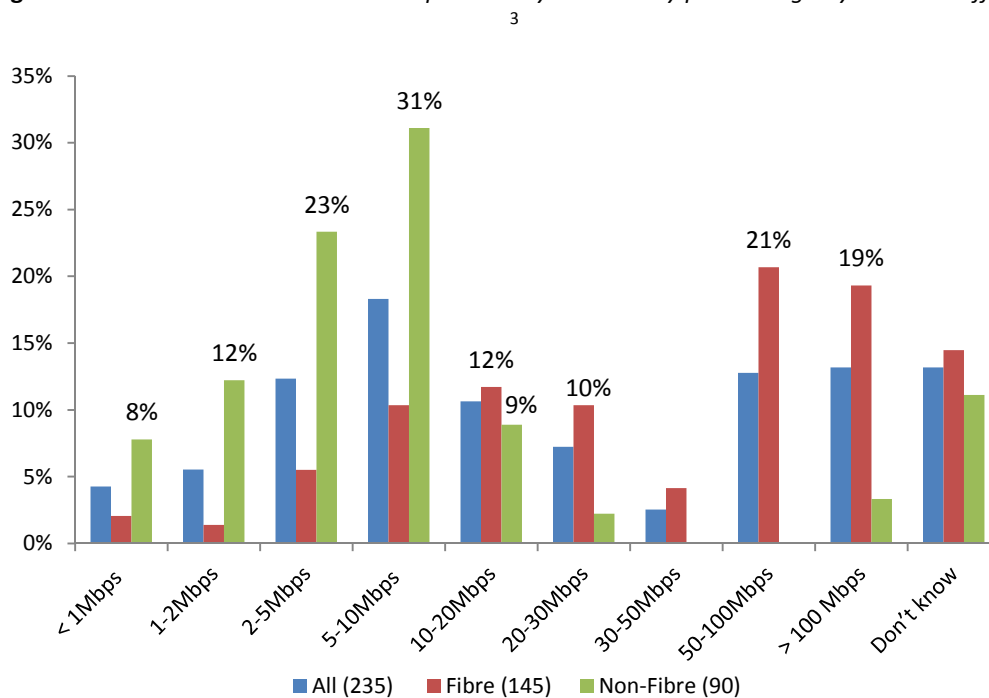


As one would expect, respondents typically purchase higher speeds for their Head Office locations than Branch Offices. Amongst non-fibre users, a majority (61% excluding "Don't know" responses)

purchase services between 5 and 10 Mbps downstream for their Head Offices, while in Branch Offices speeds are more evenly spread between 2 Mbps or less (37%) and 5 to 10 Mbps (49%).

The same pattern is evident amongst respondents with at least one existing fibre service: 47% are purchasing downstream speeds in excess of 50 Mbps at their Head Office (excluding “Don’t know” responses), but only 31% in their Branch Offices. Of businesses with at least one fibre service, one in five (18%) purchase downstream speeds of 2 Mbps or less for their Branch Offices.

**Figure 7: What maximum downstream speeds are you currently purchasing at your Head Office?**

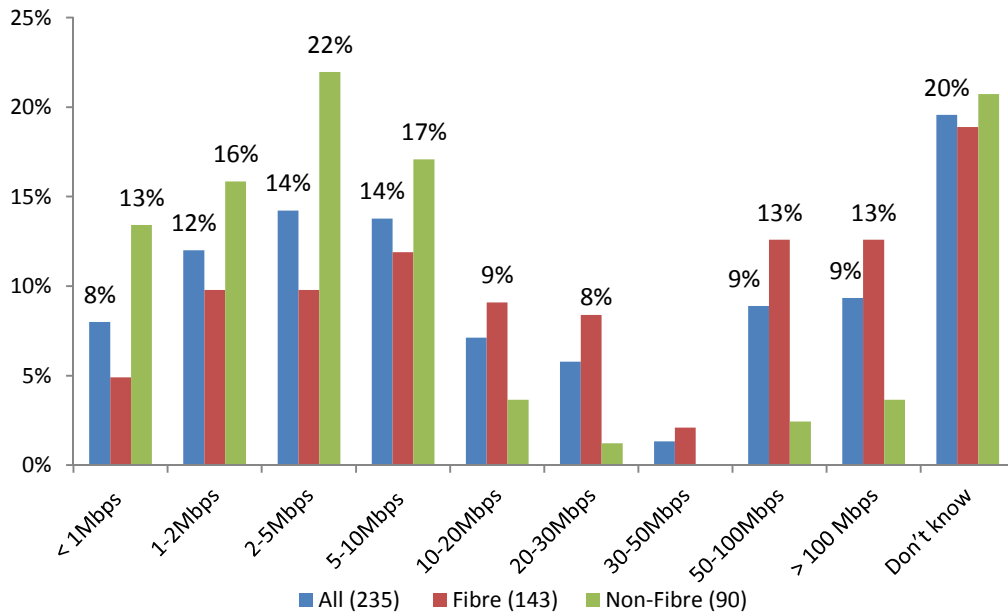


This illustrates that the greatest opportunity for UFB to increase Internet downstream speeds is for Branch Office locations rather than Head Offices. CFH and TUANZ believe improving Wide Area Networks across Branch Offices will be a key benefit of UFB for the business sector.

<sup>3</sup> **Note:** The introduction to questions on current services read “It has been reported that only 9.2% of New Zealand businesses are utilising the internet at speeds of more than 5Mbps.” Arguably this could be considered to have guided responses; however, the results showed no apparent bias in line with this.

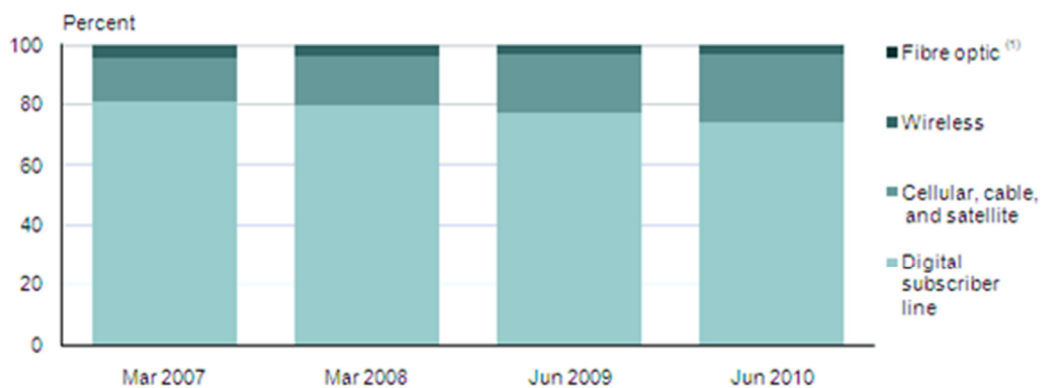


**Figure 8:** What maximum downstream speeds are you currently purchasing at your Branch Office(s)?



For the purpose of providing context only, a brief review of Statistics New Zealand’s Internet Service Provider (ISP) Survey for the year to June 2010 was conducted. This report does not focus on the business sector – 80% of its respondents were residential subscribers while only 20% were business or government entities, and uses a different methodology from this report. Statistics New Zealand’s research found that only 1% of all broadband subscribers were using fibre.

**Figure 9:** Statistics NZ: Broadband subscriptions by connection type, 2007-10<sup>4</sup>



1. Fibre optic accounts for less than 1 percent of subscribers.

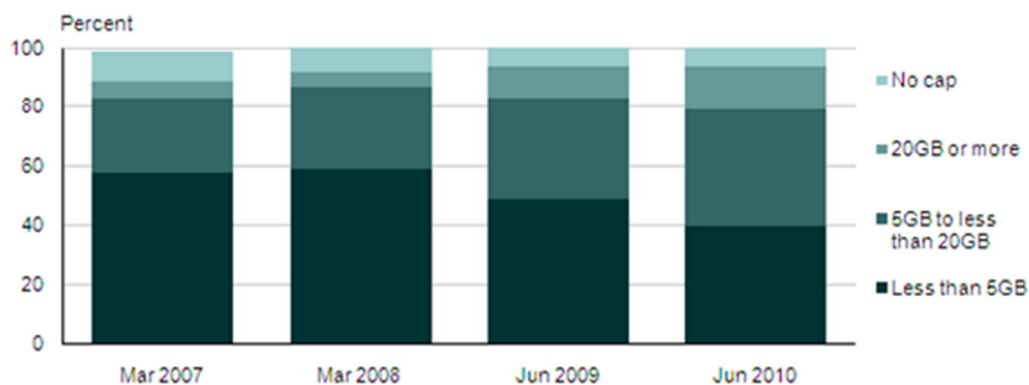
<sup>4</sup> Source:

[http://www.stats.govt.nz/browse\\_for\\_stats/industry\\_sectors/information\\_technology\\_and\\_communications/ISPSurvey\\_H\\_OTPJun10/Commentary.aspx](http://www.stats.govt.nz/browse_for_stats/industry_sectors/information_technology_and_communications/ISPSurvey_H_OTPJun10/Commentary.aspx)

It is clear from the comparison between the Statistics NZ data and the UFB survey that existing fibre services are most common in the corporate sector. This translates into faster Internet speeds. Only 4% of respondents to the Statistics NZ survey reported broadband download speeds of greater than 24Mbps while as previously stated, 29% of all UFB survey respondents said they are purchasing services with download speeds of greater than 30Mbps at their head office. There was greater correlation between the findings of the two surveys on speeds at the lower end of the spectrum: the Statistics NZ research found 10% of respondents enjoyed less than 1.5Mbps while the UFB survey showed 9.8% at less than 2Mbps.

Regarding data caps, it is of further interest to note that nearly 40% of TUANZ respondents reported no data cap, while this was evident for only 7% of the far broader Statistics NZ sample.

**Figure 10:** Statistics NZ: Internet subscription data cap, Broadband subscribers, 2007-10<sup>5</sup>



With regard to price, 50% of all respondents to the CFH / TUANZ survey said they were paying more than \$200/month for broadband services<sup>6</sup>. Forty seven per cent of respondents with at least one fibre connection said they were paying more than \$1000/month. Forty percent of non-fibre users were paying between \$50-\$120/month. More than a quarter of all respondents to this question did not know what they were paying.

<sup>5</sup> Ibid.

<sup>6</sup> Caution should be used when interpreting this data, as many telecommunications users find it often hard to separate the cost of broadband from other elements of a bundled contract.



## 8. Looking Forward

**"This is the perfect opportunity for New Zealand businesses to completely redesign the way they work, the way they interact with suppliers and customers, the way they conduct business on the global stage. "**

*Pat O'Connell, CIO Rank Group*

What are the key learnings from this survey? Questionnaire respondents, both those with some fibre services and those without, show a strong propensity to move to UFB as it becomes available. Most of those surveyed who are using fibre are currently paying a lot more than for copper. At reasonable prices, it could be expected most will migrate to UFB. Staff productivity, flexibility in staff location, and customer relationships are among the leading reasons to take up UFB, however its uses and benefits need to be better articulated. Certainly smaller businesses, and businesses without any current fibre services, need to be more engaged.

Crown Fibre Holdings and TUANZ look forward to developing further initiatives to build demand and engage all parts of New Zealand society on UFB. We need to improve the understanding of the benefits of UFB. Innovative thinkers are needed to share their ideas on new uses for delivering quantities of data at speed. To this end, in many countries seeking to leverage the benefits of fibre, local Digital Leadership Fora have been created. In these, stakeholders from both the demand and supply sides collaborate to develop and implement local digital strategies. These are some of the ways we can make sure we are prepared for the transformation UFB will bring.

If you have other ideas and would like to share them with us, or any other feedback on this report, please contact **Anna Verboeket**, Stakeholder Relations Manager, Crown Fibre Holdings at **anna.verboeket (at) crownfibre.govt.nz / phone 09 912 2424 or visit [www.crownfibre.govt.nz](http://www.crownfibre.govt.nz)** .