

Digital skills for life in Aotearoa

2021



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COVID-19 has ushered in a digital revolution that we had been promised for 20 years. Business is online and more of our lives are conducted using digital technologies. We are seeing increased creativity, innovation, collaboration and new and more effective ways of working.

Most of our customers that I speak to are excited about the opportunities digital brings. But I know that for many, this change comes with both opportunities and risks. Change is a challenge and the stresses the pandemic has wrought on people, jobs and businesses will not be short-lived. There is no riding this one out and waiting for a return to what went before. We must accept that everything has changed, embrace technology, and turn our minds to the opportunities it presents.

Our economy is undergoing a reboot and digital technologies need to be at the core of that. By expanding markets and improving the spread of new ideas, these technologies deliver more productive and better paying jobs and allow productive Kiwi enterprises to grow and invest.

Even with clear economic and social benefits, digital adoption and inclusion do not just happen automatically. The key challenge is not only about how we build back better, but also about levelling the playing field to ensure everyone has the essential digital life skills needed to be part of a more productive and sustainable society.

While considerable knowledge and infrastructure already exists on internet access, focus must also be applied to the enablers of digital inclusion – the motivation to use digital tools, trust in their safety and the skills needed to get the most out of them. This is a job for the government and business – no one can do it alone – and the insights presented in this report are offered as a guide to help us navigate these challenges.

The opportunities in front of us are immense and the path we forge now will be different from the one we had planned. With digital enablement and strong social connections at our core, we can build a nation of resilient and innovative businesses, create jobs, support communities, and shape a better economy that delivers for everyone.

Angela Mentis
Chief Executive, BNZ



I am pleased to contribute to this valuable conversation around digital acceleration in Aotearoa. Digital transformation has huge potential to open up new markets for our exports, lift the productivity of our businesses, wages of our workers and to increase the overall health and well-being of our diverse communities. The adoption of digital skills and tools during the COVID-19 lockdowns, highlighted the benefits of increasing online engagement and the need to accelerate our shift to a truly digital nation. The capability of New Zealanders to use digital tools and technologies and to operate in the digital world is central to this transition. It is critical that we all have the opportunity to upskill to make the most of digital technologies in our economic development.

Digital adoption will allow us to keep up with the ever-changing commercial and social world which we now find ourselves in and which will eventually raise Aotearoa's digital capability and confidence in using new and existing technologies. Adding to that, it will facilitate domestic and international commerce without travel or contact, grow weightless exports, support Aotearoa's emission reduction goals, and help us adapt to the implications of climate change, turning New Zealand into one of the most resilient and sustainable economies.

As we accelerate this transition, we need the best information to back our decisions. BNZ's work on measuring digital skills will help in targeting initiatives aimed at improving digital skills and in tracking their effectiveness at a system and national level. I'm supportive of BNZ's work aimed at improving our understanding of the digital capabilities of New Zealanders. I expect that as we accelerate our digital transformation, we can look forward to seeing improvements in digital competency reflected in the future estimates of the digital skills indicators mentioned in the digital skills report. I congratulate BNZ on their initiative in undertaking this research and welcome this report's valuable contribution to the ongoing conversation on how we accelerate New Zealand's journey towards becoming a truly digital nation.

Hon Stuart Nash
Minister for Economic and Regional Development,
Forestry, Small Business and Tourism



Across the world, governments, industry, and communities are struggling to keep up with the pace of new developments in the digital sector, to make the most of the benefits, and to minimise the downsides. This is not something that any one of us can solve alone.

The Digital Council welcomes this research into digital skills filling a critical gap in our evidence base in New Zealand. This strengthens the case for government to invest in digital inclusion as a way to drive digital transformation and ensure our ongoing resilience as a nation.

As the Digital Council for Aotearoa New Zealand we provide independent advice to the New Zealand Government on how to maximise the benefits of digital and data-driven technologies for all New Zealanders. The Council sees digital inclusion as a cornerstone for New Zealand's future resilience and success, and inclusion is the Council's focus in 2021.

We acknowledge BNZ and see this research as a great example of the way that the banking industry and the private sector more generally contributes to New Zealand's digital future.

This research helps build a rich and credible evidence base so we can seize the opportunities to build a thriving, equitable, digital future for Aotearoa, and for all New Zealanders.

Mitchell Pham

Chair, Digital Council for Aotearoa New Zealand

Digital Council

For Aotearoa New Zealand

The past year has brought clarity and urgency to the need for digital equity and empowerment for all New Zealanders. It's now beyond argument that digital inclusion is a key foundation for wellbeing and economic prosperity for us all.

While it's important to get people onto the internet, a device and a connection are only the start. If people don't have the skills and support to use the internet, they're unlikely to make the most of its potential, and may be exposed to harm. InternetNZ welcomes this report to shine light on the digital skills gaps in Aotearoa. It reinforces that our focus must be on groups who have the most to gain from the internet but who continue to face the highest barriers.

We support the report's call for greater coordination within government, and for more collaboration between those who work in digital inclusion. In 2020, we released a [five point plan](#) identifying key digital inclusion priorities for cross government action. In the past year we have been working to find a solution to the fragmentation that exists among the many committed individuals and organisations working tirelessly for digital equity in Aotearoa.

We think radical cooperation is the answer. Together with others, we're looking to establish a coalition which will bring the digital inclusion ecosystem together, drive collaborative action towards digital equity in New Zealand, and connect into government. Its working name is the Digital Equity Coalition Aotearoa (DECA) - and more information can be found at www.digitalequity.nz

Working together, we can achieve digital equity in Aotearoa.

Jordan Carter

Internet New Zealand Chief Executive





Executive summary

Improving digital skills provides an abundance of benefits. But too many New Zealanders still sit on the wrong side of the digital divide. We need to improve digital skills to lift wellbeing and productivity, and ensure no one gets left behind.

Benefits of the internet abound – from saving people time and money, to improving social connections, and helping with professional development. Digital technologies offer enormous potential to help us lift wellbeing and to make our economy more productive, sustainable, and inclusive. In the wake of COVID-19, seizing these benefits through greater digital inclusion is now more important than ever.

BNZ's Digital Skills for Life in Aotearoa 2021 report shows that almost 70% of New Zealanders improved their digital skills over the last year and that we are now using the internet more than ever. But there are still worrying signs that digital skills are lacking, especially for some groups, and that many New Zealanders do not know how to stay safe online.

Unfortunately, the already marginalised and most vulnerable in New Zealand are less likely to have the skills needed to operate effectively in the digital world. If left unaddressed, this digital skills gap risks compounding existing inequalities as the digital transformation rolls on.

To take full advantage of the promise of digital technologies and to ensure no one gets left behind, we need to act quickly and collectively to ensure inclusive access to digital training for all who want it.

Key findings

700,000 adult New Zealanders (20%) lack the essential digital skills they need to use the internet safely and effectively.

Most New Zealanders have foundational digital skills (93%¹) and know how to communicate (87%) and transact (85%) online. Fewer New Zealanders know how to use the internet to solve problems (80%) or to handle digital information and content (81%). More worrying still, fewer New Zealanders have the digital skills needed for online safety (73%).

The digital skills divide perpetuates existing inequalities in New Zealand.

New Zealanders are less likely to have essential digital skills if they are in the following groups:²

- Have low household income (288,000 adults, or 32% of people in this category, lack essential digital skills).
- Lower levels of education (360,000 adults, or 28% of people in this category, lack essential digital skills).
- Have a disability (108,000 adults, or 42% of people in this category, lack essential digital skills).

95% of New Zealanders agree the internet provides more benefits than disadvantages.

Benefits range from saving time (79% agree) and money (58% agree) and improved social connections (80%) to better management of mental and physical health (53%). Almost 90% of New Zealanders agree that online banking is beneficial and helps them stay on top of their finances. The more digital skills people have, the more they appreciate the benefits the internet has to offer. For example, people with all the digital skills surveyed for are twice as likely to agree that the internet helps them develop professionally, compared to people without essential digital skills.

1.3 million (37%) people don't know where to get help to stay secure online.

With cyber threats on the rise, knowing where to get help to stay secure online is increasingly important. 1.3 million adults – or 37% of New Zealand adults – don't know where to get such help. With the COVID-19 pandemic accelerating digital transformation, it's critical that people have all the skills they need to stay safe online.



If you would like to know where to get help to stay safe online, we recommend these resources:



cert.govt.nz/individuals



getscamsavvy.co.nz

¹ Percentages in this paragraph are average scores across all skills in each digital skill category. See Figure 13 for detailed results.

² For these statistics, low household income is set at \$50,000 or lower. Lower level of education is defined as having no qualification or only a school-level qualification. Disability status is as defined using the Washington Group standard (detailed later in the report).

Introduction

Digital inclusion is when “everyone has equitable opportunities to participate in society using digital technologies”.³ To enable digital inclusion, people need access to digital technologies, the motivation to use them, trust that they are safe, and the digital skills to get the most out of them.

While considerable knowledge already exists on internet access in New Zealand, much less is known about the other enablers of digital inclusion. To fill that gap, this report gives a comprehensive assessment of digital skills – plus insights into the other enablers of digital inclusion – across a representative sample of adult New Zealanders.

COVID-19 is key context for this report. The pandemic has seen more New Zealanders go online and improve their digital skills over the last 12 months. This could be a silver lining of the pandemic, as New Zealanders with strong digital skills earn higher incomes and are less likely to be unemployed compared to people with weaker digital skills (Figures 1 and 2).

However, by accelerating the digital transformation, COVID-19 has also highlighted the risk of it increasing inequality. Twenty percent of New Zealanders have had their incomes fall because of the pandemic, with low income earners hit hardest by the financial pain of COVID-19 (Figure 3). Part of the reason for this is that low-income earners tend to have weaker digital skills compared to high income earners.

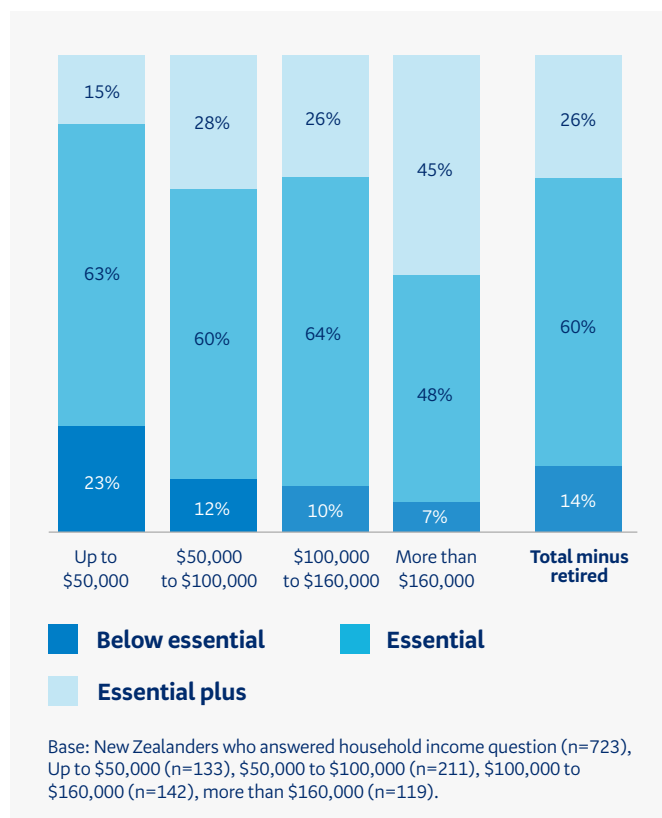
COVID-19 has accelerated and broadened the Fourth Industrial Revolution with the rapid expansion of e-commerce, online education, digital health, and remote work... these developments also risk exacerbating and creating inequalities.

– World Economic Forum

This reinforces the importance of widespread digital skills and inclusion in building economic resilience and keeping inequality in check. If every New Zealander is to have the chance to fully participate in society and the economy, there must be equitable opportunities for them to improve their digital skills.

If not, we run the risk of creating a ‘two-speed’ economy that worsens inequality as the digital transformation progresses. Investing in digital skills democratises life and work opportunities for everyone – to be digitally included is to be socially and economically included. It follows that a New Zealand population enabled with strong digital skills is critical in helping build a productive, sustainable, and inclusive New Zealand economy.

Figure 1:
Digital skills and household income
Digital skills group by household income (excluding retired people)

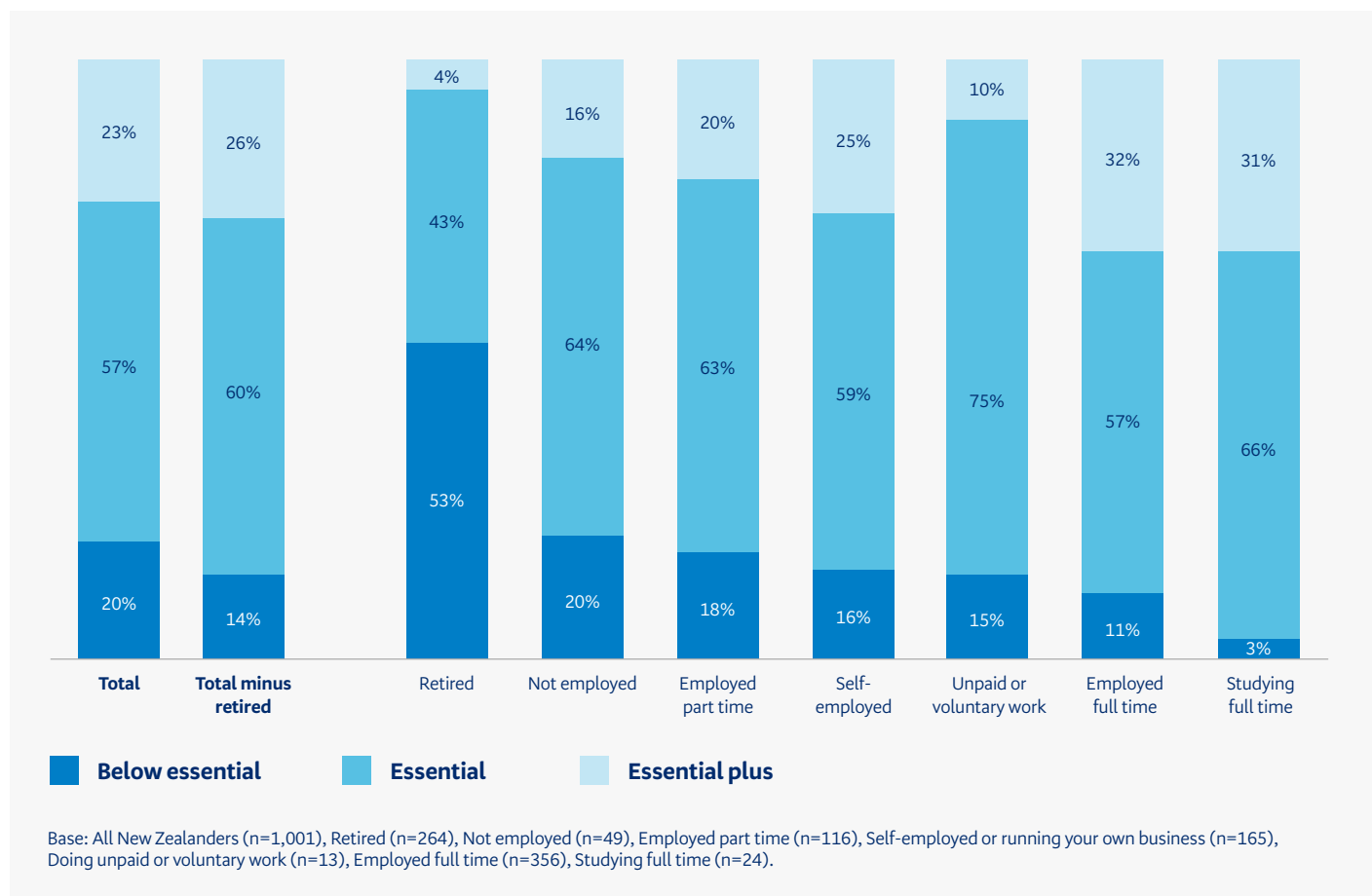


4 out of 10

New Zealanders increased their internet use during the COVID-19 pandemic

³ This definition is used by the Department of Internal Affairs. Available at: <https://www.digital.govt.nz/digital-government/programmes-and-projects/digital-inclusion/how-digital-inclusion-is-measured/>

Figure 2: Digital skills and employment
Labour market status and digital skills group



1 in 5

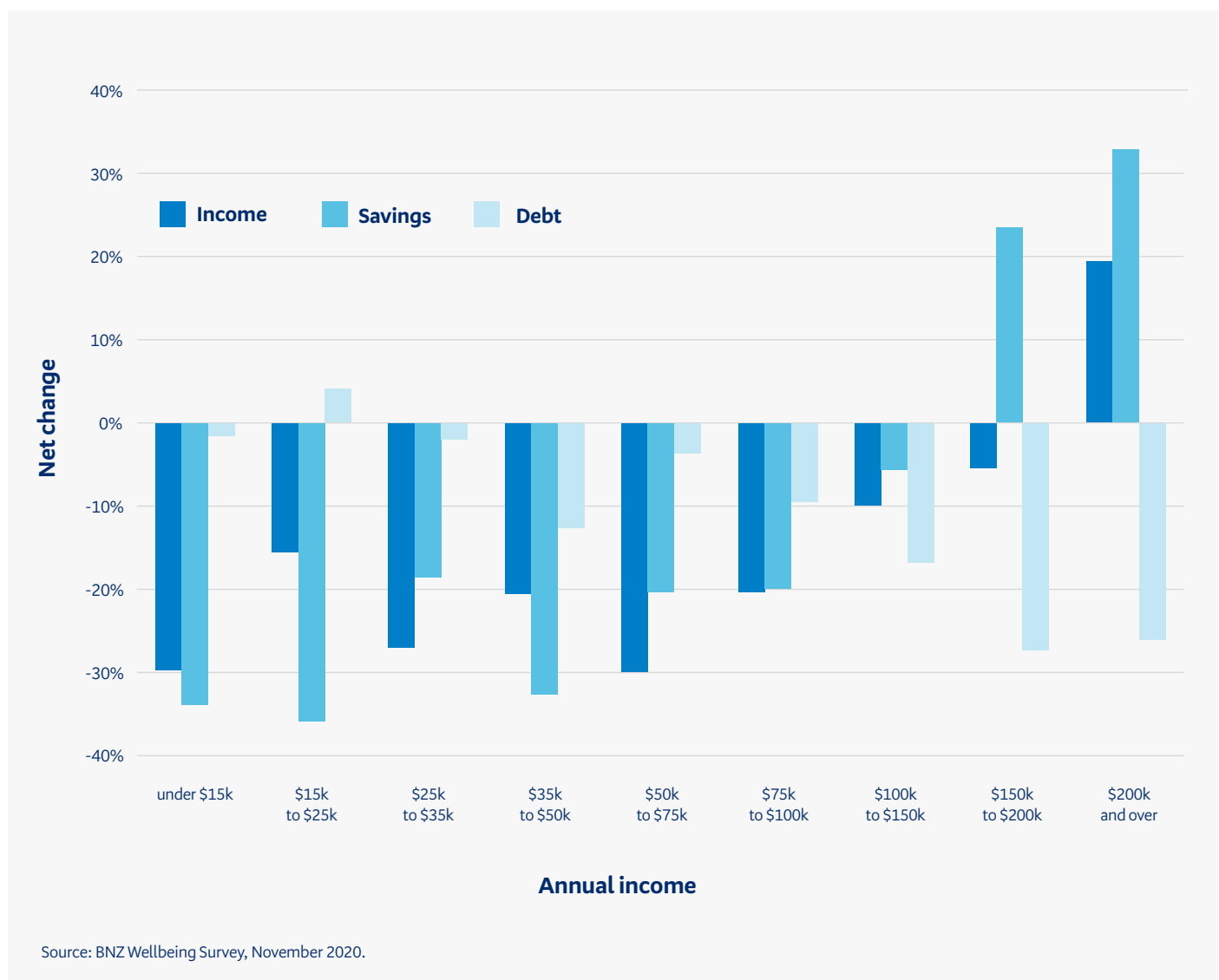
New Zealanders have suffered income cuts because of the pandemic



The rapid digitalization of human interactions and the workplace has also expanded the suite of essential digital skills—including communication, cyber safety and information processing beyond what was previously considered internet savvy.

– World Economic Forum

Figure 3:
Change in financial situation over the last six months, by income





Digital inclusion

Most New Zealanders use the internet very frequently, although some miss out and others lack confidence.

Digital inclusion is about having convenient access to the internet and the motivation, trust, and skills to use it confidently and safely. This report is about digital skills, but it first considers the broader context around digital inclusion.

Nine out of 10 New Zealanders use the internet daily (89%), with another 7% using it a few times a week or every couple of days (Figure 4). That means 96% of New Zealanders use the internet at least a few times a week, with virtually all these people having access to the internet at home.

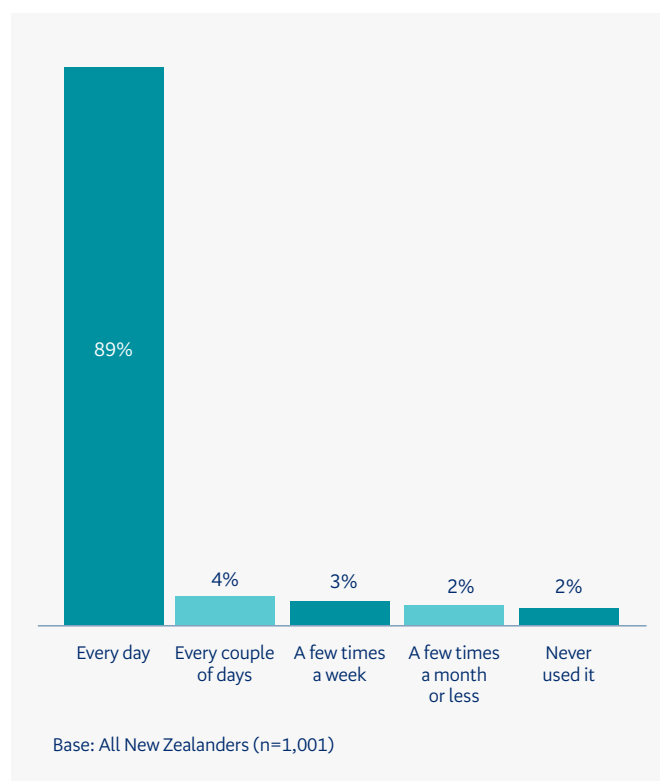
This level of internet access is higher than previously measured in New Zealand. This digital skills survey finds that 95% of people have access to the internet at home. The 2018 Census reported household access at 86%⁵, and the 2017 New Zealand Election Study reported adult access at 91%⁶.

95%

of people have access to the internet at home



Figure 4: Frequency of internet use
How often do you use the internet?



⁵ The 2018 Census reported household access at 86%. The question in the 2018 Census was "which of these are available in this dwelling?" The question in the Digital Skills survey was "do you have access to the internet at home?"

⁶ New Zealand Election Study. Results from the 2017 NZES. Available at http://www.nzes.org/exec/show/2017_NZES+Results

Internet use is less common for some groups of New Zealanders (Figure 5). Hinting at the link with inequality, people with no or only school-level qualifications, the unemployed and people on low incomes are typically less digitally active. Older New Zealanders also use the internet less frequently, as do some ethnicities.

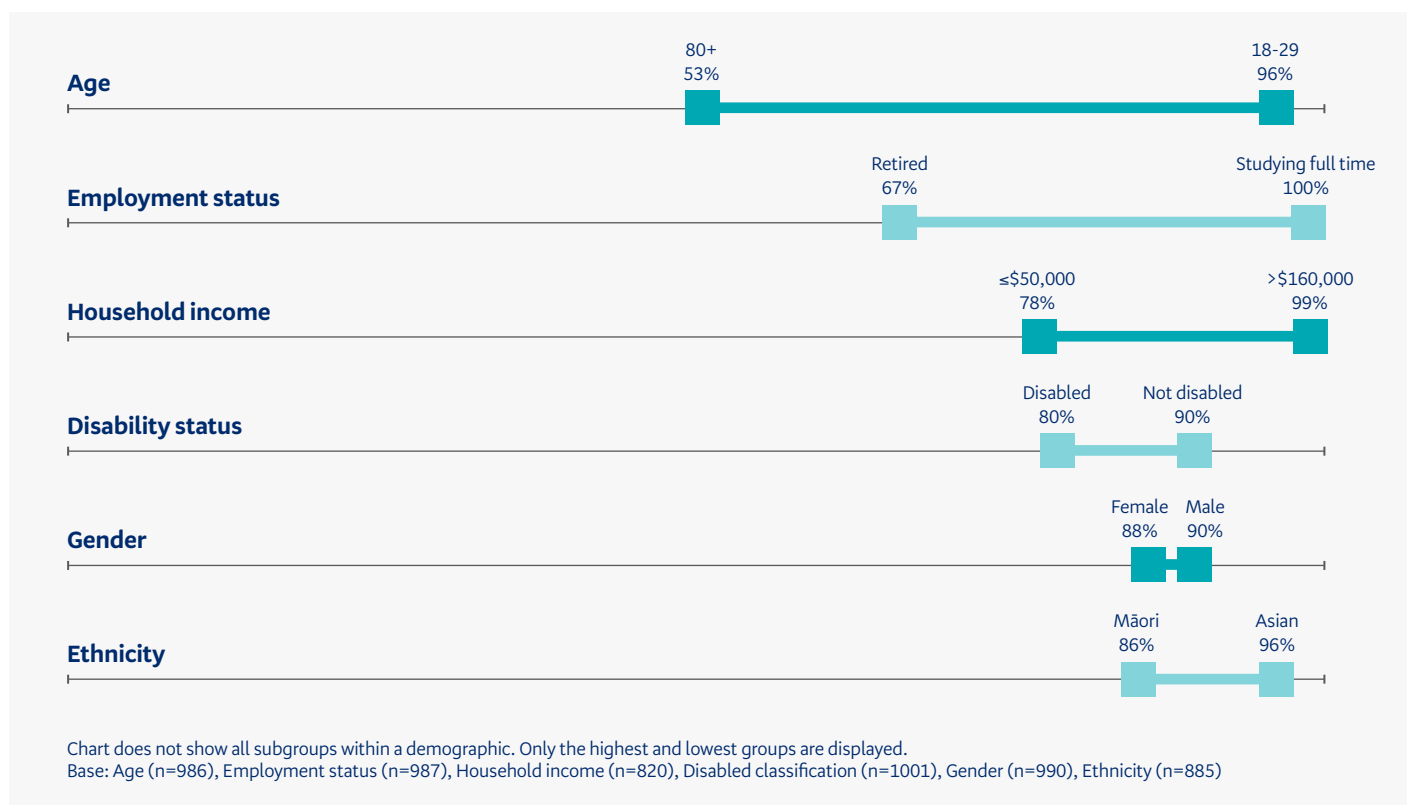
The benefits people get from the internet are an indication of their motivation to get online. The overwhelming majority of New Zealanders (95%) agree that the benefits of the internet outweigh the disadvantages (see: [The benefits of digital](#)). People in most age groups share this opinion, apart from the over 80-year-old age group who are slightly less enthusiastic overall on the benefits of the internet.

Trust is proxied by the confidence New Zealanders have in the internet and their understanding of the steps to take in the event of significant challenges (Figure 6 and 7)⁷. Nine out of 10 New Zealanders report being confident using digital devices. Unlike motivation, confidence diminishes with age. Seven out of 10 people (71%) understand the steps to take if they faced significant online challenges (Figure 7). This also diminishes with age.

Despite overall good digital inclusion results, we must not forget that some New Zealanders continue to face barriers. In an age of digital transformation, these New Zealanders are vulnerable to the risk of social and economic exclusion.⁸



Figure 5:
Proportion of demographic groups using the internet daily



⁷ The Department of Internal Affairs, 2019. Digital Inclusion Outcomes Framework. Available at <https://www.digital.govt.nz/dmsdocument/167~digital-inclusion-outcomes-framework/html>

⁸ Appendix A provides more detailed statistics on Access, Motivation and Trust.

Figure 6: Confidence using devices by age
You're confident using devices (agree/disagree) by age group

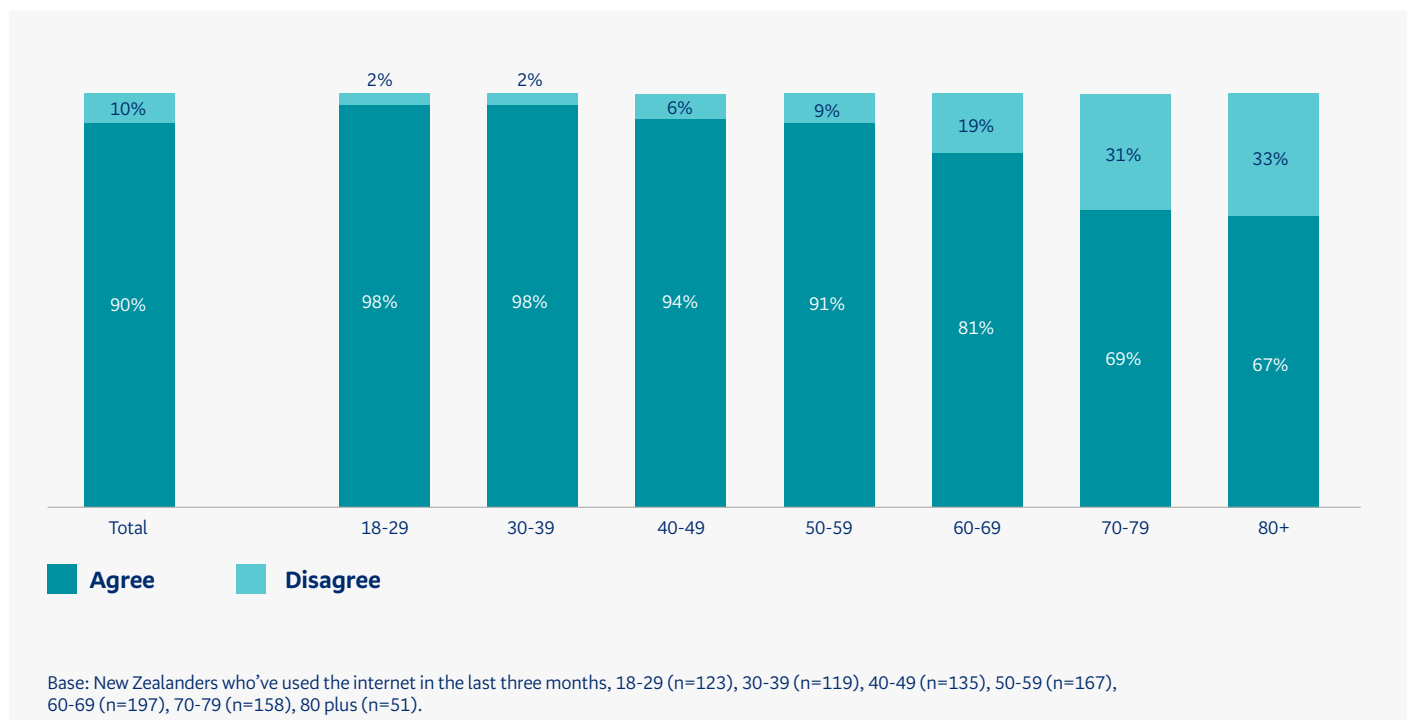
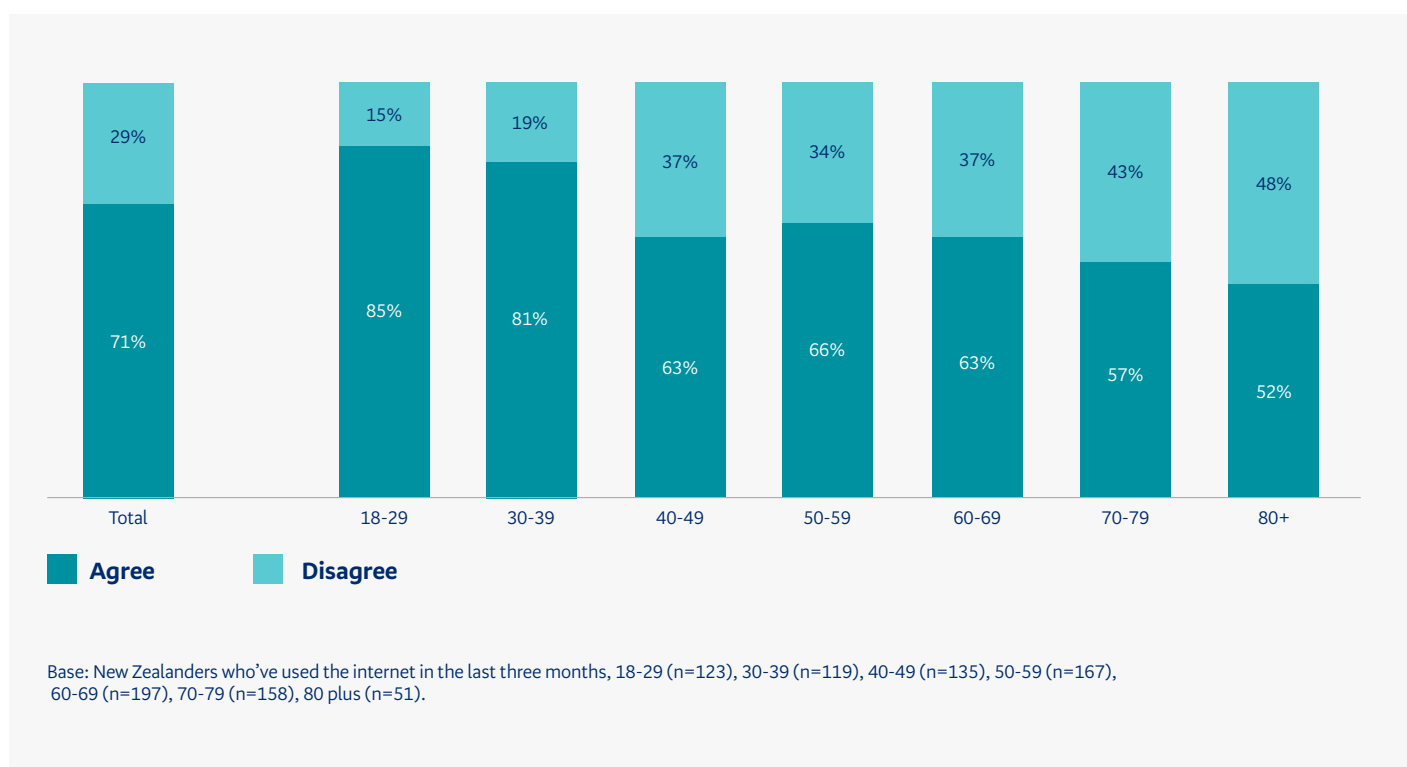
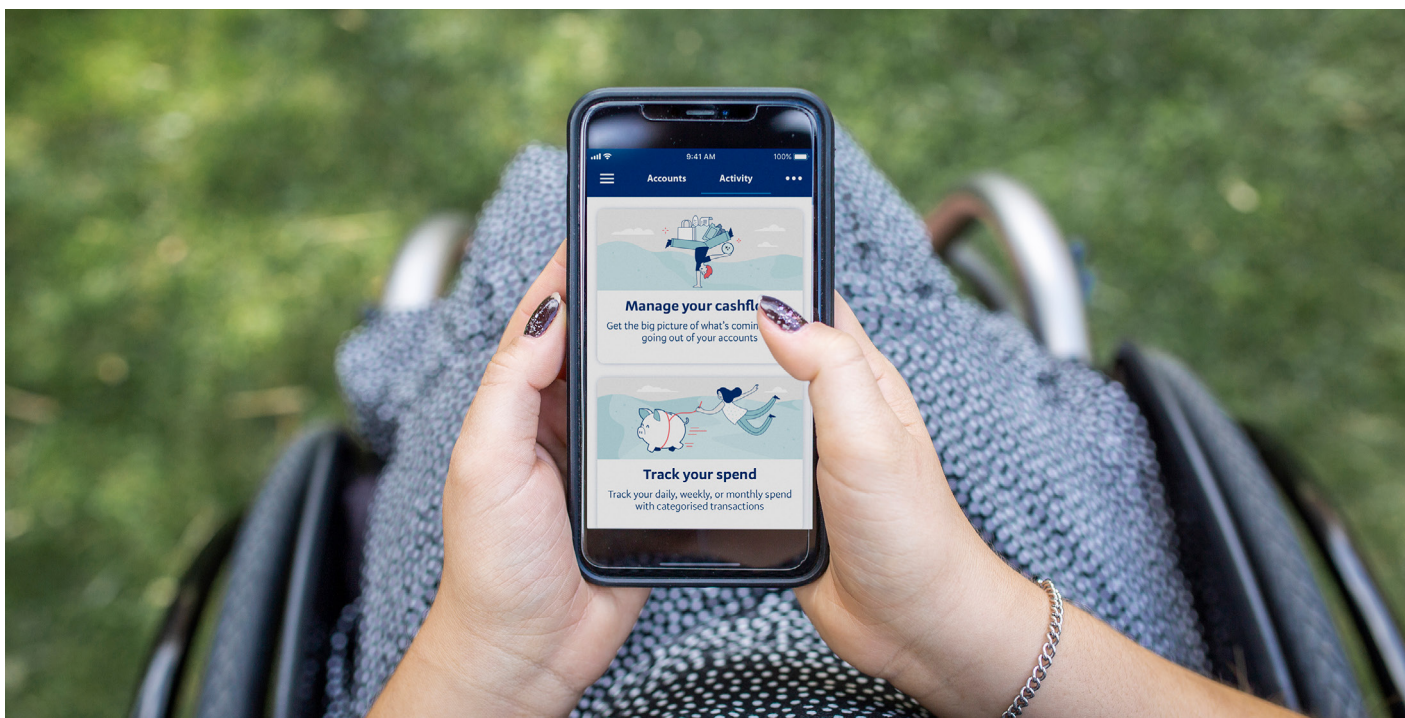


Figure 7: Significant online challenges by age
You know the steps you'd need to take if you faced significant challenges online (agree/disagree) by age group





Digital skills

700,000 adult New Zealanders (20%) lack the digital skills deemed essential for modern life. 'Online safety' is the biggest skill gap, with 1.3 million New Zealanders not knowing where to get help to stay safe and secure online.

Digital skill groups

The digital skills tested for in the survey are grouped in the six categories listed in Figure 13 below. **Foundational** skills are entry level and without which a person would struggle with basic online activities. Someone is assessed as having **Essential** digital skills if they have all the foundational skills plus at least one skill from each of the other five skill categories. If someone has all 34 of the digital skills tested for in the survey, then they are categorised as having **Essential plus** digital skills.

This gives three categories of digital skills: **Below essential**, **Essential**, and **Essential plus**. Figure 8 shows the share of New Zealanders in each of these categories. One fifth of New Zealanders have **Below essential** digital skills while slightly more than one fifth are in the **Essential plus** category.

People with a disability are
twice as likely
to lack essential digital skills

4 out of 10
New Zealanders don't
use security features
additional to passwords
if they have the choice



Figure 9 shows the proportion of each demographic group with **Below essential** digital skills.⁹ Digital skills are heavily skewed by age – New Zealanders aged 70 years and over are much less likely to have essential digital skills. Digital skills also vary significantly depending on household income, disability status, and education. For example, disabled people are twice as likely to not have essential digital skills compared to the general population.¹⁰

⁹ More detailed tables on the breakdown of digital skills across demographic groups are available in Appendix B.

¹⁰ Respondents were asked the 'Washington Group' set of questions regarding disability. Those who answered any of the questions 'a lot of difficulty', or 'can't do at all' are classified as having a disability. See: <https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/>

Differences in digital skills by ethnicity calls for special attention (Figure 10). Previous research has uncovered significant variation in internet access by ethnicity – notably Māori and Pacific people were found to have relatively low internet access.¹¹ However, the current study finds that Māori and Pacific people are not more likely to have below essential digital skills at the 95% level of significance. While NZ Europeans and Asians are more likely to have **Essential plus** digital skills, these differences are also not statistically significant.



2 out of 10

New Zealanders can't create a Microsoft Word Document or Google Doc

Figure 8:
Digital skill groups

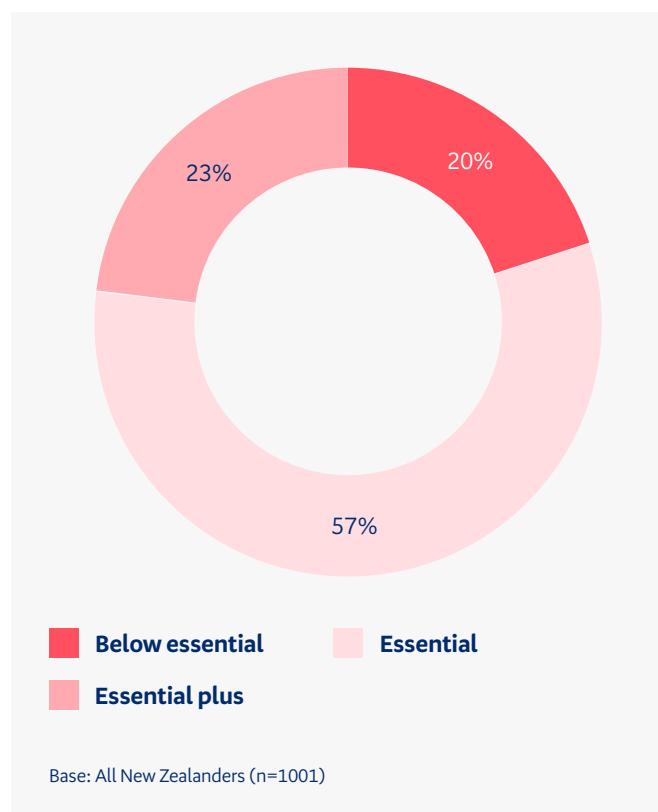
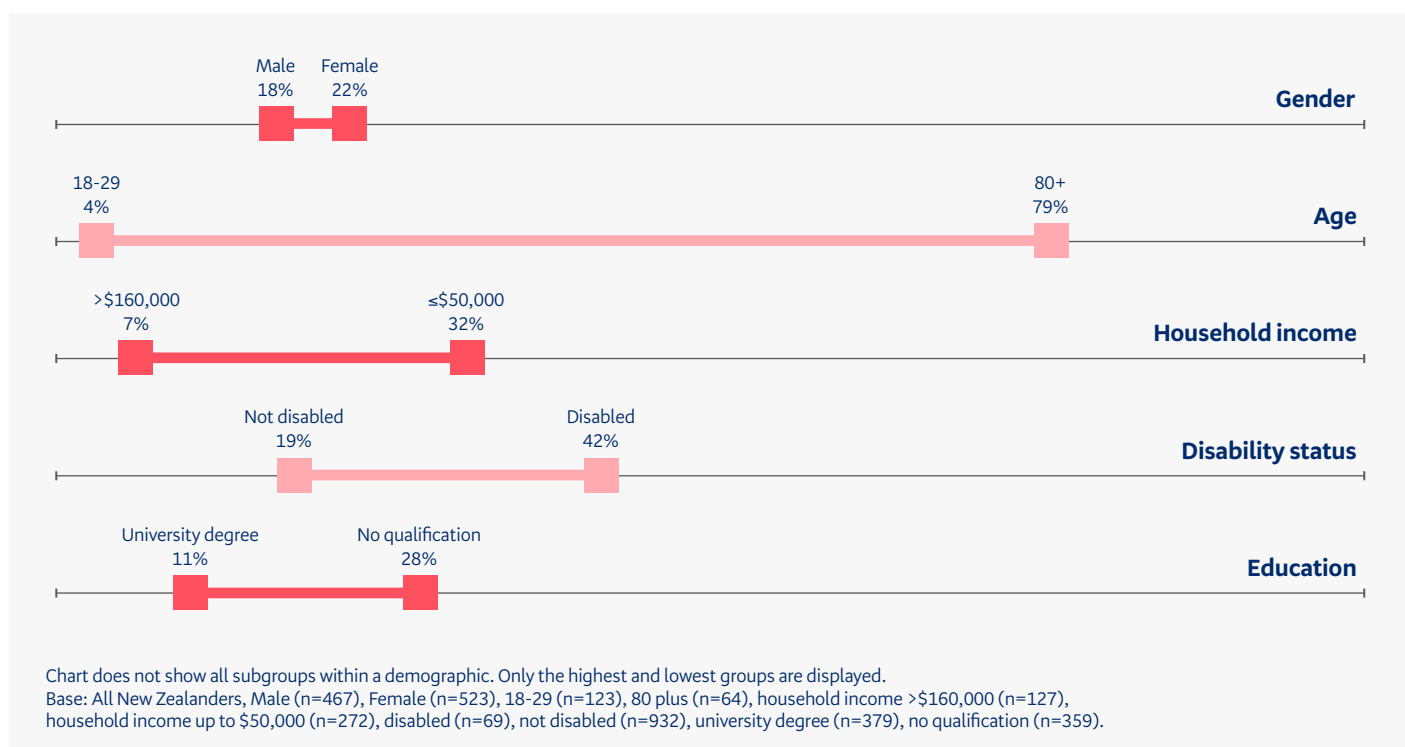


Figure 9:
Proportion of demographic groups with below essential digital skills



¹¹ Motu. "Digital Inclusion and Wellbeing in New Zealand". Available at <https://www.motu.nz/our-research/wellbeing-and-macroeconomics/well-being-and-sustainability-measures/digital-inclusion-and-wellbeing-in-new-zealand/>

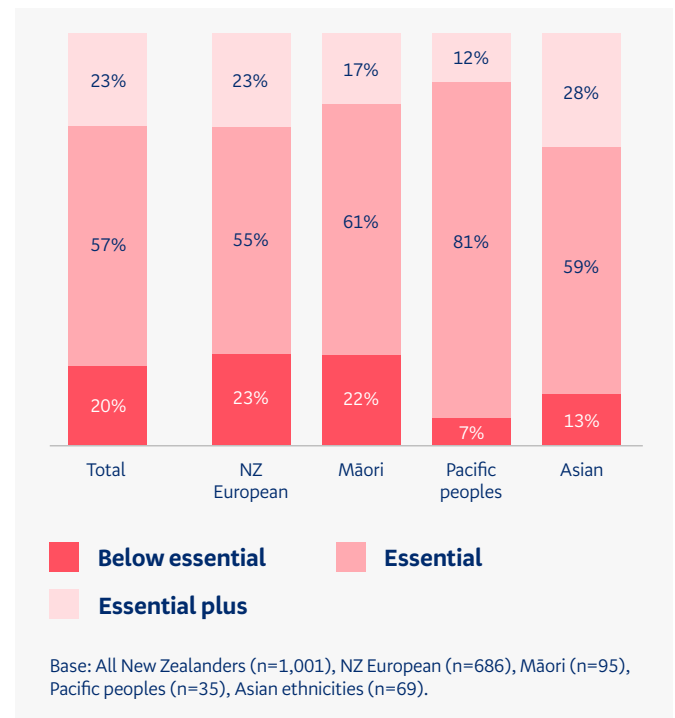
Unfortunately, demographic groups with low digital skills mirror existing lines of disadvantage in New Zealand (low household income, disability status, and education). Critically, if digital skills gaps across these groups are not addressed, inequality in New Zealand will likely get worse as the digital transformation rolls on.

3 out of 10

New Zealanders don't regularly update their devices to prevent viruses and other risks



Figure 10:
Digital skills by ethnicity



Improvements in digital skills

Encouragingly, seven out of 10 New Zealanders (70%) report that they have improved their digital skills over the last 12 months (Figure 11). This is great news and most likely a silver lining of the COVID-19 lockdowns. It is also encouraging that some demographic groups with low digital skills – Pacific Islanders and the unemployed – are more likely than average to have improved their digital capability.

Three quarters of New Zealanders who lifted their digital skills over the past year were either self-taught or taught by family (Figure 12). This highlights the importance of “trusted faces in local places” in improving digital skills. Employers were only involved with one in five people who improved their digital skills, suggesting strong potential for employers to provide greater opportunities for employees to lift their digital capabilities.

4 out of 10

New Zealanders don't know where to get help to stay secure online

Figure 11: Digital skill improvements
Do you think your skills with devices have improved in the last 12 months?

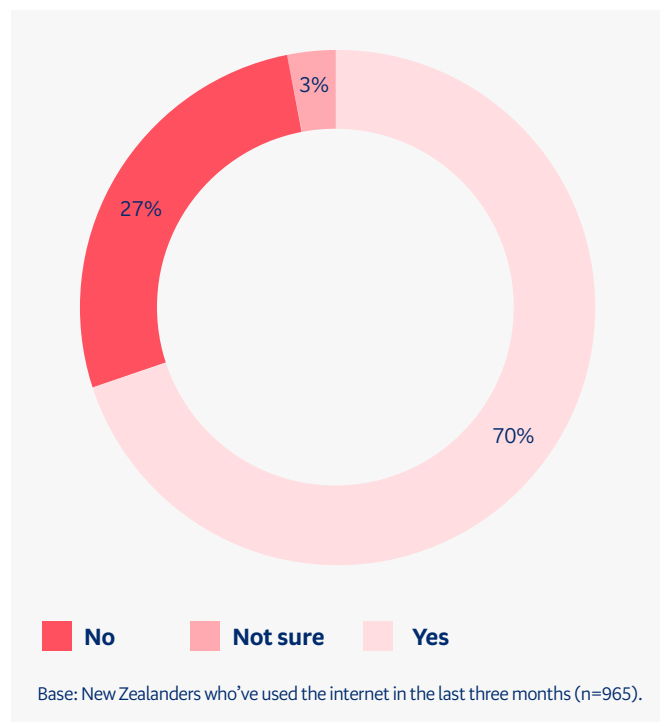
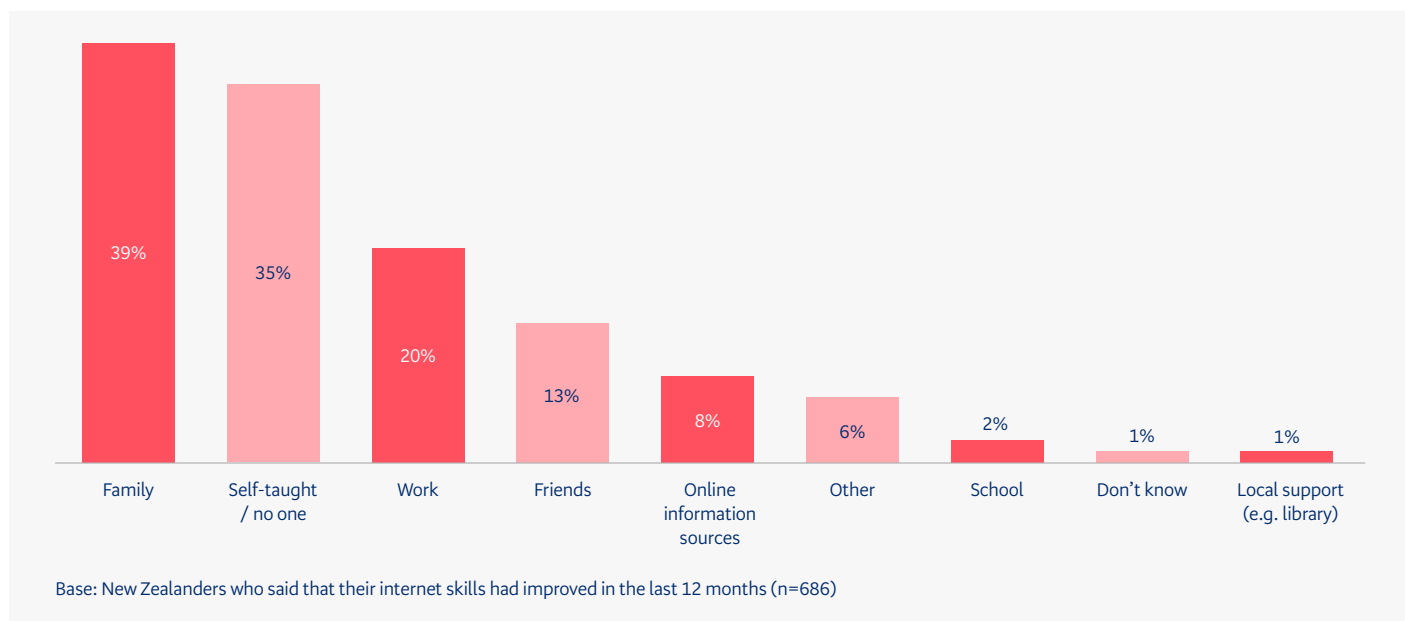


Figure 12: Source of skills improvement
Who, if anyone, helped you improve your skills with devices?



Digital skills in detail

In general, most New Zealanders know the basics of devices and the internet and how to communicate and transact online (Figure 13). In the categories of 'foundational skills' and 'communicating and transacting', at least 80% of New Zealanders have all the skills tested for (except for 'uploading documents', which is at 79%).

'Problem solving', 'handling information and content', and 'online safety' have the lowest results across the six skill categories. This is concerning as skills in these groups are important in getting the most benefit out of the internet and in keeping safe and maintaining privacy online.

For example, only six out of 10 people (59%) use security features other than passwords if they have the choice. This means that 41% of people – or 1.5 million adult New Zealanders – are exposing themselves to greater risk of cyber threats.

Equally concerning is the fact that many people don't know where to get help, both when it comes to staying secure online (37% of people, or 1.3 million adults), and when it comes to using web chat, forums, or FAQs to solve problems (33% of people, or 1.2 million adults). These results highlight the critical importance of skills initiatives – such as BNZ's Scam Savvy – aimed at keeping New Zealanders safe online.

45%

of New Zealanders can't recognise a safe website to transact with



1 out of 3

New Zealanders can't put something in the cloud and access it from multiple devices

2 out of 10

New Zealanders can't upload documents, which could prevent them from applying for jobs online

Figure 13:
Digital skills for life





Online activities

There is a clear link between digital skills and internet activity – New Zealanders with better digital skills do more online.

Figure 14 shows the share of New Zealanders – by digital skill level – that have completed each of the listed online activities over the past year. For every online activity listed, New Zealanders with stronger digital skills are more likely to have done it compared to people with less digital skills.

These results indicate the online activities that people with low digital skills miss out on. Highlighting the importance of digital skills in the labour market, nine in 10 New Zealanders with **Essential plus** digital skills have worked online compared with less than three in 10 people with **Below essential** skills.

People with **Essential plus** digital skills are also over three times more likely to have applied for a job online compared to people with **Below essential** skills. With a high proportion of jobs being advertised exclusively online, New Zealanders with low digital skills are effectively shut out of applying for many jobs.

It is encouraging to see that many New Zealanders use the internet for learning. As noted above, improvements in digital skill are often self-taught, meaning that online learning can be a powerful way of lifting digital capability. However, in a case of the chicken and the egg, New Zealanders with low digital skills are less than half as likely to use the internet for learning compared to people with high digital skills. This digital pathway to learning needs to be encouraged by trusted sources such as family, workplaces, and friends.

The increasing importance of the internet in promoting personal wellbeing can also be seen in these results. 70% of New Zealanders with **Essential plus** digital skills use the internet to manage their physical or mental health.

Unfortunately, the negative impact of the skills divide is also apparent in these results, with only 20% of people with **Below essential** skills using the internet in this way.

The growing role of the internet in everyday life is also clear, with digitally skilled New Zealanders more likely to buy or sell products online and to stream or download media. Digital skills also promote social connection, with digitally skilled New Zealanders much more likely to share photos or video and to use social media and online messaging.

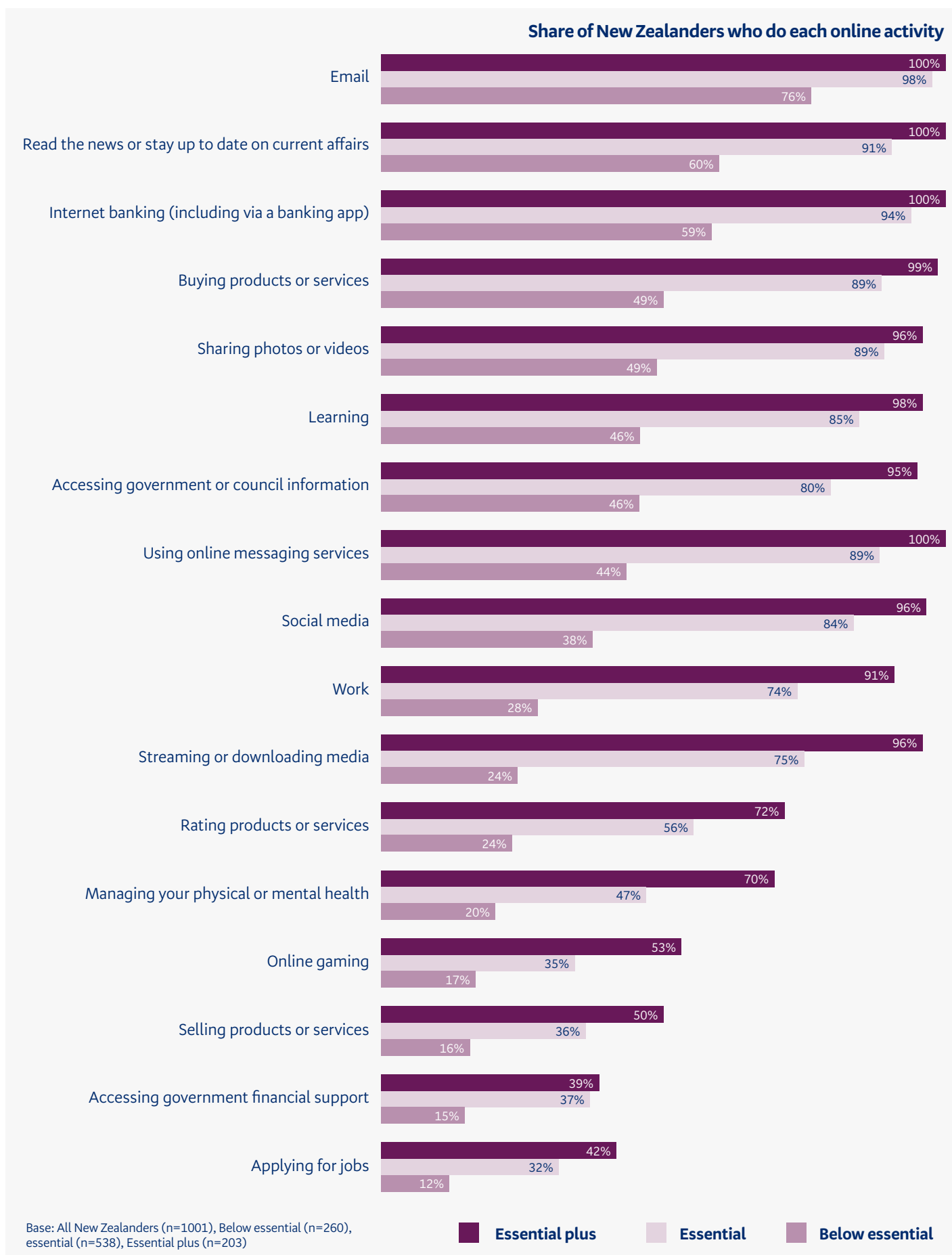
Importantly, almost all New Zealanders with **Essential plus** digital skills access Government information online, compared with less than half of people with **Below essential** skills. This implies serious difficulties for people with low digital skills in accessing important information.¹² For Government, this highlights a huge cost in providing information in non-digital formats and an opportunity in working to improve digital capability.

There are eight online activities that 40% or more of people with **Below essential** skills still do. This highlights the point that some online activities do not require a high level of digital capability. It also highlights potential areas of risk. For example, emailing – which is the most popular online activity across the board and used by eight out of 10 people (76%) with **Below essential** digital skills – can expose people to malware and scams. CERT NZ warns that “Email is widely used and trusted both in business and our personal lives. This unfortunately makes it an easy target for cyber attackers who are looking to make a quick buck”.¹³ Effective digital skills training would help mitigate this risk.

¹² Citizens Advice Bureau, “Face to face with digital exclusion”. Available at: <https://www.cab.org.nz/assets/Documents/Face-to-Face-with-Digital-Exclusion-/9c5f26012e/Face-to-face-with-Digital-Exclusion.pdf>

¹³ CERT NZ, 2020. Available at <https://www.cert.govt.nz/individuals/news-and-events/email-related-attacks-cost-new-zealanders-close-to-one-million-dollars/>

Figure 14:
Online activities by digital skill group



The benefits of digital

Almost everyone agrees that the internet provides positive benefits overall but people with stronger digital skills get more out of the internet.

A massive 95% of New Zealanders agree that the benefits of getting online outweigh the disadvantages. Even eight in 10 people with **Below essential** digital skills consider there to be more benefits than disadvantages to the internet.

Of those who did not vote,

60%

would have voted online if available



People with Essential plus digital skills are

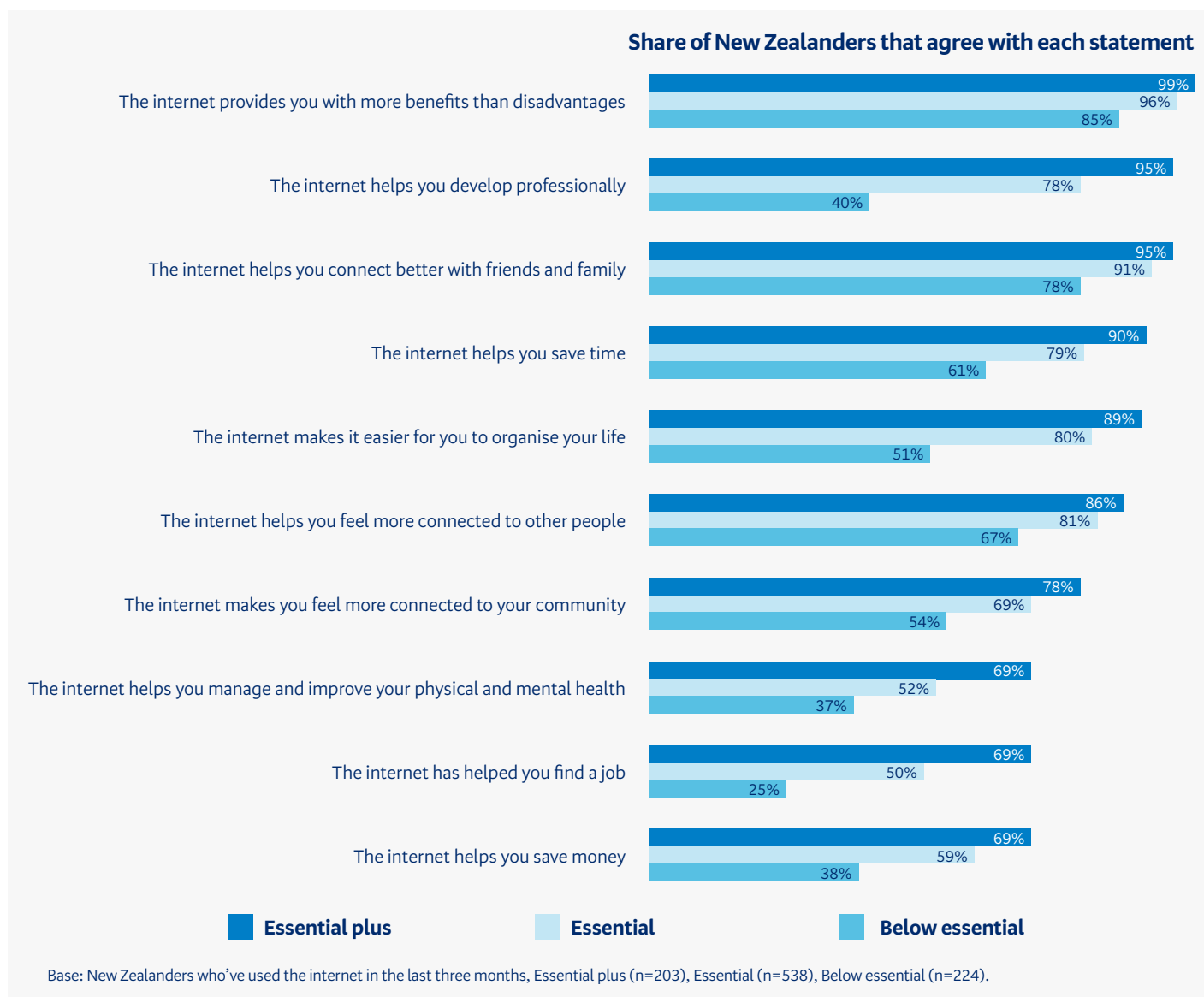
twice as likely

to benefit from improved mental and physical health thanks to the internet

As clear in Figure 15, there is a strong link between digital skills and the benefits people get from the internet. The more digital skills a person has, the more likely they are to use the internet for a broader range of activities and the greater the number of benefits they get from those activities (Figure 16). This illustrates a tight link between our digital skills and the richness of our online lives. Better digital skills allow people to do more online, thereby increasing the benefits they get from the internet.



Figure 15:
Benefits of the internet by digital skill level



The most vulnerable in society often have the most to gain from developing their digital skills. As reported on below, people with **Below essential** digital skills tend to earn relatively low incomes. This may be partly because these New Zealanders are less than half as likely to benefit from online professional development and almost three times less likely to find a job online compared to people with **Essential plus** digital skills.

This highlights how digital skills training can help keep inequality in check. Digital skills open new worlds of possibilities, some of which are useful for improving job prospects and material wellbeing. These benefits may not always be obvious to people with low digital skills, underlining the importance of a proactive approach to digital skills training.

The importance of digital skills in delivering benefits to individuals and society is only going to increase as the digital transformation rolls on. For example, if internet voting becomes more commonplace in future, digital skills will become increasingly important in civic participation. Respondents to the digital skills survey with **Essential** or **Essential plus** digital skills would have been much more likely to vote online in the general election if the option had of been available (Figure 17). This would have increased voter turnout, with 60% of people who did not vote saying they would have if online voting were available.

Figure 16:
Online activities and benefits by skill category

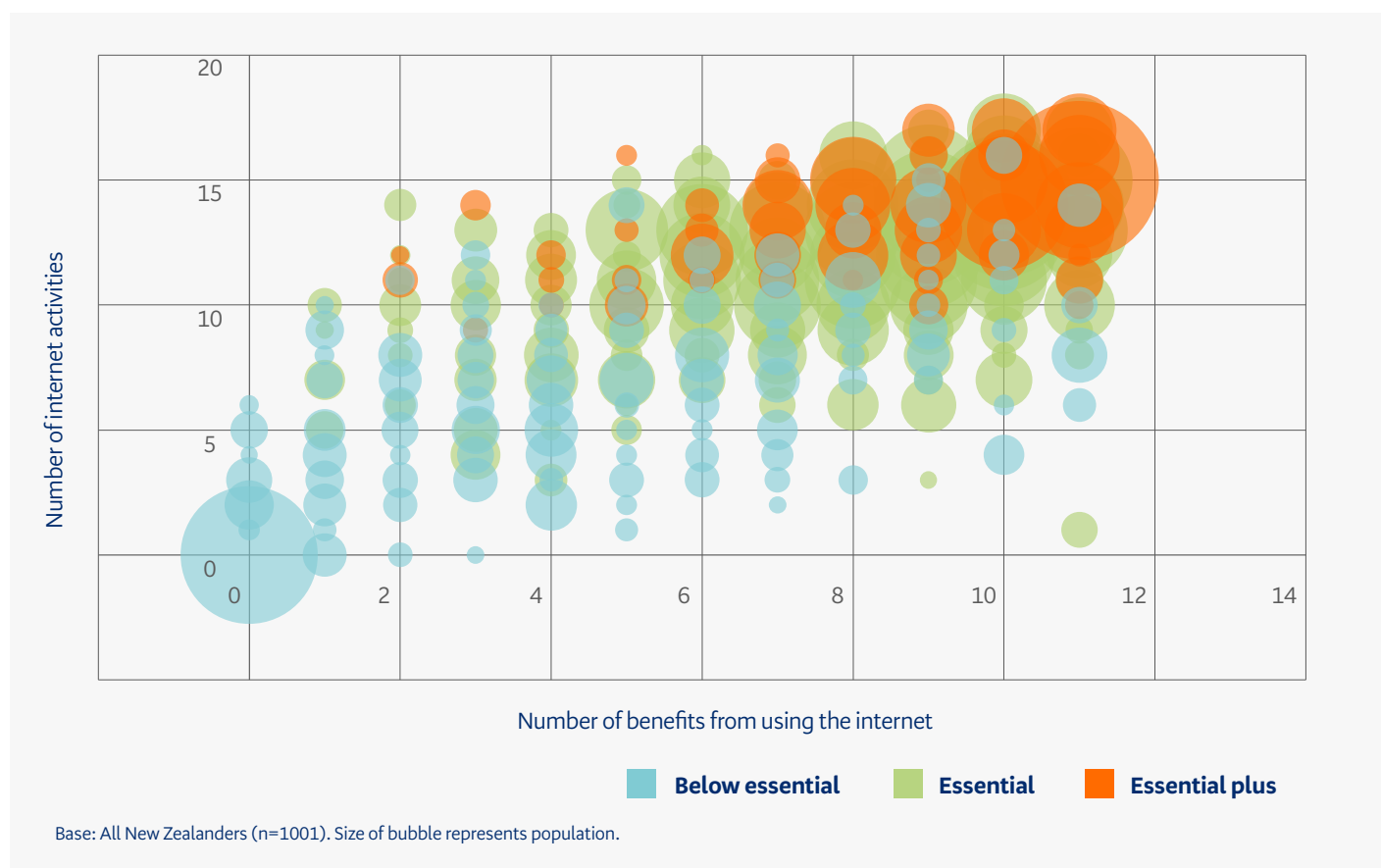
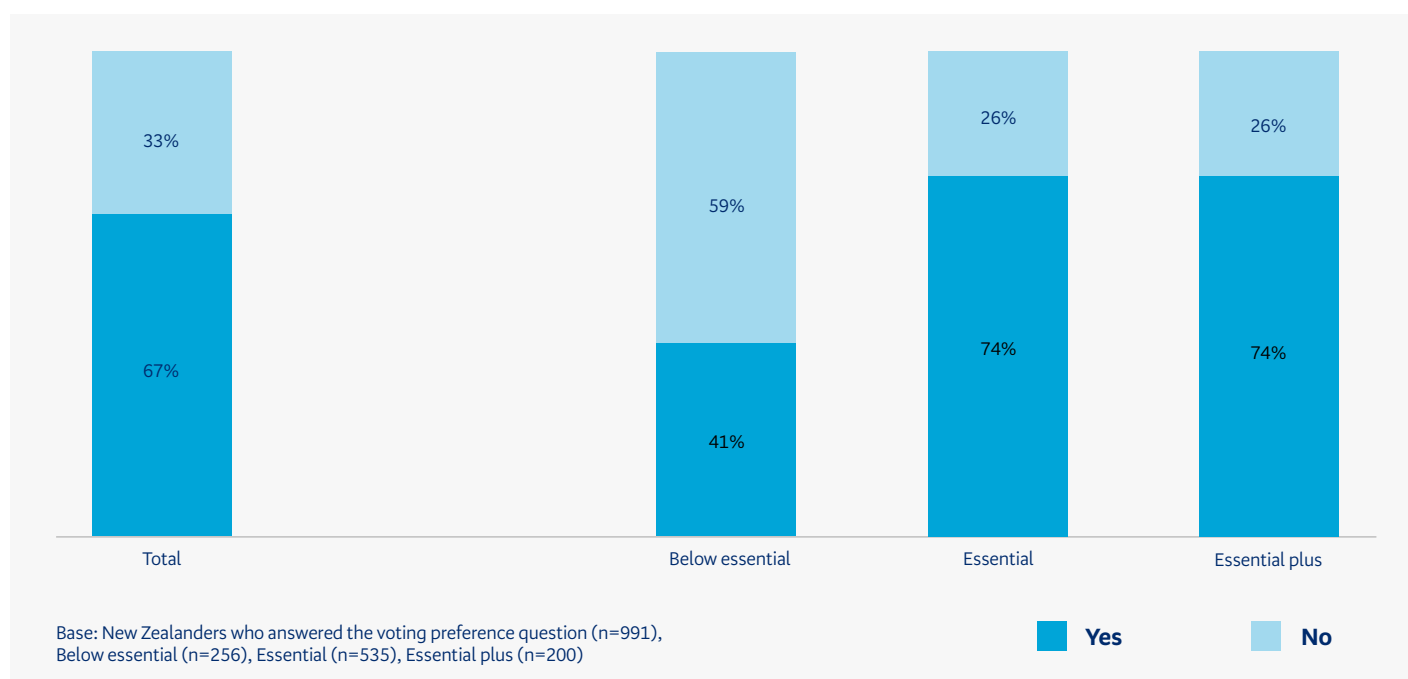


Figure 17: Digital skill by voting preference
If online voting was available, would you have voted online?





Digital skills and financial health

Digital skills and financial health are intertwined, and we are never too old to learn.

New Zealanders from higher income households have better digital skills (Figure 9, and Appendix B). In part, this reflects the fact that digitally-skilled New Zealanders are less likely to be unemployed and more likely to have well-paid jobs compared to people with low digital capabilities.

BNZ customers with Essential or Essential plus digital skills are

more than twice

as likely to bank online

In Alert Level 4 lockdown, online spending by BNZ customers

more than doubled



This link between digital skills and incomes may also reflect the fact that people with higher digital skills can manage their money more effectively online. New Zealanders with **Essential plus** digital skills are more likely to report that using the internet helps save them time and money (Figure 15 above).

People with
Essential plus are
twice as likely
to understand
compound interest



People with
Essential plus are
1.5x more likely
to regularly
contribute to savings



Compared with people with Below essential skills. Compound interest – 33% versus 61%, savings contributions – 62% versus 92%.
Base: All New Zealanders (n=1001)

The benefits of online banking are also clear from the survey, with almost nine in 10 New Zealanders agreeing that internet banking helps them stay on top of their finances and that the benefits outweigh risks. Not surprisingly, people with **Essential plus** digital skills are more likely to agree with these statements (Figures 18 and 19).

As well as making better use of digital tools, people with strong digital skills also tend to have stronger financial capability. For example, New Zealanders with **Essential plus** digital skills were much more likely to understand compound interest and to save regularly, compared to people with **Below essential** digital skills.

Figure 18:
Benefits of online banking and staying on top of finances by digital skill level
The benefits of online banking outweigh the risks

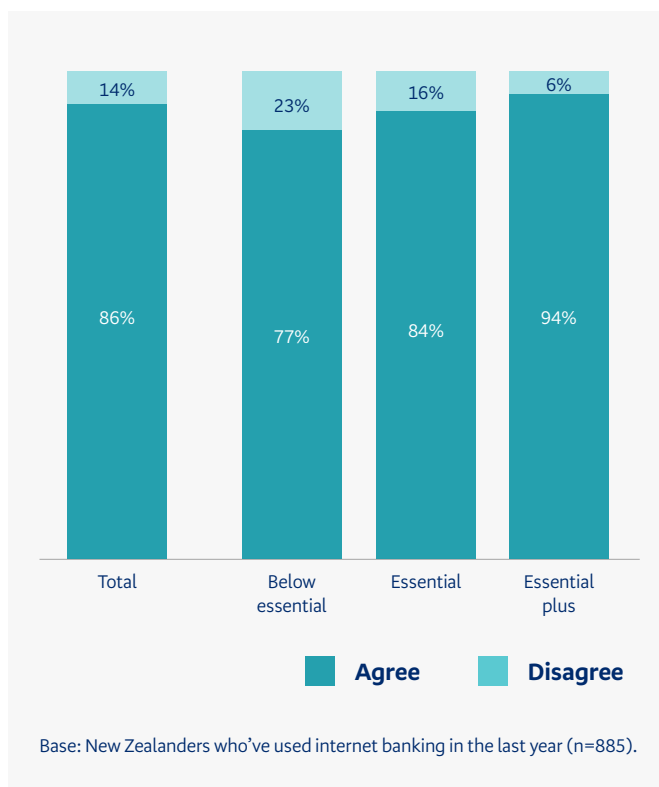
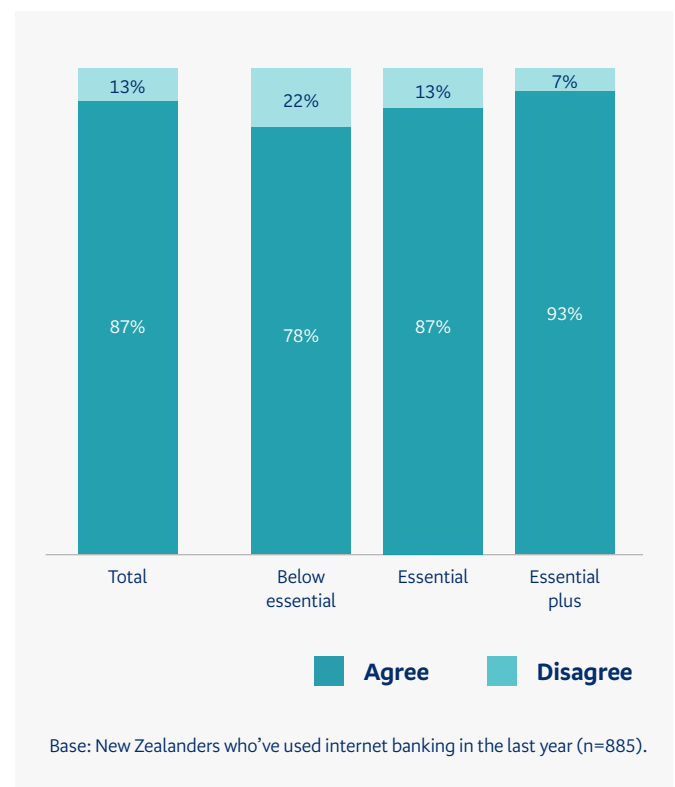


Figure 19:
Staying on top of finances by digital skill level
Internet banking helps you feel like you're staying on top of your finances





These results make the point that digital skills and financial capability are inextricably linked. Providing digital skills training to people with poor financial outcomes could help unlock better financial habits.

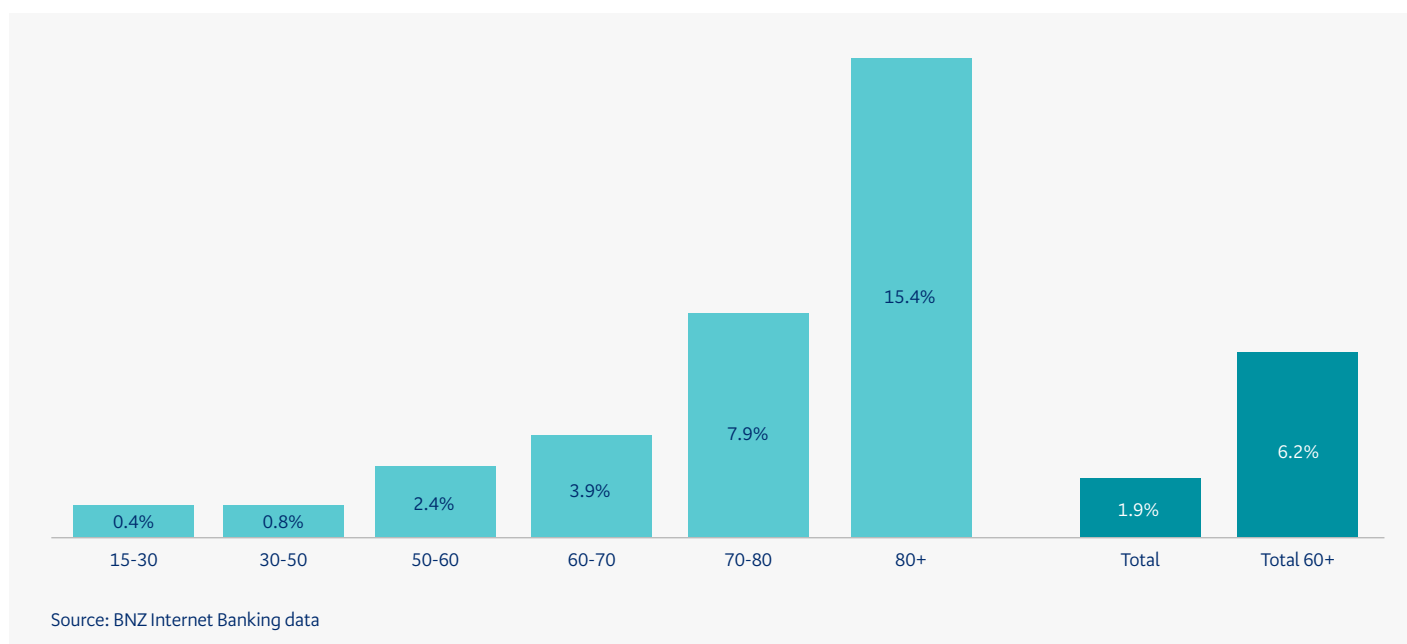
Importantly, the financial and other benefits that come with greater use of digital tools are available to all New Zealanders, even those who have traditionally shied away from digital technologies. As a case in point, access to BNZ's online banking platform by people aged 80 years or older increased by 15% over the first COVID-19 lockdown (Figure 20). Necessity is not only the mother of invention but can also be an effective prompt to lift our digital capability.

“I went in with a few simple questions about getting an Eftpos card for my son. I ended up with the BNZ app up and running on my phone... I learnt so many new things that are going to make banking so much easier.”

– BNZ customer

Figure 20: Internet banking logins over COVID-19

Increase in internet banking logins between February and May 2020 by age group



Digital harms

Half the population are concerned about how much time they spend online.

Digital harms are many and varied, ranging from internet scams through to bullying on social media, disinformation, gambling addiction, and more.¹⁴ While many digital harms affect individual internet users, others can have more slow-moving and systematic impacts on society.

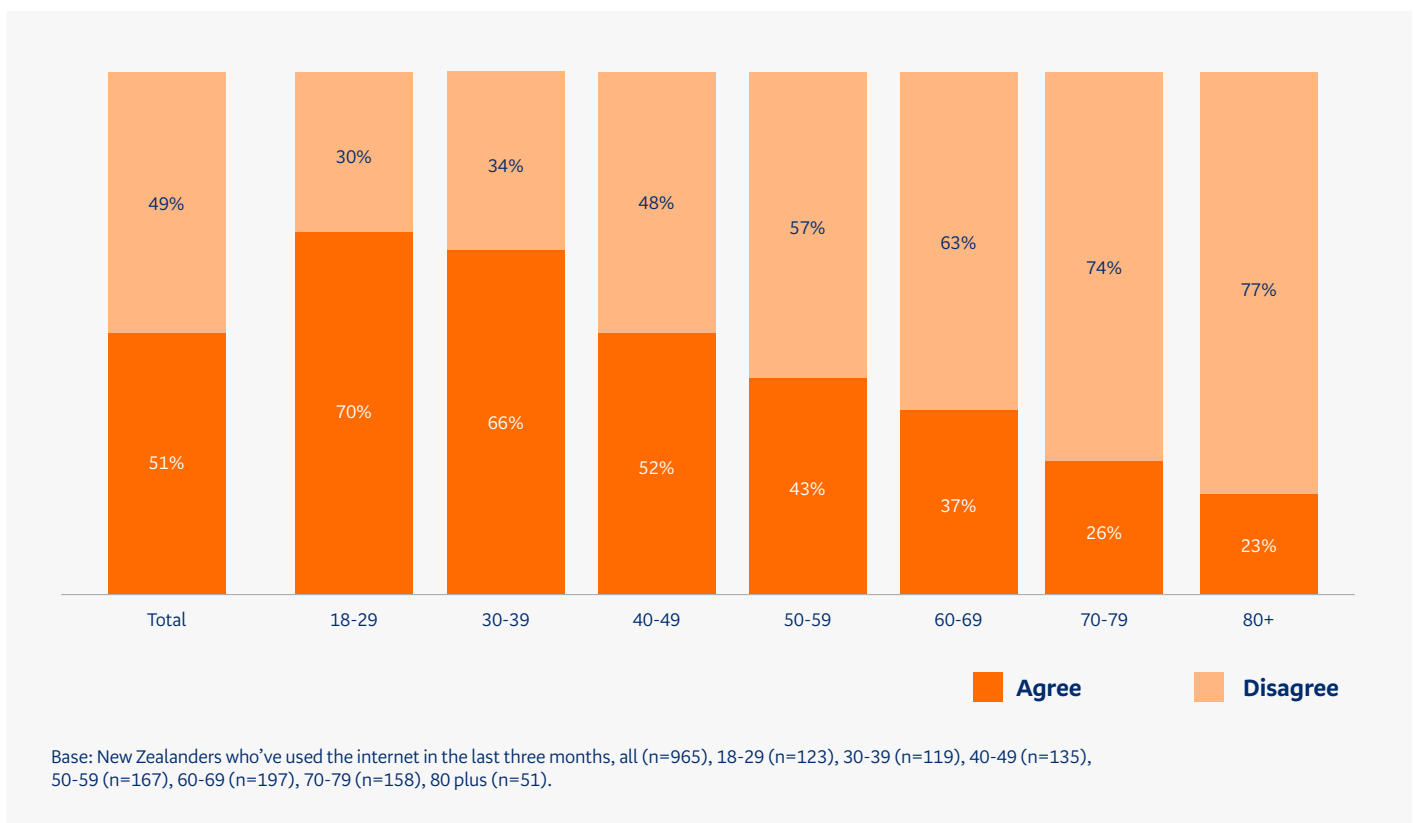
To gauge excessive internet use, respondents were asked if they were concerned about how long they spend online (Figure 21). A little over half said yes, with young people especially concerned – 70% of 18-29-year olds worry that they spend too long online.

Internet scams are also becoming increasingly sophisticated and common in New Zealand. “[attackers are] constantly evolving their techniques and seeking out opportunities to disrupt services, and access private information and finances. From July to September 2020, CERT NZ received over 2,600 reports of cyber security incidents; the highest number of reports to date.”¹⁵

Given the prevalence of online scams, it’s concerning that on average one in four New Zealanders lack ‘online safety’ digital skills, the lowest score across all categories (Figure 13 above). Further, only 63% of adult New Zealanders know where to get help to stay secure online and only around half know the meaning of the padlock in website addresses.

These limitations expose risks for the many New Zealanders who use the internet daily but do not have essential digital skills. This implies a huge opportunity to improve the internet safety skills of all New Zealanders. Having the full range of essential digital life skills includes knowing how to be safe online. We need to have the knowledge to be more connected – with all the benefits that brings – and to identify potential risks and be more conscious of our personal security while using the internet.

Figure 21: Concern about time spent on the internet, total, and by age
You are concerned you spend too long on the internet



¹⁴ Department of Internal Affairs. “Keep it real online”. Available at <https://www.keepitreallonline.govt.nz/>

¹⁵ CERT NZ. Available at: <https://www.cert.govt.nz/about/quarterly-report/quarter-three-report-2020/>



Calls to action

We must work to remove barriers to safe internet access and ensure digital equity for all New Zealanders. We must act now.

This report sheds light on the level of digital skills for life in Aotearoa-New Zealand and the benefits that come from participating in the digital world. It finds that 700,000 New Zealanders (20%) lack the digital skills deemed essential for modern life. These digital skills gaps risk increasing inequality by perpetuating existing social and economic disadvantage as the digital transformation rolls on.

Turning that around requires a team effort – we need to harness the power of partnerships. The private sector, Government, and the not-for-profit sector all have a part to play in lifting digital skills to maximise net benefits and digital equality. Addressing these issues was already important prior to COVID-19 but is paramount now and with no time to lose.

Scale digital skills training – this is for everyone

New Zealanders need access to more and better opportunities for digital skills training. People need to be able to access support in their digital learning based on their needs, more so than what any one individual organisation has to offer.

Many providers of digital training are very small community organisations, trusts or not-for-profits employing one or two people. While these providers do incredibly important work, their effectiveness could be enhanced through a joined-up approach. InternetNZ are currently pulling the digital inclusion sector together through the Digital Equity Coalition Aotearoa and this work needs to be supported.¹⁶

Digital skills training initiatives need to “know the customer” and focus on where they are needed most. This includes working with older people, people on low incomes, and people with a disability. Online safety and knowing where to get help online need to be emphasised, especially for younger people. A strong and consistent focus on improving the digital skills of already marginalised groups in New Zealand is critical in preventing further increases in inequality.

¹⁶ Digital Equity Coalition Aotearoa. Available at: <https://www.digitalequity.nz/>

Remove access barriers for those who face them

While an increasing number of New Zealanders are online daily, there are still a portion who face significant access barriers that prevent them from reaping the benefits of digital inclusion. These barriers include access to the internet at an affordable price and access to a suitable device.

If we are to lift our productivity and improve social inclusion, these access barriers need to be eliminated. New Zealanders who are missing out digitally have the most to gain and we need to collaborate to ensure that access is not a barrier for anyone who wants to get online.

Maximise Government's critical role

Government has a critical role to play in improving digital inclusion, given the promise of digital technologies to lift New Zealand's economic performance and the wellbeing of New Zealanders. Coordinating Government initiatives across different Ministries within a unifying framework could help maximise impact.

Government can also broaden its contribution by leveraging its contact with vulnerable New Zealanders through the health and social development systems to help lift their digital capabilities and inclusion. People delivering front-line services could be trained as "digital champions" and offer advice on digital skills training as part of their roles. Government could also build partnerships with the private sector as part of its efforts to achieve its digital equity goals.

New Zealand businesses have a key role to play

New Zealand firms and corporates need to be doing more to lift digital adoption – building a more productive and thriving New Zealand economy is in everyone's long-term best interests.

Only one in five New Zealanders improve their digital skills at work, suggesting that employee training programmes could be used more widely to lift employee digital skills. Large employers have an opportunity to support their employees with skills development and life-long learning. In turn, digitally skilled workers can pass on skills to their customers and families.

Businesses could also use their strong market networks to reach more New Zealanders in need of digital skills training. This is about improving digital skills by going to where people are with multiple messages to increase engagement. Digital skills education needs to be available at the right time in the right place and consistent with how people prefer to learn. For example, the banking industry could actively encourage digital skills development to improve financial capability and ensure no one is left behind.





Thank you

BNZ would like to thank our partners and contributors to this work, who have all helped make this report possible. The framework for essential digital skills on which much of our survey is based was developed in the United Kingdom (UK) and we are grateful to the UK Government for making this framework publicly available. Lloyds Bank Group's (LBG) also use this framework as a basis for their Consumer Digital Index, which has been an inspiration to us in our best practice reporting on digital skills. Thanks to LBG for their work. Special thanks also to Leigh Smyth, who acted as an independent global consultant on this project.

The digital skills questionnaire underpinning this report is based on the UK essential digital skills framework but has been contextualised for New Zealand based on the input of local experts. Thank you to staff from the following government agencies for contributions of their expertise and time: The Department of Internal Affairs, the Ministry of Business Innovation and Employment, The Ministry of Social Development, Computer Emergency Response Team, and The Department of Prime Minister and Cabinet. In New Zealand we partnered with Colmar Brunton to develop and deliver the survey.

Thank you also to the team at Internet New Zealand, who shared a vision with us for a more inclusive internet. Their expertise and input have been valuable in this work.

Methodology

This survey provides the first comprehensive measure of the digital skills of New Zealanders. A nationally representative sample of adults were asked 34 questions about their digital skills across six categories: foundational, communicating, transacting, problem solving, handling information and content, and online safety.

The questions on digital skills are derived from the UK's 'Essential Digital Skills Framework' and modified to the New Zealand context through consultation with a variety of experts.⁴ These questions were paired with other questions about demographics, internet activities, and attitudes to being online.

Leveraging BNZ data

As well as the general population, we also surveyed the digital skills of BNZ customers to investigate the links between digital and financial capability. In future, we may use BNZ customers as a representative sample frame for New Zealand's population.

The results in this report are mainly based on the general population survey. However, they are supplemented in places with results from BNZ customers. These are high level anonymised aggregates that don't identify customers.



Fieldwork dates:

Interviewing took place between 9 November and 5 December 2020.

Target population:

Adults in New Zealand (18 years or older).

Sample population:

Adults in New Zealand households with a landline telephone or access to a New Zealand mobile phone.

Sample selection:

Landline - Nationwide random digit dialling of landline telephones using stratified probability sampling to ensure a representative share of people in urban and rural areas.

Mobile - Random dialling of New Zealand mobile telephones using probability sampling.

Sample size: n = 1,001, including 401 polled via landline phone and 600 polled via mobile phone.

N.B. In future surveys we'll consider how to reach the homeless and other hard to reach populations.

Response rate:

- Total completes – 1,001
- Response rate – 14.4%

Sampling error:

The maximum sampling error is approximately ± 3.1 percentage points at the 95% confidence level. This is the sampling error for a result around 50%. Results higher and lower than 50% have a smaller sampling error.

For example, results around 10% and 5% have sampling errors of approximately ± 1.9 percentage points and ± 1.3 percentage points, respectively, at the 95% confidence level.

Interview method:

Conducted by CATI (Computer Assisted Telephone Interviewing).

Weighting:

Data weighted by age within gender, ethnicity, and region to be representative of the NZ 18+ population according to the 2018 Census.

⁴ Govt.uk, 2019. Essential Digital Skills Framework. Available at <https://www.gov.uk/government/publications/essential-digital-skills-framework>. Content under the Open Government Licence v3.0, available at <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Appendix A

Supplementary statistics: access, motivation, and trust

Internet access

Access to the internet is higher than previously measured in New Zealand¹⁸, with 95% of people stating that they have access to the internet at home. Table 2 below also shows combinations of access by location. To get the best of the benefits that the internet offers, people would ideally have access both at home and when they are mobile. Nine out of 10 people (89%) do have this combination of access, leaving others to wait until they are at home until they can use the internet.

Table 1 - Access to the internet by location

Access to the internet

At home	95%
At work	69%
On a mobile device	91%
Somewhere else	57%

Home and mobile combinations

Home and mobile	89%
Home and not mobile	6%
Mobile and not home	2%
Not home, not mobile	3%

Base: All New Zealanders (n=1,001)

Convenience of access (Table 3, below) is very high, in line with high access to the internet. We can also see, what sort of devices people have access to (Table 4, below). Some tasks such as writing a CV, are realistically only possible on a desktop or laptop computer. For optimal benefit, people would have both smartphone and laptop/desktop device access. Eighty-two percent of people have access to both a smartphone and a laptop/desktop computer, which leaves some room for improvement.

Table 2 - Convenience of access to a device

Access to a device

Have access to a device all the time	89%
Have access when you need it	9%
Not have access	3%

Base: All New Zealanders (n=1,001)

Table 3 - Access to devices, by device type

Device type access

Smartphone	89%
Tablet or iPad	54%
Laptop computer	77%
Desktop computer	48%
Some other devices	21%

Base: All New Zealanders (n=1,001)

Motivation

Motivation to use the internet is often presented as a critical enabler to digital inclusion^{19,20}. To understand people's motivation, we asked them if they thought that the internet provided more benefits than disadvantages. An overwhelming majority of people (95%) agree that the internet provides more benefits than disadvantages.

Table 4 - Motivation to use the internet

The internet provides you with more benefits than disadvantages

Agree	95%
Disagree	5%

Base: New Zealanders who have used the internet in the last three months (n=965)

¹⁸ The 2018 Census reported household access at 86%, and the 2017 NZES reported adult access at 91% (available at: <https://www.stats.govt.nz/2018-census/> and http://www.nzes.org/exec/show/2017_NZES+Results). Note that the Census question asked 'which of these are available in this dwelling?' whereas the Digital Skills survey asked 'do you have access to the internet at home'.

¹⁹ Govt.uk, 2014. Government Digital Inclusion Strategy. Available at <https://www.gov.uk/government/publications/government-digital-inclusion-strategy/government-digital-inclusion-strategy>

²⁰ Digital Inclusion Alliance Aotearoa. Motivation to go online. Available at <https://digitalinclusionalliance.nz/motivation-to-go-online>

The only age group that has significant variation from the above statistic is those over 80 (and it only drops to 87% of people agreeing with the positive statement).

Trust

The enabler of trust encompasses two dimensions; (1) having the confidence to do all that you want online; and (2) understanding what steps to take if you face significant challenges²¹.

Confidence rates highly overall, with nine out of 10 people (90%) confident using devices. Unlike motivation, we see this confidence diminish with age. For people over 70 years old, having confidence using devices reduces to seven out of 10 people (69% for those aged 70-79, and 67% for those aged 80 plus). While such results are still remarkably encouraging we should remember that this datapoint is a self-assessment and should be viewed in consideration to the variety of digital skills required to stay safe online (see the chapter on digital skills). Confidence does not always translate into a breadth and depth of digital skills.

Table 5 - Confidence using devices

You're confident using devices

Agree	90%
Disagree	10%

Base: New Zealanders who have used the internet in the last three months (n=965)

Table 6 - Confidence using device by age

You're confident using devices (by age group)

Age	Agree	Disagree
18-29	98%	2%
30-39	98%	2%
40-49	94%	6%
50-59	91%	9%
60-69	81%	19%
70-79	69%	31%
80+	67%	33%

Base: New Zealanders who have used the internet in the last three months, 18-29 (n=123), 30-39 (n=119), 40-49 (n=135), 50-59 (n=167), 60-69 (n=197), 70-79 (n=158), 80 plus (n=51)

Seven out of 10 people (71%) understand the steps they'd need to take if they faced significant challenges online (Table 8, below). This confidence too, diminishes with age. For those over 80 years, only half of the population understand what steps they'd need to take (52%).

Table 7 - Understanding what steps to take if you face significant challenges online

You understand the steps you'd need to take if you faced a big challenge online, for example, if your passwords were stolen

Agree	71%
Disagree	29%

Base: New Zealanders who have used the internet in the last three months (n=965)

Table 8 - Understanding what steps to take if you face significant challenges online by age

You understand the steps you'd need to take if you faced a big challenge online, for example, if your passwords were stolen

Age	Agree	Disagree
18-29	85%	15%
30-39	81%	19%
40-49	63%	37%
50-59	66%	34%
60-69	63%	37%
70-79	57%	43%
80+	52%	48%

Base: New Zealanders who have used the internet in the last three months, 18-29 (n=123), 30-39 (n=119), 40-49 (n=135), 50-59 (n=167), 60-69 (n=197), 70-79 (n=158), 80 plus (n=51)

²¹ The Department of Internal Affairs, 2019. Digital Inclusion Outcomes Framework. Available at <https://www.digital.govt.nz/dmsdocument/167~digital-inclusion-outcomes-framework/html>

Appendix B

Digital skills groups by demographics

Table 9 - Digital skill groups by demographics

Gender	Below essential	Essential	Essential plus
Male	18%	53%	29%
Female	22%	61%	17%
Age	Below essential	Essential	Essential plus
18-29	4%	67%	29%
30-39	9%	58%	33%
40-49	16%	58%	26%
50-59	15%	61%	24%
60-69	33%	56%	11%
70-79	50%	44%	7%
80+	79%	18%	3%
Household income	Below essential	Essential	Essential plus
Up to \$50,000	32%	56%	12%
\$50,001 to \$100,000	16%	59%	25%
\$100,001 to \$160,000	11%	64%	25%
More than \$160,000	7%	49%	43%
Disability ²²	Below essential	Essential	Essential plus
Disabled	42%	50%	8%
Not disabled	19%	58%	24%
Education	Below essential	Essential	Essential plus
No qualification / school only	28%	61%	11%
Trade qualification / certificate or diploma	20%	54%	25%
University degree	11%	57%	32%
Ethnicity	Below essential	Essential	Essential plus
NZ European	23%	55%	23%
Māori	22%	61%	17%
Pacific Peoples	7%	81%	12%
Asian ethnicities	13%	59%	28%

Base: All New Zealanders (n=1,001)

²² Respondents were asked the 'Washington Group' set of questions regarding disability. Those who have been classified as disabled if they answered any of the questions 'a lot of difficulty', or 'can't do at all'. Available at <https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/>