The World Internet Project in New Zealand

2023

NEW ZEALAND
WORK RESEARCH INSTITUTE

Authors

Alexandra Turcu, Mary Hedges & Gail Pacheco

Contact Details

Alexandra Turcu

alexandra.turcu@aut.ac.nz

[This page has been left intentionally blank]

Executive Summary

The number of people globally accessing the internet has doubled in the last decade, from 2.6 billion in 2013, to 5.2 billion in 2023 (Statista, 2023). This report summarises 3,100 responses to the 2023 World Internet Project (WIP) New Zealand (NZ) survey. The sample was targeted at specific quotas of ethnicity, region, and age (with priority in that order) based on NZ Census (2018) data to ensure that the sample was nationally representative. The report focuses on internet users, the quality and accessibility of internet connections across NZ, New Zealander's understanding of the environmental impacts of internet use, and the impact and prevalence of remote working. The key findings are summarised as follows:

Internet connection & use

- Women report spending more time online than men. Over a quarter of the women in our sample report that they spend between 5 and 6 hours online daily, compared to only 18% of males.
- Almost all respondents connect to the internet from home (97%), many connect using mobile data (82%) and some through their school or work (47%), indicating a high reliance on home internet connections and mobile data networks in NZ.
- Most respondents rate their home internet connection as acceptable through to excellent, with the most common complaints being that the internet is too slow and that the internet connection is unreliable.

Internet attitudes & beliefs

- Individuals that feel confident in their ability to assess the reliability of information online, tend to also rate more information online as reliable compared to those who are not confident.
- Despite respondents disagreeing, on average, that online privacy is possible, half of respondents still feel that they can control their privacy online and almost three-quarters report actively protecting their privacy. This contradiction may be explained by the fact that, despite over 70% of respondents not experiencing privacy breaches themselves, most do not believe that online privacy concerns are exaggerated.
- Over a third of respondents believe that social media companies have made the world a worse place, and over 60% agree that social media companies should be more strongly regulated than they are now.

Digital technologies and the environment

- Respondents were, on average, not well informed about the impact of digital technologies on the environment, and most respondents did not report taking purposeful actions to benefit the environment.

Remote work

- The proportion of respondents able to work remotely before lockdowns was 40%, this increased by 22 percentage points (over 50%), to 62% during lockdowns and remained almost unchanged in the post-lockdown world. This finding indicates that, at least in the medium term, the COVID-19 pandemic has significantly changed the way New Zealanders work, in particular their propensity to work away from the office.

Contents

List of Tables

List of Appendices

1 Introduction

> "The internet has become an integral part of modern society, transforming the way people communicate, access information, conduct business, and engage with the world." - ChatGPT[1]

The last decade has seen the estimated number of people to accessing the internet globally double, from 2.6 billion in 2013, to 5.2 billion in 2023 (Statista, 2023). As ChatGPT eloquently summarises, "The internet has become an integral part of modern society, transforming the way people communicate, access information, conduct business, and engage with the world." The World Internet Project (WIP) investigates the evolution of this technology, focusing on areas of online privacy and security issues (dataveillance), artificial intelligence (AI), and the internet's influence on political power, freedom of speech and social interactions. This report summarises the findings of the eighth iteration of the WIP survey to run in New Zealand (NZ).

In this iteration (WIP-NZ 2023), we investigate the quality and accessibility of internet connections across NZ, the impact and prevalence of remote working, and New Zealander's understanding of the environmental impacts of internet use.

The remainder of this report is structured as follows: Section 2 gives a brief overview of WIP's history both internationally and in NZ and describes the sampling methodology of the WIP-NZ 2023, Section 3 summarises findings on internet accessibility and use in NZ, Section 4 describes the attitudes and beliefs of internet users in NZ, Section 5 discusses remote working, while Section 6 concludes.

---

[1] Response from ChatGPT when asked "What is the internet?", date 01/09/2023.

2 WIP-NZ 2023

In this section we provide an overview of WIP both internationally and in NZ. We then discuss the current iteration of the WIP-NZ, including sampling methodology and key descriptive statistics of our 2023 sample of internet users.

2.1 The World Internet Project

WIP is a global research initiative that focused on studying the social, economic, and cultural impact of the internet and digital technologies on societies around the world. WIP was launched in 2000 by the Center for the Digital Future, at the University of Southern California, Annenberg School for Communication and Journalism and is a collaborative effort involving researchers from various countries who conduct surveys and research to understand how people use the internet, their online behaviours, and the consequences of internet adoption.

Key objectives and areas of study within WIP include:

- **Internet Usage Patterns**: WIP collects data on how people access and use the internet, including the types of devices they use, frequency of use, and the purposes for which they go online.
- **Digital Divides**: Researchers examine disparities in internet access and use across different demographic groups, regions, and socioeconomic backgrounds to understand digital inequalities.
- **Social and Cultural Impact**: WIP explores how the internet influences social interactions, communication, and cultural practices, including the impact on relationships, and identity formation.
- **Information and News Consumption**: The project investigates how people access and engage with online information, including news consumption habits and the spread of misinformation.
- **Privacy and Security**: WIP examines user perceptions and behaviours related to online privacy and security concerns, as well as experiences with cyber threats and breaches.
- **Digital Inclusion**: The initiative aims to promote policies and practices that can help bridge the digital divide and ensure that more people have equitable access to the benefits of the internet.
- **Longitudinal Studies**: WIP often involves long-term, repeated surveys to track changes in internet usage and attitudes over time, providing valuable insights into internet trends and developments.

By conducting research across different countries and cultures, WIP provides a comprehensive understanding of the global impact of the internet, helping policymakers, businesses, and scholars make informed decisions and adapt to the evolving digital landscape.

2.2 The World Internet Project in New Zealand

This is the eighth iteration of the WIP to run in NZ since 2007. In recent years, WIP-NZ has built upon common WIP questions, adding further detail to various areas such as disability, access and support. In this iteration of the survey, we focus on internet users and remote working. Key areas of interest in this year's survey include the quality of internet connections across NZ, environmental impacts of internet use and prevalence and impacts of working remotely.

Sampling methodology

The data presented in this report was collected between March and May of 2023 via an online survey facilitated by Qualtrics.[2] Unlike previous WIP-NZ surveys, we did not survey the non-internet user population, but focused solely on internet users. We decided not to collect the non-user rate in this iteration of the survey as the proportion of non-users in NZ, as shown by previous WIP-NZ surveys, has been stable (between 8% and 6%) since 2013.[3] We focused instead on reaching a large representative sample on New Zealanders (n=3,100), with a special focus on working individuals (n=1,914).

Users were drawn from a range of online panel database providers contacted through Qualtrics. The sample was targeted at specific quotas of ethnicity, region, and age (with priority in that order) based on NZ Census (2018) data to ensure that the sample was nationally representative. The quotas are listed in Table 1. Due to the high proportion of workers we include in our sample, and the exclusion of non-internet users, who tend to be older (Andrade, et. al, 2021), the age distribution of our sample is younger than the 2018 Census, with a higher proportion of those aged 25 - 44.

---

[2] Qualtrics is an American experience management company who specialise in survey software.
[3] See: Gibson et. al (2013); Crothers et. al (2015); Andrade, et. al (2017); and Andrade, et. al (2021).

Table 1. Demographic variables, target quotas and actual sample

Variable	Quota	Actual
Ethnicity		
European	62%	62%
Māori	15%	15%
Pacific Peoples	7%	7%
Asian	13%	14%
Middle Eastern/Latin American/African	1%	2%
Other Ethnicity	1%	1%
Region		
Northland	4%	3%
Auckland	33%	34%
Waikato/ Bay of Plenty	17%	16%
Gisborne/ Hawke's Bay	5%	4%
Taranaki/Manawatū-Whanganui	7%	7%
Wellington	11%	11%
Top of South*/West Coast	4%	3%
Canterbury	13%	15%
Otago/ Southland	7%	6%
Age		
16-24	17%	18%
25-34	15%	24%
35-44	17%	23%
45-54	18%	12%
55-64	15%	9%
65+	18%	14%

Notes: N=3,100, *Top of the South includes the Marlborough, Nelson and Tasman regions.

Descriptive statistics

Table 2 provides descriptive statistics for our sample and a weighted sample based on the age distribution of the 2018 Census, provided in Table 1.

We note that our sample has a higher proportion of women (68%) than men, and that household income is clustered above $50 - $70K. The qualifications of our sample are split into three major groups: those with no qualifications (33%), those with Certificates or Diplomas (27%) and those with Bachelor's or Honours degrees (28%). Over half of our sample is employed (63%) with an additional 8% indicating that they are self-employed, and 10% indicating that they are retired. Just over half of our sample lives with family (51%), over a quarter live with a partner (27%) and the remainder either live alone (12%) or with flatmates (11%). The average household size (50%) is between 3 and 5 people and more than half of the households (57%) have no children.

Table 2. Descriptive statistics

Variable	Sample	Weighted Sample
Gender	N=3,099	
Male	31.9%	39.6%
Female	67.7%	60.0%
Non-Binary	0.4%	0.4%
Post-school qualification	N=3,039	
	67.4%	68.3%
Highest qualification	N=3,039	
No qualification	32.6%	31.7%
High School	5.1%	4.1%
Certificate/Diploma	27.2%	28.3%
Bachelor's/Honours	28.4%	28.2%
Postgraduate Degree	6.7%	7.2%
Household income	N=2,857	
Up to $20,000	4.4%	3.2%
$20,001 - $30,000	6.2%	7.4%
$30,001 - $40,000	6.3%	6.7%
$40,001 - $50,000	7.5%	8.2%
$50,001 - $70,000	15.3%	15.6%
$70,001 - $100,000	19.6%	19.0%
$100,001 - $150,000	22.2%	21.7%
$150,001 - $200,000	12.6%	12.0%
$200,001 or more	6.1%	6.1%
Main activity	N=3,069	
Work in own business	7.7%	8.4%
Employed	63.3%	58.2%
Unpaid family business	0.9%	0.6%
Volunteer	2.9%	3.2%
Caring for others	2.8%	2.1%
Unemployed	3.3%	3.2%
Homemaker	4.9%	5.4%
Retired	10.1%	15.6%
Disabled	1.3%	2.0%
Studying	2.6%	1.0%
Other	0.2%	0.3%
Household type	N=3,052	
Live alone	11.6%	15.5%
Live with partner	26.9%	32.8%
Live with family	51.0%	44.4%
Live with flatmates	10.6%	7.3%
Household size	N=3,097	
1 person	11.6%	15.4%
2 people	29.9%	36.4%
3 – 5 people	50.2%	43.0%
6+ people	8.3%	5.1%
Dependent children in the household	N=3,093	
no children	56.9%	63.5%
1 child	17.7%	15.3%
2 children	17.5%	15.2%
3 children	5.3%	4.4%
4 + children	2.6%	1.7%

Notes: Sample sizes vary due to the removal of 'don't know / prefer not to answer' responses. The Weighted Sample uses population sample weights based on the age distribution of the 2018 Census, provided in Table 1.

3 Internet accessibility and use

In this section, we focus on how NZ internet users access the internet including the frequency of internet use, the quality of their internet connection and their propensity to share devices within households.

3.1 Frequency of internet use

Most of the respondents in our sample are long-time internet users, with over 90% having used the internet for 10 or more years. Table 3 shows how the frequency and volume of internet use varies by gender, we note that caution is required when interpreting the non-binary group due to small sample sizes, we therefore limit our discussion to the male, female and total groups.

Table 3 shows that most of our sample (over 83%) uses the internet several times a day, with most of the remainder using it daily. Very few respondents (1%) use the internet once a week or less. Gender differences arise, with an 8 percentage point difference between men and women in their propensity to use the internet several times a day. When looking at how many hours respondents spend online each day, we note that over 50% spend between 3 and 6 hours. Women, again, report spending more time online, with over a quarter reporting that they spend between 5 and 6 hours online daily, compared to 18% of the males in our sample.

Table 3. Frequency of internet use by gender

	Male	Female	Non-Binary	Total
How often do you use the internet				
Several times a day	77.8%	85.7%	76.9%	83.1%
Daily	20.6%	13.3%	23.1%	15.7%
Weekly or less	1.6%	1.0%	0.0%	1.0%
	N=987	N=2,099	N=13	N=3,099
On average, how many hours a day do you use the internet				
Less than 1 hour	1.1%	0.9%	0.0%	0.9%
1 to 2 hours	19.1%	8.3%	7.7%	11.8%
3 to 4 hours	34.5%	27.2%	7.7%	29.4%
5 to 6 hours	18.1%	25.5%	15.4%	23.1%
7 to 8 hours	10.8%	13.4%	15.4%	12.6%
9 to 10 hours	7.7%	12.3%	30.8%	10.9%
11 or more hours	8.7%	12.4%	23.1%	11.3%
Sample size	984	2,092	13	3,089

Notes: Sample sizes vary due to the removal of 'don't know / prefer not to answer' responses.

Next, we consider the impact of device type on internet use. Figure 1 illustrates the frequency of internet use reported for each device type. Respondents overwhelmingly connect to the internet most often using their phones, with 75% indicating that they use their phones "several times a day" to connect to the internet, followed by 53% doing so on their computers and 30% on their tablets.

E-Readers and Gaming consoles are used the least to connect to the internet, with 42% of our sample indicating that they connect to the internet using an E-reader "less than monthly" and 29% of those with a gaming console.

Figure 1. How often do people connect to the internet by device type
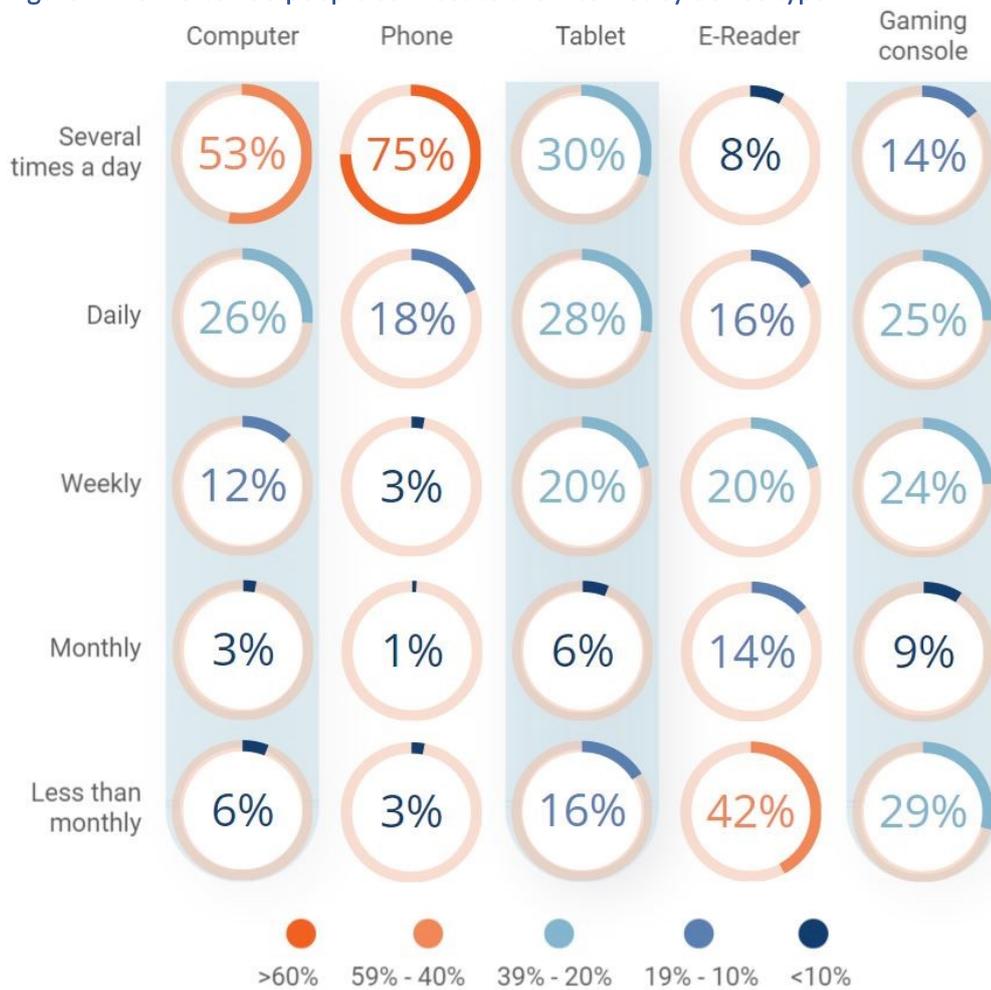
Notes: Columns sum to 100%. Sample sizes vary by device ownership, they are as follows: Computer=2,941, Phone=3,051, Tablet=2,066, E-Reader=689, Gaming console=1,689.

Next, we look at the frequency of a selection of online activities, as illustrated in Figure 2. We note that very few respondents shop online, pay bills or sell things online several times a day or daily (ranging between 2% and 8%), with the exclusion of online banking or paying bills, with 17% of the sample indicating that they do this activity daily. Selling things online is the least popular activity to do online, with 64% of respondents indicating that they do this "less than monthly", the most popular activity is online banking or paying bills, with half of the respondents doing this weekly. Lastly, we note that buying physical goods online is more common than buying digital goods, with 45% of respondents buying digital goods online less than monthly.

Figure 2. How often do people do commerce activities online
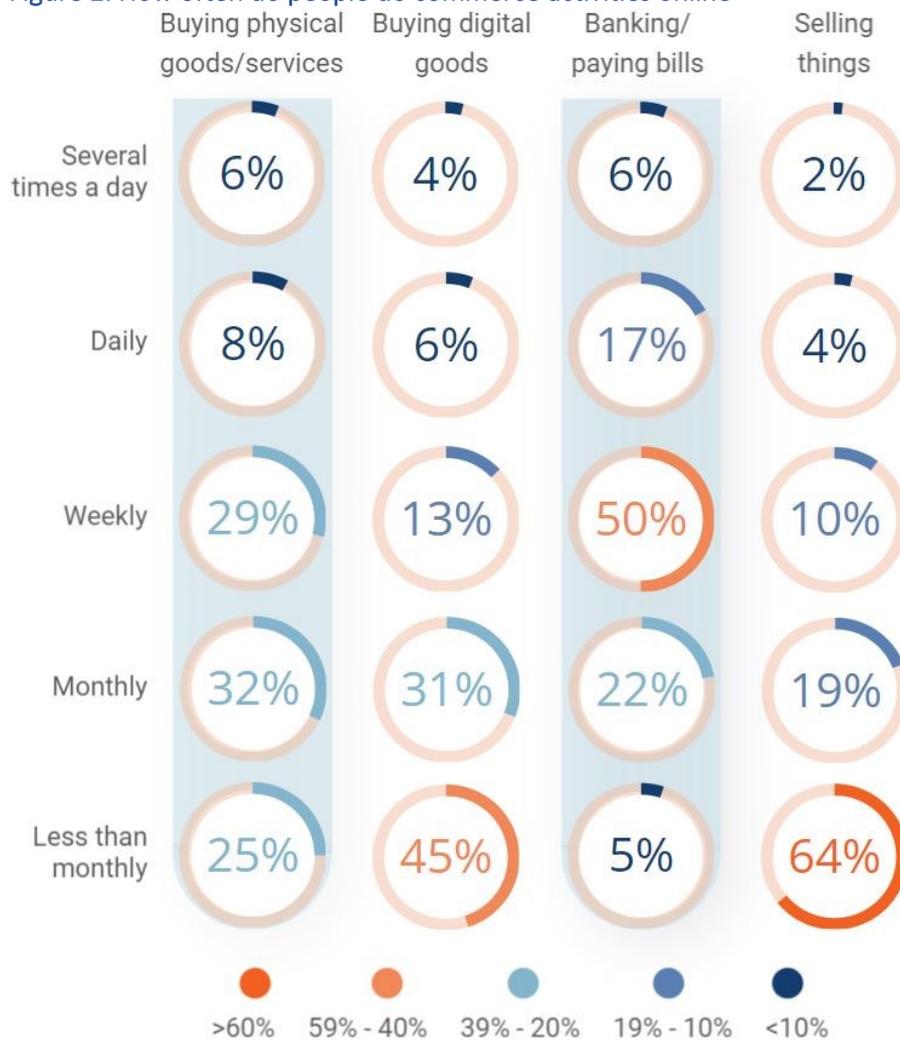
Notes: Columns sum to 100%. Sample sizes vary due to the removal of 'don't know / prefer not to answer' responses. Sample sizes are as follows: Buying physical goods/service=3,084, Buying digital goods=3,063, Banking/paying bills=3,059, Selling things=3,037.

3.2 Connectivity and hardware

All aspects of internet use are greatly affected by the quality of the internet connection and the devices being used. As such, we asked respondents about how they connect to the internet, the quality of their connection and the way they share devices within the household.

Internet connection

When asked how they connect to the internet, almost all respondents connected from home (97%), many connected using mobile data (82%) and some through their school or work (47%), in the last month as shown in Figure 3. This indicates a high reliance on home internet connections and mobile data networks in NZ.

Figure 3. In the LAST MONTH, how did you connect to the internet?

Home internet connection — 97% ▼
Friend's/neighbour's home — ▼23%
Mobile data — 82% ▼
Internet cafe/public library — ▼11%
Work/school — ▼47%
Marae/community centre — ▼3%
WiFi hotspots — ▼32%
Other — ▼1%
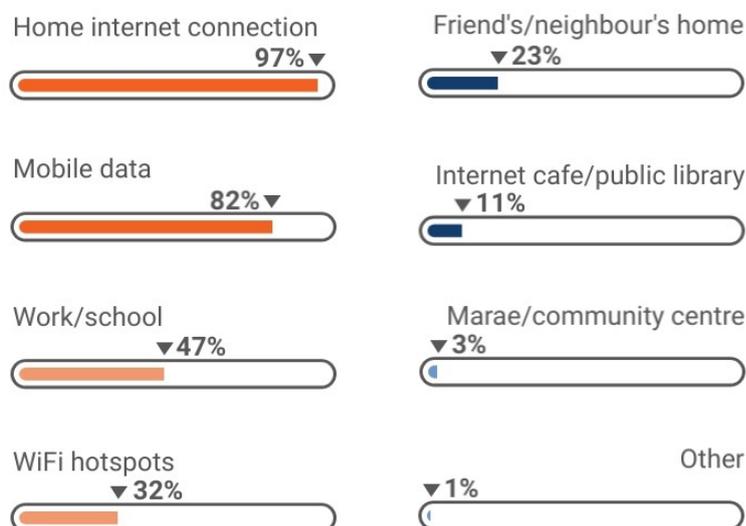
Notes: This figure excludes 'don't know / prefer not to answer' responses. Sample size = 3,100. These do not sum to 100% as respondents could select multiple options.

Figure 4 illustrates that the type of internet connection respondents have at home fit three categories, with the most common being Fiber or HFC broadband (78%), mobile or wireless networks being second (33%) and finally, VDSL or ADSL broadband (19%). Only a small portion of respondents did not know what sort of internet connection they had (2%) and surprisingly, a new category of internet connection emerged from 1% of respondents indicating that they use a satellite internet connection.

Figure 4. How do you connect to the internet from home?

78% Fibre/HFC Broadband

33% Mobile data/ Wireless network

19% VDSL/ADSL Broadband

2% Don't know

1% Satellite
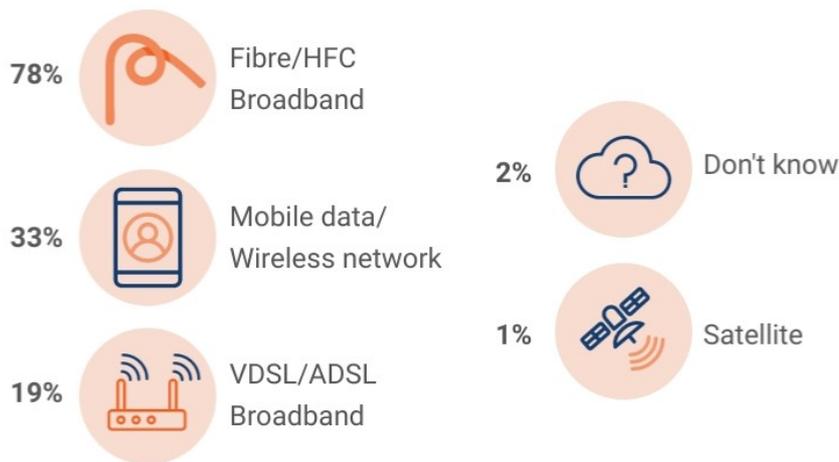
Notes: This figure excludes 'prefer not to answer' responses. Sample size = 3,100.

Quality of connection

The quality of internet connection also contributes to internet use and engagement. We asked respondents what they thought of the quality of their internet connection they use most often. Figure 5 splits the results into those who mostly connect to the internet from home and those who more often connect from a different site, although we note that this sample is small (91 respondents). We notice that the home connections are rated better than the other internet connections, with 46% rating their home internet conneciton as good and a further 30% rating it as excellent, while 37% rate their non-home connection as good, and 24% rate it as excellent.

Figure 5. Quality of internet connection

Home internet connection

30%	46%	18%	4%	1%
Excellent	Good	Acceptable	Not good	Awful

Other internet connection

24%	37%	31%	4%	3%
Excellent	Good	Acceptable	Not good	Awful

Notes: Samples exclude 'don't know / prefer not to answer' responses. Sample sizes are as follows: Home internet connection=3,008, Other internet connection=91.

We go on to analyse what the most common problems with individual's internet connections are, with Table 4 providing the results for the two connection groups (home connection and other connection). We also split the groups by how they rated their internet connection. For the home connection group, we notice that 61% of those who rated their home internet connection as "acceptable" or above did not have any problems with their internet connection (i.e. they selected "none of the above"). This is in stark contrast to those in the other connection group, all of which had at least one complaint about their internet connection. The top two most common complaints for those who rated their internet connection as "not good" or below were that their internet was too slow (76% and 71%) and that their connection is unreliable (63% and 57%) regardless of their connection type.

Table 4. Problems with main internet connection

	Home			Other		
	All	Not good - Awful	Excellent - Acceptable	All	Not good - Awful	Excellent - Acceptable
Internet is too slow	18.4%	76.3%	14.9%	25.0%	71.4%	21.4%
I can only connect some of the time	5.4%	22.5%	4.4%	16.3%	14.3%	16.7%
My connection is unreliable	16.2%	63.3%	13.4%	16.3%	57.1%	13.1%
Internet is only available in certain areas	14.3%	33.1%	13.2%	15.2%	28.6%	14.3%
No wired connection	3.3%	8.3%	3.0%	10.9%	28.6%	9.5%
Device I use is too slow/old	4.0%	3.6%	4.0%	15.2%	28.6%	14.3%
The modem/hardware I use is too slow/old	4.3%	13.0%	3.7%	3.3%	0.0%	3.6%
The websites I want to use are blocked	0.5%	0.6%	0.5%	3.3%	0.0%	3.6%
Other	1.4%	3.0%	1.3%	1.1%	0.0%	1.2%
None of the above	57.6%	3.0%	60.9%	0.0%	0.0%	0.0%
Sample size	3,006	169	2,837	91	7	84

Notes: Sample excludes 'don't know / prefer not to answer' responses. Columns do not sum to 100% as respondents could select multiple options.

Household hardware

Next, we look at the number of devices in each household and whether or not they are shared among multiple household members. We recall from Table 2 that, on average, our respondents come from households made up of 3 to 5 individuals.

Figure 6 illustrates that most households surveyed did not own any E-readers (77%) and more than a third did not own gaming consoles (44%). Where gaming consoles were present, 64% of respondents indicated that these were shared between multiple members of the household.

The most common device type was mobile phones, with 35% of respondents stating that there were two phones in the household and 47% having 3 or more. Mobile phones were also the least likely device in the household to be shared, with 14% of respondents indicating that mobile phones were shared between multiple household members. Computers and laptops were the second most common device

type, with 32% or respondents stating that their household had three or more. However, unlike mobile phones, computers and laptops were much more likely to be shared among members of the household (41% of the time), similar to tablets (40% of the time).

Figure 6. Number of devices in the household
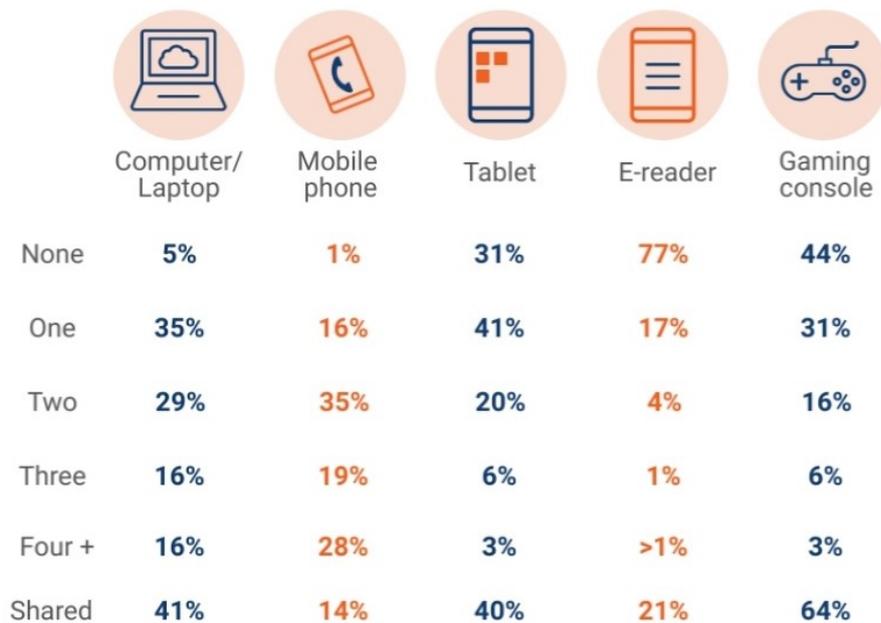
	Computer/ Laptop	Mobile phone	Tablet	E-reader	Gaming console
None	5%	1%	31%	77%	44%
One	35%	16%	41%	17%	31%
Two	29%	35%	20%	4%	16%
Three	16%	19%	6%	1%	6%
Four +	16%	28%	3%	>1%	3%
Shared	41%	14%	40%	21%	64%

Notes: Columns sum to 100%. Sample sizes vary due to the removal of 'don't know / prefer not to answer' responses. Sample sizes are as follows: Computer/laptop=3,092, Mobile phone=3,098, Tablet=3,062, E-reader=2,985, Gaming console=3,061.

As ethnic differences are prevalent in terms of household sizes, we further disaggregate the results from Figure 6 by ethnicity, as presented in Table 5. Asian respondents tend to live in households with a higher number of computers and laptops than any other ethnic group, however their households tend to have fewer mobile phones especially relative to Māori and Pacific respondents, with 30% of Asian respondents reporting four or more mobile phones in their households, to an average of 3 individuals compared to 42% and 4 individuals and 58% and 6 individuals of Māori and Pacific respondents respectively. This is likely explained by the larger household size for Māori and Pacific respondents, reported in row one of Table 5.

Gaming consoles were most common in Māori and Pacific households, with 80% and 70% of respondents indicating there was one or more gaming consoles in their household, compared to around half of respondents in the other ethnic groups. Again, the demographic characteristics of the Māori and Pacific respondents may explain some of these differences, as these respondents had higher number of children in their households on average, as shown in row two of Table 5.

Table 5. Number of devices in household by ethnicity

	European	Māori	Pacific	Asian	MELAA/Other
	N=1,909	N=476	N=221	N=420	N=74
Household size	2.9	4.0	5.5	3.2	3.4
Children	0.8	1.5	1.8	0.9	0.8
Computer/Laptop	N=1,904	N=474	N=221	N=419	N=74
None	4.4%	8.0%	8.1%	1.0%	1.4%
One	37.4%	35.9%	30.8%	25.3%	24.3%
Two	28.2%	27.2%	25.8%	34.1%	27.0%
Three	15.8%	12.7%	11.3%	20.3%	25.7%
Four +	14.2%	16.2%	24.0%	19.3%	21.6%
Mobile phone	N=1,908	N=476	N=221	N=420	N=73
None	1.0%	1.3%	0.9%	0.7%	2.7%
One	17.7%	12.6%	10.0%	14.8%	11.0%
Two	41.4%	23.1%	13.6%	34.5%	30.1%
Three	18.6%	21.2%	17.6%	20.2%	24.7%
Four +	21.3%	41.8%	57.9%	29.8%	31.5%
Tablet	N=1,884	N=470	N=219	N=417	N=72
None	31.8%	34.9%	28.3%	22.8%	25.0%
One	40.6%	37.9%	37.9%	49.4%	38.9%
Two	19.7%	18.7%	25.6%	18.0%	25.0%
Three	4.9%	5.7%	6.4%	7.7%	8.3%
Four +	3.0%	2.8%	1.8%	2.2%	2.8%
E-reader	N=1,849	N=454	N=214	N=396	N=72
None	74.5%	85.0%	86.0%	75.3%	77.8%
One	18.8%	11.9%	10.3%	18.7%	19.4%
Two	5.2%	2.0%	2.3%	3.8%	2.8%
Three	1.0%	0.4%	1.4%	1.3%	0.0%
Four +	0.5%	0.7%	0.0%	1.0%	0.0%
Gaming console	N=1,888	N=471	N=218	N=410	N=74
None	49.9%	20.8%	28.9%	49.0%	47.3%
One	28.3%	40.3%	39.4%	29.0%	31.1%
Two	14.1%	24.0%	20.2%	15.6%	8.1%
Three	4.5%	10.2%	7.8%	3.9%	10.8%
Four +	3.2%	4.7%	3.7%	2.4%	2.7%

Notes: Columns sum to 100% for each device type. Sample sizes vary due to the removal of 'don't know / prefer not to answer' responses.

3.3 Scamming and privacy breaches

Finally, we asked respondents about the prevalence of scams and privacy breaches they had encountered online. Table 6 summarises the prevalence of scamming and privacy breaches by age group. Most notable from Table 6 is that regardless of age group, most respondents experienced some scamming attempts, but most of these attempts did not turn into problems. We can interpret this to mean that, on average, individuals don't fall for scamming attempts. The highest prevalence of scamming attempts causing problems was for those in the 75+ age category, 21% of whom report experiencing some minor problems because of a scamming attempt.

As it relates to privacy breaches, a much higher proportion of individuals report not having experienced this, around 70%, regardless of age. It is unclear how much of this reporting is due to individuals not knowing or associating as a victim of a data breach. As reported by the office of the Privacy Commissioner, the prevalence of serious privacy breaches in NZ has increased by 41% when comparing the first half of the 2022/23 financial year to the second half (Privacy Commissioner, 2023). Notably, more respondents on average reported not knowing if their privacy had been breached online (around 4%) than in the case of scamming attempts (around 1%).

Table 6. Online scamming attempts and privacy breaches

	All	16-24	25-34	35-44	45-54	55-64	65-74	75+
Scamming attempt	N=3,099	N=555	N=747	N=721	N=376	N=267	N=264	N=169
No, I haven't experienced this	29.8%	28.5%	31.9%	30.1%	33.2%	30.0%	27.7%	19.5%
Yes, it wasn't really a problem	45.8%	45.8%	44.0%	44.7%	44.7%	46.8%	49.2%	54.4%
Yes, it was only a minor problem	16.9%	16.6%	16.9%	16.9%	16.0%	16.1%	16.7%	21.3%
Yes, it caused considerable problems	4.5%	4.7%	4.8%	5.4%	3.5%	3.7%	5.3%	1.2%
Yes, it caused serious problems	1.6%	3.1%	1.6%	1.7%	0.8%	1.5%	0.0%	0.6%
Don't know	1.4%	1.4%	0.8%	1.2%	1.9%	1.9%	1.1%	3.0%
Privacy breach	N=3,096	N=554	N=747	N=721	N=375	N=266	N=264	N=169
No, I haven't experienced this	71.3%	70.8%	69.5%	69.1%	70.9%	72.6%	76.9%	79.9%
Yes, it wasn't really a problem	9.7%	11.4%	9.6%	9.3%	8.8%	12.0%	9.5%	5.3%
Yes, it was only a minor problem	10.3%	10.3%	11.1%	12.1%	10.4%	7.9%	6.4%	8.9%
Yes, it caused considerable problems	3.7%	2.3%	4.1%	4.6%	3.7%	3.4%	3.8%	2.4%
Yes, it caused serious problems	1.0%	1.3%	1.3%	0.7%	0.5%	1.5%	0.8%	0.0%
Don't know	4.1%	4.0%	4.3%	4.3%	5.6%	2.6%	2.7%	3.6%

Notes: Columns sum to 100%. Sample sizes vary due to the removal of 'prefer not to answer' responses.

4 Attitudes and beliefs

In this section we report on internet users' views on a variety of topics, including the information they read online, political freedom on the internet, online privacy, social media and their understandings of the environmental impacts of internet use.

## 4.1 Reliability of information online

We asked internet users about how confident they are in their ability to accurately assess the reliability of information on the internet, and how much of the information presented on the internet they believe is reliable. Figure 7 illustrates the results of how these two dimensions interplay.

We notice that individuals who reported not being confident in assessing the reliability of information online were more likely to rate less information online as reliable, with 42% of those who don't even attempt to assess the reliability of information believing only a small portion or none of it is reliable, and 52% of those who reported not being confident stating the same. This is in strong contrast with respondents at the other end of the spectrum, who report being confident or extremely confident in assessing the reliability of information online; of these respondents 38% and 47%, respectively, indicated that they believe that most or all of the information online is generally reliable.

Those who sit in the middle of the confidence spectrum, indicating that they are somewhat confident in assessing the reliability of information online, were more likely to report believing that about half of the information online is generally reliable, with the other half of these respondents split evenly between beliving that a small portion of it and most of it is reliable.

It is of course difficult to make causal inferences here, because it could be that confidence in one's ability to assess the reliability of information makes one percieve more information as reliable, or that percieving more information as reliable makes one feel more confident in their ability to discern the reliability of the information. We illustrate this inverse possibility in Appendix Figure A 1. Alternatively, there could be multiple confounding factors to this relationship, such as looking at high-quality information online may make one feel more confident that all or most of the internet is filled with similar content.

Figure 7. How confident do you feel that you are able to accurately assess the reliability of information on the internet?
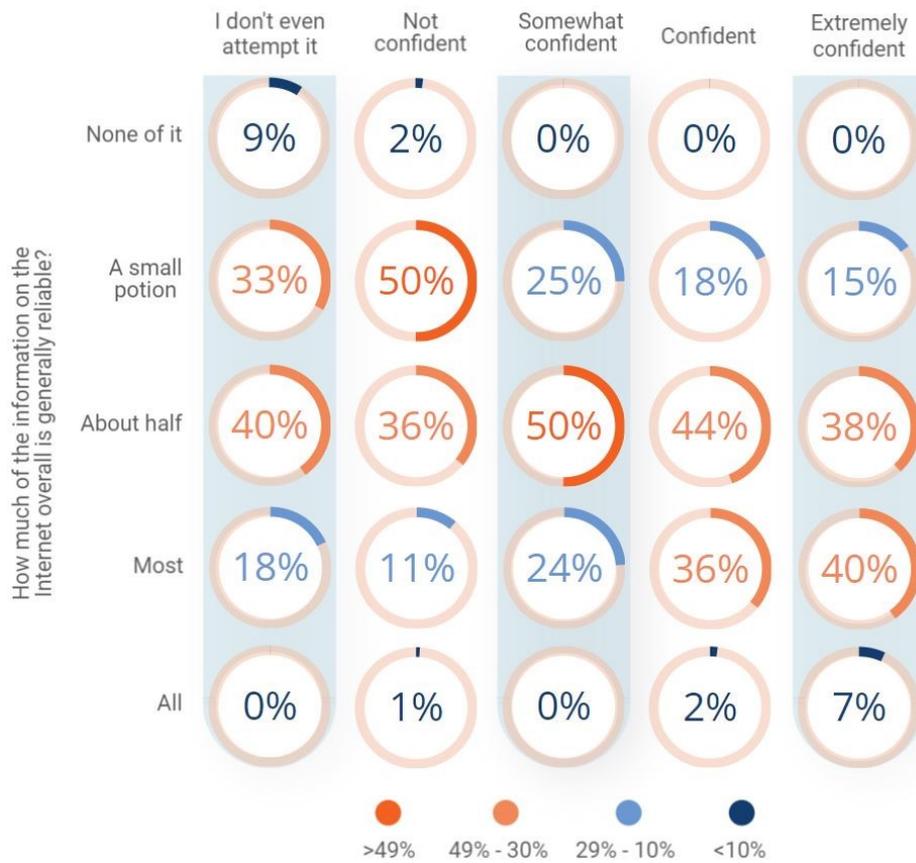
	I don't even attempt it	Not confident	Somewhat confident	Confident	Extremely confident
None of it	9%	2%	0%	0%	0%
A small potion	33%	50%	25%	18%	15%
About half	40%	36%	50%	44%	38%
Most	18%	11%	24%	36%	40%
All	0%	1%	0%	2%	7%

(y-axis label: How much of the information on the Internet overall is generally reliable?)

Legend: ●>49% ●49% - 30% ●29% - 10% ●<10%

Notes: Columns sum to 100%. This figure does not include 'don't know / prefer not to answer' responses, sample sizes are: "I don't even attempt it"=108, "Not confident"=293, "Somewhat confident"=1,369, "Confident"=903, "Extremely confident"=210, Total N=2,883.

4.2 Political freedom online

Next we asked respondents about their beliefs regarding political freedom online. First, in Figure 8, we present the responses related to freedom of speech. We notice that three of the opinions received a fairly even split of responses from agree to neutral to disagree. About a third (31%) of respondents agreed that they felt comfortable saying whatever they thought about politics online, with another third being undecided (32%) and the final third disagreeing (37%). This pattern was similar for the opinion that it is okay for people to express their ideas online even if those ideas are extreme, with 36% agreeing, 28% being neutral and 37% disagreeing. Opinions on regulating the internet were also split into approximate thirds, with 36% agreeing, 36% being neutral and a final 28% disagreeing.

The final two opinions were slightly less divisive, with over half (51%) of respondents disagreeing that it is safe to say whatever one thinks online, and less than a quarter (23%) agreeing. The opposite was true for the statement that people should be free to criticize their government online, with 18% disagreeing and over half (55%) agreeing.

Figure 8. Opinions about politics online
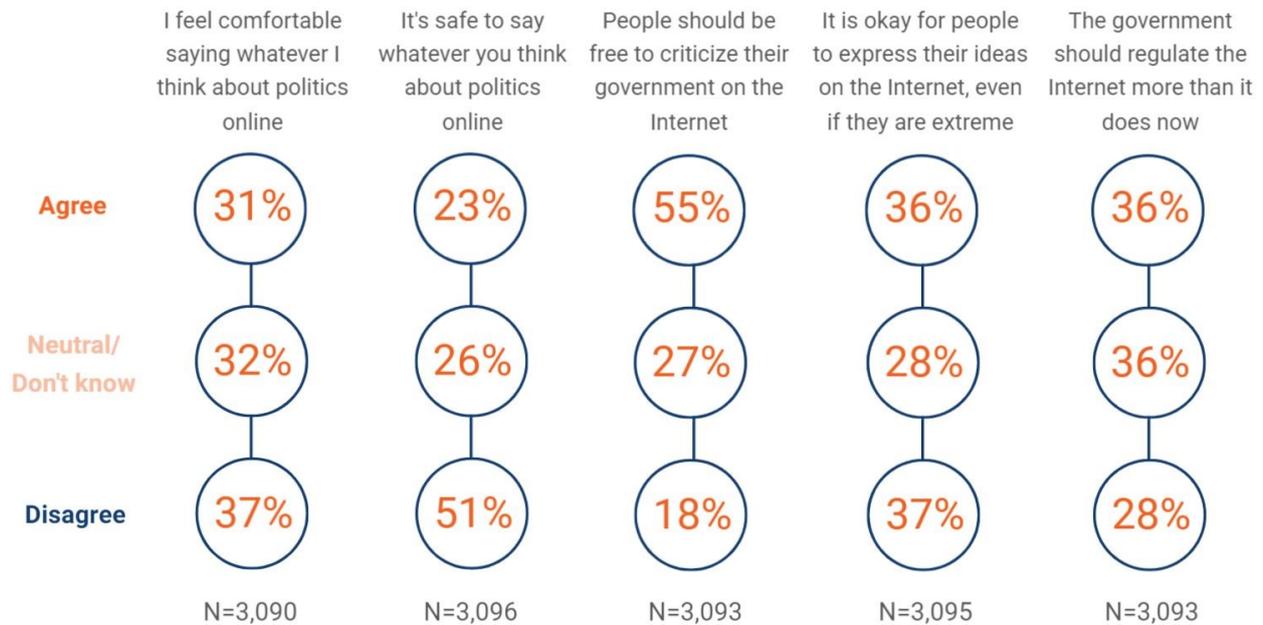
Notes: Columns sum to 100%. Sample sizes vary due to the removal of 'prefer not to answer' responses.

Secondly, we asked respondents about their beliefs regarding their ability to impact politics using the internet. Figure 9 illustrates the results. As with Figure 8, two statements received a fairly even split of responses from agree to neutral to disagree. A third of respondents (33%) agreed that public officials will care more about what they think online, with about a third disagreeing (32%) and the final third being undecided (35%). Similarly, a bit over a third of respondents agree (37%) that they will have more say in central governmet decision making, with a bit under a third disagreeing (29%) and the rest being neutral (34%). This is contrasted by the slightly higher rate of respondents agreeing (42%) with the statement that they will have more say in local governmet decision making, and a lower rate of those disagreeing (28%).

The least divisive statement in this section is that respondents can better understand politics using the internet, with 62% agreeing and only 14% disagreeing. This statement also had the lowest rate of neutral responses (25%).

Figure 9. Opinions about political voice online

	I can have more political power	I will have more say about what CENTRAL government does	I will have more say about what LOCAL government does	I can better understand politics	Public officials will care more what I think
Agree	34%	37%	42%	62%	33%
Neutral/ Don't know	40%	34%	30%	25%	35%
Disagree	26%	29%	28%	14%	32%
	N=3,095	N=3,097	N=3,098	N=3,097	N=3,099

Notes: Columns sum to 100%. Sample sizes vary due to the removal of 'prefer not to answer' responses.

4.3 Privacy online

In this sub-section we asked respondents about their beliefs about privacy online. First, as illustrated in Figure 10, we asked about their beliefs concerning online privacy in general. The least divisive statement in this series was that respondents actively protect their privacy online, with almost three-quarters (73%) agreeing and only 8% disagreeing. This is in line with the fact that 50% agreed with the statement that they can control their privacy online, although 21% disagreed. Surprisingly, more than half of respondents (57%) agree that there is no privacy online while 59% agree with the statement that they have nothing to hide. However, over half (51%) disagree that concerns about privacy online are exaggerated.

Therefore, despite respondents disagreeing, on average, that online privacy is possible they also believe that they can control their privacy online, and the majority take actions to actively protect it. This is potentially explained by the fact that respondents, on average, do not believe that online privacy concerns are exaggerated. This finding is surprising, given the findings from Section 3, where, as Table 6 shows, over 70% of respondents report not having experienced any online privacy breaches.

Figure 10. Beliefs about online privacy
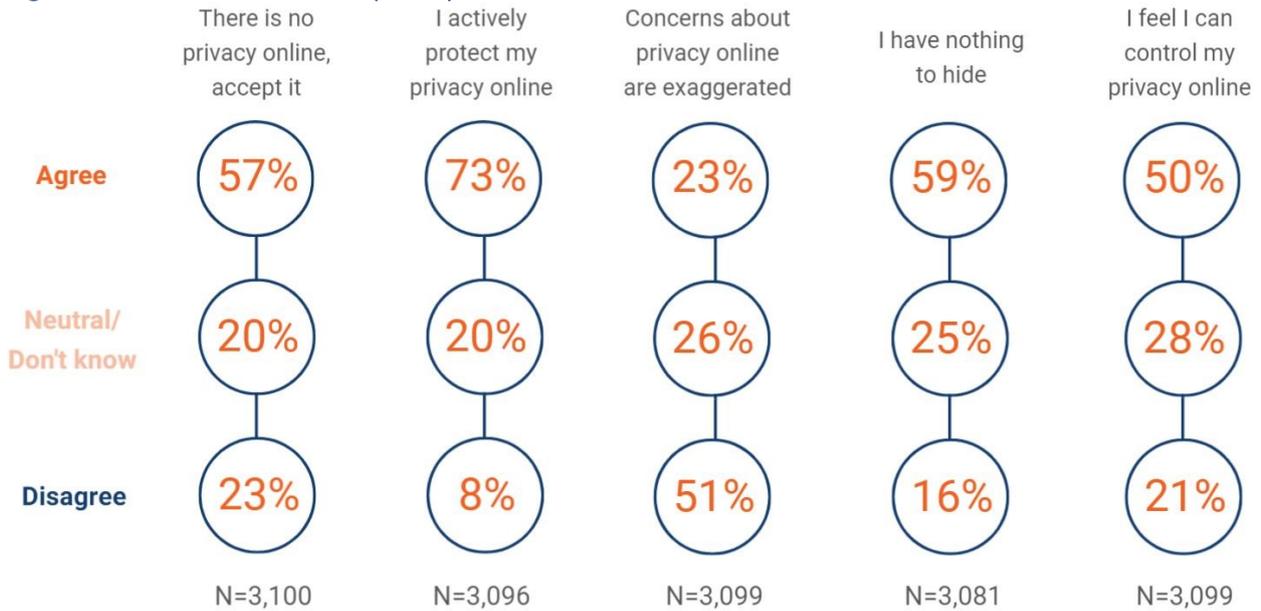
	There is no privacy online, accept it	I actively protect my privacy online	Concerns about privacy online are exaggerated	I have nothing to hide	I feel I can control my privacy online
Agree	57%	73%	23%	59%	50%
Neutral/ Don't know	20%	20%	26%	25%	28%
Disagree	23%	8%	51%	16%	21%
	N=3,100	N=3,096	N=3,099	N=3,081	N=3,099

Notes: Columns sum to 100%. Sample sizes vary due to the removal of 'prefer not to answer' responses.

Secondly, we asked respondents about how much they agreed or disagreed that different actors would breach their privacy online; we illustrate the results in Figure 11. Over half (56%) of respondents agree that private corporations were likely to breach their privacy online, with over a quarter of respondents being neutral and 18% disagreeing. Similarly, half (50%) of respondents agreed that private individuals were likely to breach their privacy online, with 29% being neutral and 20% disagreeing. Finally, about a third (32%) of respondents were unsure about governments breaching their privacy, with 41% agreeing and over a quarter (27%) disagreeing.

Figure 11. Beliefs about who is likely to breach my privacy online
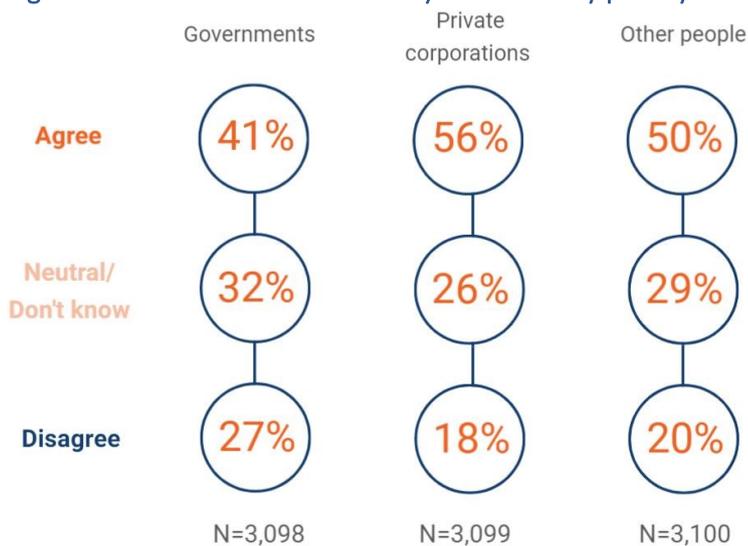
|	Governments	Private corporations	Other people
Agree	41%	56%	50%
Neutral/ Don't know	32%	26%	29%
Disagree	27%	18%	20%
	N=3,098	N=3,099	N=3,100

Notes: Columns sum to 100%. Sample sizes vary due to the removal of 'prefer not to answer' responses.

4.4 Social media

Next we asked respondents about their opinions regarding social media companies such as Facebook (now known as Meta), Twitter (now known as X), and Instagram. As Figure 12 illustrates, the majority (61%) of respondents agree that social media companies should be more strongly regulated than they are now.

Figure 12. Social media companies should be more strongly regulated than they are now

Notes: This figure does not include 'prefer not to answer' responses. N=3,094

The finding, illustrated in Figure 13, shows that over a third (34%) of respondents believe that social media companies have made the world a worse place, 28% think these companies have made the world a better place and 38% are undecided.

Figure 13. Overall, have social media companies like Facebook and TikTok made the world…
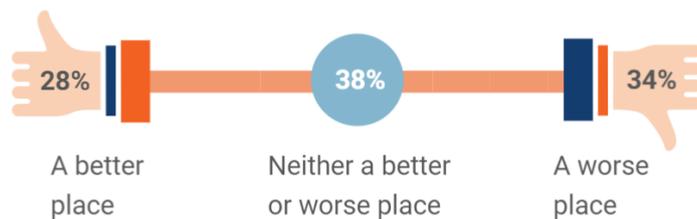
Notes: This figure does not include 'don't know / prefer not to answer' responses. N=2,355

As it relates to social media use, we also asked respondents: "In the past year, have you been bullied or harassed online?" Most respondents (88%) said "No". Of the 12% that had experienced bullying or harassment online, a third (33%) were aged 16-24, 29% were 25-34 and 23% were 35-44 years old. The remaining 15% were over 44 years old.

4.5 Environmental impact of digital technologies

Finally, we surveyed internet users' opinions and knowledge about the environmental impacts of internet use. Figure 14 illustrates the proportion of respondents who have heard about the environmental impact of digital technologies. We note that only a small proportion (7%) of respondents feel they could speak comfortably about this topic, while 43% reported not knowing about it at all. The remaining 50% reported either knowing about it or being able to discuss the environmental impact of digital technologies, but not in detail.

Figure 14. Have you heard about the environmental impacts of digital technologies?

43%	22%	28%	7%
No	Yes, but I can't talk about it	Yes, and I can talk about it but not sure of all the details	Yes, and I can talk about it in detail
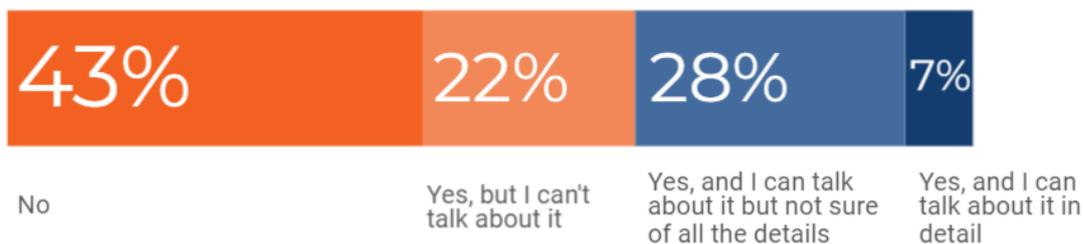
Notes: This figure does not include 'don't know / prefer not to answer' responses. N=3,038

Consistent with the findings in Figure 14, Figure 15 illustrates the responses of respondents when asked if they had changed any of their digital habits in the last six months in order to limit their impact on the environment. The majority of respondents (67%) did not, 17% changed a small amount of their habits, 12% some of the time and only 4% have changed a lot of their digital habits in order to limit their impact on the environment.

Figure 15. In the last six months, have you changed any of your digital habits to limit the impact they have on the environment?

67%	17%	12%	4%
No, not at all	Yes, but only a little	Yes, some of the time	Yes, a lot

Notes: This figure does not include 'don't know / prefer not to answer' responses. N=3,069

We went on to ask respondents about which specific actions they did take, if any, to limit the impact of their digital technology use on the environment. Based on the previous responses, we would assume that most respondents wouldn't do any of the actions listed in Table 7, however, only 16% reported doing nothing. The most common action respondents reported taking was deleting unnecessary files and emails, with over half of respondents (55%) doing this. The second most common action was keeping

digital devices for as long as possible, with almost half (49%) reportedly doing this. Well over a third (39%) of respondents also reported unplugging their devices when not in use and approximately 1 in 5 respondents also store their data locally rather than on a cloud service.

Table 7. Do you do any of the following to limit the environmental impact of your digital technology use?

	Proportion
None	16.2%
Keeping digital devices as long as possible	48.7%
Limiting the number of digital devices you own	27.1%
Buying used or refurbished digital devices rather than new ones	18.4%
Deleting unnecessary files, emails	54.8%
Storing data locally rather than in the cloud	20.9%
Limiting the number and/or size of files you share online	17.5%
Unplugging digital devices when not in use	38.5%
Other	0.6%

Notes: This table does not include 'prefer not to answer' responses. N=3,100

5 Remote work

In this section we report the results of the remote working component of the WIP-NZ 2023 survey. Unlike the previous sections, only a sub-set of individuals who reported that they were working were asked the questions relating to their remote working practices. As a result, the sample we use here varies in descriptive characteristics from the sample presented in the rest of the report. A full table of descriptive statistics can be found in Appendix Table B 1.

Our population of interest in this section is individuals from our original sample that are engaged in some form of work 5 or more hours per week. In this section, we refer to "remote working" individuals, which we define as respondents who indicated that, in their main job, they were currently (at the time of the survey) able and allowed to complete their work remotely.

Figure 16 illustrates the proportion of workers in our sample who worked remotely before the COVID-19 lockdowns in NZ (the first being in March of 2020), during the lockdowns,[4] and "now", meaning at the time the survey was administered (March - May 2023). As we can see, the proportion of respondents able to work remotely before lockdowns was 40%, this increased by 22 percentage points (over 50%), to 62% during lockdowns and remained unchanged in the post-lockdown world. This finding indicates that, at least in the medium term, the COVID-19 pandemic has significantly changed the way New Zealanders work, in particular their propensity to work away from the office. This indicates that more individuals are likely to rely more often on their home internet connections to complete their work and thus earn a living.

---

[4] Note that NZ experienced several strict lockdowns, known as "level 4" lockdowns and that the intensity and severity of lockdowns varied across regions, with the Auckland region experiencing more lockdowns than any other region. For more information on COVID-19 lockdowns in NZ, including timelines, see the official NZ Government website, here: https://covid19.govt.nz/about-our-covid-19-response/history-of-the-covid-19-alert-system/.

Figure 16. Working remotely

40%	Before Lockdowns
62%	During lockdowns
62%	Now
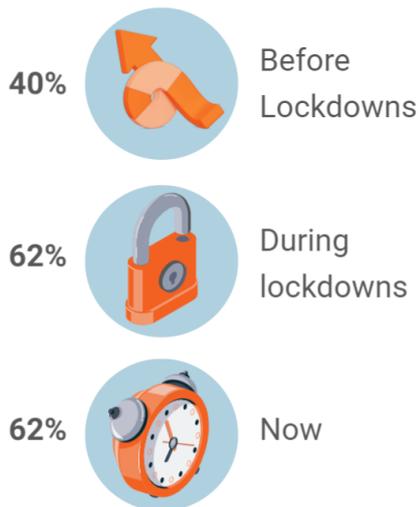
Notes: This figure includes a sub-sample of individuals who are working 5 or more hours per week and does not include 'don't know / prefer not to answer' responses.

Of the working individuals surveyed in this section, Figure 17 illustrates that the majority (84%) work in a paid job as an employee, 11% work in their own business and 5% do some kind of volunteer or other unpaid work. Individuals working remotely at the time of the survey were more likely to work in their own business (14%), than those not working remotely.

Figure 17. Types of work

All	Working remotely	Not working remotely	
11%	14%	7%	Work in own business
84%	81%	88%	Employed
5%	2%	5%	Other
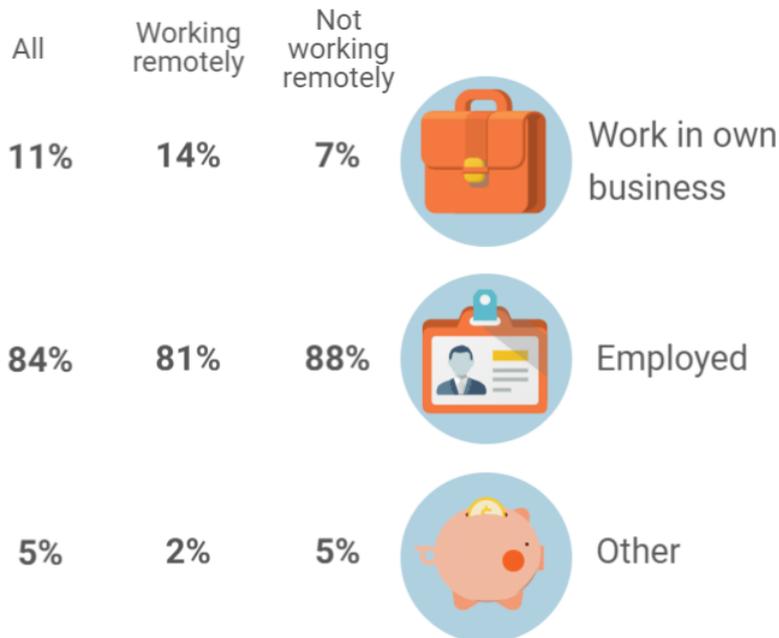
Notes: This figure does not include 'don't know / prefer not to answer' responses. Sample sizes: All=1,225, Working remotely=743, Not working remotely=461.

Table 8 provides the work-related characteristics of this sample of workers. We note that 60% of respondents work 36 or more hours a week and 18% work fewer than 20 hours per week on average. Those not working remotely at the time of the survey had a higher proportion of those working 40+ hours and, contrastingly, also a higher proportion of those working 11-20 hours. We also note that this sample of respondents work a broad range of industries, and that over half (51%) are either managers or professionals. As expected, the proportion of labourers in the remote work group is smaller than in the non-remote working group, as well as community and personal service workers, technicians and trades workers, and machinery operators and drivers. The remote work group had the highest proportion of mangers, professionals, and clerical and administrative workers. Also of note is the high proportion of permanent staff, with three-quarters of respondents reporting that they are in a permanent position, and less than 10% being casual, seasonal or project-based/temp agency workers. Again, we note that the working remotely group had a higher proportion of self-employed individuals, while the non-remote workers had a higher proportion of casual workers.

Table 8. Work-related descriptive statistics

	All	Working remotely	Not working remotely
Hours worked per week	N=1,203	N=733	N=455
5 - 10 hours	8.1%	7.5%	8.4%
11 - 20 hours	9.9%	7.9%	12.8%
21 - 25 hours	6.1%	5.9%	6.2%
26 - 30 hours	8.2%	8.3%	7.9%
31 - 35 hours	7.8%	7.5%	8.6%
36 - 40 hours	33.9%	38.9%	26.2%
more than 40 hours	26.1%	24.0%	30.1%
Industry	N=1,194	N=730	N=450
Retail trade	10.5%	7.7%	14.9%
Agriculture, forestry, fishing & mining	3.9%	4.1%	3.6%
Manufacturing	4.7%	4.4%	5.1%
Construction, electricity, gas, water,	7.4%	7.7%	7.1%
Rental, hiring, real estate, information	4.7%	6.7%	1.6%
Public and private administrative, support	10.2%	13.8%	4.7%
Wholesale trade	2.4%	2.6%	2.2%
Arts and recreation services	2.1%	2.6%	1.3%
Accommodation and food services	4.5%	3.2%	6.4%
Transport, postal, and warehousing	3.9%	3.6%	4.4%
Health care and social assistance	13.0%	7.7%	22.0%
Financial and insurance services	4.4%	6.3%	1.3%
Education and training	10.2%	8.9%	12.4%
Professional, scientific, and technical	5.8%	7.7%	2.7%
Other services	10.6%	11.0%	9.1%
Not classified elsewhere	1.9%	2.2%	1.1%

	All	Working remotely	Not working remotely
Occupation	N=1,084	N=672	N=400
Labourer	7.9%	5.1%	13.0%
Manager	23.1%	27.1%	16.3%
Professional	27.5%	29.6%	24.0%
Technician and trades worker	5.2%	3.6%	8.0%
Community and personal service worker	7.8%	4.8%	12.5%
Clerical and administrative worker	16.6%	20.4%	10.5%
Sales worker	10.1%	8.3%	12.8%
Machinery operator and driver	1.9%	1.2%	3.0%
Employment Type	N=1,158	N=707	N=432
Permanent	74.5%	73.8%	76.4%
Self-employed	11.1%	14.1%	6.0%
Fixed term	5.0%	4.2%	6.0%
Project-based/Temp agency	1.7%	1.8%	1.4%
Casual	7.0%	5.2%	9.5%
Seasonal	0.7%	0.7%	0.7%

Notes: This table includes a sub-sample of individuals who are working 5 or more hours per week. Sample sizes vary due to the exclusion of 'don't know / prefer not to answer' responses.

In total, 68% of our sample worked remotely at the time of the survey at least some of the time. Most commonly, 43% respondents reported working remotely "a few days a week" (23%) or "daily" (20%).

Table 9 presents results relating to the frequency of remote working. Most respondents who work remotely do so daily (29%) or a few days a week (34%). Interestingly, around a quarter (26%) of respondents who initially reported that they do not work remotely indicated that they do work remotely when asked about the frequency of their remote work. This may be work in secondary jobs or "side hustles".

Table 9. How often do you work remotely using the internet?

	Working remotely now	
	Yes	No
Daily	28.5%	5.2%
A few days a week	34.1%	4.0%
Weekly	13.0%	3.4%
A few days a month	10.0%	4.5%
Monthly or less	8.2%	9.0%
Never	6.2%	74.1%
Sample size	730	447

Notes: This table includes a sub-sample of individuals who are working 5 or more hours per week and does not include 'don't know / prefer not to answer' responses.

In conjunction with official remote working statistics, we also gathered information on respondent's propensity to do work remotely outside of official work hours. We hypothesized that more individuals do unofficial and unpaid remote work such as checking and responding to emails, setting calendar invites, preparing for presentations and so on, than official data on remote working might capture.

In contrast to official remote work discussed above, we note that 88% of our sample reported doing some kind of remote work outside of official work hours, with 50% reporting that they do this daily.

Table 10 summarises the results relating to the frequency of unofficial remote working for respondents. Of respondents who reported working remotely at the time of the survey, more than three-quarters reported doing unofficial remote work "a few days a week" (18%) or "daily" (57%). Respondents who reported not working remotely at the time of the survey also had high rates of unofficial remote work, with over 75% reporting doing some form of unofficial remote work, with over half doing unofficial remote work "a few days a week" (12%) or "daily" (40%).

Table 10. How often do you use the internet remotely to do work outside of what can be considered normal working hours?

	Working remotely now	
	Yes	No
Daily	57.2%	39.8%
A few days a week	18.2%	11.9%
Weekly	8.1%	10.8%
A few days a month	5.1%	4.4%
Monthly or less	5.9%	9.9%
Never	5.5%	23.3%
Sample size	729	455

Notes: This table includes a sub-sample of individuals who are working 5 or more hours per week and does not include 'don't know / prefer not to answer' responses.

5.1 Effects of remote work

Table 11 provides a summary of survey responses related to the effects of working remotely on various aspects, including team collaboration, colleague performance, and individual performance. About one-third of the respondents (36%) have experienced a positive effect on their team's collaboration while working remotely. This suggests that remote work has improved the ability of some teams to work together effectively, possibly through digital tools and virtual communication. Almost one-third of respondents (29%) report a negative effect on team collaboration. This may indicate challenges in maintaining effective teamwork when working remotely, such as difficulties in communication or

coordination. The final third of respondents (35%) have not noticed a significant impact on team collaboration.

When evaluating their colleague's performance, 50% of respondents observed a positive impact on their colleague's performance while working remotely, while a smaller proportion, 14% report a negative effect on their colleague's performance. This may point to challenges colleagues face when working remotely, such as reduced supervision or access to necessary resources. The remaining 37% of respondents reported no effect.

As for respondents rating the impact of working remotely on their own performance, over half of the respondents (56%) report a positive impact from working remotely. This suggests that remote work has allowed individuals to be more productive, possibly by providing a more comfortable or flexible work environment. Similar to colleague performance, 14% of respondents, experienced a negative effect on their own performance as a result of working remotely. And about one-third of respondents (30%) did not notice a significant change in their own performance.

These findings reflect the diverse impact of remote work on team collaboration, colleague performance, and individual performance. While a substantial portion of respondents have reported positive effects, there is also a notable proportion who have experienced negative effects. Additionally, for each category, a significant percentage of respondents haven't seen a significant change, suggesting that the impact of remote work varies widely among individuals and teams.

Table 11. What effect has working remotely had on…

	My team's collaboration	My colleague's performance	My own performance
Positive	35.7%	49.5%	56.2%
Negative	29.4%	13.5%	13.5%
No effect	34.9%	37.0%	30.3%
Sample size	773	740	805

Notes: This table includes a sub-sample of individuals who are working 5 or more hours per week and does not include 'don't know / prefer not to answer' responses.

Finally, we asked respondents if they received any reimbursements for working remotely and asked them to assess the value of reimbursements in the last 12 months. As summarised in Table 12, we find that the majority of respondents (73%) did not receive any reimbursement for working remotely. This suggests that a significant portion of remote workers in the sample did not receive any financial support from their employers or tax deductions related to remote work. Some respondents (11%) received partial reimbursement for their remote work expenses while others (8%) received a tax deduction. Only a small proportion (4%) of respondents received full reimbursement for their remote work-related expenses.

The value of the reimbursements varied, with most of those receiving support getting less than $1,000, and only 3% of the sample receiving more than $1,000 in support.

Table 12. Value of reimbursement for working remotely

Did you receive any reimbursement for working remotely?	
Nothing	72.6%
Full reimbursement	4.2%
Partial reimbursement	10.8%
Tax deduction	7.5%
Don't know	5.0%
	N=988
Value of the reimbursement/tax deduction in the last 12 months	
0	76.5%
<$100	4.2%
$100 - $500	8.6%
$600 - $1000	4.9%
>$1000	3.2%
Don't know	2.6%
	N=937

Notes: This table includes a sub-sample of individuals who are working 5 or more hours per week and does not include 'don't know / prefer not to answer' responses.

6 Conclusion

In conclusion, the findings from the 2023 World Internet Project (WIP) New Zealand survey provide valuable insights into the evolving landscape of internet usage, attitudes, and its impact on society. With the internet's exponential growth over the last decade, it has undeniably become an integral part of modern society, fundamentally transforming the way people connect, access information, conduct business, and engage with the world.

The report's key findings shed light on several critical aspects of internet use in New Zealand. Notably, it highlights differences in internet use between genders, with women spending more time online compared to men. It emphasizes the heavy reliance on home internet connections and mobile data networks in NZ, as the majority of respondents connect to the internet from their homes. However, it also underscores common complaints of slow and unreliable internet connections.

The report also delves into the attitudes and beliefs of internet users in NZ. It reveals a correlation between confidence in assessing online information reliability and the perception of information online as reliable. Moreover, despite respondents' belief that online privacy is not possible, many actively protect their privacy, possibly due to a perception that online privacy concerns are not exaggerated. Furthermore, a significant portion of respondents expresses concerns about social media companies, with over one-third believing they have made the world a worse place and a majority advocating for stronger regulations.

The survey also explores the relationship between digital technologies and the environment, revealing that most respondents are not well informed about the impact of digital technologies on the environment, and as a result, most do not take purposeful actions to benefit the environment.

Finally, the report's examination of remote work dynamics before, during, and after the COVID-19 pandemic indicates a substantial shift in New Zealanders' work habits. The proportion of respondents able to work remotely increased significantly during lockdowns and remained elevated in the post-lockdown world, showcasing the lasting impact of the pandemic on the way New Zealanders work.

References

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.

Díaz Andrade, A., Hedges, M.R., Karimikia, H. & Techatassanasoontorn, A. (2018). *World Internet Project: The Internet in New Zealand 2017*. New Zealand Work Research Institute, Auckland.

Díaz Andrade, A., Hedges, M.R., Pacheco, G. & Turcu, A. (2021) *The World Internet Project New Zealand 2021*. New Zealand Work Research Institute, Auckland.

Gibson, A., Miller, M., Smith, P., Bell, A., Crothers, C. (2013). *The Internet in New Zealand 2013*. Auckland, New Zealand: Institute of Culture, Discourse & Communication, AUT University.

Privacy Commissioner. (2023). Notable increase in data breaches reported. Retrieved (28/09/2023) from: https://www.privacy.org.nz/publications/statements-media-releases/notable-increase-in-data-breaches-reported/

Statista. (2023). Number of internet and social media users worldwide as of April 2023. Demographics & Use. Retrieved (01/09/2023) from: https://www.statista.com/statistics/617136/digital-population-worldwide/

Appendix A

Figure A 1. How much of the information on the Internet overall is generally reliable?
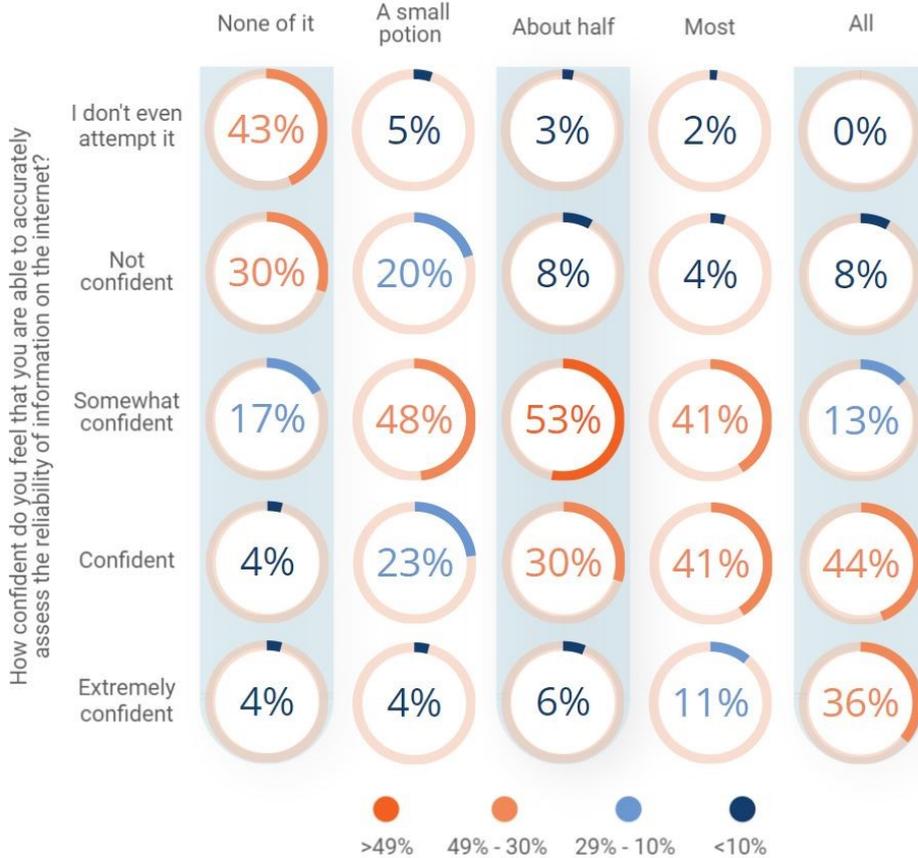
Notes: Columns sum to 100%. This figure does not include 'don't know / prefer not to answer' responses, sample sizes are: "None of it"=23, "A small portion of it"=722, "About half"=1,313, "Most"=786, "All"=39, Total N=2,883.

Appendix B

Table B 1. Descriptive statistics – Remote work section

Variable	Sample	Working remotely now	Not working remotely now
Ethnicity	N=1,225	N=743	N=461
European	58.1%	55.3%	63.6%
Māori	16.4%	16.0%	16.1%
Pacific Peoples	7.3%	8.3%	5.2%
Asian	16.0%	17.6%	13.7%
Middle Eastern/Latin American/African	1.5%	1.8%	1.1%
Other Ethnicity	0.7%	0.9%	0.4%
Region	N=1,225	N=743	N=461
Northland	2.5%	2.3%	3.0%
Auckland	37.3%	40.1%	32.3%
Waikato/ Bay of Plenty	17.1%	17.2%	17.1%
Gisborne/ Hawke's Bay	3.8%	3.9%	3.5%
Taranaki/Manawatū-Whanganui	7.3%	6.3%	8.7%
Wellington	9.7%	10.8%	8.2%
Top of South*/West Coast	1.9%	1.3%	2.8%
Canterbury	14.9%	13.5%	17.4%
Otago/ Southland	5.5%	4.9%	7.0%
Age	N=1,225	N=743	N=461
16-24	20.4%	17.2%	24.5%
25-34	28.6%	30.6%	25.6%
35-44	28.1%	30.3%	25.2%
45-54	12.0%	11.8%	12.4%
55-64	6.9%	6.2%	8.2%
65+	4.1%	3.9%	4.1%
Gender	N=1,225	N=743	N=461
Male	25.1%	25.7%	24.3%
Female	74.5%	73.8%	75.5%
Non-Binary	0.4%	0.5%	0.2%
Post-school qualification	N=1,199	N=730	N=451
	70.6%	73.6%	66.5%
Highest qualification	N=1,199	N=730	N=451
No qualification	29.4%	26.4%	33.5%
High School	5.0%	4.4%	5.8%
Certificate/Diploma	26.4%	25.3%	28.6%
Bachelor's/Honours	31.4%	33.4%	28.4%
Postgraduate Degree	7.8%	10.4%	3.8%
Household income	N=1,148	N=701	N=428
Up to $20,000	2.4%	2.1%	2.3%
$20,001 - $30,000	2.6%	1.7%	3.7%
$30,001 - $40,000	4.7%	5.1%	3.7%
$40,001 - $50,000	4.9%	4.4%	5.6%
$50,001 - $70,000	13.9%	12.0%	17.3%
$70,001 - $100,000	21.5%	18.4%	27.1%
$100,001 - $150,000	27.6%	29.2%	25.7%
$150,001 - $200,000	15.0%	18.1%	9.6%
$200,001 or more	7.4%	8.8%	4.9%

Variable	Sample	Working remotely now	Not working remotely now
Main activity	N=1,225	N=743	N=461
Work in own business	10.9%	13.7%	6.5%
Employed	83.6%	81.0%	88.1%
Unpaid family business	1.4%	1.9%	0.7%
Volunteer	4.1%	3.4%	4.8%
Household type	N=1,203	N=728	N=455
Live alone	9.5%	8.4%	11.4%
Live with partner	23.9%	22.8%	25.5%
Live with family	55.7%	58.0%	52.3%
Live with flatmates	11.0%	10.9%	10.8%
Household size	N=1,224	N=742	N=461
1 person	9.6%	8.4%	11.7%
2 people	25.4%	24.5%	27.1%
3 – 5 people	55.6%	57.6%	52.3%
6+ people	9.4%	9.6%	8.9%
Dependent children in the household	N=1,222	N=740	N=461
no children	50.5%	48.5%	53.8%
1 child	20.1%	20.8%	18.4%
2 children	21.0%	22.2%	19.1%
3 children	6.0%	5.8%	6.3%
4 + children	2.5%	2.7%	2.4%

Notes: Sample sizes vary due to the removal of 'don't know / prefer not to answer' responses. *Top of the South includes the Marlborough, Nelson and Tasman regions.

[This page has been left intentionally blank]