

# Household Use of Information and Communication Technology: 2012

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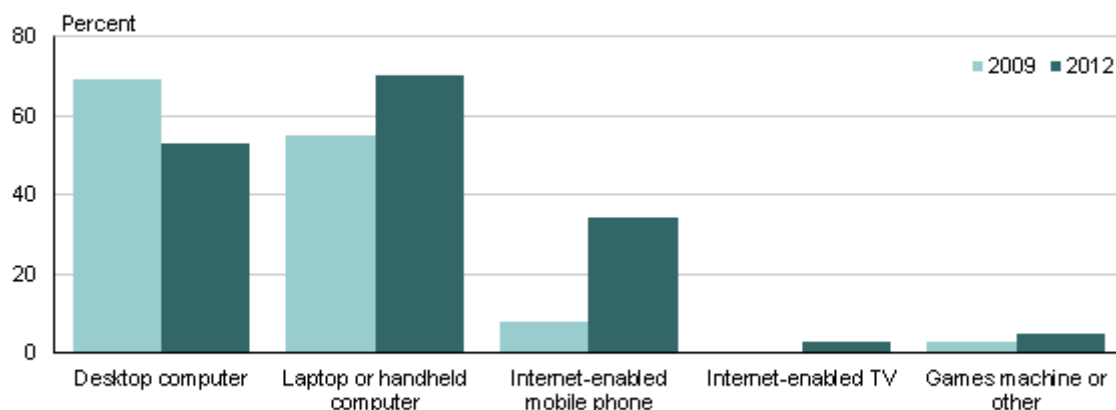
## Key facts

### Households

In 2012:

- 4 out of 5 New Zealand homes had access to the Internet, up 5 percent since 2009.
- Two-thirds of rural households had a broadband connection, up 13 percent since 2009.
- 40 percent of households were using more than one device to access the Internet – this figure has doubled since 2009.
- Laptops were the most popular means of accessing the Internet in more than two-thirds of households.
- One-third of households accessed the Internet via a mobile phone, up 26 percent since 2009.

**Devices used by households to access the Internet**  
2009 and 2012



Source: Statistics New Zealand

### Individuals

In 2012:

- Half of all Kiwis made an online purchase in the 12 months before the survey.
- Almost half a million people spent between \$100 and \$500 online in the four weeks before the survey.
- Two-thirds of recent Internet users engaged in social networking in the 12 months before the survey.
- Over three-quarters of 15–24-year-old Internet users accessed music online.
- Half of all Internet users aged 15–44 years used the Internet for reading.

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## Commentary

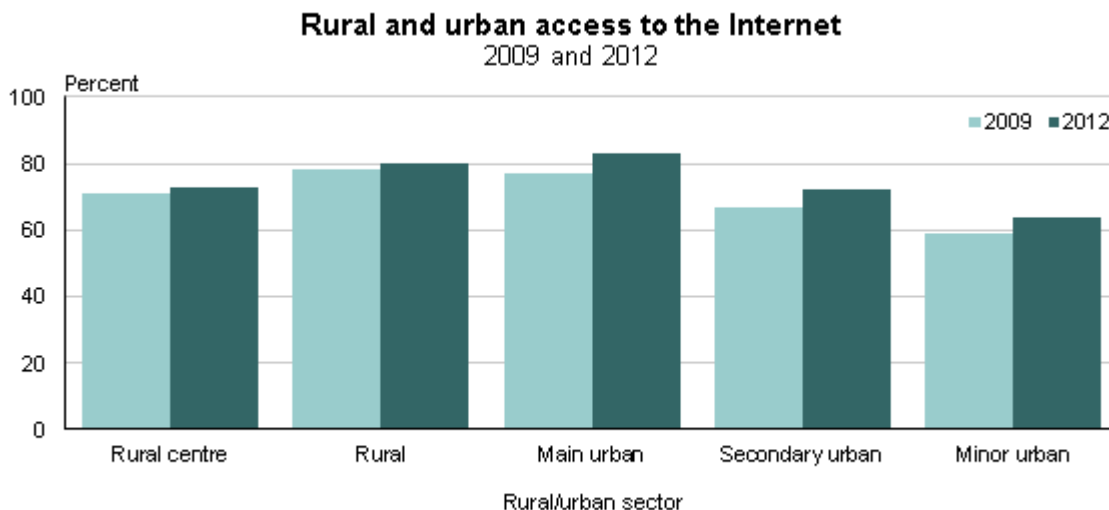
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### Four in five homes connected to Internet

In 2012, 1.3 million New Zealand homes (80 percent) had some form of Internet connection. This 5 percent increase since 2009 indicates that the rate of new connections is slowing, which is to be expected as it gets closer to 100 percent of all households.

Wellington and Auckland have the highest proportion of connections, at 85 percent of households, but large increases were seen across the central North Island (up 9 percent), and the top and bottom of the South Island (also up 9 percent).

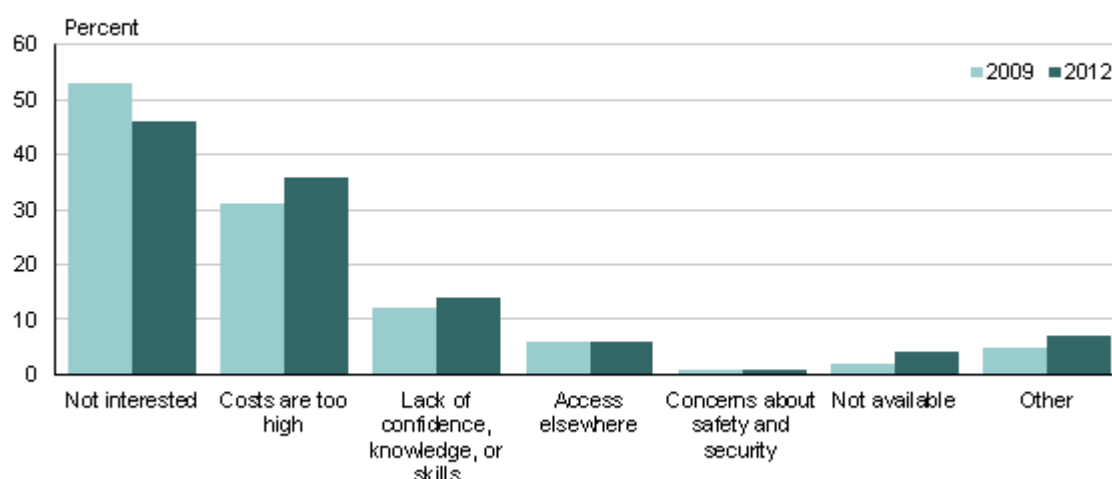
Access in rural areas has increased to almost 4 out of 5 households, remaining ahead of smaller urban centres/areas. However, homes with dependents had one of the highest connection rates, at 88 percent.



Source: Statistics New Zealand

For those who do not have access to the Internet at home, the main reason remains a lack of interest. However, this figure is steadily declining, while concern over cost has increased, deterring over a third of households from getting connected.

### Reasons that households do not have Internet 2009 and 2012

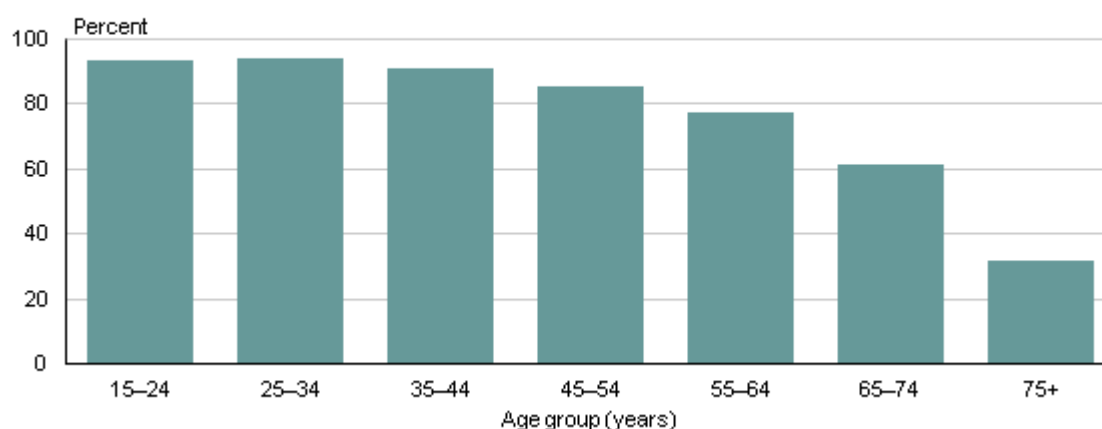


Source: Statistics New Zealand

As you are probably reading this online, you are likely to be one of the 4 out of 5 New Zealanders aged 15 years and over who is a recent Internet user (has accessed the Internet in the past 12 months). And if you're a user, you're probably hooked, as 78 percent of you will have used the Internet in the past week. The largest groups accessing the Internet in 2012 were those aged between 15 and 44 years old, those currently employed, and those with a tertiary qualification.

### Percentage of recent Internet users

By age group  
2012



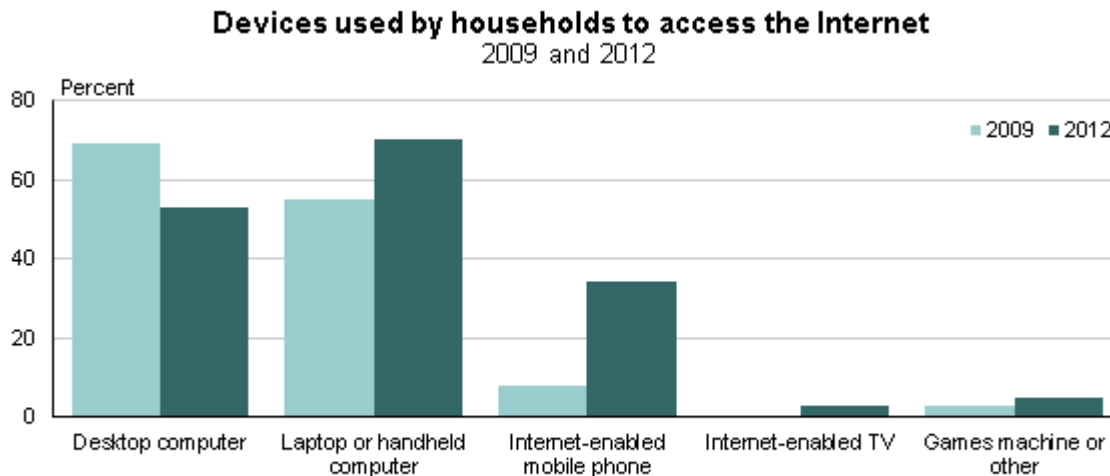
Source: Statistics New Zealand

As may be expected, the number of households using broadband has increased across the entire country over the past three years. The largest increases come from the Manawatu-Wanganui region and the West Coast and top of the South Island region, each with almost 20 percent more broadband connections. Two-thirds of households in rural areas now have access to broadband, a jump of 13 percent.

Broadband access has almost entirely replaced dial-up, and is now the connection of choice for nearly 90 percent of recent Internet users.

## Kiwis move to more mobile devices

The big change in information and communication technology in recent years is in how and where people are accessing the Internet. In 2009, desktop computers dominated in over two-thirds of New Zealand homes. Now laptops have taken top spot as the most common way people connect. But this is not just about replacing types of technology. There are more types of devices available to connect with, and this is something Kiwis are embracing.



Source: Statistics New Zealand

Over the past three years, the number of households using more than one device to connect has doubled, from 21 percent to 40 percent. In 2009, the most popular combination was overwhelmingly a desktop and a laptop. In 2012, this has shifted to a laptop and a mobile phone. Rather than depending on a 'household' device (as desktops tend to be), each person in a household can have their own personalised device to connect to the Internet.

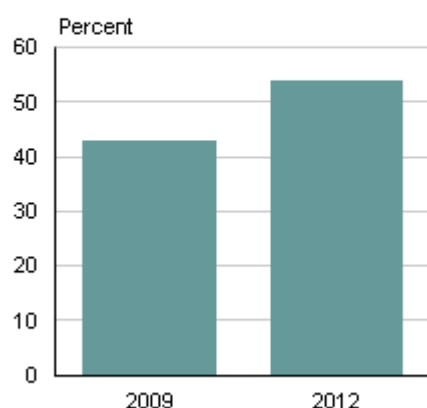
Smartphones have announced their presence: a third of households used a mobile phone to access the Internet in 2012, an increase of 26 percent since 2009. At an individual level, a quarter of all recent Internet users now connect via their mobile phone.

Laptops, tablets, and smartphones: the common features are flexibility and mobility. Our personal use of mobile Internet (cellular, datacards, hotspots, and Wi-Fi) has doubled in the last three years, indicating that half of those who use the Internet are mobile when doing so. What this means is that we're no longer restricted to homes or workplaces when we connect. We can be working on a laptop while in a café, or even finding directions on our smartphones while on the road – though not while driving, of course.

## Online purchasing the way of the... present

Kiwis are putting their money where their mouse is. Online purchases are on the rise, with 1.8 million New Zealanders making an online purchase in the 12 months before the survey. Over 70 percent of New Zealanders aged 25–34 years opted for this convenience, though the biggest increase was for those aged 35–44 years – a jump of 14 percent to a total of 68 percent.

**Population with purchases online in the last 12 months**  
2009 and 2012



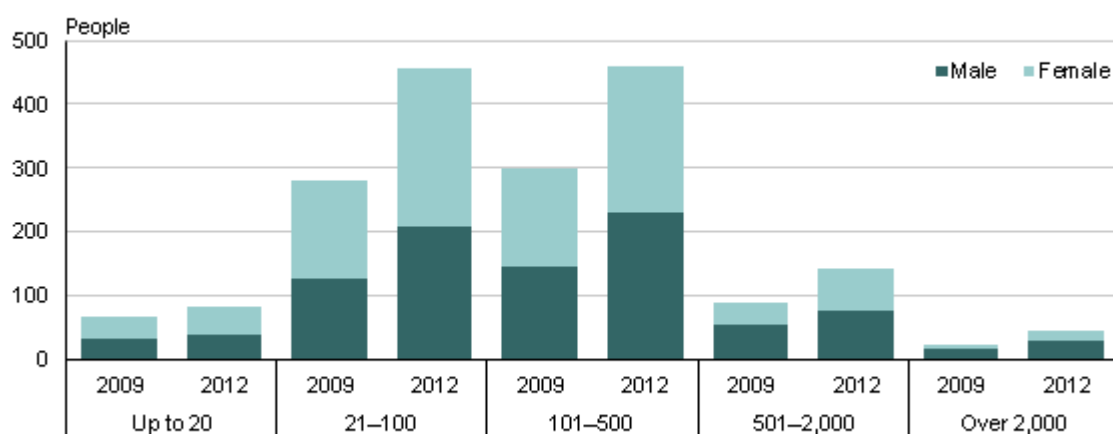
Source: Statistics New Zealand

It also seems that what we're buying is changing. We're not necessarily buying tangible items; over half of those who shopped online had at least one item delivered electronically. This may include items such as e-books, music, or e-tickets.

Looking at those who had made a purchase in the four weeks before the survey, women outnumbered men in spending a total value of up to \$500, while the more expensive purchases predominantly belonged to men. The number of people spending a total of over \$2,000 online has doubled since 2009, to reach 44,000 people in a four-week period.

**Number of people making online purchases in the last four weeks**

By value of purchase  
2009 and 2012

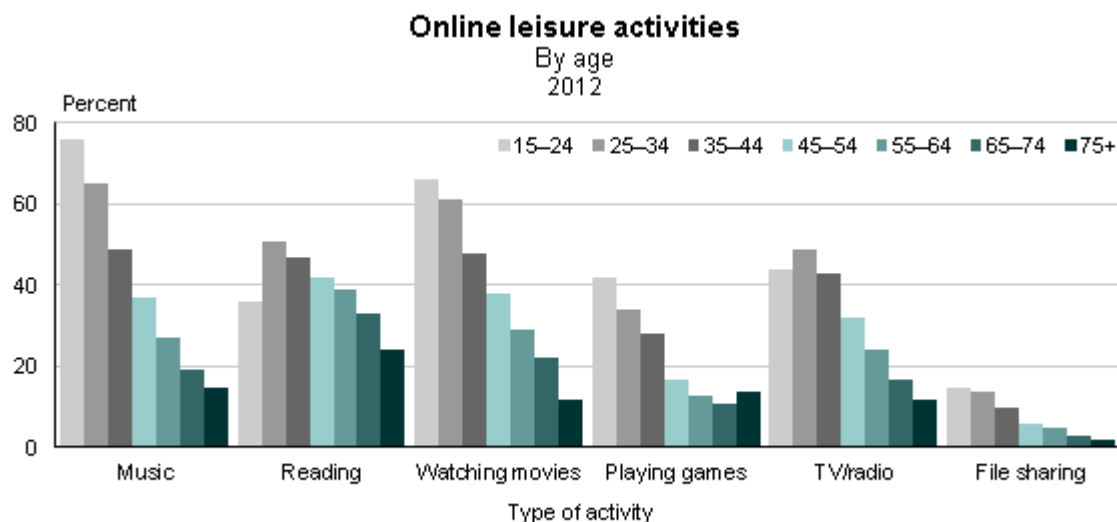


Source: Statistics New Zealand

## Internet entertaining Kiwis in plenty of ways

While the Internet has a lot of very practical applications, Kiwis are also happy to use it for entertainment. More and more of our entertainment is virtual. We read online, we play games online, and we chat and connect with friends online. This holds across all age groups – almost all

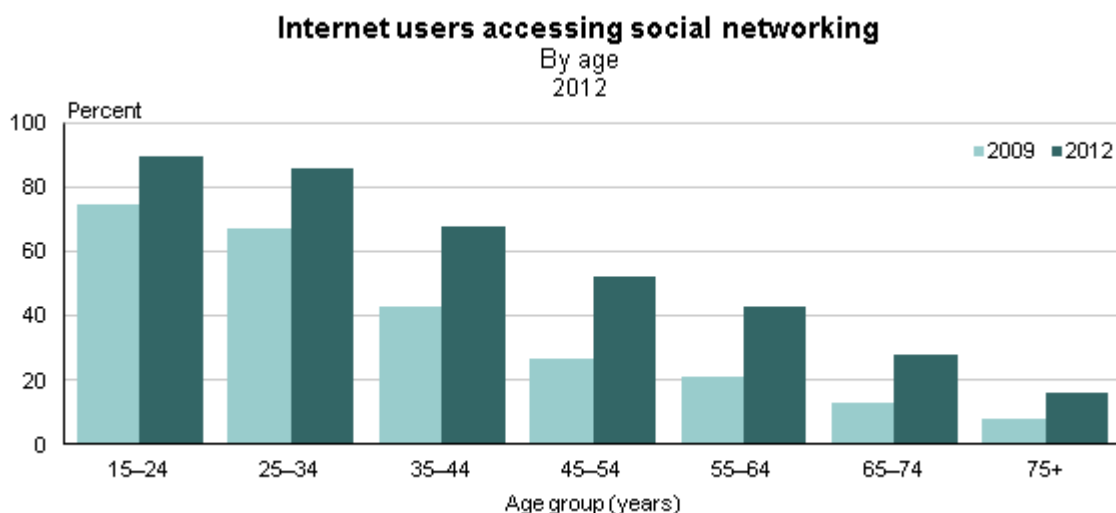
have increased. However, some trends identify what we're most likely to do online depending on our age, education, ethnicity, or income.



Source: Statistics New Zealand

Abandoned CD racks may become commonplace in New Zealand homes, as almost half of recent Internet users enjoyed music and movies online in the 12 months before the survey. This is a 10 percent increase since 2009. Though this change is driven largely by those aged 25–44 years, the highest figures come from the highly connected younger generation; over three-quarters of 15–24-year-olds access music online, while two-thirds of the same age group download or watch videos online.

For the older age groups, reading online is one of the preferred activities; 1 in 4 Internet users over the age of 75 years used the Internet for reading. However, social networking is an increasing norm among older age groups, with the proportions for those aged over 55 years doubling since 2009.



Source: Statistics New Zealand

Those with a tertiary qualification are more likely to be reading online, listening to web radio, and watching web television than those without a tertiary qualification. The proportion of people engaging in these activities also increases as personal income increases.

Māori and Pacific peoples had the highest proportion of people who download or listen to music online and also the highest proportion of those who engage in online gaming. Three-quarters of Māori Internet users had engaged in social networking in the 12 months before the survey. These activities are some of the few areas of Internet use in which Māori and Pacific peoples exceeded other ethnic groups.

For more detailed data see the Excel tables in the 'Downloads' box.

# Definitions

## About the Household use of ICT survey

The Household Use of Information and Communication Technology (ICT) Survey measures the access to and use of the Internet by individuals and by New Zealand households. Information from this survey is used to understand how ICT is changing New Zealand's economy and society.

## More definitions

**Anti-spyware software:** programmes to remove or block spyware. Spyware is software that helps to gather information about a person or organisation without their knowledge.

**Anti-virus software:** programmes to detect and remove computer viruses.

**Broadband:** a high-speed connection to the Internet also referred to as non-analogue. It can allow for multiple services to work at the same time, eg telephone, cable TV, and Internet access. For the purposes of the Household use of ICT questionnaires, broadband use was identified by the respondent, and then the respondent was asked about the way the broadband was provided, eg via cable.

**Cable:** a broadband transmission technology using coaxial cable or fibre-optic TV cable lines to access the Internet.

**Data card:** a removable computer component containing data used in conjunction with other ICT devices to provide mobile Internet access, also known as a smart card.

**Dial-up:** a way of connecting a computer to the Internet using a modem and the telephone line.

**DSL:** digital subscriber line, a type of broadband that carries data at high speeds over traditional (copper) telephone lines. DSL allows for simultaneous voice and data transmission.

**Fibre:** a cable to the home specifically for broadband Internet services. This is an optical fibre connection often referred to as 'fibre-to-the-home'.

**Firewall:** an integrated collection of security measures designed to prevent unauthorised electronic access to a networked security system.

**Hotspot:** a site that offers Internet access, typically using Wi-Fi technology. Hotspots may be found in coffee shops and various other public establishments and areas.

**Information and communication technology (ICT):** electronic technologies used for collecting, processing, or transmitting information, which can be in the form of voice, images, or data. Examples of ICT include computers, the Internet, and telecommunications.

**Internet telephone, Skype, iTalk:** services that allow you to talk in real time over the Internet in a similar fashion to a phone call, often including a video component.

**Mobile phone:** a portable wireless telephone that can be used at long ranges (not a cordless phone, which has a limited range). Also referred to as a cellphone, cellular phone or handphone.



**Netbook:** a small, low power, mobile personal computer, used primarily for email and Internet access.

**Online purchase:** a purchase paid for online, eg by credit card or web-based Internet transaction systems. This does not include online banking, or when the payment for a purchase is made by cash or cheque.

**Patches:** a piece of software designed to fix or update a computer programme and its supporting data.

**Regional council areas:** regional councils cover every territorial authority in New Zealand, with the exception of the Chatham Islands Territory. There are 16 regional council areas in New Zealand. To allow publication of smaller areas, these areas have been combined into 12 regions for this release.

**Satellite broadband:** a connection to the Internet using a satellite dish. Satellite broadband is linked to a dish network subscriber service and provides speeds similar to other broadband connections.

**Sharing files via peer to peer exchanges:** directly accessing other computers' files through Internet networks and certain software programs.

**Tablet:** a mobile computer integrated into a flat touch-screen and primarily operated by touching the screen rather than using a physical keyboard. Tablets are larger than a mobile phone.

**Web radio and web television:** radio and television stations that can be accessed through the Internet, also called 'webcasting'.

**Wi-Fi:** a local area network that uses high frequency radio signals to transmit and receive data over distances up to approximately 100 metres.

**Wireless:** access to the Internet via wireless networks (other than cellular technology).

**Wireless network:** a computer network with no physical connection such as cables between senders and receivers, instead using high-frequency radio to transmit data.

**Wireless router:** a device that allows Internet access to wireless-capable devices in the home, most often laptops, tablets, and smartphones. A wireless router is also known as a wireless modem.

## **Urban and rural areas**

**All urban areas:** the urban population is defined internationally as towns with 1,000 people or more for statistical purposes. There is a three-part hierarchical subdivision of urban areas.

**Main urban area:** very large urban areas centred on a city or major urban centre. Main urban areas have a minimum population of 30,000.

**Secondary urban area:** urban areas with a population between 10,000 and 29,999 and centred on larger regional centres.

**Minor urban area:** urbanised settlements (outside main and secondary urban areas), centred around smaller towns with a population between 1,000 and 9,999.

**All rural areas:** areas with a population of less than 1,000 are defined as rural for statistical purposes.

**Rural centre:** centres with a population between 300 and 999.

**Rural:** rural areas have a population of under 300.

## Related links

### Upcoming releases

*Household Use of Information and Communication Technology: 2015* will be released in April 2016.

[Subscribe to information releases](#), including this one, by completing the online subscription form.

[The release calendar](#) lists all our upcoming information releases by date of release.

### Past releases

[Household Use of Information and Communication Technology](#) has links to past releases.

### Related information

Household Use of Information and Communication Technology (ICT) Survey is one of four surveys that provide information on the supply and use of ICT in New Zealand. The results of the other surveys are available as follows:

[Internet Service Provider Survey](#) provides information from Internet service providers (ISPs) about the Internet access they provide to households and businesses. The next release will be published on 14 October 2013.

[Business Operations Survey](#) includes the Business Use of ICT module, which is run every second year in the annual BOS collection. This module provides information on the current state of ICT use by businesses, as well as considerations, activities, and outcomes. The last release was published on 15 April 2013.

[Information and Communication Technology Supply Survey](#) provides information on the sale of goods and services from businesses associated with ICT industries. The last release was published on 19 March 2013.

[Government Use of Information and Communication Technology: 2006](#) was a one-off release that looked at government computer and Internet use, website features, and expenditure on ICT.

### Other sources of ICT information

[InternetNZ](#) is a non-profit organisation that aims to protect and promote the Internet in New Zealand.

[Telecommunications Users Association of New Zealand](#) is a not-for-profit membership association that represents a cross-section of the major business users of telecommunications.

[The Commerce Commission](#) is New Zealand's competition enforcement and regulatory agency. This includes the regulation of the supply of certain telecommunications services in New Zealand.

[Netsafe](#) is an independent non-profit organisation that promotes confident, safe, and responsible use of online technologies.

World Internet Project is a longitudinal study that New Zealand is involved in that enables comparisons of Internet use across countries.

Institute of IT Professionals is an organisation that represents those working or studying in software and information technology (IT) related fields.

## Data quality

### Period-specific information

This section has information that has changed since the last release.

- [Reference period](#)
- [Sampling error](#)
- [Response rates](#)
- [Consistency with other periods or datasets](#)

### General information

This section has information that does not change between releases.

- [Data source](#)
- [Population and sample selection](#)
- [Data capture](#)
- [Accuracy of the data](#)
- [Interpreting the data](#)

## Period-specific information

### Reference period

The reference period for the 2012 Household Use of ICT Survey was the September quarter 2012. Responses were collected between July and September, and most questions have a recall period of 12 months.

The reference period for the 2006 and 2009 Household Use of ICT Surveys was the December quarter. The change in quarter has minimal effect on most questions, due to the 12 month recall period. However, for estimates referring to online spending, where the recall period was four weeks, there is likely to be some effect. The percentage change in online spending is likely to be an underestimate, as the Retail Trade Survey shows a higher sales volume in the December quarter.

### Sampling error

Sampling error can be measured, and quantifies the variability that occurs by chance because a sample rather than an entire population is surveyed.

The absolute sampling errors estimates for the overall New Zealand household population are presented in tables 1.01 and 1.02. These errors should be used as a guide for judging the reliability of figures contained in the tables.

Table 1.01

<b>Sampling error estimates for household key variables</b> 2009 and 2012						
Variable	All households		Sampling error			
	2009	2012	2009	2012	2009	2012
	Number (000)		Absolute number (000)		Relative percent	
Internet	1,220	1,332	15	13	1.23	0.98
Landline	...	1,448	...	14	...	0.94
Broadband access	1,023	1,240	21	15	2.04	1.23
Dial-up access	202	70	13	8	6.36	11.00
<b>Note:</b> Sample errors for 2009 have been revised.						
<b>Symbol:</b> ... not applicable						

Table 1.02

<b>Sampling error estimates for individual key variables</b> 2009 and 2012						
Variable	All individuals		Sampling error			
	2009	2012	2009	2012	2009	2012
	Number (000)		Absolute number (000)		Relative percent	
Recent Internet users	2,677	2,820	24	27	0.89	0.96
Broadband access	...	2,458	...	36	...	1.46
Dial-up access	...	97	...	12	...	11.93
Online purchases	1,430	1,856	39	41	2.71	2.23
<b>Note:</b> Sample errors for 2009 have been revised.						
<b>Symbol:</b> ... not applicable						

The sampling errors provided above are estimated at the 95 percent confidence level.

### How to use the sampling errors

For example, the estimated number of households with Internet in 2012 is 1,332,000. This estimate is subject to a relative sampling error estimate of approximately 13,000. This means that 95 percent of the possible samples of the same size will produce an estimate between 1,319,000 and 1,345,000.

In general, the sampling errors associated with subnational estimates (eg breakdowns by regional council area) are larger than those associated with national estimates.

### Response rates

The 2012 Household Use of ICT Survey targeted a 75 percent response rate. The survey achieved an actual response rate of 76 percent, which represented 13,046 households.

### Consistency with other periods or datasets

Information and communication technology (ICT) is a rapidly changing field. As a result, the Household Use of ICT questionnaire has changed considerably since the last survey cycle. The questionnaire is now more streamlined with a stronger focus on Internet security. The majority of the household questions have been moved into the individual section allowing for use of multiple technologies within a household to be captured. This move was also aimed at gaining the

individuals' perspective of their own circumstances, rather than that of the household. Nevertheless, in order to retain as much comparability as possible with previous years, some individual responses have also been aggregated to the household level. This is done by deriving a variable for a household if at least one individual in the household contributes to that variable. Nevertheless, some outputs will not be comparable with previous years due to question changes and new questions.

## **General information**

### **Data source**

The 2012 Household Use of ICT Survey was a supplement to the Household Labour Force Survey (HLFS) for the September 2012 quarter. The supplement was asked of all households and people eligible to take part in the HLFS. Two questionnaires were used. A Household ICT questionnaire asked about households' access to the Internet and a landline telephone. An individual ICT questionnaire was then asked of all eligible individuals within the HLFS sample. Proxy responses were not accepted for ICT questionnaires.

### **Population and sample selection**

The target population for the Household Use of ICT Survey is the civilian, usually resident, non-institutionalised population aged 15 years and over living in private dwellings. This means the survey population did not include:

- long-term residents of homes for older people
- hospitals and psychiatric institutions
- inmates of penal institutions
- members of the permanent armed forces
- members of the non-New Zealand armed forces
- overseas diplomats
- overseas visitors who expect to be resident in New Zealand for less than 12 months.

The HLFS target population includes non-private dwellings whereas the Household Use of ICT Survey does not.

The target population for the household portion of the Household Use of ICT Survey is all households from the scope outlined above with at least one eligible individual.

The HLFS sample contains about 15,000 private households and about 30,000 individuals each quarter. Households are sampled on a statistically representative basis from areas throughout New Zealand, and information is obtained for each member of the household. The sample is stratified by geographic region, urban and rural areas, ethnic density, and socio-economic characteristics

### **Data capture**

The 2012 Household Use of ICT Survey was an electronic questionnaire. One-eighth was conducted via face-to-face interviews, and seven-eighths were collected via telephone (CATI) interviews.

## **Accuracy of the data**

### **Non-sampling error**

Non-sampling error may arise from:

- errors in the reporting of data by respondents
- variation in respondents' or interviewers' interpretation of questions
- errors in capturing or processing of data

An effort has been made to reduce non-sampling error to a minimum by careful design and thorough testing of the questionnaire, efficient operating systems and procedures, and appropriate methodology. Non-sampling errors may still occur and are not quantifiable.

Given the nature of the data collected, there are limitations on the level of accuracy that can be expected from the survey. Even though detailed descriptions of technical terms were given, there may still be differences in respondent and interviewer interpretation.

### **Unit non-response**

Unit (or complete) non-response occurs when units (respondents) in the sample do not complete a questionnaire. The initial selection weight of the remaining units was adjusted to account for the unit non-response.

### **Item non-response**

Item (or partial) non-response is when units (respondents) complete the questionnaire but some questions are not complete (eg refused). Item non-response imputation was carried out for the questions that required derivations of household data – including personal mobile phone use and personal income.

### **Imputation**

Random donor imputation was used to impute answers for unanswered categorical questions and personal income. The donor was a random selection from the same strata, which are defined by characteristics of the respondent.

### **Suppression of data**

Cells with estimates of less than 1000 are suppressed and appear as 'S' in the tables. These estimates are subject to sampling errors too great for most practical purposes.

### **Interpreting the data**

As stated above, a large portion of the household section of the questionnaire was moved to the individual section in the 2012 survey. However, in order to retain comparability at the household level, several individual questions around Internet connection types and devices were aggregated to the household level. While this change in methodology between 2009 and 2012 does not compromise comparability, it is something to note when interpreting the data.

Previously all individuals were asked if they had access to a mobile phone, which was published as individual and aggregated household results. In 2012, a change in routing meant that only



those who had used the Internet in the last 12 months were asked if they had a mobile phone. In the published results (see Excel table 21 in the 'Downloads' box) for 2012 this new methodology was applied to the 2009 data for comparability. This change meant that household level comparisons could not be made with 2009 data. Nevertheless, household-level results around mobile phones will be available from the 2013 Census. Census results will be released progressively from December 2013, starting with key population and dwelling information, with the final release approximately 18 months from that date.

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## Revisions

The Household Use of Information and Communication Technology (HHICT) figures and sample errors for 2009 have been revised in this release. The revised figures are limited to the definition of two variables: dependents and non-dependents. The revisions have been made with a correction applied to the data definition for these particular variables. This means that the definition of a dependent as any person under the age of 18 who is not employed is consistent across all HHICT datasets.

For the revised sample errors see the 'Data quality' section.

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## Tables

The following tables are available in Excel format from the 'Downloads' box. If you have problems viewing the files, see [opening files and PDFs](#).

1a	HH	Household access to information and communication technology
1b	HH	Household access to information and communication technology, by household characteristic
2a	HH	Household access to the Internet, by connection type
2b	Ind	Individuals with Internet access
2c	Ind	Individual access to the Internet, by connection type
3	HH	Reasons households do not have the Internet
4a	HH	Household Internet connection type
4b	HH	Households with broadband, by type of broadband connection
4c	Ind	Individual Internet connection type
4d	Ind	Individuals with broadband, by type of broadband connection
5	Ind	Individuals with a wireless router at home
6	Ind	Reasons individuals do not use broadband
7a	HH	Devices households use to access the Internet
7b	Ind	Devices individuals use to access the Internet
7c	HH	Household use of multiple devices to access the Internet
7d	HH	Household use of multiple devices to access the Internet – combinations
8	Ind	Individual Internet use
9	Ind	Individuals who made online purchases in the last 12 months
10	Ind	Value of online purchases made by individuals in the last four weeks
11	Ind	Internet use over last 12 months, by activity
12	Ind	Individual use of the Internet for communication and information activities
13	Ind	Individual use of the Internet for leisure activities
14	Ind	Individual use of the Internet for non-leisure activities and interaction with government
15	Ind	Use of government websites to obtain information
16	Ind	Use of government websites to download forms
17	Ind	Use of government websites to make online payments
18	Ind	Reasons individuals do not use government websites
19	Ind	Mobile access to the Internet for personal use
20	Ind	Purpose of recent Internet use
21	Ind	Recent Internet users with a mobile phone

**Note:** HH – household Ind – individual