

Information and Communication Technology Supply Survey: 2012

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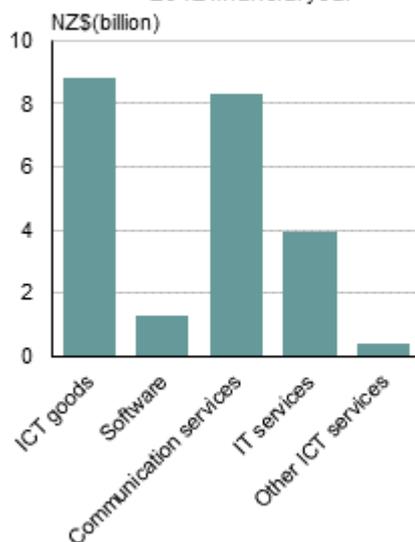
Key facts

In the 2012 year:

- Information and communication technology (ICT) goods and services were worth almost \$23 billion, 17 percent more than in 2010.
- At \$8.3 billion, one-third of all ICT sales came from communication services such as fixed-line and mobile connections, and Internet access.
- Despite rising sales volumes, falls in unit prices drove revenue from audiovisual goods down to \$1.1 billion, 5 percent lower than in 2010.
- One-third of the \$1.6 billion earned from New Zealand's ICT exports came from sales of electronic components and devices, which include whiteware goods and medical devices.

Sales of ICT goods and services

By commodity totals
2012 financial year



Source: Statistics New Zealand

Geoff Bascand
Government Statistician

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Commentary

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ICT more than just phones and Internet

In 2012, New Zealand ICT businesses sold \$1.9 billion worth of phones, \$1.3 billion of Internet connections, and another \$7 billion of mobile and fixed line connections. However, with almost \$23 billion of ICT goods and services traded in New Zealand last year, ICT means much more than this today.

At \$10.1 billion, goods made up just under half of all ICT sales. These included sales of a huge range of smart goods: computers, photocopiers, printers, TVs, DVD players, medical equipment, industrial scales, electronic devices for measuring temperature and water pressure ... it's a long and growing list.

Computers and related goods accounted for more than one-third of all ICT goods traded, and are now worth \$3.9 billion. Despite falls in average prices for laptops, the introduction of new technologies, such as tablets, have helped drive this to 17 percent more than in 2010. However, this has not been the same for all ICT goods.

Movements in audiovisual equipment sales show how complex the relationships between sales volumes and revenues can be. The Statistics NZ report [A fresh look at patterns in gadget sales](#) shows that average prices of audiovisual goods such as TVs and Blu-ray players fell 30 percent between 2008 and 2011. During this period, the number of TVs sold increased, but total spending on TVs did not. As a result of such market trends, total ICT audiovisual sales for 2012 were \$1.1 billion: 5 percent lower than 2010, and 20 percent less than the \$1.4 billion in 2008.

The other half of the ICT economy comes in the form of services. Of the \$12.6 billion generated by ICT services last year, two-thirds came from communication services. These include mobile and fixed line connections, Internet access, and cable broadcasting.

The remaining third of services comes chiefly from IT support (up 18 percent to \$1.6 billion), and IT design, consulting, and development (up 15 percent to \$1.5 billion). Hosting and infrastructure, which includes cloud hosting services, also grew 5 percent, to \$767 million. All three service areas have continued to grow over the past two survey periods.

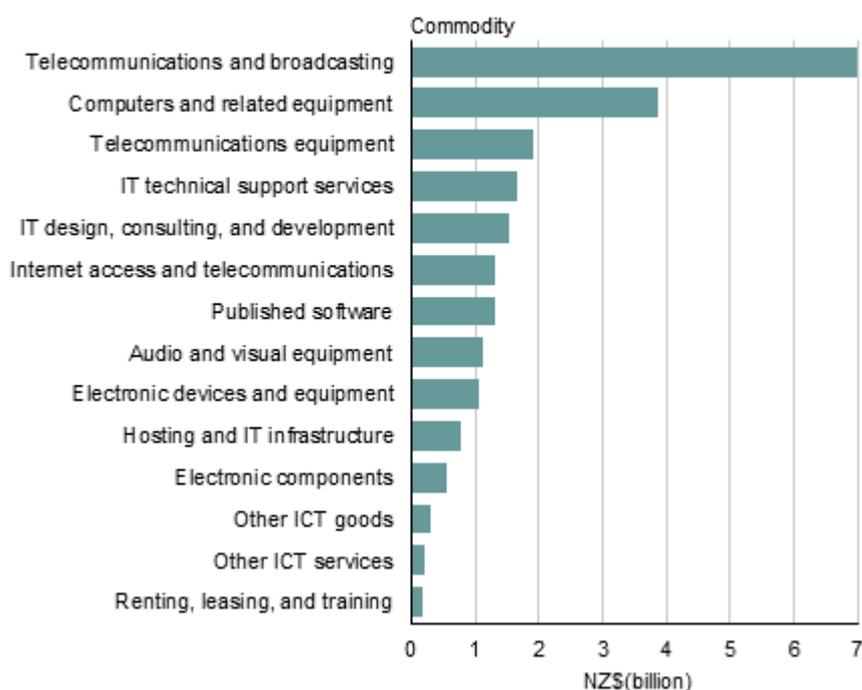
Kiwis keen on connectivity

New Zealanders' desire to be connected is good business. Over one-third of all ICT goods and services activity comes from communication services, which were worth \$8.3 billion in 2012.

Most of this came from telecommunication and programme distribution, which includes mobile and fixed line telecommunications, and broadcasting services. The value of Internet provider services has increased 44 percent since 2010, and is now worth over \$1.3 billion. This reflects the increased volumes reported in the [Internet Service Provider Survey](#) between these two periods: the total number broadband subscribers grew by 300,000, and the number of data cap connections of more than 20 gigabytes increased almost five-fold.

Sales of ICT goods and services

By commodity
2012 financial year



Source: Statistics New Zealand

Of course, how we connect has changed too. It is now estimated that more than half of all New Zealanders have smartphones, which can access news, weather, and social media from almost anywhere in the country. Computers are being replaced by tablets, which have become an educational requirement in some schools, and even our TVs can connect to the Internet.

High-tech exports grow to \$1.6 billion

New Zealand may not be well known as a high-tech goods exporter, but it is an area that continues to grow. Exports of high-tech goods and services from New Zealand's ICT sector were valued at \$1.6 billion in the 2012 year; 4 percent higher than in 2010.

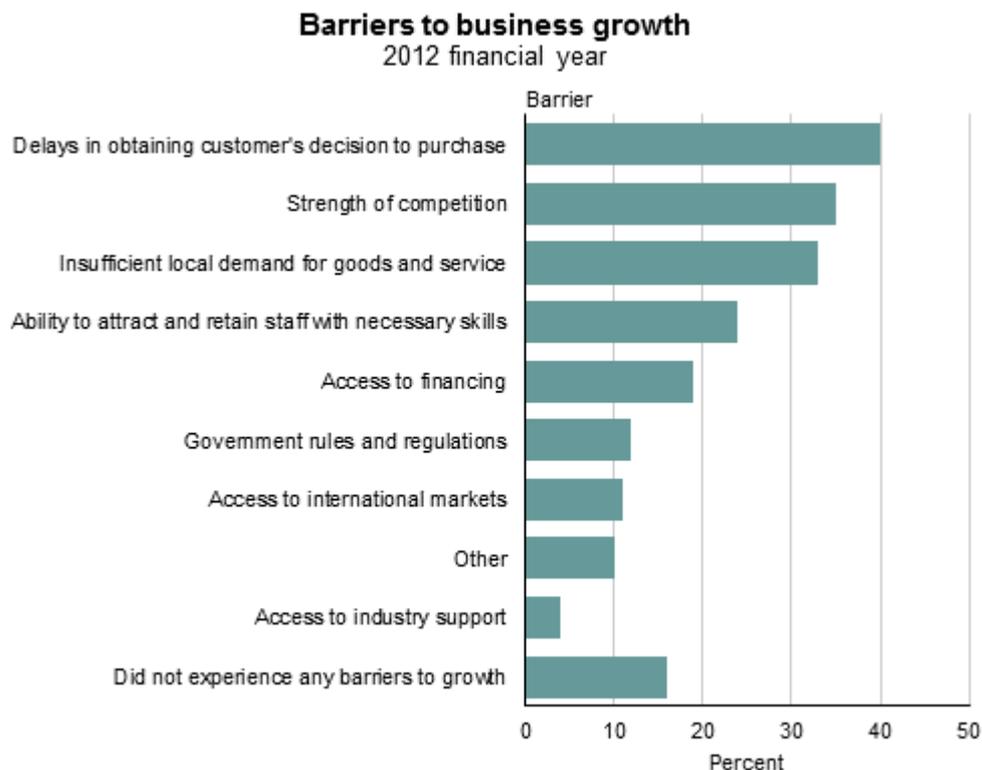
Exports of electronic components, devices, and equipment accounted for over a third of these high-tech exports, generating almost \$570 million in 2012. Included in this category are a range of smart products: from security systems, to climate control devices and medical devices. In terms of growth, electronic components and software sales were the only goods to show growth in the export sector between 2010 and 2012.

IT design, consulting, and development services are our biggest ICT service sector export, accounting for one in every five New Zealand ICT export dollars. In fact, at \$300 million, it is our second biggest ICT export earner overall. As a percentage, exports grew even faster than the total sales of these services: total sales grew 15 percent, while exports grew 33 percent.

Consumer commitment biggest challenge to growth

The most frequently cited barrier to growth for businesses with ICT sales in 2012 was delays in obtaining customer's decision to purchase. This held true for 40 percent of all ICT businesses, 4

percent lower than in 2010. Even so, it affected two in every five small and medium-sized businesses, and one-third of all large businesses in the survey.



Source: Statistics New Zealand

Competition was the second most frequently indicated challenge to growth, affecting 35 percent of businesses. When broken down by business size, competition was cited as a growth barrier for:

- 46 percent of large businesses
- 39 percent of medium-sized businesses
- 34 percent of small businesses.

Only one in four businesses indicated that attracting and retaining staff with necessary skills was an issue for them over the past 12 months. This is a marked move from the 2010 results, in which half of all businesses named it as a barrier to growth. It may be an indication of both a competitive job market, and an increasingly tech-savvy population, though this level of detail is not available from the survey itself.

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

Definitions

About the Information and Communications Technology (ICT) Supply Survey

The ICT Supply Survey measures the sale of goods and services from businesses associated with ICT industries. The ICT Supply Survey replaced the previous Statistics NZ Information Technology (IT) Survey (1993–2004).

The OECD defines ICT goods and services as those that fulfil or enable the function of information processing and communication by electronic means. Alternatively, ICT goods may also use electronic processing to detect, measure, and/or record physical phenomena, or control a physical process.

Data from the ICT Supply Survey measures sales of:

- equipment and components (goods)
- communication services
- IT services
- software renting, training, and other ICT services.

Data is published on total, domestic, and export ICT sales; totals of specific ICT goods and services; specific industry performance; and perceived barriers to industry growth.

More definitions

ANZSIC: Australian and New Zealand Standard Industrial Classification (ANZSIC).

Business Frame: register (maintained by Statistics NZ) of all economically significant businesses operating in New Zealand, from which the survey population is drawn.

Business size: large businesses are defined as those with more than 50 employees. Medium-sized businesses are those with between 21 and 50 employees, and small businesses are those with fewer than 20 employees.

Employees: defined by an enterprise's rolling mean employment (RME) count. RME is a 12-month moving average of the monthly employment count figure, obtained from taxation data, and related to PAYE counts.

Enterprise: a business operating in New Zealand. It can be a legally constituted body, such as a company, trust, local or central government trading organisation, an incorporated society, or self-employed individual.

Exports: goods and services sold overseas by a New Zealand company. This excludes goods sold to other New Zealand businesses who will export the goods at a later stage.

Goods and services pricing: the data reported in the ICT Supply Survey is collected and reported in nominal dollar values at time of sale. These nominal sales figures combine price and volume movements. Price movements of these goods and services may disguise the volume or quantity change in goods and services sold.

ICT commodities: categories of goods and services used in the ICT Supply Survey questionnaire. ICT goods commodities are defined by the internationally recognised Harmonized System (HS), as follows:

- Telecommunications equipment
 - telephone and data switching and transmission equipment
 - telephones, facsimile machines, answering machines
 - radio frequency (RF) and fixed-line equipment
 - radio and television transmitting equipment
 - television cameras and radar apparatus
 - burglar alarms, fire alarms, or similar
 - optical and coaxial fibre cables
 - telecommunications aerials, connectors, and conductors.
- Computer and related equipment
 - computers and other data processing machines
 - computer printers, scanners, other peripheral units
 - magnetic or optical storage units (eg CD or DVD drives)
 - servers, routers, switches, structural cabling systems
 - barcode scanners, EFTPOS machines
 - computer parts and accessories (including printer cartridges; not including covers, carrying cases, or similar).
- Audio and visual equipment
 - radio and television sets
 - monitors, video recorders, video or digital cameras, projectors
 - CD players, DVD players/recorders, MP3 players
 - microphones, earphones, loudspeakers, amplifiers
 - magnetic tapes or disks and other unrecorded media.
- Electronic components
 - electrical transformers, conductors, power supplies, or parts thereof
 - capacitors, resistors, inductors, printed circuits
 - semiconductor devices including diodes, transistors, and integrated circuits
 - television picture tubes, microwave tubes, other tubes or parts
 - electronic subassemblies and parts thereof
 - magnetic stripe cards, recorded or unrecorded.
- Electronic devices and equipment
 - navigation apparatus and devices
 - scientific instruments and appliances
 - industrial measurement and process control equipment
 - electro-diagnostic medical equipment (eg ECG, MRI, ultrasound, CT, X-ray)
 - electronic gas, liquid, and electricity meters
 - marine and aeronautical instruments and devices
 - electronic calculating and accounting devices and office machinery.
- Published software
 - off-the-shelf (packaged) software developed for wide distribution and produced for multiple sale or licensing
 - limited end-user licences as part of packaged software
 - licensing services for the right to use computer software
 - PC and gaming console games.
- Telecommunication and program distribution services
 - carrier services
 - fixed or mobile services
 - private network and data transmission services
 - telecommunication repair and maintenance services
 - audio/video broadcasting on a subscription or pay-to-view basis.

- Internet access and Internet telecommunication services
 - connections to, and carriage of, traffic on the Internet
 - carrier services of Internet traffic by one Internet service provider (ISP) for another ISP
 - telecommunication services on the Internet.
- IT technical support services
 - IT hardware repair and maintenance, routine testing of hardware
 - providing technical expertise to solve IT-related problems
 - maintenance and troubleshooting of software or hardware
 - provision of software patches and upgrades
 - management and monitoring of a client's IT infrastructure (ie hardware, software, networks)
 - day-to-day management and operation of a client's computer system
 - transforming information from one format or media to another
 - data or disaster recovery services.
- IT design, consulting, and development services
 - design and development of IT solutions
 - creating and/or implementing software applications, custom programming, customisation and integration of packaged software
 - developing and implementing client-specific networks
 - developing client-specific computer systems.
- Hosting and IT infrastructure provisioning services
 - website or email hosting with or without integration of applications (online storefronts, order processing, data warehousing)
 - supporting, hosting, and managing business processes for a client (financial transaction/credit card processing, payroll)
 - processing, personnel administration, logistics services, help desks, call centre
 - provision of leased software applications from a centralised, hosted, and managed computing environment
 - data storage and management services, co-location services
 - video and audio streaming services, computer time share.
- Renting or leasing services
 - computers, printers, peripheral units
 - telephones, fax machines, pagers, cellphones
 - radio and television equipment
 - scientific, measuring, or control apparatus.
- Training and education in ICT
 - post-school technical and vocational education
 - in-house training services
 - other education and training services.

Rolling mean employment: average size of the enterprise employment count over the past 12 months. This number is sourced from the Statistics NZ Business Frame, which is updated on a monthly basis by employers.

Sales: revenue in New Zealand dollars.

Related links

Upcoming releases

ICT Supply Survey is one of four surveys collected to provide information on the supply and use of ICT in New Zealand. The results of the other surveys will be available as follows:

Business Operations Survey (BOS)

Business Operations Survey: 2012 will be released on 15 April 2013.

Business Use of Information and Communication Technology is run every second year as a module in the annual BOS collection, and provides information on the current state of ICT use by businesses as well as considerations, activities, and outcomes.

Household Use of Information and Communication Technology

Household Use of Information and Communication Technology: 2012 will be released on 22 April 2013. This survey is collected every three years, and provides information on the access households and individuals have to ICT.

Internet Service Provider Survey

Internet Service Provider Survey: 2013 will be released on 14 October 2013. This annual collection provides information from Internet service providers (ISPs) about the Internet access they provide to households and businesses.

[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

[Information and Communication Technology \(ICT\) Supply Survey – information releases](#) has links to our previous releases.

Related information

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

Data quality

The data quality section provides period-specific and general information about the data.

Period specific information

- [Response rate](#)
- [Population comparability](#)
- [Questionnaire changes](#)
- [Reference period](#)

General information

- [Data source](#)
- [Accuracy of the data](#)
- [Interpreting the data](#)
- [Timing of published data](#)
- [Confidentiality](#)
- [More information](#)

Period-specific information

Response rate

The target response rate for ICT Supply Survey 2012 was 75 percent, and an overall response rate of 78 percent was achieved.

Some businesses were identified as key units if their response to a survey question was considerable in the previous survey period, or if GST figures suggested that they would significantly affect the results in the current year. The target response rate was 100 percent for businesses identified as key units. In practice, a 99 percent response rate was achieved.

Data from one key business was not collected; however, analysis of other available information showed that historical imputation would sufficiently reflect their activity for the 2012 survey period.

Population comparability

The target population for 2012 was 3373. This was 270 more than in 2010.

The ICT Supply Survey is held every second year, with the last ICT Supply Survey data released in April 2011. Since that collection, there has been change to scope of the population. Enterprises from three more Australia New Zealand Standard Industry Classification 2006 (ANZSIC06) codes were included in the 2012 collection to sufficiently cover the definition of ICT businesses.

These codes are:

- J570000 Internet publishing and broadcasting
- J562200 Cable and other subscription broadcasting
- G422200 Computer and computer peripheral retailing.

These have been added to ensure we cover subscription and pay per view broadcasting, any businesses that are likely to grow in the Internet publication and broadcasting space, and companies retailing ICT. There were 145 businesses added to the population from these three ANZSICs in 2012.

To demonstrate the impact of this change in population on the overall results, two sets of 2012 results have been published in table 1, allowing some comparison with the 2010 population. Other 'comparable population' results may be available on request. The 'comparable population' results only account for the change in ANZSIC06 codes, and not for businesses that have started or ceased operating between collections.

Questionnaire changes

Only minor changes were made to the 2012 questionnaire. These included giving more up-to-date examples of the commodities we survey, and in one case separating out two types of Internet services: Internet access services and Internet telecommunication services. Neither of these changes affect the comparability of the data.

Reference period

The reference period for the latest survey was the 2011/12 financial year. Businesses with balance dates falling between 1 January and 30 September supplied data for the year ending 2012. Businesses with balance dates falling between 1 October and 31 December supplied financial data for the year ending 2011.

General information

Data source

Data is collected using a paper-based questionnaire, the Information and Communication Technology (ICT) Supply Survey. The survey is posted out to businesses in the target population once every two years.

Target population

The target population is all economically significant resident New Zealand businesses involved in the production and/or supply of information and communication technology (ICT) goods and services.

ICT goods and services are defined as goods and services that fulfil or enable the function of information processing and communication by electronic means. Alternatively, ICT goods may also use electronic processing to detect, measure, and/or record physical phenomena; or control a physical process.

These definitions are broad, including goods such as computers, cameras, medical equipment, and scanning equipment, as well as components such as conductors, power supplies, and

printed circuits. Services include providing customised software and systems development, telecommunication services, Internet access, cloud computing, and IT support. For more detail, see the [Definitions](#) section.

Survey population

All enterprises with a rolling mean employment (RME) of two or more, or having more than \$1 million GST sales have been surveyed within selected ANZSIC06 codes.

These ANZSIC06 codes are:

C241900 Other professional and scientific equipment manufacturing
C242100 Computer and electronic office equipment manufacturing
C242200 Communication equipment manufacturing
C242900 Other electronic equipment manufacturing
C243100 Electric cable and wire manufacturing

F349100 Professional and scientific goods wholesaling
F349200 Computer and computer peripheral wholesaling
F349300 Telecommunication goods wholesaling
F349400 Other electrical and electronic goods wholesaling

G426000 Department stores
G422200 Computer and computer peripheral retailing

J542000 Software publishing
J562200 Cable and other subscription broadcasting
J570000 Internet publishing and broadcasting
J580100 Wired telecommunications network operation
J580200 Other telecommunications network operations
J580900 Other telecommunications services
J591000 Internet service providers and web search portals
J592100 Data processing and web hosting services
J592200 Electronic information storage services

M700000 Computer system design and related services

S942200 Electronic (except domestic appliance) and precision equipment repair and maintenance

For ANZSIC06 codes that contain businesses that may or may not be in scope of the population, only those that include ICT-relevant keywords in their 'main activities', 'enterprise names', and 'income sources' are selected for the population. This ensures that we survey only enterprises that are involved in ICT activities. This process is applied to the following ANZSICs:

L663900 Other goods and equipment rental and hiring (not elsewhere classified)
C241200 Medical and surgical equipment manufacturing

Accuracy of the data

This section gives an outline of the methodology used for dealing with non-response in the ICT Supply Survey.

Measurement errors

The ICT Supply Survey results may be subject to measurement errors. These need to be considered when analysing the results from the survey.

Measurement errors include mistakes by respondents when completing the questionnaire, variation in respondents' interpretation of the questions asked, and errors made during the processing of the data. In addition, the survey applies imputation methodologies to cope with questions left unanswered by some respondents. These methods are not without error.

Statistics NZ adopts procedures to minimise these types of errors, but they may still occur and are not quantifiable.

Unit non-response

Unit non-response occurs where an enterprise does not return the questionnaire.

A weight adjustment method is used to rate up the responding firms to compensate for the non-responding enterprises. This is done within groups of enterprises with similar properties. These properties include the number of employees and ANZSIC06 code.

Item non-response

Item non-response occurs where a returned questionnaire is incomplete.

Large enterprises are contacted and asked to provide more data in the case of incomplete questionnaires. If this is unsuccessful, we use historical imputation. This involves bringing over data from a previous cycle, and scaling this data based on changes to available administrative or other survey data over the same period.

For small enterprises, we use random donor imputation for both categorical and numerical items. This method uses the data from a randomly chosen respondent with similar characteristics.

Sampling error

The ICT Supply Survey is a census. As such, there is no sampling error.

Interpreting the data

The sales of goods and services are indicative of total revenue activity in the economy. No adjustment is made to account for the resale of goods or services purchased by one business from another business within the population.

Sales revenue is presented by commodity and by industry. The commodity breakdown is supplied by respondents. A business may be engaged in selling multiple goods and services, hence an enterprise's revenue may be split across several commodities.

Data presented by industry refers to breakdowns of revenue by ANZSIC06. In these tables, the entire ICT revenue of a business is allocated to its industry sector, regardless of whether it is active in other business activities.

Timing of published data

Our information releases are delivered electronically by third parties. Delivery may be delayed by circumstances outside our control. Statistics NZ does not accept responsibility for any such delay.

Confidentiality

Confidentiality measures have been put in place to ensure the anonymity of respondents, and to safeguard against any individual data being released.

More information

See [Information and Communication Technology Supply Survey](#) for more information.

Liability

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Revisions

The ICT supply figures for the 2010 year have been revised in this information release. We made these revisions at the unit record level because more information has become available, allowing us to make the figures more accurate.

This information has come from three sources:

- directly from respondents
- through other Statistics NZ collections
- through non-survey data, such as taxation data.

Revisions are marked 'R' in the data.

Contacts

For media enquiries contact:

Hamish Hill
Wellington 04 931 4600
Email: info@stats.govt.nz

For technical information contact:

Jason Mackiewicz
Wellington 04 931 4600
Email: info@stats.govt.nz

For general enquiries contact our Information Centre:

Phone: 0508 525 525 (toll-free in New Zealand)
+64 4 931 4600 (outside New Zealand)
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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](#).

1. Information and communication technology sales of goods and services
- 2a. Sales of information and communication technology, by commodity and sales type
- 2b. Percentage sales of information and communication technology goods and services, by commodity and sales type
3. Sales of information and communication technology, by industry
- 4a. Number of businesses with information and communication technology sales, by industry
- 4b. Businesses with information and communication technology sales by percentage, by industry
5. Barriers to business growth