

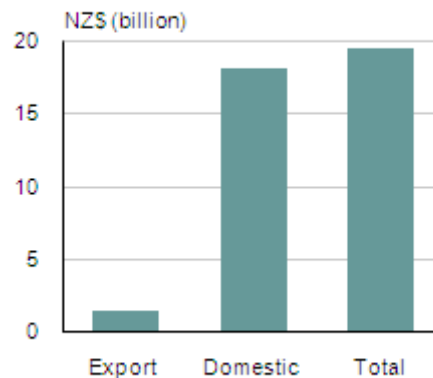
# Information and Communication Technology Supply Survey: 2009/10

Embargoed until 10:45am – 15 April 2011

## Highlights

- Export sales of information and communication technology (ICT) products increased 7 percent between the 2008 and 2010 financial years. Domestic sales of ICT goods and services remained stable.
- Sales of Internet access and Internet telecommunication services jumped 28 percent between 2008 and 2010.
- Audio and visual equipment sales were down 16 percent from 2008.
- Almost half of New Zealand ICT businesses (44 percent) reported 'delays in obtaining customer's decision to purchase' as a barrier to business growth, followed by strength of competition (one-third of businesses).

**Sales of ICT goods and services**  
2010 financial year



Source: Statistics New Zealand

Geoff Bascand  
Government Statistician

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# Commentary

## Background

The Information and Communication Technology (ICT) Supply Survey measures the sale of goods and services from businesses associated with ICT industries, based on OECD definitions. The survey ran annually from 2005 but from 2008 onwards the survey has run every two years.

Small changes have been made to the population since the previous information release, to more accurately capture activity in the ICT sector. All 2010 figures in the text relate to the new population. However, in the tables, figures are also presented on a basis that is comparable with the previous (2008) results, to show growth rates (refer to technical notes for more information). This is the first release of ICT Supply Survey 2009/10 statistics that covers businesses' last financial year at August 2010.

Data from the survey will be included in the OECD Science, Technology and Industry scoreboard ([www.oecd.org/sti/scoreboard](http://www.oecd.org/sti/scoreboard)), which will be updated later in 2011.

## Total ICT sales

Results from the ICT Supply Survey for the 2010 financial year show that total sales of ICT goods and services were valued at \$19,557 million. The majority (\$18,058 million) were sold domestically, while \$1,499 million were sold to export markets.

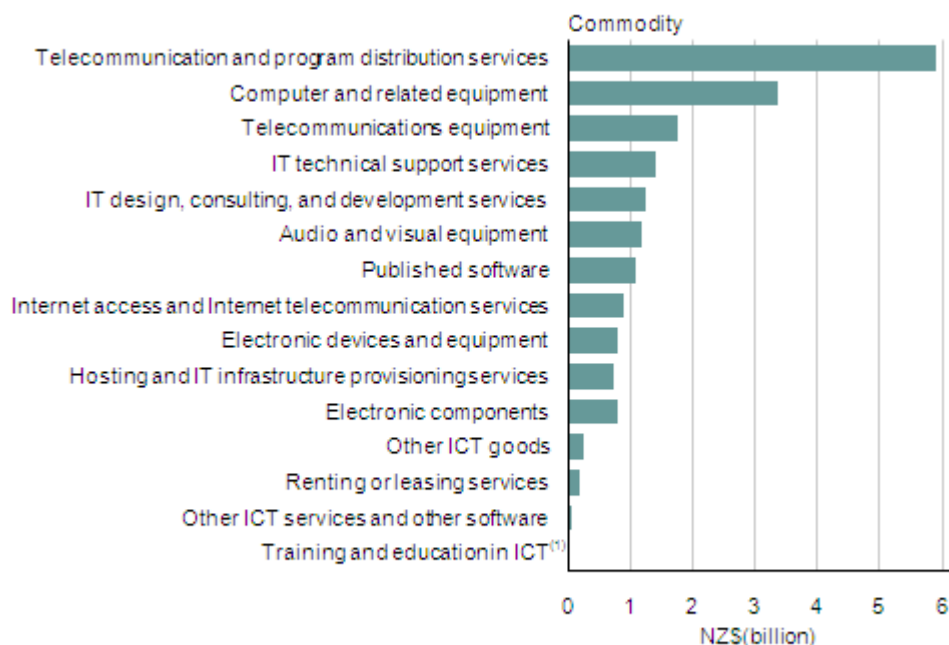
Total ICT sales grew slightly on the 2008 figure, on a comparable basis. This includes a 7 percent growth in export sales, while domestic sales remained stable.

## Total sales of ICT commodities

ICT commodities cover a range of goods and services. Total sales of ICT services were \$10,482 million in 2010 while sales of ICT goods (including published software) were \$9,075 million.

Sales of telecommunication and program distribution services, which includes fixed or mobile services, remained the most significant commodity. At \$5,895 million, this was just under one-third of total sales. This was followed by computer and related equipment, like computers, scanners, or printers, with \$3,361 million in sales.

## Sales of ICT by commodity 2010 financial year



1. Data too small to display

Source: Statistics New Zealand

## Export sales of ICT commodities

For the 2010 financial year, export sales of ICT goods were about 70 percent of the total export value (\$1,499 million). Export sales of ICT services were \$465 million, roughly 30 percent of the total ICT export value.

The ICT commodity with the largest export sales was electronic devices and equipment, such as navigation devices, with \$296 million, or 20 percent of the total ICT export sales. This was followed by electronic components, with \$242 million in export sales.

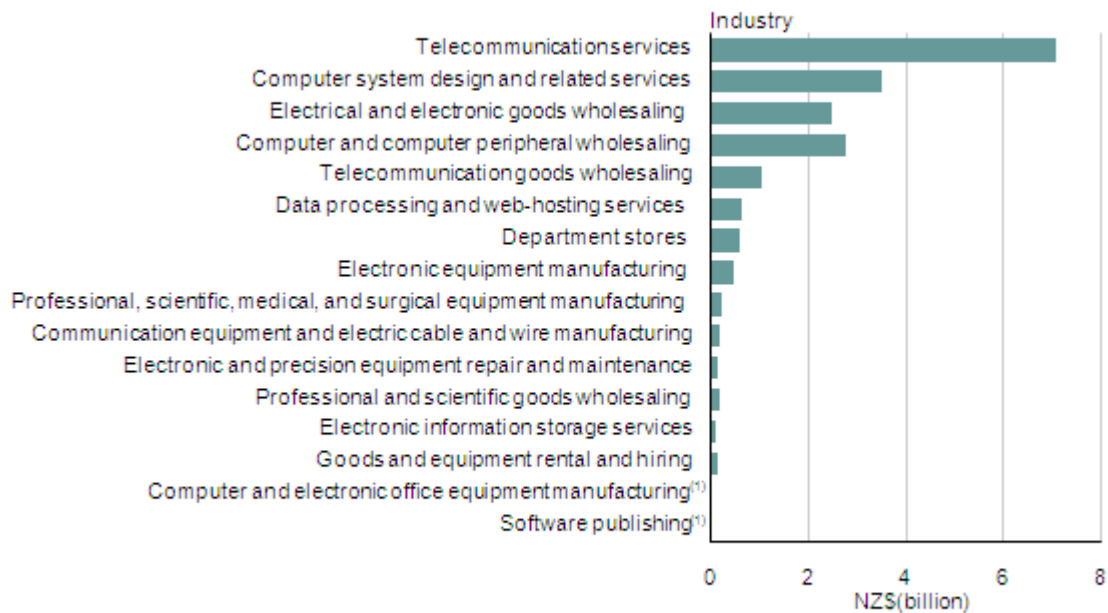
## ICT sales, by industry

The industry with the largest ICT sales in 2010 was telecommunication services, which includes Internet service providers, with \$7,072 million, more than one-third of total ICT sales. This industry was also the largest in the 2008 financial year.

The wholesale trade industry was the second-largest in both years, with \$6,444 million of ICT sales in the 2010 financial year.

Computer services and software was the industry with the highest growth. This industry increased 8 percent from 2008, on a comparable basis. ICT sales for this industry were \$4,528 million in 2010.

## Sales of ICT by industry 2010 financial year



1. Data too small to display

Source: Statistics New Zealand

## ICT business, by industry

There were 2,226 businesses that reported sales of ICT goods and services in the 2010 financial year. This number was down slightly on 2008, on a comparable basis.

Businesses with ICT sales in computer system design and related services were 52 percent of the total population of businesses with ICT sales. This is a minor decrease from 2008.

## ICT industry barriers to growth

The most commonly reported barrier to business growth was 'delays in obtaining customer's decision to purchase', reported by 44 percent of businesses in 2010. This could be due to businesses having to divert additional resources into securing sales and the resulting adverse effects on cash flow.

Other significant barriers to growth were the strength of competition (37 percent), and the ability to attract staff with the necessary skills (27 percent). Fourteen percent of businesses reported they had not experienced any barriers to business growth.

## Barriers to business growth

2010 financial year



Source: Statistics New Zealand

For technical information contact:  
Yolandi de Beer  
Wellington 04 931 4600  
Email: [info@stats.govt.nz](mailto:info@stats.govt.nz)

## Technical notes

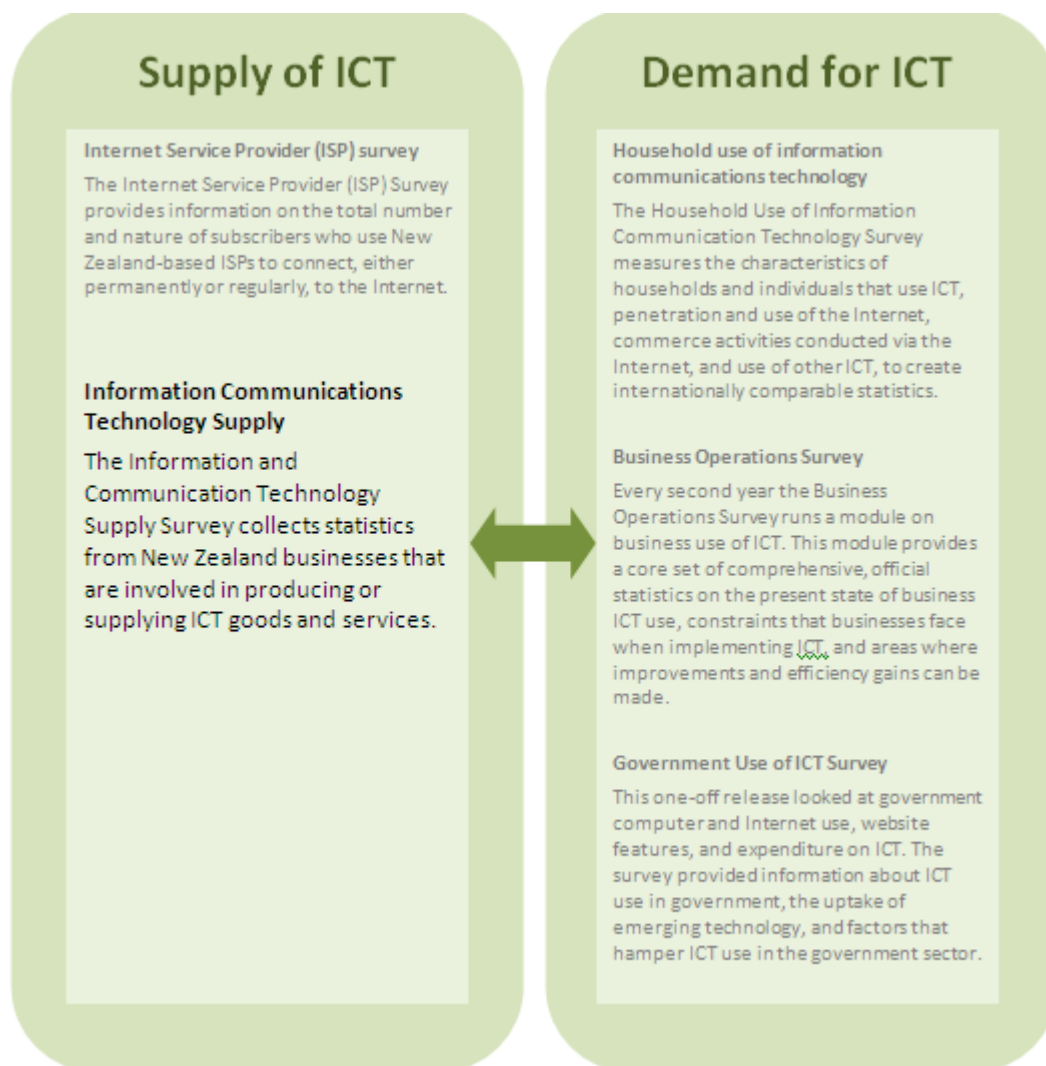
### Background to the Information and Communication Technology Supply Survey release

The Information and Communication Technology Supply Survey 2009/10 (ICT) is based on OECD definitions to measure the ICT industry.

Statistics in this release are drawn from the ICT Supply Survey 2009/10. This survey provides information on the total income, export income, and domestic income from sales of ICT in New Zealand.

The ICT Supply Survey is part of a suite of surveys that measure the use and demand for ICT as outlined below:

### Information and communication technology surveys



## **Changes to the ICT Supply Survey**

### **Change in frequency**

The frequency of the ICT Supply Survey has changed. From 2005–08 the survey ran annually but from 2008 onwards the survey is being run every two years. This is the first release of information since the survey was last run in 2008.

### **Changes to the population**

Enterprise units sourced from the New Zealand Software Association (NZSA) and New Zealand Trade and Enterprise (NZTE) were previously included in the population but they have now been removed. The units excluded from the population by the new definition are assumed to make a minimal contribution to totals at industry level.

Previously, the ICT Supply Survey population did not include units with fewer than two employees. The new 2010 survey population does include units with fewer than two employees, if that units has GST sales larger than \$1 million. This allows units that make significant contributions to ICT sales, but have few employees, to be included in the survey population.

### **Presentation of data**

Because of the change to the survey population, three sets of data are being published. This will enable comparison with data from previous years:

- Comparable population: The comparable population is data for 2008 and 2010 that does not include units with fewer than two employees or enterprises sourced from NZSA and NZTE. These are shown as an indication of change since the 2008 results.
- New population: The new population is data for 2010 that includes units with fewer than two employees that have GST sales larger than \$1 million. It does not include units sourced from NZSA and NZTE. These are the 2010 figures referred to in the text of this release.

### **Changes to treatment of unit non-response**

Treatment of unit non-response has changed from the 2007/08 survey. In the past, imputation was used to obtain data in cases of unit non-response but this method has been replaced with weight adjustment.

### **Reference period**

The reference period for the latest survey was the 2010 financial year. For businesses with balance dates falling between 1 January and 30 September, this is financial data for the year ending 2010. For enterprises with balance dates falling between 1 October and 31 December, this is financial data for the year ending 2009. Throughout this release the reference period is described as 2010.

### **Population**

The ICT Supply Survey includes all enterprise units with more than two employees engaged in ICT activity in New Zealand, and enterprise units with fewer than two employees who have GST

sales of more than \$1 million. Employees are defined by an enterprise's rolling mean employment (RME) count. RME is the 12-month moving average size of the monthly employment count figure. The population for the ICT Supply Survey 2009/10 was 3,103 units.

All units that fit the above criteria and are classified on the Statistics NZ Business Frame to the following ANZSIC 06 codes are included in the survey:

### **C2419 Other professional and scientific equipment manufacturing**

Units mainly engaged in manufacturing navigational, measuring, or other professional and scientific equipment not elsewhere classified, such as control, or meteorological, or surveying equipment or instruments, or specialised parts for such equipment.

### **C2421 Computer and electronic office equipment manufacturing**

Units mainly engaged in manufacturing computers, computer peripheral equipment, or other electronic office equipment.

### **C2422 Communication equipment manufacturing**

Units mainly engaged in manufacturing electronic and/or studio equipment for television or radio broadcasting; data transmission equipment, such as routers or modems; or telecommunication (including telephone) data communication, receiver, or transceiver equipment.

### **C2429 Other electronic equipment manufacturing**

Units mainly engaged in manufacturing audio or visual receiving sets, sound reproducing and/or recording equipment, radio receiving sets (except radio transceivers or radio telegraphic or telephone receivers), television receiving sets, headphones, electronic equipment, or components not elsewhere classified.

### **C2431 Electric cable and wire manufacturing**

Units mainly engaged in manufacturing cables, wires, or strips capable of conducting electricity, including braided or insulated non-ferrous cables, wires, or strips. Units mainly engaged in manufacturing optical fibre cables for data transmission, including telecommunications cables, are also included.

### **F3491 Professional and scientific goods wholesaling**

Units mainly engaged in wholesaling scientific, medical, or other professional equipment (except photographic equipment).

### **F3492 Computer and computer peripheral wholesaling**

Units mainly engaged in wholesaling computers or computer peripheral equipment.

### **F3493 Telecommunication goods wholesaling**

Units mainly engaged in wholesaling telecommunication goods.

### **F3494 Other electrical and electronic goods wholesaling**

Units mainly engaged in wholesaling electrical or electronic goods not elsewhere classified.

### **G4260 Department stores**

Units mainly engaged in retailing a wide variety of goods, other than food or groceries, but the variety is such that no predominant activity can be determined. These units have predominant retail sales in at least four of the following six product groups:

- clothing
- furniture
- kitchenware, china, glassware, and other housewares
- textile goods
- electrical, electronic, and gas appliances
- perfumes, cosmetics, and toiletries.

### **J5420 Software publishing**

Units mainly engaged in creating and disseminating ready-made (non-customised) computer software.

### **J5801 Wired telecommunications network operation**

Units mainly engaged in operating, maintaining, or providing access to facilities for the transmission of voice, data, text, sound, and video, using wired telecommunications networks. Units operate fixed (wired) telecommunications infrastructure, but may also utilise other types of technologies in order to deliver services.

### **J5802 Other telecommunications network operation**

Units mainly engaged in operating and maintaining switching and transmission facilities that provide omni-directional or point-to-point communications via wireless telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies, including communications via airwaves and through satellite systems.

### **J5809 Other telecommunications services**

Units mainly engaged in providing a range of other telecommunication services such as paging services and other specialised telecommunications applications. Also included in this class are units of telecommunications resellers purchasing access and network capacity from telecommunication carriers.

### **J5910 Internet service providers and web-search portals**

Units mainly engaged in providing Internet access services. Also included are units which provide web-search portals used to search the Internet.

## **J5921 Data processing and web-hosting services**

Units mainly engaged in providing electronic data processing or hosting services. These units provide specialised hosting activities such as web hosting, streaming services, or application hosting; provide application service provisioning; or provide general timesharing mainframe facilities to customers. These units provide complete processing and specialised reports from data supplied by customers or provide automated data processing and data-entry services.

## **J5922 Electronic information storage services**

Units mainly engaged in providing electronic information storage and retrieval services (except library services).

## **M7000 Computer system design and related services**

Units mainly engaged in providing expertise in the field of information technologies, such as writing, modifying, testing, or supporting software to meet the needs of a particular consumer; or planning and designing computer systems that integrate computer hardware, software, and communication technologies.

## **S9422 Electronic (except domestic appliance) and precision equipment repair and maintenance**

Units mainly engaged in repairing and maintaining electronic equipment (except domestic appliances), such as computers and communications equipment, and/or highly specialised precision instruments.

A keyword search was used on the Statistics NZ Business Frame to find ICT units from the following two ANZSIC 06 codes:

## **L6639 Other goods and equipment rental and hiring nec**

Units mainly engaged in hiring, leasing, or renting goods and equipment not elsewhere classified.

## **C2412 Medical and surgical equipment manufacturing**

Units mainly engaged in manufacturing medical, surgical, or dental equipment, including dentures.

## **Data collection**

The ICT Supply Survey 2009/10 is a postal survey to all organisations meeting the population criteria.

## **Response rate**

An overall target response rate of 75 percent was specified in terms of the number of enterprise units from the survey population. Key businesses were also identified, and targeted with a response rate of 100 percent. These key businesses were those having the highest total GST

sales in the 2008 financial year, or which were significant contributors to commodity or export totals in the ICT Supply Survey: 2007/08.

An overall response rate of 78 percent was achieved, including 99 percent of key businesses. One key business's data was not collected; however, this would not have made a significant contribution to the results.

## **Non-response**

This section gives an outline of the methodology used for dealing with non-response in the ICT Supply Survey 2009/10.

### **Unit non-response**

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

A weight adjustment method was used to rate up the responding firms to compensate for the non-responding firms within the same weighting cell. Initial selection weights are multiplied by a non-response factor to give the adjusted weight.

### **Item non-response**

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

Historical imputation was used to impute key businesses and enterprises with sales greater than \$20 million in the 2007/08 financial year. This involves bringing over data from a previous cycle, and scaling this data based on changes to available auxiliary data over the same period.

For non-key enterprises, random donor imputation was used to impute both categorical and numerical items. This method uses the data from a randomly chosen respondent in the same imputation cell. Imputation cells group enterprises with similar characteristics together and are usually defined by industry and RME.

## **Non-sampling error**

Non-sampling error occurs for reasons such as respondent error, frame quality, and errors in processing. While every effort is made to minimise these types of error, they may still occur. It is not possible to quantify their effect.

Statistics NZ has used standard procedures in attempting to control non-sampling error. This includes pilot testing of questionnaires and survey quality-control procedures.

## **Confidentiality**

Data published from the ICT Supply Survey must conform to the provisions of the Statistics Act 1975, which requires that all statistical information published by Statistics NZ shall be arranged in such a manner as to prevent any particulars belonging to any respondent from being identifiable. Cell suppression has been used to prevent the disclosure of sensitive information.

## **Concepts and terms**

### **ANZSIC**

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

### **Business Frame**

A register of all economically significant businesses operating in New Zealand, maintained by Statistics NZ from which the survey population is drawn.

### **Employees**

Employees are defined by an enterprise's rolling mean employment (RME) count. RME is a 12-month moving average size of the monthly employment count (EC) figure.

### **Enterprise**

A single business entity operating in New Zealand either as a legally constituted body, such as a company, trust, local or central government trading organisation, incorporated society, or self-employed individual.

### **Rolling mean employment**

The 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.

### **OECD definition of ICT goods and services**

ICT goods and services 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.

### **ICT commodity definition**

The following is a list of ICT commodity categories used in the ICT Supply Survey questionnaire, and examples relating to each category. ICT goods commodities are defined by the internationally recognised Harmonized System (HS).

### **Telecommunications equipment**

- telephones, facsimile machines, answering machines
- telephone and data switching and transmission equipment
- 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 etc)
- 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 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.

### **Sales**

Sales are in New Zealand dollars for each ICT category.

### **Exports**

Exports exclude goods sold to other New Zealand businesses who will export the goods at a later stage.

### **Sales to New Zealand end-users**

Sales to purchasers who buy goods for their own use, rather than for selling.

### **Sales to other New Zealand customers**

Sales not classed as exports or sales to New Zealand end-users. This category includes sales to businesses that sell the ICT goods or services.

### **Goods and services pricing**

The data reported in the ICT Supply Survey: 2009/10 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.

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### **Next release ...**

*Information and Communication Technology Supply Survey: 2011/12* will be released in April 2013.

## Tables

The following tables are printed with this information release and can also be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel you may use the [Excel file viewer](#) to view, print and export the contents of the file.

- 1a. Information and communication technology sales of goods and services, 2008 and 2010 financial years
- 1b. Percentage sales of information and communication technology goods and services, 2008 and 2010 financial years
- 2a. Sales of information and communication technology, by commodity and sales type, 2008 and 2010 financial years
- 2b. Percentage sales of information and communication technology, by commodity and sales type, 2008 and 2010 financial years
3. Sales of information and communication technology, by industry, 2008 and 2010 financial years
4. Breakdown of business population, by industry, 2008 and 2010 financial years
5. Barriers to business growth, 2010 financial year