

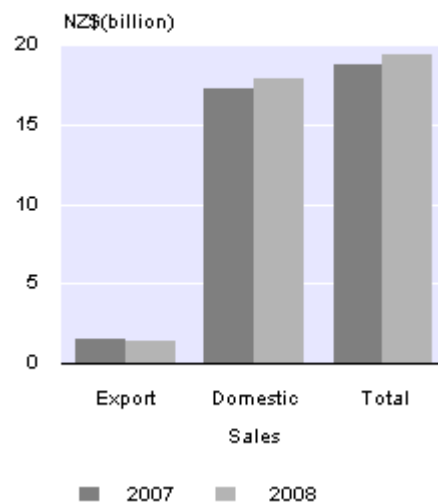
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## Information and Communication Technology Supply Survey 2007/08

### Highlights

- Total sales of information and communication technology (ICT) goods and services rose 3 percent to \$19.3 billion in the 2008 financial year.
- The ICT commodity with the largest dollar value export sales was electronic components with \$281 million.
- Domestic sales of ICT goods and services increased 4 percent to \$17.9 billion.
- The most commonly reported barrier to business growth was strength of competition, reported by 29 percent of businesses in 2008.

**Sales of ICT Goods and Services**  
2007–08 financial years



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See also [Information and Communication Technology Supply Survey: 2007/08 – Media release](#).

# 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.

This is the first release of ICT Supply Survey 2007/08 statistics that covers the last financial year as at August 2008.

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)) later in 2009.

This is the first release of ICT Supply Survey statistics on the basis of the Australian New Zealand Standard Industrial Classification (ANZSIC) 2006. Further information can be found in the Technical Notes section of this release.

## Total ICT sales

Results from the ICT Supply Survey for the 2008 financial year show that total sales of ICT goods and services were valued at \$19,346 million. The majority (\$17,935 million) were sold domestically, while \$1,412 million were sold to export markets.

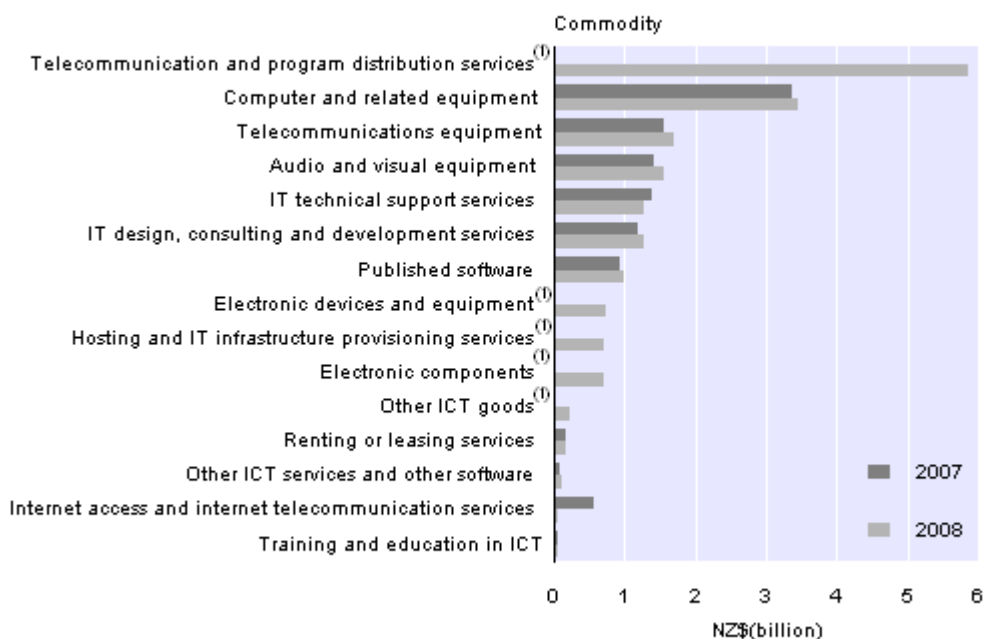
Total ICT sales grew by 3 percent on the previous year's figure of \$18,787 million. This was driven by a 4 percent growth in domestic sales, while export sales fell by 8 percent.

## Total sales of ICT commodities

In 2008, sales of ICT services increased 3 percent to \$10,011 million, while sales of ICT goods (including published software) increased 4 percent to \$9,335 million.

Sales of telecommunication and program distribution services remained the most significant commodity. At \$5,875 million, this accounted for one third of total sales. This was followed by computer and related equipment with \$3,465 million.

## Total Sales of ICT by Commodity 2007–08 financial years



(1) 2007 data confidential.

## Export sales of ICT goods and services

For the 2008 financial year export sales of ICT goods was 72 percent of the total export value (\$1,412 million). Export sales of ICT services were \$397 million, 28 percent of total ICT export value.

The ICT commodity with the largest export sales was electronic components with \$281 million, which is 20 percent of the total ICT export sales. This was followed by telecommunications equipment with \$232 million.

## ICT sales by business size

There were 2,283 businesses that reported sales of ICT goods and services in the 2008 financial year. This was an increase of 30 businesses on the previous year's figure. In 2008, 1,923 businesses were classified as small, 210 as medium and 153 as large.

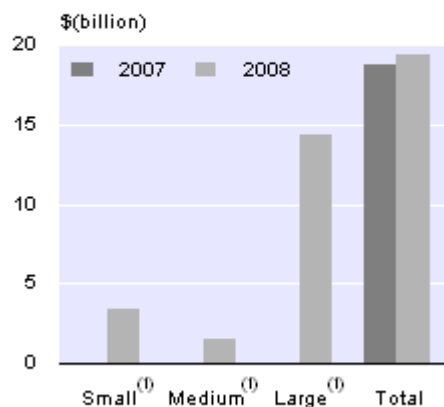
For total sales of ICT goods and services, the larger businesses remained dominant in the 2008 financial year, accounting for \$14,411 million (75 percent) of total ICT sales. ICT sales for small businesses were \$3,415 million. This was over twice that of medium businesses (\$1,521 million) although there were more than nine times as many small businesses as medium businesses.

Small businesses in general accounted for a smaller proportion than large businesses of ICT sales in most commodities, however, for the sales of training and education in ICT, small businesses played a leading role with 65 percent of the total sales of \$40 million.

## Total Sales of ICT Goods and Services

By business size

2007–08 financial years

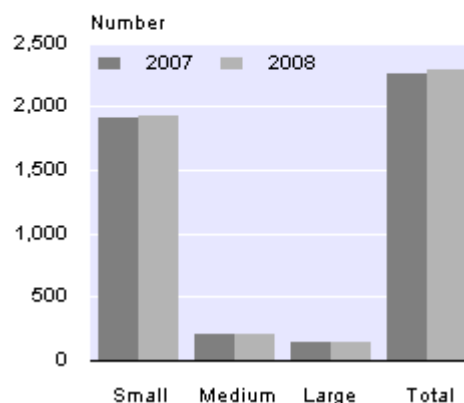


(1) 2007 data confidential.

## Businesses with ICT Sales

By business size

2007–08 financial years



## ICT sales, by industry

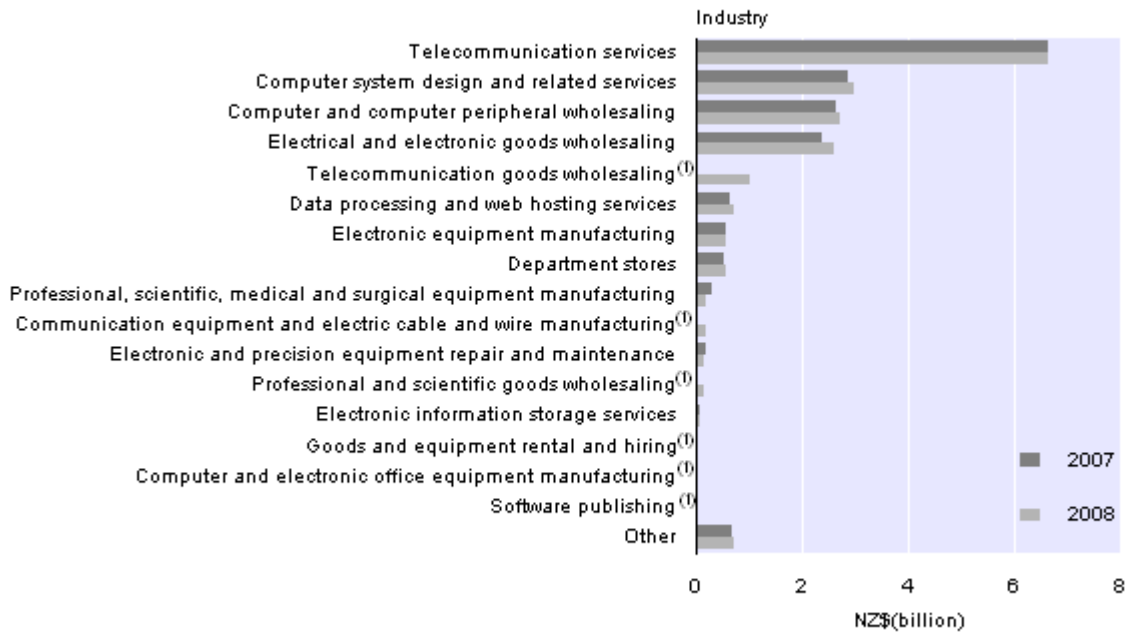
The industry with the largest ICT sales was telecommunication services with \$6,657 million, around one third of the total ICT sales. This was also the largest in the 2007 financial year with \$6,649 million of sales.

The wholesale trade industry was the second largest in both years, with \$6,476 million of ICT sales in the 2008 financial year, up from \$6,086 million in 2007.

ICT manufacturing industry sales decreased 8 percent, to \$956 million. Whereas, the total New Zealand manufacturing sector grew 0.9 percent during the similar period (Gross Domestic Product: March 2008 quarter).

For the 2008 financial year, the number of businesses with ICT sales in the computer system design and related services industry accounted for 51 percent (1,173 enterprises) of total businesses with reported ICT sales. The computer system design and related services industry accounted for 15 percent of the total ICT sales and 88 percent of these were small businesses.

### Total Sales of ICT by Industry 2007–08 financial years



(1) 2007 data confidential.

### ICT industry barriers to growth

The most commonly reported barrier to business growth was strength of competition, reported by 29 percent of businesses in 2008. This was followed by the ability to attract and/or retain experienced staff (27 percent), and the ability to attract and/or retain qualified staff (24 percent). Twelve percent of businesses reported they had not experienced any barriers to business growth. These findings are in line with 2007 results.

### Barriers to Business Growth 2007–08 financial years



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**Next release ...**

*Information and Communication Technology Supply Survey: 2008/09* will be released in April 2010.

## Technical notes

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

The Information and Communication Technology (ICT) Supply Survey 2007/08 is based on OECD definitions to measure the ICT industry.

Statistics in this release are drawn from the ICT Supply Survey 2007/08. The objectives of this survey are to provide information on the total income, export income and domestic income from sales of ICT in New Zealand.

### Reference period

The reference period for the survey was the 2008 financial year. For businesses with balance dates falling between 1 January and 30 September, this is financial data for the year ending 2008. For enterprises with balance dates falling between 1 October and 31 December, this is financial data for the year ending 2007.

### Introduction of a new industrial classification for 2007/08

This is the first official publication of the ICT Supply Survey results using the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 06) that replaces the 1996 version of this classification (ANZSIC 96). Previous ICT Supply Surveys, were designed and published on an ANZSIC 96 basis, though the ICT Supply Survey 2006/07 was designed under both ANZSIC 96 and ANZSIC 06 to allow for the impact of the changed classification to be measured. The ICT Supply Survey 2006/07 has been reprocessed under ANZSIC 06 and this release presents results from both the 2006/07 and 2007/08 years on an ANZSIC 06 basis to allow the trends in results to be shown over this period.

The development of a new version of ANZSIC has been driven by changes in the structure, composition and organisation of industrial and business activities in Australia and New Zealand. Significant technological changes since ANZSIC 96 was developed have affected the way industry and businesses operate. In addition, industries undertaking new activities have emerged, requiring a review of ANZSIC 96 and the development of a more contemporary version of the classification to better reflect the new economy. More information about ANZSIC 06 is available on our website at:

[www.stats.govt.nz/economy/industry/introducing-anzsic-2006/](http://www.stats.govt.nz/economy/industry/introducing-anzsic-2006/).

The conversion of ICT Supply Survey 2007/08 to ANZSIC 06 was completed using the following steps.

- The sample for the ICT Supply Survey 2006/07 was designed on both an ANZSIC 96 and an ANZSIC 06 basis.
- Analysis of the ICT Supply Survey 2006/07 data was completed on an ANZSIC 96 basis and published in the 2006/07 release.
- The sample for the ICT Supply Survey 2007/08 was designed and optimised on an ANZSIC 06 basis.
- Imputation cells for the ICT Supply Survey 2007/08 were reviewed and created on an ANZSIC 06 basis.
- Analysis of ICT Supply Survey 2007/08 data was completed on an ANZSIC 06 basis.
- Analysis of ICT Supply Survey 2006/07 data was completed on an ANZSIC 06 basis.

The following table provides an indication of the affect of the change from ANZSIC 96 to ANZSIC 06 using data collected in the ICT Supply Survey 2006/07.

<b>Information and Communication Technology Sales of Goods and Services 2007</b>				
	ANZSIC 96		ANZSIC 06	
Commodity	NZ\$ million	Number of businesses	NZ\$ million	Number of businesses
<b>ICT goods (excluding software)</b>				
Telecommunications equipment	1,514	411	1,548	432
Computer and related equipment	3,324	804	3,363	822
Audio and visual equipment	996	294	1,424	327
Electronic components	777	243	.. C	252
Electronic devices and equipment	767	267	.. C	267
Other ICT goods	182	72	.. C	78
<b>Published software</b>				
Published software	911	879	917	894
<b>Total sales of ICT goods</b>	<b>8,472</b>	<b>1,617</b>	<b>9,022</b>	<b>1,668</b>
<b>Communication services</b>				
Telecommunication and program distribution services	5,891	171	.. C	171
Internet access and Internet telecommunication services	561	141	563	153
<b>Information technology services</b>				
IT technical support services	1,391	1,002	1,392	1,017
IT design, consulting and development services	1,194	945	1,198	951
Hosting and IT infrastructure provisioning services	430	432	.. C	435
<b>Other ICT services</b>				
Renting or leasing services	161	246	162	252
Training and education in ICT	39	261	38	264
Other ICT services and other software	89	144	91	153
<b>Total sales of ICT services</b>	<b>9,756</b>	<b>1,731</b>	<b>9,765</b>	<b>1,770</b>
<b>Total sales of ICT goods and services</b>	<b>18,228</b>	<b>2,181</b>	<b>18,787</b>	<b>2,253</b>

**Note:** Figures may not sum to totals due to rounding.

**Symbols:**

C confidential

.. figures not available

## Population

The ICT Supply Survey includes all enterprise units with 2.0 or more rolling mean employees (RME) engaged in ICT activity in New Zealand. However businesses that are known to be significant ICT businesses were surveyed regardless of their RME count. RME is a 12-month moving average size of the monthly employment count (EC) figure. The population for the ICT Supply Survey 2007/08 was 2,974 enterprises.

All units with greater than 2.0 RME, and 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. These units also had to have greater than 2.0 RME to be included in the survey:

## **L6639 Other goods and equipment rental and hiring n. e. c.**

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.

In addition, enterprises are also added if they have greater than 2.0 RME and are a member of one of the following lists:

- New Zealand Software Association (NZSA)
- New Zealand Trade and Enterprise (NZTE).

Also included are significant participants in the ICT industry outside the above sources and which are not classified on the Statistics NZ Business Frame. Known information communication and technology retailers were also added to the population.

## **Data collection**

The ICT Supply Survey 2007/08 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 95 percent. These key businesses were identified as those having the highest total GST sales in the 2007 financial year, or which were significant contributors to commodity or export totals in the ICT Supply Survey: 2006/07.

An overall response rate of 78 percent was achieved, including 100 percent of key businesses.

## Imputation

Imputation is used to obtain data in cases of unit or item non-response. Unit non-response occurs where an enterprise does not return the questionnaire. Item non-response occurs where a returned questionnaire is incomplete. The same imputation methods are used for handling both unit and item non-response.

Historical imputation is used to impute key businesses and enterprises with sales greater than \$10 million in the 2006/07 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 is 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.

There was a minor imputation improvement for the ICT Supply Survey 2007/08 which was also applied to the reprocessing of the ICT Supply Survey 2006/07 data based on ANZSIC 06 that is included in this release. This means that the 2006/07 and 2007/08 trends that are shown in this release are not affected by the implementation of this imputation change.

## 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-sample error. This includes pilot testing of questionnaires and survey quality control procedures.

## Data quality

The ICT supply survey measures financial information by ICT commodities (see definition below). Given the nature of the information collected, there are limitations on the level of accuracy that can be expected from the ICT supply survey data as detailed below.

- For bundled products, for example, a computer preloaded with software, respondents are asked to split the value of sales between the appropriate categories. When they cannot split the bundle between categories, respondents are asked to decide which item in the bundle is of the highest value and enter the total sales value from the bundle into that category.
- Businesses do not always record their sales by commodities, therefore it is hard to split financial values across different commodities.
- Some questions may be interpreted differently by respondents, dependent on their understanding of ICT. This means that results at both the aggregate level and at the commodity level can vary across businesses and across financial years based on how these questions are interpreted.

## **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).

### **Audio and visual equipment**

This includes:

- 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.

### **Business Frame**

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

### **Business size**

Small business: between 2 and less than 20 RME

Medium business: RME between 20 and less than 50

Large business: 50 or more RME.

### **Computer and related equipment**

This includes:

- 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).

### **Electronic components**

This includes:

- 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**

This includes:

- 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.

## **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.

## **Exports**

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 2007/08 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.

## **Hosting and IT infrastructure provisioning services**

This includes:

- 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.

## **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 Harmonised System (HS).

## **Internet access and Internet telecommunication services**

This includes:

- 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 design, consulting and development services**

This includes:

- 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.

## **IT technical support services**

This includes:

- 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.

## **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.

## **Published software**

This includes:

- 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.

## **Renting or leasing services**

This includes:

- computers, printers, peripheral units
- telephones, fax machines, pagers, cellphones
- radio and television equipment
- scientific, measuring or control apparatus.

## **Rolling mean employment (RME)**

RME is a 12-month moving average of the monthly employment count (EC) figure. This number is sourced from the Statistics NZ Business Frame which is updated on a monthly basis by employers.

## **Sales**

Sales in New Zealand dollars for each ICT category.

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

Sales to those 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.

## **Telecommunications equipment**

This includes:

- 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.

## **Telecommunication and program distribution services**

This includes:

- 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.

## **Training and education in ICT**

This includes:

- post-school technical and vocational education
- in-house training services
- other education and training services.

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## Tables

The following tables are printed with this Hot Off The Press 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.

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