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BUSINESS USE OF INFORMATION TECHNOLOGY

AUSTRALIA

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INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Peta Hart on Perth (08) 9360 5303.

NOTES

- INTRODUCTION** This publication presents results from an Australian Bureau of Statistics (ABS) survey of Business Use of Information Technology (BUIIT) conducted in respect of 2004–05.
- CHANGES IN THIS ISSUE** The content of the BUIIT survey changes each year to reflect the changing nature of information technology (IT) use by Australian businesses. As such, some of the content of this publication has changed compared to the previous issue. For example, information on IT support is not presented in this issue due to data on this topic not being collected in the 2004–05 survey. However, additional data on the main type of Internet connection and barriers to use of broadband are included.
- NUMBER OF BUSINESSES** The BUIIT survey is not designed to provide high quality estimates of numbers of businesses for any of the output classifications (for example, state and territory or industry) and the number of businesses in this publication are only included to provide contextual information for the user. A more robust source of counts of Australian businesses is available from *Australian Bureau of Statistics Business Register, Counts of Businesses* (cat. no. 8161.0.55.001). Please see Explanatory Notes 17 and 18 for more information.
- CHANGES TO THE SURVEY VEHICLE** The 2004–05 BUIIT survey was the last stand-alone collection to be conducted. From 2005–06, data related to business use of IT will be collected as part of the Business Characteristics Survey (BCS). This new survey will provide greater flexibility in measurement of a range of business characteristics and more comprehensive integration of these types of data for analysis of inter-relationships between business characteristics and economic outcomes, for example, productivity. It is expected that the main variables included in this publication will continue to be published on an annual basis as part of a release which covers other business characteristics as well. Users of this publication will be contacted later this year with further details on how BUIIT type data will be made available from 2005–06 onwards.
- COMMENTS** If you wish to make comments and suggestions about IT related content in the BCS or this publication, please write to the Director, Innovation and Technology Statistics, Australian Bureau of Statistics, GPO Box K881, Perth WA, 6842, or email mike.scott@abs.gov.au.

Peter Harper
Acting Australian Statistician

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CHAPTER 1

SUMMARY OF FINDINGS

INTRODUCTION

This chapter presents a summary of outputs from the 2004–05 Business Use of Information Technology (BUI) survey and focuses on key indicators of computer use, Internet access, web presence and Internet commerce.

ADOPTION OF INFORMATION TECHNOLOGY

After little change for four years, the proportion of businesses using a computer increased by 4 percentage points during the year ended June 2005. The proportion of businesses with Internet use and web presence has continued to grow steadily.

BUSINESS USE OF SELECTED TECHNOLOGIES (a)

	2000-01	2001-02	2002-03(b)	2003-04	2004-05
	%	%	%	%	%
Businesses with computer use	84	84	83	85	89
Businesses with Internet use	69	71	71	74	77
Businesses with web presence	22	24	23	25	27

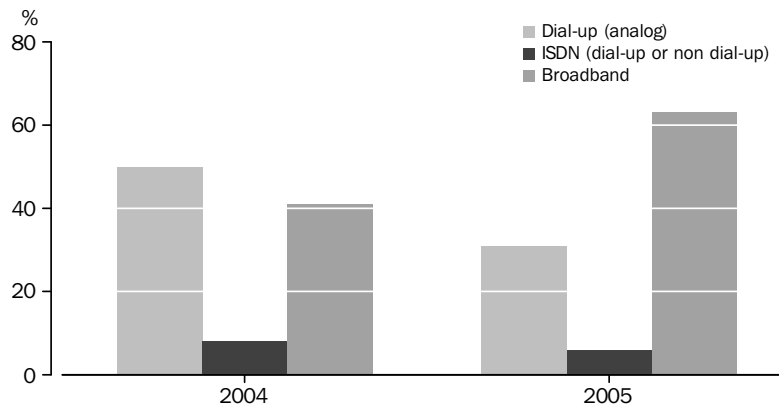
(a) Proportions are of all businesses.

(b) Affected by The New Tax System (TNTS) - see Explanatory Note 10.

INTERNET ACCESS

While the proportion of businesses with Internet access increased by 3 percentage points overall, there were more significant changes in the main type of Internet connection. The proportion of businesses which had broadband as their main Internet connection type grew strongly from 41% at the end of June 2004 to 63% at the end of June 2005. Broadband is defined by the ABS as an 'always on' Internet connection with an access speed equal to or greater than 256kbps.

MAIN TYPE OF INTERNET CONNECTION (a), as at 30 June



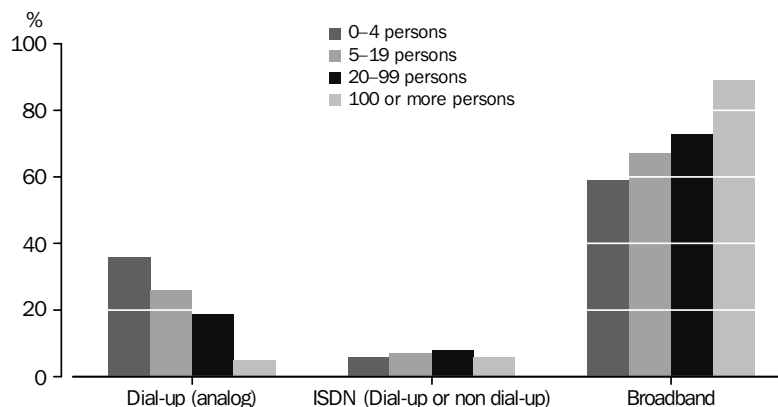
(a) Proportions are of all businesses with Internet use

INTERNET ACCESS

continued

For the first time since the survey started, broadband was the most prevalent type of Internet connection for businesses across all employment sizes. 89% of businesses which employed 100 or more persons had broadband as their main connection type.

MAIN TYPE OF INTERNET CONNECTION BY EMPLOYMENT SIZE (a), as at 30 June 2005



(a) Proportions are of all businesses in each employment size category with Internet use

Businesses using broadband as the main type of Internet connection were also asked to identify the main type of broadband connection used as at the end of June 2005. The most common broadband connection used was DSL (Digital Subscriber Line) with 68% of broadband users identifying this as the main type of broadband connection. The next most common main type of broadband connection was cable (26%) which includes Fibre Optic, Coaxial and Hybrid Fibre (Coaxial) cable.

The 2004–05 survey collected the perceived reasons why businesses with non-broadband Internet access did not use a broadband connection as the main type of connection. Businesses could identify more than one reason. Perceived *unavailability in business location* and *lack of perceived benefit* (32% each) were the most common reasons reported by businesses for not using broadband, followed by *ongoing connection and usage costs too high* (21%) and *start up connection costs too high* (18%). Broadband had not been considered by 15% of businesses with non-broadband Internet access.

INTERNET COMMERCE

The 2004–05 survey measured the proportion of Australian businesses using the Internet or web to place and/or receive orders, with or without online payments, and the value of Internet or web orders received by businesses (Internet income). Caution should be used when interpreting values of Internet income, please refer to Explanatory Notes 12 to 16.

The proportion of businesses which reported placing orders via the Internet or web during 2004-05 was 33%, an increase of 2 percentage points from the previous year. This is a continuation of the growth observed over recent years for this business practice.

While the proportion of businesses reporting receipt of orders via the Internet or web has remained unchanged over the last few years, the income received from these orders has increased significantly over this time. Internet income grew by 19% from \$33.3 billion in 2003–04 to \$39.6 billion in 2004-05.

ORDERS FOR GOODS AND SERVICES VIA THE INTERNET OR WEB (a)

		2001-02	2002-03(b)	2003-04	2004-05
Businesses which					
Placed orders via the Internet or web	%	25	28	31	33
Received orders via the Internet or web	%	6	13	12	12
Internet Income	\$b	11	24	33	40

(a) Proportions are of all businesses.

(b) Affected by TINTS - see Explanatory Note 10.

BUSINESS SIZE

A strong relationship continues to exist between the employment size of a business and the likelihood that the business is using IT. As employment size increases, so does the proportion of Australian businesses using IT. For example, during the year ended June 2005 all businesses with 100 or more persons employed used computers, 99% used the Internet, while 91% had a web presence. A much lower proportion of businesses with 0–4 persons employed used IT: 85% used computers, 71% used the Internet and 17% had a web presence.

While use of computers and the Internet for businesses with 100 or more persons employed has been complete or near complete for a year or two (100% and 99% respectively, during the years ended June 2003 and 2004), the proportion of these businesses with a web presence continues to grow with an increase of 8 percentage points from 2003–04 to 2004–05. In contrast, for businesses with 0–4 persons employed the proportions of computer use and Internet use increased by 5 and 4 percentage points respectively over the period, while a smaller increase of 1 percentage point was experienced for web presence.

As with employment size, a relationship exists between the total income of businesses and the use of IT. For example, 70% of businesses with income of \$5 million or more had a web presence while only 10% of businesses with income less than \$100,000 had a web presence.

INDUSTRY

Estimates of IT use by industry are affected by the nature, number and size of the businesses classified to the individual division. While there is general homogeneity of business activity at the industry division level, the range of activity within a division can vary significantly. Similarly, some industry divisions have large numbers of smaller businesses which can have very different IT use to that of larger businesses. For example, the activity and number of businesses included in the Communication services division ranges from a small number of very large businesses that provide telephony services (these have high levels of IT use) to a large number of small postal delivery contractors (these have very low levels of IT use).

During the year ended June 2005, the proportion of Australian businesses which used IT varied considerably across industries. The industries with the highest proportion of businesses which used a computer were Electricity, gas and water supply and Cultural and recreational services (97% each). These industries also had the highest proportion of businesses which used the Internet (90% each). Accommodation, cafes and restaurants had the lowest proportion of businesses which used a computer (77%). Internet use was lowest in Accommodation, cafes and restaurants and Communication services (62% each). Web presence was highest in Cultural and recreational services (50%) and Wholesale trade (44%). Construction had the lowest proportion of businesses with a web presence (11%).

INDUSTRY *continued*

At the broad industry level, the highest increases in the proportions of IT use between 2003–04 and 2004–05 were experienced by Finance and insurance for computer use (12 percentage points) and Cultural and recreational services for Internet use and web presence (9 percentage points each).

REGIONAL DATA

Use of IT by businesses in capital cities was higher than other areas for computer use, Internet use and web presence. The proportions of businesses using computers, the Internet and having a web presence were 89%, 78% and 29% respectively for capital cities, compared to 87%, 74% and 22% respectively for other areas. Growth in these indicators from 2003–04 to 2004–05 was similar for both capital cities and other areas.

In the sample design, the stratification for the three smaller states and territories (Tasmania, the Northern Territory and the Australian Capital Territory) is combined. This makes their data less reliable than for the larger states, as demonstrated by relatively high levels of standard errors for some characteristics of IT use within the smaller states and territories. On this basis, users should only make comparisons between regions or time periods for these states and territories with caution. For this reason, commentary in this publication is confined to the five larger states (i.e. New South Wales, Victoria, Queensland, South Australia and Western Australia).

Of the five larger states, South Australia had the highest proportions of businesses with computer use (92%), Internet use (82%) and web presence (31%). The lowest proportions of business computer use and web presence were for New South Wales (87% and 23% respectively). New South Wales and Victoria had the lowest proportions of businesses which used the Internet (75%).

Western Australia had the largest increase in the proportion of businesses with computer use (7 percentage points). South Australia had the largest increase in the proportion of businesses with Internet use (6 percentage points). Victoria had the largest growth in the proportion of businesses with a web presence (4 percentage points).

ORDERS FOR GOODS OR SERVICES VIA THE INTERNET OR WEB

The proportions referred to in this subsection relate to all Australian businesses. Further commentary pertaining to placing and receiving orders via the Internet or web by more narrowly defined populations (e.g. businesses with Internet access) is provided in chapters 3 and 4.

During 2004–05, the proportion of businesses placing orders via the Internet or web (33%) continued to increase with a growth of 2 percentage points from 31% in 2003–04.

The likelihood of a business placing orders via the Internet or web increases with the employment size of the business. For example, in 2004–05, 74% of businesses which employed 100 or more persons placed orders in this manner, compared to 28% of businesses which employed 0–4 persons. At the industry level, Electricity, gas and water had the highest proportion of businesses which placed orders via the Internet or web (51%), while Construction had the lowest (20%).

During 2004–05, the proportion of businesses receiving orders via the Internet or web (12%) remained unchanged from 2003–04. The proportion of businesses which received orders via the Internet or web increased with employment size. For example, 25% of businesses with 100 or more persons employed received orders in this way, compared

ORDERS FOR GOODS OR
SERVICES VIA THE
INTERNET OR WEB
continued

with 10% of businesses which employed 0–4 persons. A similar relationship existed between total income and the proportion of businesses receiving orders via the Internet or web, with a greater proportion of businesses with larger total incomes receiving orders in this way. For example, 22% of businesses with a total income of \$5 million or more received orders in this way, compared with 6% of businesses with a total income of less than \$100,000. At the industry level, Wholesale trade and Cultural and recreational services industries had the highest proportion of businesses receiving orders via the Internet or web (24% and 20% respectively). Health and community services reported the lowest proportion of businesses which received orders via the Internet or web (4%).

Estimates for the five largest states show that South Australia had the highest proportion of businesses which both placed and received orders via the Internet or web during 2004–05 (37% and 16% respectively). Western Australia had the lowest proportion of businesses which placed orders via the Internet or web (29%), while New South Wales had the lowest proportion of businesses which received orders via the Internet or web (10%).

2.1 BUSINESS USE OF SELECTED TECHNOLOGIES(a), by selected business characteristics

	NUMBER OF BUSINESSES(b)		BUSINESSES WITH COMPUTER USE		BUSINESSES WITH INTERNET USE	
	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
	'000	'000	%	%	%	%
Employment size						
0-4 persons	451	455	80	85	67	71
5-19 persons	201	204	94	95	85	86
20-99 persons	39	39	98	97	94	92
100 or more persons	7	7	100	100	99	99
Total income						
Less than \$100,000	162	154	74	80	62	62
\$100,000 to less than \$1m	405	409	86	89	73	77
\$1m to less than \$5m	101	111	97	97	91	90
\$5m or more	31	30	99	100	98	99
Industry						
Mining	2	3	88	92	82	88
Manufacturing	57	58	88	88	76	75
Electricity, gas and water supply	1	1	95	97	84	90
Construction	108	110	78	84	63	66
Wholesale trade	44	44	91	95	86	87
Retail trade	119	118	81	84	69	73
Accommodation, cafes and restaurants	36	37	72	77	58	62
Transport and storage	35	36	83	82	66	67
Communication services	8	8	74	84	55	62
Finance and insurance	28	29	83	95	78	85
Property and business services	159	158	94	95	89	89
Health and community services	53	53	91	94	76	80
Cultural and recreational services	19	19	90	97	81	90
Personal and other services	31	32	76	82	60	66
State						
New South Wales	250	248	84	87	74	75
Victoria	183	182	85	89	71	75
Queensland	129	137	87	90	78	80
South Australia	43	44	89	92	76	82
Western Australia	65	67	83	90	72	76
Tasmania	12	11	89	92	74	86
Northern Territory	^ 5	^ 6	92	95	82	83
Australian Capital Territory	^ 11	10	89	92	^ 78	84
Region						
Capital cities	486	483	86	89	75	78
Other areas	212	222	83	87	71	74
Total	698	705	85	89	74	77

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Proportions are of all businesses in each category.
(b) See Explanatory Notes 17 to 18.

2.1 BUSINESS USE OF SELECTED TECHNOLOGIES(a), by selected business characteristics *continued*

	BUSINESSES WITH WEB PRESENCE		BUSINESSES WHICH PLACED ORDERS VIA THE INTERNET OR WEB		BUSINESSES WHICH RECEIVED ORDERS VIA THE INTERNET OR WEB	
	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
	%	%	%	%	%	%
Employment size						
0–4 persons	16	17	27	28	9	10
5–19 persons	38	41	38	40	16	15
20–99 persons	58	59	43	47	23	^21
100 or more persons	83	91	69	74	^21	^25
Total income						
Less than \$100,000	^12	^10	23	21	^8	^6
\$100,000 to less than \$1m	22	24	30	33	10	12
\$1m to less than \$5m	46	49	43	43	21	^19
\$5m or more	68	70	58	59	^25	^22
Industry						
Mining	36	38	34	36	^6	^6
Manufacturing	36	38	33	35	^21	^18
Electricity, gas and water supply	39	43	42	51	^12	^14
Construction	11	11	18	20	^6	^7
Wholesale trade	40	44	40	45	^28	^24
Retail trade	23	^24	28	27	^11	^10
Accommodation, cafes and restaurants	29	31	^20	^23	^12	^16
Transport and storage	^17	16	^20	21	^13	^12
Communication services	^17	19	23	28	^11	^10
Finance and insurance	^27	28	^31	38	*7	^9
Property and business services	29	33	46	45	^13	^14
Health and community services	17	19	29	36	^4	^4
Cultural and recreational services	41	50	44	46	^17	^20
Personal and other services	28	25	23	24	^9	^11
State						
New South Wales	24	23	31	31	12	^10
Victoria	26	30	33	32	^12	^12
Queensland	27	29	33	35	^13	^13
South Australia	28	31	32	37	^14	^16
Western Australia	23	26	25	29	^9	^12
Tasmania	^26	^28	^29	^40	^17	^18
Northern Territory	*21	^28	*43	^39	*14	*16
Australian Capital Territory	^21	^28	^37	^44	*12	^20
Region						
Capital cities	27	29	33	34	13	13
Other areas	21	22	27	30	^10	^10
Total	25	27	31	33	12	12

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Proportions are of all businesses in each category.

TYPE OF INTERNET CONNECTION

In the 2004–05 survey, businesses which used the Internet were asked to identify the main type of Internet connection: dial-up (analog); ISDN (dial-up or non dial-up); or broadband. Businesses which identified broadband as the main connection type were also asked to report the main type of broadband connection. Businesses with Internet use which did not identify broadband as the main connection type were asked to provide reasons for not using broadband.

As at the end of June 2005, 63% of businesses were using broadband Internet as the main type of Internet access, compared with 37% using non-broadband Internet connections. This represents a substantial increase from 2003–04 where 41% of businesses were using broadband. The proportion of businesses using dial-up decreased from 50% in 2003–04 to 31% in 2004–05, while the proportion of businesses using ISDN decreased from 8% to 6%.

Broadband was the most prevalent main Internet connection type across all employment sizes, industries, states and territories. As business employment size increased, the proportion of businesses which used broadband as the main Internet connection type increased. For example, 59% of businesses with 0–4 employees had broadband, compared with 89% of businesses which employed 100 or more persons. At the industry level, Finance and insurance and Property and business services had the highest proportion of broadband (80% and 72% respectively), while Accommodation, cafes and restaurants and Transport and storage had the lowest proportion (51% each).

Of the five larger states, Victoria had a significantly higher proportion of businesses which used broadband as their main connection type (68%) with South Australia having the lowest proportion (58%). The proportion of businesses using broadband was greater in capital cities (68%) than in other areas (50%).

Main type of broadband connection used

As at the end of June 2005, the most common type of broadband connection used to access the Internet was DSL, with 68% of businesses which used broadband identifying this as the main type. Cable was reported as the main broadband connection type by 26% of businesses using broadband. Businesses which employed 100 or more persons had a far greater use of frame relay systems (20%) than did businesses in other employment sizes.

Reasons for not using broadband

For businesses not using broadband as the main Internet connection type at the end of June 2005, the most commonly reported reasons for not using broadband were perceived *unavailability in business location* and *lack of perceived benefit* (32% each). These were followed by *ongoing connection and usage costs too high* (21%) and *start up connection costs too high* (18%). Broadband had not been considered by 15% of businesses with non-broadband Internet access. Note that businesses could identify more than one reason for not using broadband and responses are based on the

Reasons for not using broadband continued

perception of the business. For the response option *unavailable in business location* no attempt is made to verify with other sources that broadband was not available at the location.

Unavailable in business location and *lack of perceived benefit* were the most common reasons for not using broadband reported by businesses in each employment size category and most states/territories. The proportion of businesses reporting *start up costs too high* decreased with employment size. For example, 18% of businesses employing 0–4 persons reported this concern, compared with 2% of businesses with 100 or more employees. The proportion of businesses in areas other than capital cities which identified *unavailable in the business location* as a reason for not using broadband (43%) was almost double that of capital cities (24%).

ELECTRONIC
LODGEMENTS WITH
GOVERNMENT

During the year ended June 2005, 48% of businesses with Internet use undertook electronic lodgements with government organisations via the Internet or web. Electronic lodgment of payments (e.g. for rates, licence fees) was the most common electronic lodgment activity during the year ended June 2005 with 30% of businesses using the Internet making payments to government in this way.

There was a strong relationship between employment size and the proportion of businesses with the Internet which used the Internet for lodging taxation forms: 74% of businesses with Internet access and 100 or more persons employed used the Internet in this way, compared with 24% of businesses with 0–4 employees.

ORDERS FOR GOODS AND
SERVICES VIA THE
INTERNET OR WEB

The proportion of businesses with Internet use which reported placing orders for goods and services via the Internet or web during 2004–05 was 43%. This is over 2.5 times higher than the proportion of businesses which reported receiving orders. Given placement of orders via the Internet or web generally requires Internet access only, whereas receipt of orders often requires a web presence and additional support within the business, it is considered much easier to place an order than to receive an order. Therefore, the differences highlighted in these levels of usage are to be expected.

WEB PRESENCE AND
FEATURES

As at 30 June 2005, approximately 27% of Australian businesses reported having a web presence, either with their own web site or a presence on another entity's web site. Businesses with a web presence were asked to indicate the features of their web presence. The web features listed in table 3.5 are presented in approximately ascending order of sophistication. Differences in web features across employment sizes of businesses were more significant as features increased in sophistication. For example, while approximately 8% of businesses with 0–4 persons employed and a web presence reported the capability for secure access or transactions, the proportion was 23% for businesses which employed 100 or more persons. Similarly, automated links with back end systems was reported as a web feature by 25% of businesses with a web presence and 100 or more persons employed, compared with 12% of businesses with 0–4 persons employed.

3.1 MAIN TYPE OF INTERNET CONNECTION(a)(b), by selected business characteristics

	<i>Businesses which used the Internet</i>	<i>Dial-up (analog)</i>	<i>ISDN (Dial-up or non dial-up)</i>	<i>Broadband</i>
	'000	%	%	%
.....				
Employment size				
0–4 persons	323	36	^ 6	59
5–19 persons	176	26	^ 7	67
20–99 persons	35	^ 19	^ 8	73
100 or more persons	7	*5	*6	89
Industry				
Mining	2	^ 29	^ 9	62
Manufacturing	44	^ 32	*7	61
Electricity, gas and water supply	1	^ 24	^ 7	69
Construction	73	40	^ 7	53
Wholesale trade	39	^ 29	*8	64
Retail trade	86	39	*5	56
Accommodation, cafes and restaurants	23	42	*7	51
Transport and storage	24	42	^ 8	51
Communication services	5	34	^ 7	60
Finance and insurance	24	^ 16	*4	80
Property and business services	142	^ 21	*7	72
Health and community services	42	28	^ 5	67
Cultural and recreational services	17	^ 38	*4	58
Personal and other services	21	^ 31	*5	64
State				
New South Wales	186	32	^ 6	62
Victoria	136	26	^ 6	68
Queensland	110	32	^ 7	61
South Australia	36	35	^ 7	58
Western Australia	51	34	^ 5	61
Tasmania	10	^ 37	*5	58
Northern Territory	^ 5	^ 34	**8	^ 58
Australian Capital Territory	9	^ 26	*4	70
Region				
Capital cities	377	26	^ 6	68
Other areas	165	43	^ 7	50
Total	542	31	6	63

-
- ^ estimate has a relative standard error of 10% to less than 25% and should be used with caution
- * estimate has a relative standard error of 25% to 50% and should be used with caution
- ** estimate has a relative standard error greater than 50% and is considered too unreliable for general use
- (a) Proportions are of all businesses which used the Internet during the year ended 30 June 2005 in each category.
- (b) Businesses identified the main type of Internet connection used as at 30 June 2005.

3.2**MAIN TYPE OF BROADBAND CONNECTION(a)(b), by employment size**

		EMPLOYMENT SIZE				Total
		0-4 persons	5-19 persons	20-99 persons	100 or more persons	
DSL (Digital Subscriber Line)	%	64	76	69	^ 44	68
Cable	%	31	^ 18	^ 24	^ 24	26
Any wireless(c)	%	^ 4	* 3	* 5	** 6	^ 4
Frame Relay	%	** —	** 1	** 1	^ 20	^ 1
Other Broadband	%	** 1	* 1	** 1	** 5	* 1
Businesses which used a broadband connection	'000	189	118	26	^ 7	339

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Proportions are of all businesses which used broadband as the main type of Internet connection as at 30 June 2005 in each employment size category.

(b) Businesses identified the main type of broadband connection used as at 30 June 2005.

(c) Includes fixed wireless, mobile wireless and satellite.

3.3 REASONS FOR NOT USING BROADBAND AS THE MAIN INTERNET CONNECTION

TYPE(a)(b), by selected business characteristics

	<i>Businesses with non-broadband Internet connection</i>	<i>Unavailable in business location (c)</i>	<i>Start up connection costs too high</i>	<i>Ongoing connection and usage costs too high</i>	<i>Business's hardware incompatible</i>	<i>Lack of perceived benefit</i>
	'000	%	%	%	%	%
Employment size						
0–4 persons	134	33	18	23	*3	33
5–19 persons	58	^ 29	^ 17	^ 20	*3	^ 31
20–99 persons	^ 10	^ 32	*13	*17	*6	^ 30
100 or more persons	*1	*44	*2	**11	^ 6	*37
State						
New South Wales	71	^ 30	^ 18	^ 21	*3	39
Victoria	44	^ 28	^ 17	^ 21	*2	^ 34
Queensland	43	^ 39	^ 16	^ 25	*5	^ 24
South Australia	15	^ 30	^ 22	^ 23	*5	^ 27
Western Australia	20	^ 30	^ 20	^ 18	**3	^ 25
Tasmania	^ 4	^ 44	**6	*13	—	^ 32
Northern Territory	^ 2	^ 49	*18	**4	**6	*15
Australian Capital Territory	^ 3	**13	*23	*13	—	*28
Region						
Capital cities	120	24	20	21	*3	36
Other areas	82	43	^ 14	^ 23	*3	27
Total	202	32	18	21	^ 3	32

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

— nil or rounded to zero (including null cells)

(a) Proportions are of all businesses with Internet use which did not use a broadband connection as at 30 June 2005.

(b) Businesses could identify more than one reason.

(c) Based on provider perception and no attempt is made by the ABS to verify with other sources that broadband is not actually available at the location.

3.3

REASONS FOR NOT USING BROADBAND AS THE MAIN INTERNET CONNECTION

TYPE(a)(b), by selected business characteristics *continued*

	<i>Other reasons</i>	<i>Not considered</i>
	%	%
.....		
Employment size		
0–4 persons	^ 6	^ 13
5–19 persons	*6	^ 18
20–99 persons	*7	*16
100 or more persons	*3	*4
State		
New South Wales	*5	^ 14
Victoria	*7	^ 13
Queensland	*5	^ 13
South Australia	*6	^ 17
Western Australia	*5	^ 18
Tasmania	3	*20
Northern Territory	**10	**5
Australian Capital Territory	**10	*27
Region		
Capital cities	^ 7	^ 15
Other areas	^ 5	^ 14
Total	^ 6	15

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

(a) Proportions are of all businesses with Internet use which did not use a broadband connection as at 30 June 2005.

(b) Businesses could identify more than one reason.

3.4 SELECTED BUSINESS INTERNET ACTIVITIES(a), by employment size

		EMPLOYMENT SIZE				
		0-4	5-19	20-99	100 or more	Total
		persons	persons	persons	persons	
Electronic lodgements with government organisations(b)	%	46	47	60	86	48
Electronic lodgement of						
Taxation forms(c)	%	24	27	45	74	27
Claims for grants or benefits	%	^ 2	^ 4	^ 4	^ 12	^ 3
Applications for licenses or permits	%	^ 6	^ 8	^ 11	^ 14	7
Payments	%	30	30	^ 29	^ 32	30
Placed orders for goods or services	%	39	46	52	74	43
Received orders for goods or services	%	14	17	^ 22	^ 25	16
Businesses which used the Internet	'000	323	176	35	7	542

- ^ estimate has a relative standard error of 10% to less than 25% and should be used with caution
- (a) Proportions are of all businesses which used the Internet during the year ended 30 June 2005 in each employment size category.
- (b) Businesses could identify more than one activity.
- (c) Excludes electronic lodgement of taxation forms undertaken on behalf of the business by accountants or tax agents.

3.5 SELECTED BUSINESS WEB FEATURES(a)(b), by employment size

		EMPLOYMENT SIZE				
		0-4	5-19	20-99	100 or more	Total
		persons	persons	persons	persons	
Inquiry or contact facility	%	90	92	92	97	92
Online ordering	%	^ 21	^ 17	^ 20	^ 25	19
Shopping cart facilities	%	* 5	* 3	* 5	* 10	^ 4
Online payment capabilities(c)	%	^ 10	^ 7	* 7	^ 18	^ 9
Capability for secure access or transactions	%	^ 8	^ 6	^ 10	^ 23	^ 8
Account information	%	* 5	^ 4	* 6	^ 11	^ 5
Facility to track orders	%	* 2	* 2	* 6	* 12	^ 3
Personalised page for repeat customers	%	* 2	* 1	* 4	* 12	^ 2
Automated link with back end systems	%	^ 12	* 6	^ 16	^ 25	^ 11
Businesses which had a web presence	'000	75	83	23	^ 7	188

- ^ estimate has a relative standard error of 10% to less than 25% and should be used with caution
- * estimate has a relative standard error of 25% to 50% and should be used with caution
- (a) Proportions are of all businesses which had a web presence as at 30 June 2005 in each employment size category.
- (b) Business could identify more than one feature.
- (c) Online payments capabilities for goods and services irrespective of whether ordered via the Internet or web.

CHAPTER 4

RECEIVING ORDERS VIA THE INTERNET OR WEB

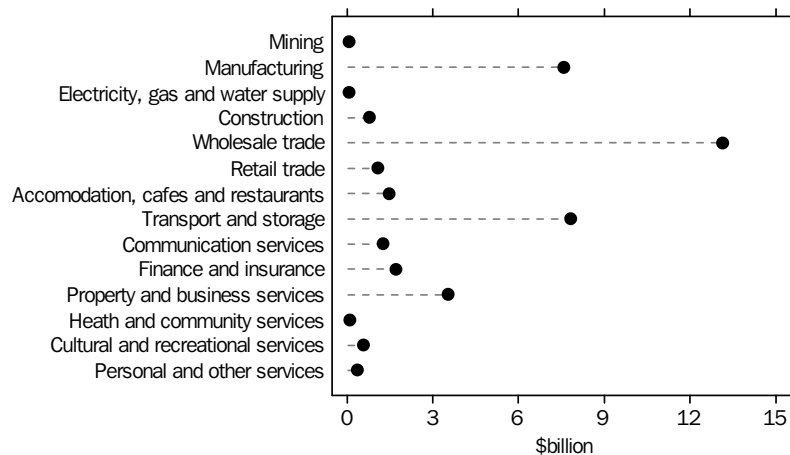
DEFINING INTERNET COMMERCE

The ABS uses the Organisation for Economic Co-operation and Development (OECD) definition of Internet commerce as the basis for collecting data about the receipt of orders via the Internet or web (more broadly referred to as Internet or web selling). The OECD defines an Internet commerce transaction as "the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organisations, conducted over the Internet. The goods and services are ordered over the Internet, but the payment and the ultimate delivery of the good or services may be conducted on or off line ". For more information, please refer to Explanatory Notes 12 to 16.

VALUE OF INTERNET INCOME

The proportion of Australian businesses receiving orders via the Internet or web remained steady at 12% from 2003–04 to 2004–05. The estimated value of Internet income for the year ended 30 June 2005 was \$39.6 billion. Wholesale trade had the highest proportion of businesses receiving orders via the Internet or web (24%) with the value of these orders (\$13.1 billion) making the largest contribution to the value of total Internet income. While Cultural and recreational services had the second highest proportion of businesses receiving orders via the Internet or web, the income from these orders contributed only 1.5% to total Internet income.

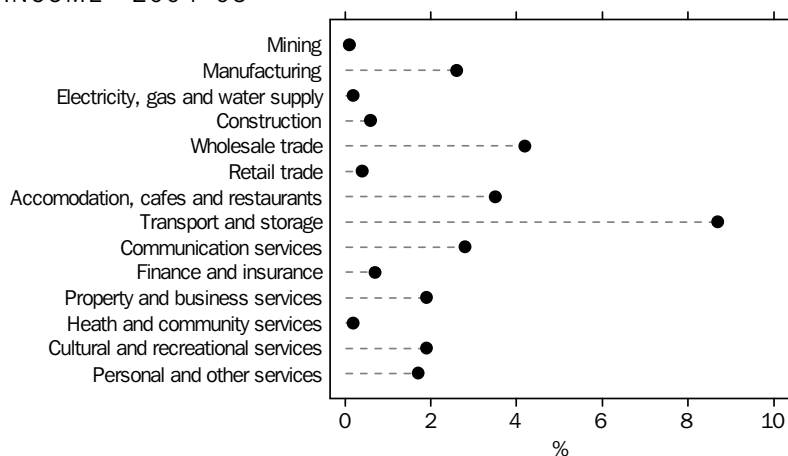
INTERNET INCOME—2004–05



VALUE OF INTERNET
INCOME *continued*

Internet income represented approximately 2.2% of total income for all businesses surveyed. In comparison, for the year ended 30 June 2004, Internet income was approximately 2.0% of total income for all businesses surveyed. Internet income represented 7.7% of total income for those businesses who received orders via the Internet or web in 2004–05, compared with 7.2% in 2003–04. While Wholesale trade contributed the largest proportion to total Internet income (\$13.1 billion), this represented only 4.2% of total income for this industry. Businesses in Transport and storage had the highest proportion of total business income coming from orders received via the Internet or web (8.7%). This reflects the growing practice of purchasing travel via the Internet or web.

INTERNET INCOME AS A PROPORTION OF TOTAL BUSINESS INCOME—2004–05



Of the 86,000 businesses estimated to be receiving Internet income in 2004–05, 60% generated 5% or more of their total income in this manner. Of businesses with 0–4 persons employed which received orders via the Internet or web, 67% indicated earning 5% or more of their total income in this way while 10% earned less than 1%. Each of the other employment size categories had much greater proportions of businesses with Internet income being less than 1% of their total income. For example, 29% of businesses which employed 5–19 persons and received orders via the Internet or web had Internet income of less than 1% of their total income, compared to 53% for which Internet income was 5% or more of their total income.

BUSINESS SYSTEMS
SUPPORTING RECEIPT OF
ORDERS

Businesses which received orders via the Internet or web were asked to identify ways in which these orders were received. Businesses could identify more than one way of receiving orders. Email not linked to a web site was the most common method (79% of businesses received orders in this way). Orders received via an email linked to a web site was reported by 29% of businesses, 15% of businesses received orders through a web site online order form and 7% received orders through a web site shopping cart facility.

Businesses which received orders via the Internet or web were also asked to specify types of automated links between systems used to receive orders and other business systems as at 30 June 2005. Of these businesses, 86% indicated their systems used to receive orders did not have automated links to any other business system. The most

BUSINESS SYSTEMS
SUPPORTING RECEIPT OF
ORDERS *continued*

common automated links reported were links to invoicing and payment systems of the business and links to suppliers' business systems (6% each).

BENEFITS OF RECEIVING
ORDERS VIA THE
INTERNET OR WEB

Businesses which received orders via the Internet or web were asked to specify what benefits, if any, they received by receiving orders in this fashion. Businesses could identify more than one benefit of receiving orders via the Internet or web. For businesses receiving orders via the Internet or web in 2004–05, being able to achieve *faster business processes* and *improved quality of customer service* were the two most commonly reported benefits, at 51% and 44% respectively. Approximately 19% of businesses receiving orders via the Internet or web indicated they did not achieve any benefits.

REASONS FOR NOT
RECEIVING ORDERS VIA
THE INTERNET OR WEB

Reasons why businesses did not receive orders via the Internet or web in 2004–05 were collected from businesses which used the Internet or had a web presence but did not receive orders in this way. Businesses could identify more than one reason for not receiving orders via the Internet or web. The most common reason reported was *goods or services produced by the business unsuitable* (60%), followed by *prefer to maintain the current business model* (41%) and *lack of customer demand* (15%).

4.1 INTERNET INCOME AS A PERCENTAGE OF TOTAL INCOME(a)(b), by employment size

		EMPLOYMENT SIZE					Total
		0-4 persons	5-19 persons	20-99 persons	100 or more persons		
Less than 1%	%	^ 10	^ 29	^ 25	*18	^ 18	
1 to less than 5%	%	^ 24	^ 18	^ 26	*30	^ 22	
5 to less than 50%	%	52	49	^ 45	^ 50	50	
50% or more	%	^ 15	*4	**4	^ 1	^ 10	
Businesses which received orders via the Internet or web	'000	46	30	^ 8	^ 2	86	

- ^ estimate has a relative standard error of 10% to less than 25% and should be used with caution
 - * estimate has a relative standard error of 25% to 50% and should be used with caution
 - ** estimate has a relative standard error greater than 50% and is considered too unreliable for general use
- (a) Proportions are of all businesses which received orders via the Internet or web during 2004-05 in each employment size category.
- (b) Estimates related to Internet income should be used with caution. See Explanatory Notes 12 to 16.

4.2 METHOD OF RECEIVING ORDERS AND SUPPORTING BUSINESS SYSTEMS(a)

		Total
Method of receiving orders via the Internet or web(b)		
Email not linked to web site	%	79
Web site with linked email facility	%	29
Web site with online order form	%	^ 15
Web site with shopping cart	%	^ 7
Other	%	*1
Automated links between systems used to receive orders and other business systems(c)		
Suppliers' business systems	%	^ 6
Customers' business systems	%	^ 3
Own business systems for reordering replacement supplies	%	*3
Own business systems for invoicing and payment	%	^ 6
Own business systems for production or service operations	%	^ 2
Own business systems for logistics, including electronic delivery	%	*2
Own business systems for marketing operations	%	^ 5
No automated links with other business systems	%	86
Businesses which received orders via the Internet or web	'000	86

- ^ estimate has a relative standard error of 10% to less than 25% and should be used with caution
 - * estimate has a relative standard error of 25% to 50% and should be used with caution
- (a) Proportions are of all businesses which received orders via the Internet or web during 2004-05.
- (b) Businesses could identify more than one method.
- (c) Businesses were asked to identify all automated links.

4.3 BENEFITS OF RECEIVING ORDERS VIA THE INTERNET OR WEB(a)(b), by employment size

EMPLOYMENT SIZE

		0-4 persons	5-19 persons	20-99 persons	100 or more persons	Total
Improved quality of customer service	%	^ 43	^ 42	^ 52	^ 67	44
Lower transaction costs	%	^ 36	^ 28	^ 29	^ 48	33
Increased sales	%	^ 28	^ 29	^ 32	^ 32	29
Increased number of customers	%	^ 32	^ 24	^ 27	*29	29
Faster business processes	%	54	^ 45	^ 53	71	51
Keeping pace with competitors	%	^ 31	^ 39	^ 41	^ 51	35
Any benefits achieved	%	83	75	88	98	81
No benefit achieved	%	17	25	12	2	19
Businesses which received orders via the Internet or web	'000	46	30	^ 8	^ 2	86

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Proportions are of all businesses which received orders via the Internet or web during 2004–05 in each employment size category.

(b) Businesses could identify more than one benefit.

4.4 REASONS FOR NOT RECEIVING ORDERS VIA THE INTERNET OR WEB(a)(b), by employment size

EMPLOYMENT SIZE

		0-4 persons	5-19 persons	20-99 persons	100 or more persons	Total
Goods or services produced by the business unsuitable	%	60	61	62	^ 60	60
Lack of customer demand	%	16	^ 13	^ 10	^ 14	15
Security concerns	%	^ 7	^ 8	*6	*9	7
Costs to develop and maintain the technology too high	%	^ 9	^ 10	^ 6	*17	9
Lack of skilled employees to develop, maintain and use the technology	%	^ 9	^ 12	*6	*3	10
Timing, e.g. technology currently under development or in future work program	%	^ 5	^ 7	^ 11	^ 8	6
Prefer to maintain current business model, e.g. face to face interaction	%	41	43	^ 35	^ 33	41
Businesses with Internet use or web presence which did not receive orders	'000	278	147	27	^ 6	458

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Proportions are of all businesses with Internet use or web presence, but did not receive orders via the Internet or web, during 2004–05 in each employment size category.

(b) Businesses could identify more than one reason.

INTRODUCTION

In recent years there has been considerable progress in the measurement of IT use and e-commerce by National Statistical Offices, particularly through efforts of the Organisation for Economic Co-operation and Development (OECD) and the *Working Party on Indicators for the Information Society*. Although there are differences in the scope and content of surveys covering these topics, some comparisons between Australian statistics and those of other countries can be made. This chapter presents some comparisons of business use of IT for Australia and selected other countries.

Australian data are from the 2004–05 BUIT survey and have been adjusted to show estimates for businesses with 10 or more employees only. All other data are provided courtesy of the OECD. These data were originally published in the *OECD Science, Technology and Industry Scoreboard 2005* (available from the publications section of the OECD web site <www.oecd.org>). Users should also be aware of the variation in time periods and respective country survey scopes. More information about the differences in sources of data are shown in Explanatory Notes 20 and 21.

INTERNET USE AND
INTERNET COMMERCE

The proportions of businesses for selected countries using the Internet, with broadband Internet connections and web presence are shown in table 5.1. In most cases, these proportions are of all employing businesses which employed ten or more persons. The proportion of businesses using the Internet range from 71.3% (Slovak Republic) to 97.5% (Japan). Australia's level of Internet use is toward the upper end of the range at 91.9%. The proportion of businesses using broadband Internet connections varied from 19.9% (Iceland) to 92.2% (Korea), with Australia at 70.4%. Care must be taken, however, in interpreting these figures due to differences in scope and definition of broadband between countries. See Explanatory Notes 20 and 21 for more information. The proportion of businesses with web presence varied from 26.3% (France) to 82.1% (Sweden), with Australia at 52.5%.

Business use of Internet and web presence generally showed a close relationship, with countries with higher proportions of businesses with Internet use (such as Sweden, Denmark and Finland) also had higher proportions of businesses with broadband Internet connections and web presence. Countries with lower proportions of businesses with Internet use (such as Portugal and the Slovak Republic) also had lower proportions of businesses with broadband Internet connections and web presence.

The proportion of businesses receiving orders via the Internet or web was generally low, ranging from 2.2% (Mexico) to 26.6% (United Kingdom), with Australia (17.2%) towards the top of the range. The proportion of businesses placing orders via the Internet or web varied from 2.2% (Mexico) to 56.2% (Canada), with Australia (45.2%) towards the top of the range.

5.1 BUSINESS USE OF THE INTERNET AND WEB SITES (a)(b), Australia and selected countries

PROPORTION OF BUSINESSES USING THE INTERNET		PROPORTION OF BUSINESSES USING BROADBAND		PROPORTION OF BUSINESSES WITH WEB SITE	
Country	%	Country	%	Country	%
Australia	91.9	Australia	70.4	Australia	52.5
Japan	97.5	Korea	92.2	Sweden	82.1
Denmark	97.4	Canada	81.7	Denmark	80.9
Iceland	97.4	Denmark	79.8	Japan	78.4
Finland	97.1	Sweden	74.7	Finland	75.4
Belgium	96.0	Spain	71.6	Germany	72.4
Sweden	95.9	Finland	70.9	Austria	70.8
Germany	94.1	Belgium	69.9	Iceland	68.5
Korea	94.0	Norway	60.3	Belgium	67.6
Canada	93.9	Austria	54.8	United Kingdom	66.3
Austria	93.7	Netherlands	53.7	Netherlands	65.5
Switzerland	92.0	Germany	53.6	Switzerland	64.0
Ireland	91.8	Italy	51.3	Canada	63.9
Czech Republic	90.1	France	49.1	Norway	61.5
Mexico	90.0	Portugal	48.6	Czech Republic	60.9
Netherlands	88.5	Mexico	45.6	Ireland	59.5
Italy	87.4	United Kingdom	44.1	Luxembourg	58.4
Greece	87.4	Luxembourg	39.1	Korea	53.3
Spain	87.4	Czech Republic	38.0	Mexico	52.5
United Kingdom	86.6	Switzerland	37.0	Greece	49.0
Norway	85.5	Ireland	31.5	Slovak Republic	46.7
Poland	85.0	Poland	27.8	Italy	44.1
Luxembourg	85.0	Slovak Republic	24.8	Poland	43.8
New Zealand	84.3	Greece	20.6	New Zealand	41.7
France	82.9	Iceland	19.9	Spain	39.7
Hungary	77.5	New Zealand	na	Hungary	34.7
Portugal	77.3	Hungary	na	Portugal	29.4
Slovak Republic	71.3	Japan	na	France	26.3

na not available

- (a) Australian data in this table are from the 2004–05 BUIT survey, however, the scope has been adjusted to provide estimates for businesses with 10 or more persons employed only.
- (b) All other data in this table have been provided courtesy of the OECD. For most estimates, the reference period is 2004 and the scope is businesses with 10 persons or more employed. Please refer to Explanatory Notes 20 to 21 for more detailed information about the reference period, scope and source for each country.

5.2 BUSINESS INTERNET COMMERCE ACTIVITIES(a)(b), Australia and selected countries

PROPORTION OF BUSINESSES RECEIVING ORDERS VIA THE INTERNET OR WEB		PROPORTION OF BUSINESSES PLACING ORDERS VIA THE INTERNET OR WEB	
Country	%	Country	%
<i>Australia</i>	17.2	<i>Australia</i>	45.2
United Kingdom	26.6	Canada	56.2
Denmark	25.2	United Kingdom	49.5
Sweden	20.5	Germany	47.0
Ireland	18.6	Switzerland	44.0
Japan	18.0	Belgium	40.8
Germany	17.6	Sweden	38.4
Belgium	17.5	Ireland	33.0
Netherlands	16.9	Denmark	28.0
Switzerland	16.0	Norway	27.0
Luxembourg	12.7	New Zealand	26.8
Norway	12.6	Japan	25.6
Iceland	11.8	Austria	21.8
Austria	11.6	Netherlands	21.5
Canada	11.3	Czech Republic	19.0
New Zealand	10.7	Luxembourg	16.8
Czech Republic	10.6	Korea	15.3
Korea	9.6	Iceland	15.2
Hungary	6.3	Hungary	14.3
Portugal	6.2	Greece	13.9
Slovak Republic	6.2	Poland	9.1
Greece	5.7	Portugal	8.0
Poland	4.4	Italy	4.1
Italy	2.8	Spain	3.2
Spain	2.4	Slovak Republic	2.8
Mexico	2.2	Mexico	2.2

- (a) Australian data in this table are from the 2004–05 BUIT survey, however, the scope has been adjusted to provide estimates for businesses with 10 or more persons employed only.
- (b) All other data in this table have been provided courtesy of the OECD. For most estimates, the reference period is 2004 and the scope is businesses with 10 persons or more employed. Please refer to Explanatory Notes 20 to 21 for more detailed information about the reference period, scope and source for each country.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents results from the 2004–05 Business Use of Information Technology (BUIIT) survey. This survey measured the use of computers, Internet and web technologies by Australian businesses. It also collected data relating to ordering of goods and services via the Internet or web and supporting business systems.

2 Since 1999–2000, the BUIIT survey has been conducted on an annual basis. Prior to this, the BUIIT survey was conducted twice, initially in respect of the 1993–94 financial year and then for 1997–98. The survey has a set of core items for which data is collected each year. The remainder of survey content is dynamic and is updated each survey cycle to reflect emerging and changing uses of IT.

SCOPE AND COVERAGE

3 The scope of the BUIIT survey is all employing businesses in Australia with the exception of businesses classified to:

- SISCAs 3000 General government
- SISCAs 6000 Rest of the world
- ANZSIC Division A Agriculture, forestry and fishing
- ANZSIC Division M Government administration and defence
- ANZSIC Division N Education
- ANZSIC Sub-division 97 Private households employing staff
- ANZSIC 9610 Religious organisations

4 The frame for the BUIIT survey, like most ABS economic collections, is taken from the ABS Business Register. The register provides a list of employing businesses, primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding (PAYGW) scheme. The frame is updated quarterly to take account of new businesses, businesses which have ceased employing, changes in employment levels, changes in industry and other general business changes. Businesses which have ceased employing are identified when the ATO cancels their Australian Business Number (ABN) and/or PAYGW registration. In addition, businesses with less than 50 employees which did not remit under the PAYGW scheme in each of the previous five quarters are removed from the frame. The estimates in this publication include an allowance for the time it takes a newly registered business to get on to the survey frame.

CHANGES TO THE ABS BUSINESS REGISTER

5 The introduction of The New Tax System (TNTS) has a number of significant implications for ABS business statistics. These are discussed in *Information Paper, Improvements in ABS Economic Statistics [Arising from the New Tax System]* (cat. no. 1372.0). The replacement of the Group Employer registration process by PAYGW registration resulted in a number of changes to most business survey frames. The changes included the statistical units model; update of industry for some businesses by the ATO; and availability of different measures of business size.

STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

6 The ABS uses an economic statistics units model on the ABS Business Register to describe the characteristics of businesses, and the structural relationships between businesses. The units model is also used to break groups of related businesses into relatively homogenous components that can provide data to the ABS.

STATISTICAL UNITS DEFINED
ON THE ABS BUSINESS
REGISTER *continued*

7 In mid 2002, to better use the information available as a result of TNTS, the ABS changed its economic statistics units model. The new units model allocates businesses to two sub-populations. The vast majority of businesses are in what is called the ATO Maintained Population, while the remaining businesses are in the ABS Maintained Population. Together, these two sub-populations make up the ABS Business Register population.

ATO MAINTAINED
POPULATION

8 Most businesses and organisations in Australia need to obtain an ABN, and are then included on the ATO Australian Business Register. Most of these businesses have simple structures; therefore the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit is used as the statistical unit.

ABS MAINTAINED
POPULATION

9 For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with each business. These businesses constitute the ABS Maintained Population. This population consists typically of large, complex and diverse businesses. The new statistical units model described below covers such businesses.

Enterprise Group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the Corporations Legislation Amendment Act 1991) including legal entities such as companies, trusts, and partnerships. Majority ownership is not required for control to be exercised.

Enterprise: The enterprise is an institutional unit comprising (i) a single legal entity or business entity, or (ii) more than one legal entity or business entity within the same Enterprise Group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia sub-sector).

Type of Activity Unit (TAU): The TAU is comprised of one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU is created which covers all the operations within an industry sub-division (and the TAU is classified to the relevant sub-division of the ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry sub-division. Where a TAU has significant activity in more than one industry, the ABS will 'split' the TAU to maintain industry homogeneity.

IMPACT ON BUIT OF
CHANGES ARISING FROM
TNTS

10 The changes arising from the TNTS were introduced to the BUIT survey for the 2002–03 reference year. The main effect of the introduction of the new ABS business register, for the BUIT survey, was a changed population from which the survey frame was drawn. The changes to the population resulted in a high survey rotation rate which in turn impacted on the accuracy of estimates for 2002–03. Users are cautioned against making comparisons between 2002–03 and subsequent estimates with those for earlier periods. For more information, please contact the person named on the front of this publication.

SURVEY METHODOLOGY

11 The 2004–05 BUIT survey was conducted by mail. It was based on a random sample of approximately 9,000 businesses which was stratified by industry, state/territory and number of employees. All manufacturing businesses with 500 or more employees and all other businesses with 200 or more employees were included in the sample.

ORDERS FOR GOODS AND
SERVICES VIA THE INTERNET
AND INTERNET INCOME

12 The concept of Internet income presented in this publication relates to income resulting from orders received via the Internet or web for goods or services, where an order is a commitment to purchase. Like previous surveys, the 2004–05 BUIT survey has highlighted issues which affect the quality and interpretation of estimates of Internet income and the proportion of businesses receiving orders for goods and services via the Internet or web. Readers should consider these issues when using these estimates.

13 The ABS uses the Organisation for Economic Co-operation and Development (OECD) definition of an Internet commerce transaction and therefore measures the income resulting from Internet orders for goods and services. For the purposes of the BUIT survey, this definition has been refined to only include orders (and resultant income) where the commitment to purchase is made via the Internet or web. An important element of the definition remains that payment and the ultimate delivery of the good or service is not relevant, that is, either or both may be conducted off line. ABS experience in collecting data for receipt of orders and Internet income continue to highlight the difficulty of defining an Internet commerce transaction in a way which is understood by businesses and suits all forms of Internet commerce. For instance, for some businesses, the Internet transaction initiates and completes the purchase, while for others the Internet transaction finalises details of a purchase which was initiated by a non-Internet based agreement or contract.

14 Over several cycles of the BUIT survey, the definition of "order" has been progressively refined and now includes those transactions where the final commitment to purchase occurs via the Internet or web only. While care is taken to address the impact of these changes, there may be impacts on final estimates of proportions of businesses receiving orders via the Internet or web. Factors influencing the accuracy of estimates include more stringent application of the definition through better question wording and improvements in ABS quality assurance procedures during survey processing. Final estimates of proportions of businesses receiving orders via the Internet or web are also subject to variations in reporting by businesses, such as redevelopment of web functionality, which can limit receipt of orders during the reference period or abandonment of this e-business process. Amongst businesses, the receipt of orders via the Internet or web is still a relatively rare event, therefore, changes in the sample such as rotation can have a significant impact on estimates.

15 Some orders for goods and services are initiated over the Internet and are then subject to ongoing payments. Ongoing payments may occur over a long period of time and via non-Internet based media. For consistency in compiling the income measure and to ensure that it covers all income flowing from the initial order over the Internet, the ABS would ideally like to include ongoing payments via the Internet, but recognises that most businesses are unable to track these payments. Estimates of Internet income for the 2004–05 survey and previous collections may be understated due to this measurement issue.

16 As in previous surveys, many businesses in the 2004–05 survey did not maintain records on the basis of the Internet income measure described in paragraph 13 and therefore needed to estimate its value. For some large businesses, the estimation of Internet income continues to be difficult and in some instances responses were inconsistent with those of previous surveys. While the ABS has reduced this error through analysis of responses and consultation with businesses, this form of error cannot be completely eliminated.

COMPARABILITY OF
BUSINESS COUNTS

17 Estimates of the number of businesses operating in Australia can be derived from a number of sources within the ABS. They may relate to a particular point in time or may be presented as an average annual figure. However, these estimates will not always show the same results. Variations will occur because of differing data sources, differing scope

COMPARABILITY OF
BUSINESS COUNTS *continued*

and coverage definitions between surveys, as well as variations due to sampling and non-sampling error. More information about business counts can be found in the information paper *A Statistical View of Counts of Businesses in Australia* (cat. no. 8162.0)

18 The BUIT survey is not designed to provide high quality estimates of numbers of businesses for any of the output classifications (for example, state and territory or industry) and the number of businesses in this publication are only included to provide contextual information for the user. A more robust source of counts of Australian businesses is available from *Australian Bureau of Statistics Business Register, Counts of Businesses* (cat. no. 8161.0.55.001).

OUTPUT CLASSIFICATIONS

19 For output purposes, businesses are classified to employment and income size groups based on actual data reported in the survey. For other output groups (industry, state or territory, capital city/other areas) the classification is drawn from information held about the business on the ABS Business Register. The head office location of a business determined the state or territory or region the business was classified to.

COMPARISONS WITH OTHER
COUNTRIES

20 For tables 5.1 and 5.2, data for other countries has been provided courtesy of the OECD and were originally sourced from individual country reports to the OECD. Australian data are from the 2004–05 BUIT survey and the scope has been adjusted to show estimates for businesses with 10 or more employees. See paragraph 3 in these Explanatory Notes for more information about BUIT scope.

21 There are different definitions, reference periods and scope for the data included in these tables and these are:

- The ABS defines broadband as an 'always on' Internet connection with an access speed equal to or greater than 256kbps. Most other countries define broadband in terms of technology (e.g. ADSL, cable etc) rather than speed. However, Iceland only includes connections with a bandwidth equal to or greater than 2Mbps.
- The definition of Internet Selling and Purchasing varies between countries, with some explicitly including orders placed by conventional email (for instance, Australia and Canada) and others explicitly excluding such orders (e.g. Ireland, the UK and some other European countries). Most countries explicitly use the OECD definition, that is, goods or services that are ordered over the Internet but payment and/or delivery may be off line.
- Estimates are for businesses with 10 or more employees unless otherwise stated. For most European countries, the following industries are included: Manufacturing, Construction, Wholesale and retail, Hotels and restaurants (part), Transport, storage and communication, Real estate, renting and business activities and Other community, social and personal service activities (part). Korea includes: Agriculture and Fisheries, Light Industry, Heavy Industry, Petrochemicals, Construction, Distribution, Finance and Insurance, and Other services. For Mexico, data refer to enterprises with 50 or more employees and include: Manufacturing, Services and Construction. For Switzerland, data refer to enterprises with 5 or more employees, and include the Manufacturing, Construction, Electricity, gas and water, and Services industries. For Canada exclude: Agriculture, fishing, hunting and trapping, and Construction – specialist contractors. For Japan, data refer to enterprises with 100 or more employees and exclude: Agriculture, forestry, fisheries and Mining. For New Zealand exclude: Electricity, gas and water, Government administration and defence, and Personal and other services; the New Zealand survey also excludes businesses with five or fewer full time equivalent (FTEs) employees and those with turnover of less than NZD 30,000.

COMPARISONS WITH OTHER COUNTRIES <i>continued</i>	<ul style="list-style-type: none"> ■ For Table 5.1, data for France, Iceland, Japan, Luxembourg, Mexico and Spain were collected in 2003. Data for Switzerland were collected in 2002 and data for New Zealand were collected in 2001. ■ For Table 5.2, data for Iceland, Italy, Japan, Luxembourg and Mexico were collected in 2003. Data for Switzerland were collected in 2002 and data for New Zealand were collected in 2001.
RELATED PUBLICATIONS	<p>22 The most recent issue of other ABS publications on the use and production of information and communication technologies in Australia are listed below:</p> <p><i>Government Technology, Australia, 2002–2003</i>, cat. no. 8119.0</p> <p><i>Household Use of Information Technology, Australia, 2004–05</i>, cat. no. 8146.0</p> <p><i>Information and Communication Technology, Australia, 2002–2003</i>, cat.no. 8126.0</p> <p><i>Innovation in Australian Business, 2003</i>, cat. no. 8158.0</p> <p><i>Internet Activity, Australia, March 2005</i>, cat. no. 8153.0</p> <p><i>Use of Information Technology on Farms, Australia, 2003–04</i>, cat. no. 8150.0</p>
ABS WEB SITE	<p>23 The summary of findings from this publication are published on the ABS web site <www.abs.gov.au>. Other information relating to information and communication technologies can be found on the web site, see the Innovation, Science and Technology Home page under Themes/Industry.</p>
DATA AVAILABLE ON REQUEST	<p>24 As well as the statistics included in this publication, the ABS may have relevant data available on request. The availability of more detailed data are subject to confidentiality and quality checks. Inquiries should be made to the National Information and Referral Service on 1300 135 070.</p>
ROUNDING	<p>25 Estimates of proportions shown in the tables are rounded to a percentage point.</p> <p>26 Where figures have been rounded, discrepancies may occur between the sum of the component items and the total. In addition, percentages have been calculated using the unrounded figures.</p>
UPCOMING CHANGES TO THE BUIT SURVEY VEHICLE	<p>27 The collection of all business characteristics data by the ABS has been reviewed. These data have generally been collected through a variety of survey vehicles which included the BUIT survey. Due to the differences in survey scope and content definition, data produced from the range of characteristics surveys were not directly comparable and minimally integrated. A decision has been made to introduce a new survey vehicle, the Business Characteristics Survey, which will collect an extensive range of characteristics data using integrated concepts and best practice methodology. This survey will be introduced from the 2005–06 reference year. There will also be a longitudinal component to this new survey. For more information, please write to the contact shown in paragraph 28.</p>
COMMENTS	<p>28 The ABS welcomes comments and suggestions from users regarding future surveys of IT use by businesses. These comments should be addressed to the Director, Innovation and Technology Business Statistics Centre, Australian Bureau of Statistics, GPO Box K881, Perth, WA, 6842, or email mike.scott@abs.gov.au.</p>
ABBREVIATIONS	<p>ABS Australian Bureau of Statistics</p> <p>ANZSIC Australian and New Zealand Standard Industrial Classification</p> <p>ATM asynchronous transfer mode</p> <p>ATO Australian Taxation Office</p> <p>DSL digital subscriber line</p> <p>Gbps gigabits per second</p> <p>ICT information and communication technology</p>

ISDN	integrated service digital network
IT	information technology
kbps	kilobits per second
Mbps	megabits per second
OECD	Organisation for Economic Co-operation and Development
PAYGW	pay-as-you-go withholding
RSE	relative standard error
SISCA	Standard Institutional Sector Classification of Australia
TNTS	The New Tax System

INTRODUCTION

1 When interpreting the results of a survey it is important to take into account factors that may affect the reliability of the estimates. Estimates in this publication are subject to both non-sampling and sampling errors.

NON-SAMPLING ERRORS

2 Non-sampling errors may arise as a result of errors in the reporting, recording or processing of the data and can occur even if there is a complete enumeration of the population. These errors can be introduced through inadequacies in the questionnaire, treatment of non-response, inaccurate reporting by respondents, errors in the application of survey procedures, incorrect recording of answers and errors in data capture and processing.

3 The extent to which non-sampling error affects the results of the survey is difficult to measure. Every effort is made to reduce non-sampling error by careful design and testing of the questionnaire, efficient operating procedures and systems, and the use of appropriate methodology.

4 The BUIT survey is dynamic in nature and the concepts measured are subject to evolution and refinement over time. This results in regular changes to questions used to measure the various attributes and features of IT use. The potential impacts of these changes on survey outputs are assessed during questionnaire testing and where these changes impact on data continuity, they are referred to in the publication commentary or Explanatory Notes.

5 The 2004–05 survey had a response rate of approximately 94%; this was above the target response rate.

SAMPLING ERROR

6 The difference between estimates obtained from a sample of businesses, and the estimates that would have been produced if the information had been obtained from all businesses, is called sampling error. The expected magnitude of the sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the standard error (SE) which indicates the degree to which an estimate may vary from the value that would have been obtained from a full enumeration (the 'true' figure). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors.

7 In this publication, sampling variability is measured by the relative standard error (RSE) which is obtained by expressing the SE as a percentage of the estimate to which it refers. The RSE is a useful measure in that it provides an immediate indication of the sampling error in percentage terms, and this avoids the need to refer also to the size of the estimate.

8 To illustrate, the estimated percentage of businesses with a web presence is 27% and the RSE is 3.3%, giving a standard error of 0.9 percentage points (3.3% of 27%). Therefore, there would be about two chances in three that, if all units had been included in the survey, a figure in the range of 26.1% to 27.9% would have been obtained, and 19 chances in 20 (i.e. a confidence interval of 95%) that the figure would have been within the range of 25.2% to 28.8%.

SAMPLING ERROR *continued*

9 Most published estimates have RSEs less than 10%. Estimates that have a RSE between 10% and 25% are annotated with the symbol '^'. These estimates should be used with caution as they are subject to sampling variability too high for some purposes. Estimates with an RSE between 25% and 50% are annotated with the symbol '*', indicating that the estimates should be used with caution as they are subject to sampling variability too high for most practical purposes. Estimates with an RSE greater than 50% are annotated with the symbol '**' indicating that the sampling variability causes the estimates to be considered too unreliable for general use.

10 The sampling variability for estimates at the state/territory or industry level is higher than that for Australian level aggregates. Within states/territories, the sampling variability, and therefore the RSEs of estimates for Tasmania, Northern Territory and the Australian Capital Territory are higher than for other states. Survey estimates for these states should therefore be viewed with more caution than those for other states.

11 Estimates of RSEs for the key indicators in this publication are shown in the following table:

RELATIVE STANDARD ERRORS OF BUSINESS USE OF TECHNOLOGIES, by selected business characteristics

	<i>Number of businesses</i>	<i>Businesses with computer use</i>	<i>Businesses with Internet use</i>	<i>Businesses with web presence</i>	<i>Businesses which placed orders via the Internet or web</i>	<i>Businesses which received orders via the Internet or web</i>
	%	%	%	%	%	%
Employment size						
0–4 persons	1.5	1.0	1.5	6.1	4.4	8.3
5–19 persons	3.0	0.9	1.5	4.5	4.6	9.0
20–99 persons	6.2	1.7	2.6	5.9	7.4	11.2
100 or more persons	9.4	—	0.4	2.8	6.8	17.4
Total Income						
Less than \$100,000	3.9	2.1	3.3	12.3	9.0	19.1
\$100,000 to less than \$1m	1.8	0.9	1.3	5.1	4.1	7.8
\$1m - \$4.9m	4.3	1.0	1.6	5.1	5.8	10.1
\$5m or more	6.3	—	0.9	5.0	6.1	12.6
Industry						
Mining	2.3	2.1	2.6	7.7	8.7	22.9
Manufacturing	1.6	2.7	4.4	9.1	9.9	15.0
Electricity, gas and water supply	3.0	1.8	2.7	8.8	7.6	21.0
Construction	1.0	1.6	2.6	9.6	7.1	12.6
Wholesale trade	2.5	2.0	3.2	9.1	8.9	14.6
Retail trade	1.6	2.5	3.4	10.1	9.2	16.1
Accommodation, cafes and restaurants	1.8	3.1	4.3	8.1	10.0	12.3
Transport and storage	1.2	2.0	3.0	9.1	7.9	11.0
Communication services	1.3	1.8	3.2	8.2	6.4	11.9
Finance and insurance	3.4	1.1	1.9	7.7	6.2	16.0
Property and business services	2.1	1.5	2.2	8.4	6.9	15.2
Health and community services	0.9	1.2	2.3	8.5	5.7	21.8
Cultural and recreational services	2.4	1.6	2.8	7.9	8.9	15.7
Personal and other services	1.6	2.7	4.0	9.2	9.5	14.9
State						
New South Wales	1.3	1.3	1.9	6.5	5.6	11.6
Victoria	1.2	1.4	2.3	6.6	6.2	11.7
Queensland	1.4	1.5	2.2	7.7	6.7	12.5
South Australia	1.3	1.4	2.2	6.9	6.5	11.1
Western Australia	1.3	1.7	2.7	7.6	7.7	12.8
Tasmania	7.3	2.8	3.9	15.0	11.4	19.7
Northern Territory	11.6	4.0	6.5	18.7	16.2	27.9
Australian Capital Territory	7.9	3.1	4.4	14.5	11.2	19.8
Region						
Capital cities	1.4	0.8	1.2	3.8	3.5	6.5
Other areas	2.9	1.3	1.9	6.9	5.5	10.2
Total	0.6	0.7	1.0	3.3	2.9	5.5

— nil or rounded to zero (including null cells)

GLOSSARY

Back end systems	Computer systems (e.g. for accounting, stock control or ordering) used to manage non-Internet aspects of a business.
Broadband	Defined by the ABS as an 'always on' Internet connection with an access speed equal to or greater than 256kbps.
Cable	Describes those technologies including coaxial cable, fibre optic cable and hybrid fibre coaxial cable which are capable of transmitting data at speeds of up to 2Gbps.
Dial-up (analog)	Connection to the Internet via modem and dial-up software utilising the public switched telecommunications network.
DSL (Digital Subscriber Line)	More properly referred to as xDSL as this covers several digital technologies (e.g. Asymmetric DSL or ADSL and Symmetric DSL or SDSL) for fast two-way data connections over the public switched telecommunications network.
Fixed Wireless Internet access	Point to point microwave link, generally building to building or tower to building which allows subscribers within the receiving building to access the Internet. Sender and receiver must be within line of sight and no more than 22 kilometres apart.
Frame Relay	Communications protocol used to ensure that data is delivered correctly over a packet-switching system transmitting at up to 2Mbps.
Internet	A world-wide public computer network. Organisations and individuals can connect their computers to this network and exchange information across a country and/or across the world. The Internet provides access to a number of communication services including the World Wide Web and carries email, news, entertainment and data files.
Internet Income	Income resulting from orders received via the Internet or web for goods or services.
ISDN (Integrated Services Digital Network)	A digital access technique for both voice and data. Digital alternative to an analog public switched telephone service and carries data or voltages consisting of discrete steps or levels, as opposed to continuously variable analog data. ISDN enables digital transmission over the public switched telecommunications network.
Mobile Wireless Internet access	Mobile Internet access via 'hotspots' using a microwave connection often referred to as WiFi. Most commonly utilised by laptop users although it is also becoming increasingly popular within homes and businesses with multiple PCs.
Non dial-up	Refers to permanent and 'always on' connections to the Internet.
Order	A commitment to purchase goods or services.
Satellite/communications satellite	A satellite stationed in geosynchronous orbit that acts as a microwave relay station, receiving signals sent from a ground based station, amplifying them, and retransmitting them on a different frequency to another ground-based station. Satellites can be used for high-speed transmission of computer data.
Secure access/transactions	A web site has a capability for secure access or transactions when it allows customers to submit orders for goods, requests for services and credit/debit card details over a secure link that cannot be accessed by unauthorised persons. Secure Sockets Layer (SSL) is a common protocol used in this type of web site as it enables encryption of data such as credit card details and customer information sent over the Internet.

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- Web presence** Web presence includes a web site, home page or presence on another entity's web site. A web site or home page is an electronic document that is accessed via a unique address on the World Wide Web. The document provides information in a textual, graphical or multimedia format. Web presence excludes online listings.
- Wireless** Includes fixed wireless, mobile wireless and satellite Internet connections.

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