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**Australian Communications
and Media Authority**

Australia's regulator for broadcasting, the internet, radiocommunications and telecommunications

www.acma.gov.au

Telecommunications Today

Report 2: Take-up and use by small and medium enterprises

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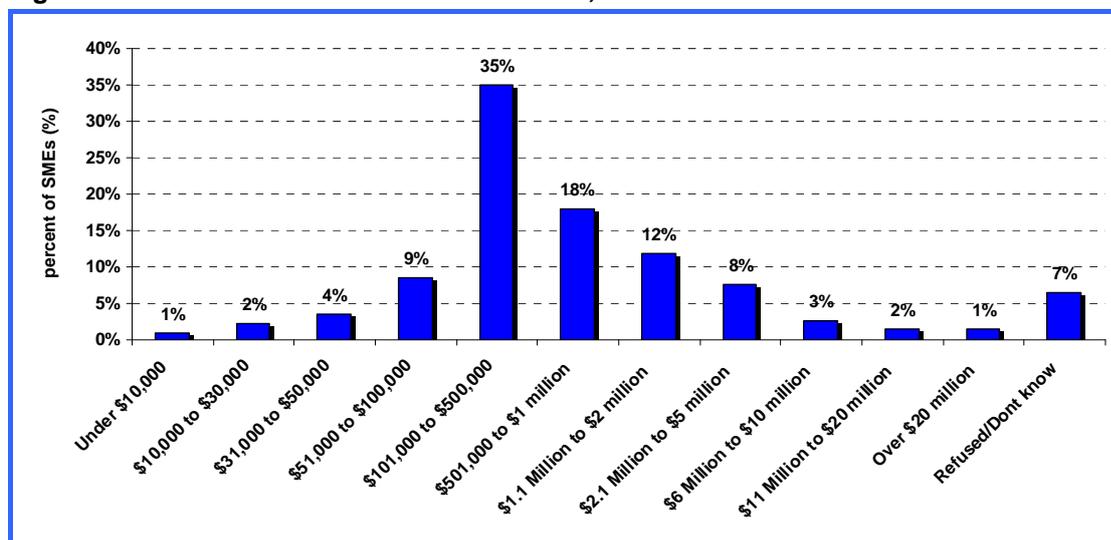
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1 Introduction

The purpose of this research is to provide an understanding of the take-up and use of communications services by small and medium enterprises (SME) in the telecommunications market. This is the second report in ACMA's *Telecommunications Today* series of reports which will report on telecommunications take-up, farm sector use of communications, consumer satisfaction with communications services, consumer substitution between fixed and mobile service, and consumers' use of online services.

SMEs are a significant sector of the Australian economy, representing 99 per cent of all businesses in Australia. The small business sector accounts for 46 per cent of total private sector employment (3.7 million people) and 39 per cent of Australia's economic production.¹ The effective use of communications services can be important to driving the productivity of their businesses. Figure 1 shows the distribution of annual turnover for SMEs in 2007.

Figure 1: Distribution of SME annual turnover, 2007



Source: Sensis[®] Business Index, May 2007, n=1800

For the purposes of this study, a small enterprise is a business employing between 1 and 19 persons and a medium enterprise is one employing between 20 and 200 persons.

This report has three main objectives:

1. To identify the levels of take-up and use of various telecommunications services by SMEs.

¹ Department of Innovation, Industry, Science and Research. www.industry.gov.au

2. To explore SME attitudes and behaviour towards services, such as:
 - What motivates SMEs to take up particular services?
 - Which services and applications are most commonly used by SMEs?
 - Which telecommunications services do SMEs perceive to be critical to their business operations?
3. To ascertain how factors such as business size and industry sector influence SME take-up and use of telecommunications services.

In investigating these issues, ACMA is also seeking to gain an understanding of the significance of specific telecommunications services to SMEs. ACMA has found that there is limited research on SMEs in this area.

For the purposes of this research, the term ‘telecommunications’ includes all voice services—fixed-line telephone, mobile and voice over internet protocol (VoIP)—and data services—dial-up and all forms of broadband such as ADSL, cable, satellite and wireless.

2 Methodology

Sensis[®] Business Index survey data has been used as a primary data source for this research report. In addition to the standard business survey, ACMA commissioned Sensis to ask additional questions about telecommunication use, take-up and attitudes. Sensis conducted telephone interviews with 1,800 SMEs between 24 April and 31 May 2007. Businesses interviewed were drawn from all metropolitan and major non-metropolitan regions within Australia. However, the sample excludes businesses in the agricultural sector.²

Survey results were weighted by selected ANZSIC³ divisions within the metropolitan and non-metropolitan region of each state and territory, to help ensure the sample reflected the actual small and medium business population distribution. The Australian Bureau of Statistics (ABS) Business Register, as at June 1998, was used to help weight the sample to be representative of the total business population.

2.1 Rounding

Discrepancies may occur between the sums of the component items and totals due to the effects of rounding.

² A separate report on farming sector attitudes to take-up and use of communications services has been published as part of ACMA's *Telecommunications Today* series of reports.

³ The Australian and New Zealand Standard Industry Classification is an industry classification jointly produced by Australian Bureau of Statistics and Statistics New Zealand.

3 Overview of findings

The assessment conducted to inform this report demonstrates that SMEs principally take up and use those communications services that can improve the productivity of their business.

Most SMEs (77 per cent) identified fixed-line telephones as their main form of voice communications service and only 19 per cent identified mobile phones as their main form of communication. The businesses nominating mobile phones tended to operate in industry sectors such as construction, cultural, recreational, personal and other services, or transport and storage services, where mobility can be a key aspect of the work environment.

Voice over internet protocol (VoIP) services are used by 13 per cent of SMEs, with a further 14 per cent indicating they intend to adopt VoIP services in the future. VoIP take-up is more common in medium-sized enterprises and enterprises that have a focus on export markets, such as wholesale trade, manufacturing, and communications, property and business services.

While the internet is a relatively new tool for business compared with fixed-line telephones, it is quickly becoming as important and gaining similar ubiquity. There are high levels of internet connection in the SME market (92 per cent) and of those SMEs that are connected, 91 per cent use broadband.

SMEs identified the main productivity-related benefits of the internet as being able to communicate by email, conduct research and access reference material. Access to the internet helps SMEs to embrace e-commerce initiatives, allowing them to accept orders for products and services, receive payments, source products for their own business needs, and advertise and promote their business to a global market of consumers.

Of those SMEs connected to the internet, medium enterprises have a higher broadband take-up rate than small enterprises, 97 per cent compared to 90 per cent. Small enterprises in metropolitan (91 per cent) and non-metropolitan (88 per cent) areas have similar rates of broadband take-up, as do medium enterprises in metropolitan (99 per cent) and non-metropolitan areas (96 per cent). This indicates that business size may have more influence on broadband take-up than the geographic location of the enterprise.

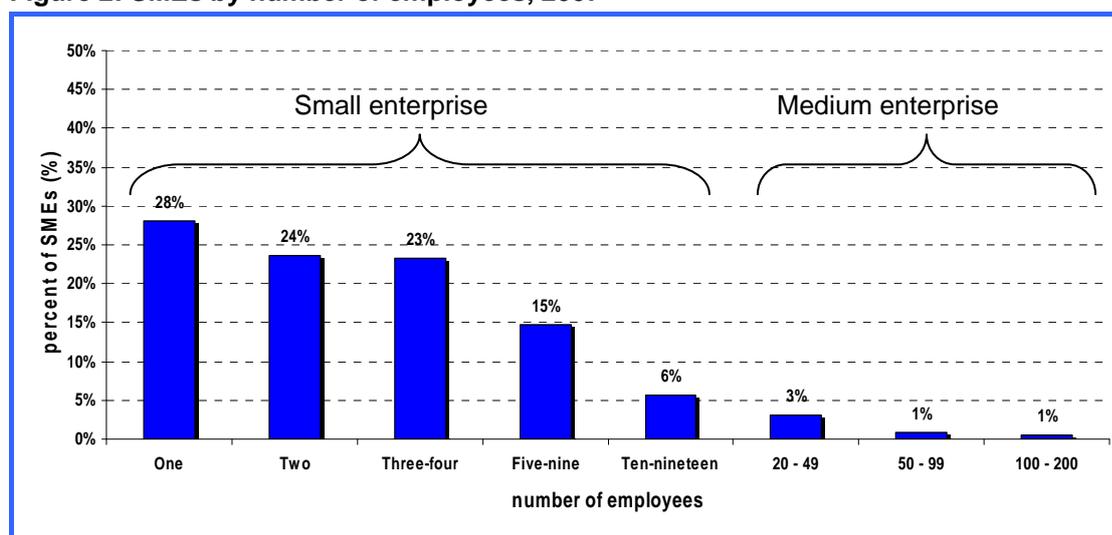
The 38 per cent of SMEs that have not taken up broadband services commented on the lack of broadband availability in their area. A similar number of SMEs did not believe they had a need for broadband services in their business.

4 SME profile

According to the Australian Bureau of Statistics (ABS) there were 1.96 million Small to Medium Enterprises (SMEs) in Australia at June 2006.⁴

Figure 2 shows that 95 per cent of SMEs have less than 20 employees and are classed as 'small'. The remaining five per cent have between 20 and 200 employees and are classed as 'medium'-sized enterprises.

Figure 2: SMEs by number of employees, 2007



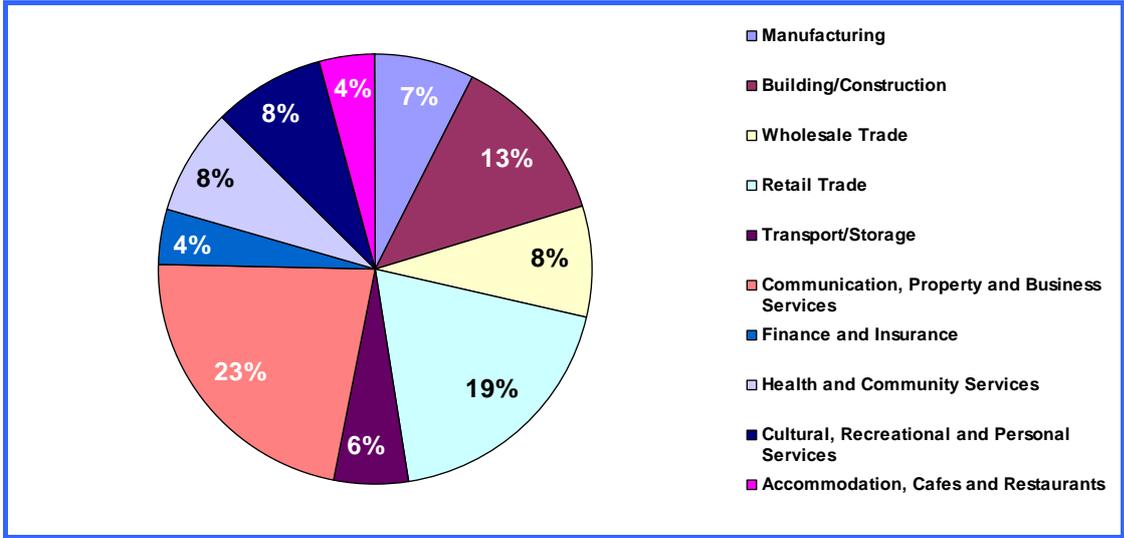
Source: Sensis® Business Index, May 2007, n=1800

SMEs are predominantly family-run businesses (66 per cent), which is consistent with the size profile of SMEs shown above. SMEs are also predominantly located in metropolitan areas (67 per cent) compared with non-metropolitan areas (33 per cent), reflecting higher population densities in metropolitan regions.

SMEs operate in a variety of industries. Using selected ANZSIC classifications, SMEs fall into 10 categories as shown in Figure 3. SMEs are most numerous in the communications, property and business services sector (23 per cent), and the retail sector (19 per cent).

⁴ This includes 1.16 million non employing businesses—ABS, *8165.0 – Counts of Australian Businesses, including Entries and Exits – June 2003 to June 2006*, released 26 February 2007.

Figure 3: SMEs by ANZSIC industry type, 2007



Source: Sensis® Business Index, May 2007, n=1800

5 Results – SMEs and voice communications

5.1 SME use of voice communications

The goals, drivers and modus operandi of SMEs are different to those of household consumers, and it is likely that communications take-up, use and preferences for SMEs will also be different to those of household consumers.

Modern communications offers business a myriad of options and technologies. Figure 4 shows that, among these options, fixed-line telephones (98 per cent) and mobile phones (93 per cent) are most commonly used by SMEs. In comparison, 90 per cent of Australians aged 14+ years have a fixed-line telephone connected in their home⁵, and 89 per cent of households with a fixed-line also had a mobile phone⁶. VoIP is still an emerging communications technology—only 13 per cent of SMEs cited that they used VoIP.⁷

Overall, there is no significant difference in communication use by SMEs in metropolitan and non-metropolitan areas.

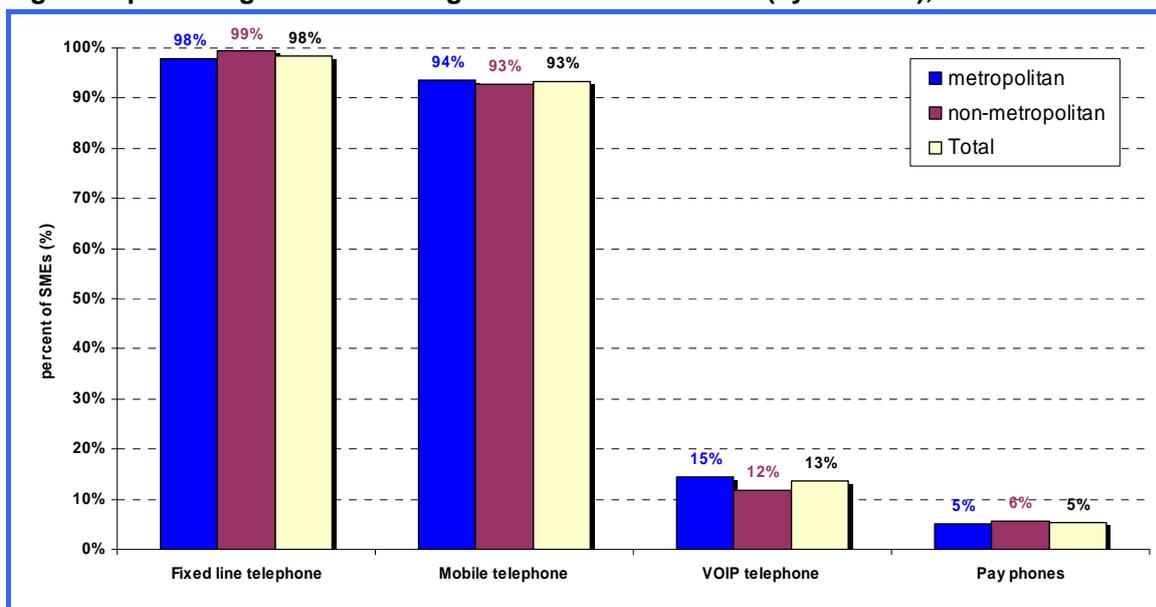
⁵ Roy Morgan Single Source, April 2006 – March 2007: Total aged 14+ years with a home telephone connected, n=21,560

⁶ Woolcott Research, April 2007

⁷ Voice over internet protocol (VoIP) involves the encoding of voice communications into IP packets for transmission.

Essentially, VoIP is a catch-all term that covers a range of services and business models including computer-to-computer communications and VoIP services that act as an effective substitute to standard PSTN fixed-line services.

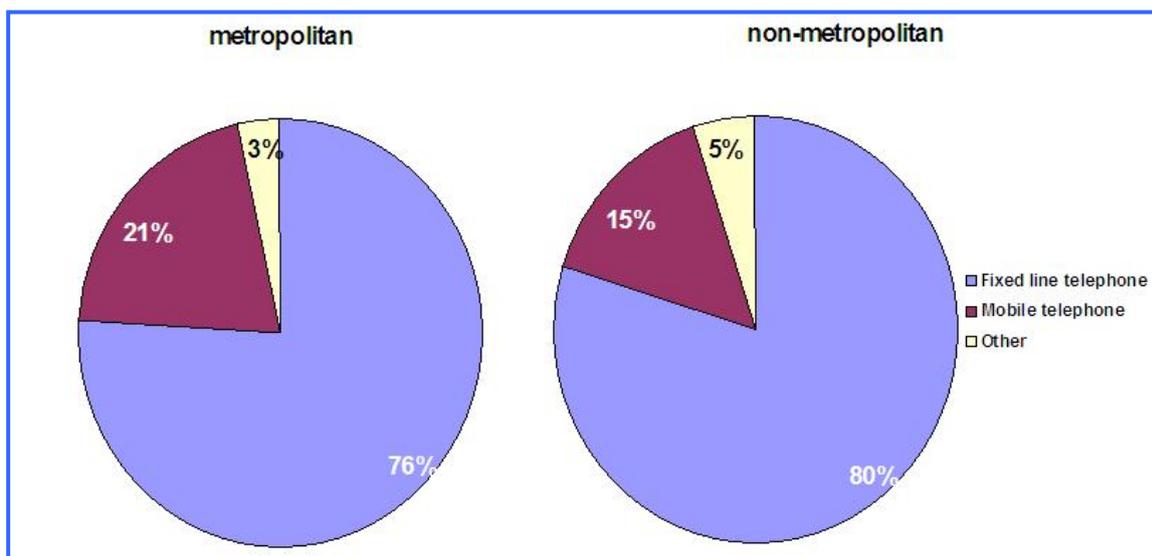
Figure 4: percentage of SMEs using voice communications (by location), 2007



Source: Sensis® Business Index, May 2007, n=1668, multiple responses

The fixed-line telephone is the backbone of SME operations, with 98 per cent of SMEs using fixed-line voice communications. When asked about their *main* form of communications, 76 per cent of metropolitan SMEs and 80 per cent of non-metropolitan SMEs nominated the fixed-line telephone (see Figure 5). The mobile phone is the next most common *main* form of communications, with 21 per cent of metropolitan SMEs and 15 per cent non-metropolitan SMEs nominating it.

Figure 5: Main form of communications, 2007



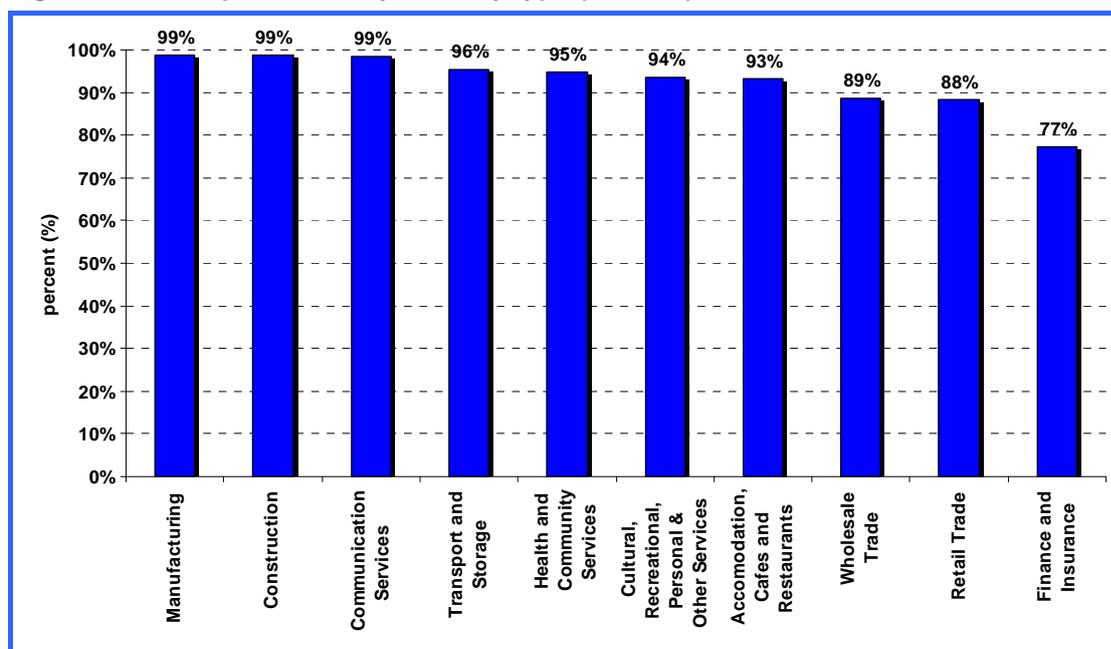
Source: Sensis® Business Index, May 2007, n=1668, 'Other' includes both (fixed-line and mobile), VoIP, all are the same/all equal, payphones, two-way radio, fax and email.

5.2 SME mobile phone use

Mobile telephony take-up in Australia has increased over the last 10 years, becoming ubiquitous for SMEs as it has for general consumers. Mobile take-up has not necessarily occurred at the expense of fixed-line telephony, but has complemented it. The mobile phone has allowed businesses to operate more flexibly and efficiently, enabling business operators to communicate more readily when not in the office (where previously they may have been restricted to the use of public payphones).

Mobile phones are cited as the second most common form of communications used by SMEs. SME use of mobile phones is high for small business (93 per cent) and medium-sized business (99 per cent), and is high across all industry sectors—seven of the 10 ANZSIC sectors have a 90 per cent+ mobile phone take-up rate (see Figure 6). Those sectors without a 90 per cent+ take-up rate were the wholesale and retail sector (just under 90 per cent), and finance and insurance sector (77 per cent). In comparison, research undertaken by Woolcott Research for ACMA found that 89 per cent of households that had a fixed-line telephone at home also had a mobile phone.⁸

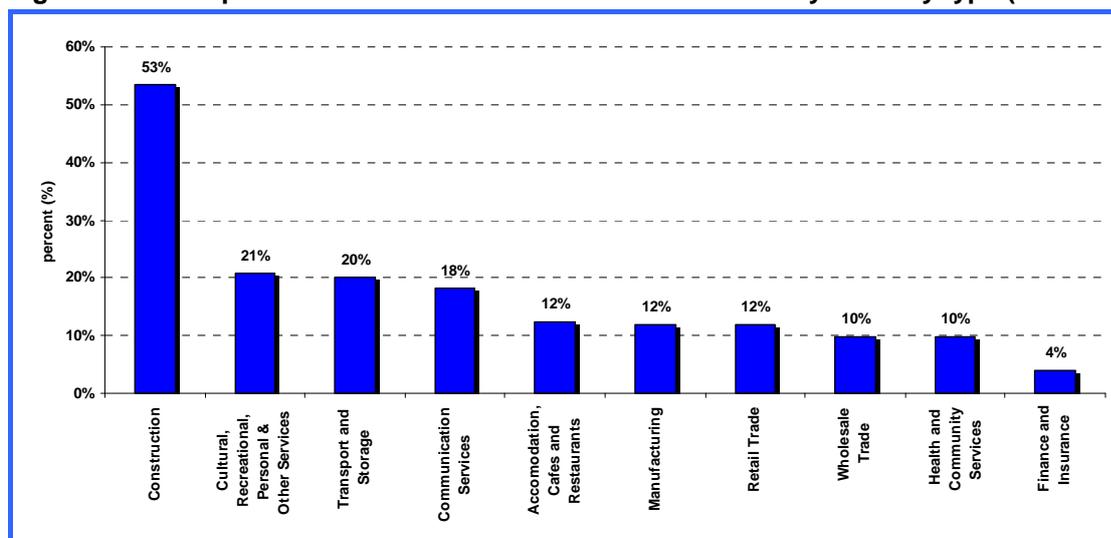
Figure 6: Mobile phone use by Industry type (ANZSIC), 2007



Source: Sensis® Business Index, May 2007, n=1668

Although mobile phone take-up is generally high across all industry sectors, some are more reliant on them than others. SMEs in the construction, recreation and transport industries were more likely to list the mobile phone as their *main* form of communication (see Figure 7), because their working environment (outdoors and on the road) is not conducive to fixed-line communications.

⁸ Woolcott Research, April 2007

Figure 7: Mobile phone cited as main form of communication by Industry type (ANZSIC), 2007

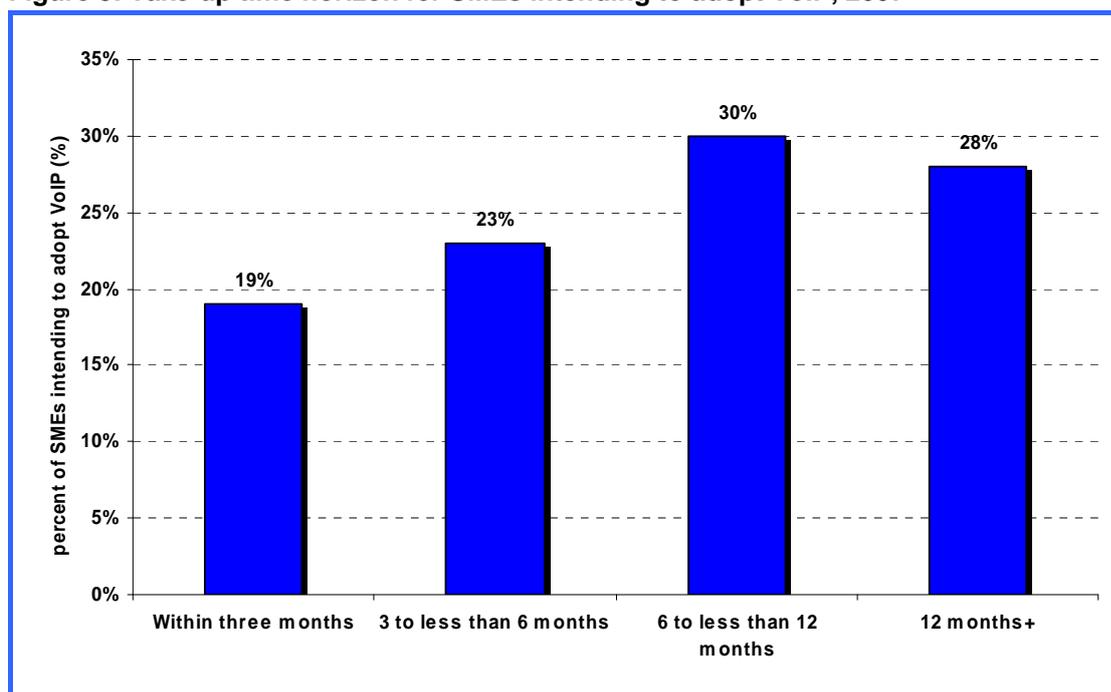
Source: Sensis® Business Index, May 2007, n=306

Conversely, the finance and insurance sector has the lowest take-up of mobile phones, is the least likely industry to use mobile phones as its *main* form of communication, and has the highest take-up of broadband among ANZSIC divisions (see section 6 of this report). This is indicative of the industry's propensity to be located in indoor offices with little mobile business activity, and a concurrent need for integrated systems with internet access.

5.3 SME VoIP take-up and use

VoIP involves the encoding of voice communications into internet protocol (IP) packets for transmission. Essentially, VoIP is a catch-all term that covers a range of services and business models including computer-to-computer voice communications and VoIP services that act as an effective substitute to standard public switched telephone network (PSTN) landline services.

While only 13 per cent of SMEs currently use VoIP, there is wider interest from other SMEs—another 14 per cent of SMEs stated that they intend to adopt VoIP in the future. Figure 8 shows that nearly three quarters of the SMEs that intend to adopt VoIP plan to do so within 12 months.

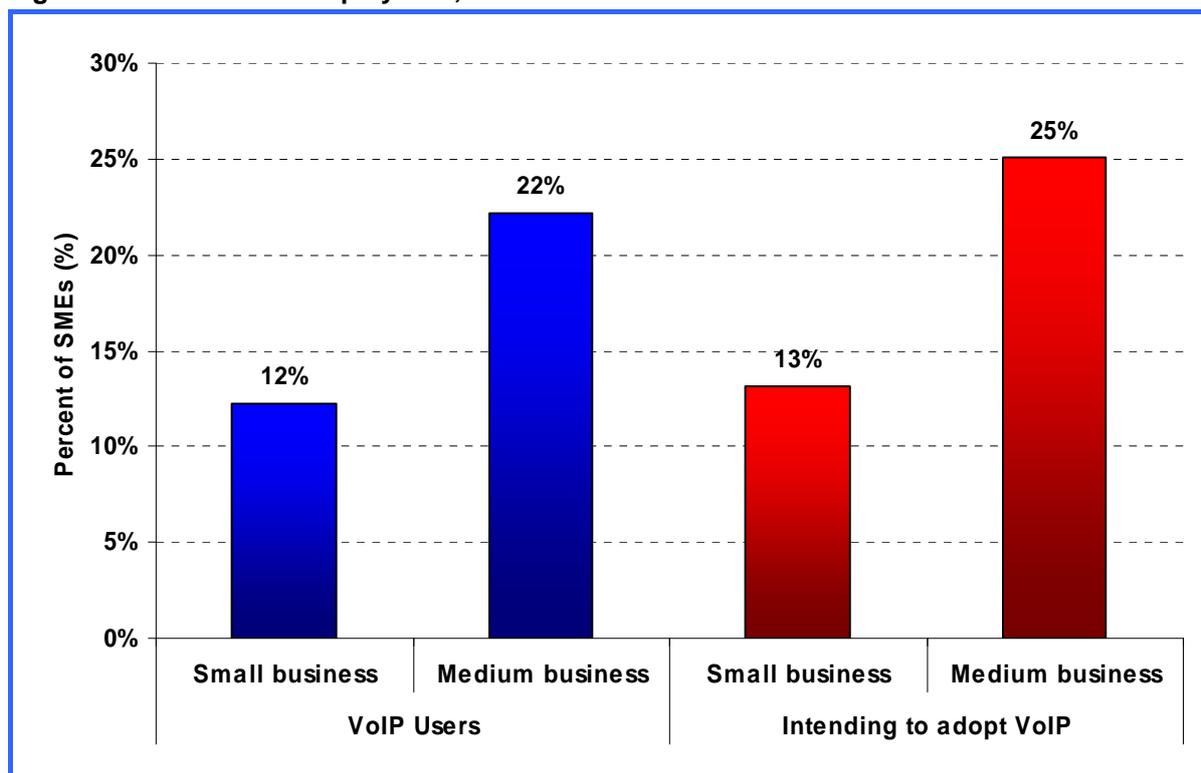
Figure 8: Take-up time horizon for SMEs intending to adopt VoIP, 2007

Source: Sensis® Business Index, May 2007, n=253

The ABS September 2006 internet activity survey found that 18 per cent of ISPs provide VoIP services as part of a bundled internet package. A number of ISPs have recently announced plans to provide naked DSL⁹ in combination with VoIP. VoIP services are typically cheaper per call than PSTN services and removing the necessity to pay for line rental will make VoIP more attractive to Australia's SMEs.

There is a general positive correlation between VoIP take-up and the size of SMEs (see Figure 9). The VoIP take-up rate for medium-sized businesses was 22 per cent, compared with only 12 per cent for small businesses. This suggests that medium-sized businesses have better means—perhaps greater resources dedicated to adopting a VoIP system. Similarly, future intentions to adopt VoIP were higher for medium-sized business (25 per cent) compared with small business (13 per cent), suggesting that medium sized businesses have a stronger incentive to adopt VoIP—perhaps because higher call volumes (and cost savings) make adoption of VoIP more worthwhile.

⁹ Naked DSL or stand-alone DSL is a broadband service that is unbundled from a telephone service. Naked DSL will allow consumers to access DSL internet without having to pay fixed-line rental (which typically costs about \$30 per month).

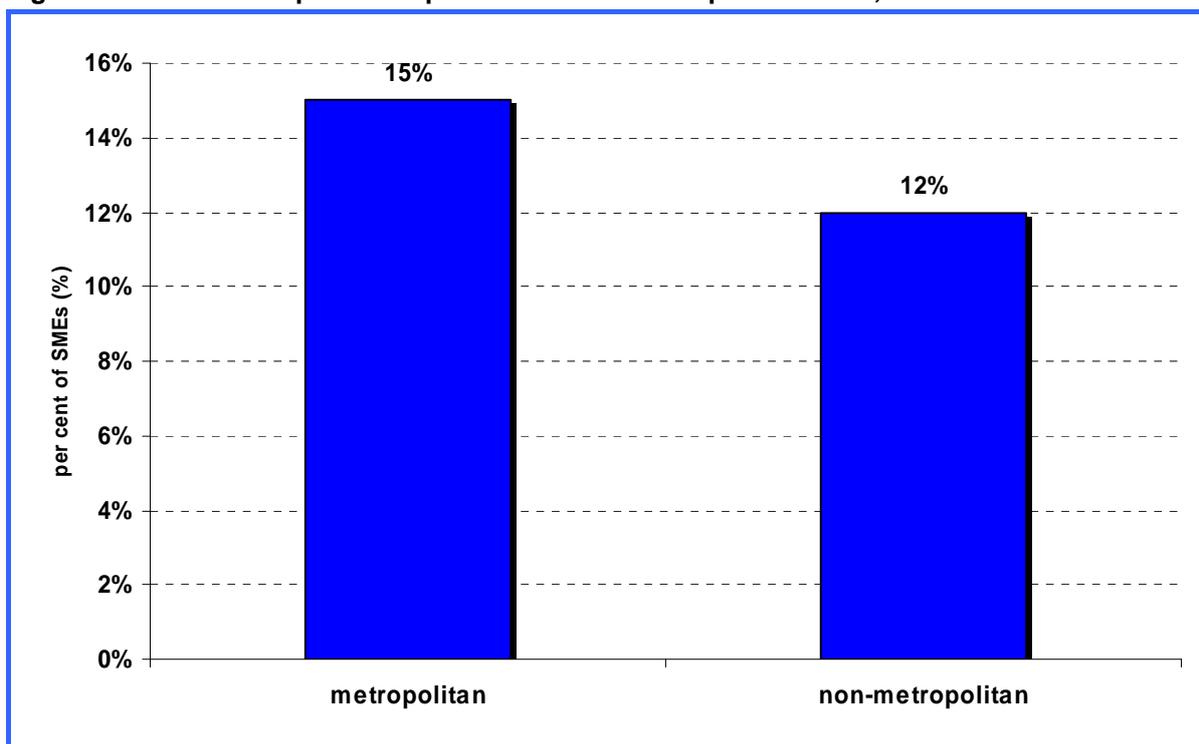
Figure 9: SME VoIP take-up by size, 2007

Source: Sensis® Business Index, May 2007, VoIP users n=1800, intending to adopt VoIP n=1800.

5.3.1 VOIP TAKE-UP IN METROPOLITAN AND NON-METROPOLITAN AUSTRALIA

As shown in Figure 10, there is not a large difference in VoIP take-up between metropolitan and non-metropolitan areas—15 per cent of SMEs in metropolitan areas and 12 per cent of SMEs in non-metropolitan areas. This compares to around 21 per cent of residential consumers which have used a VoIP service.¹⁰

¹⁰ Woolcott Research, April 2007

Figure 10: VoIP Take-up in metropolitan and non-metropolitan areas, 2007

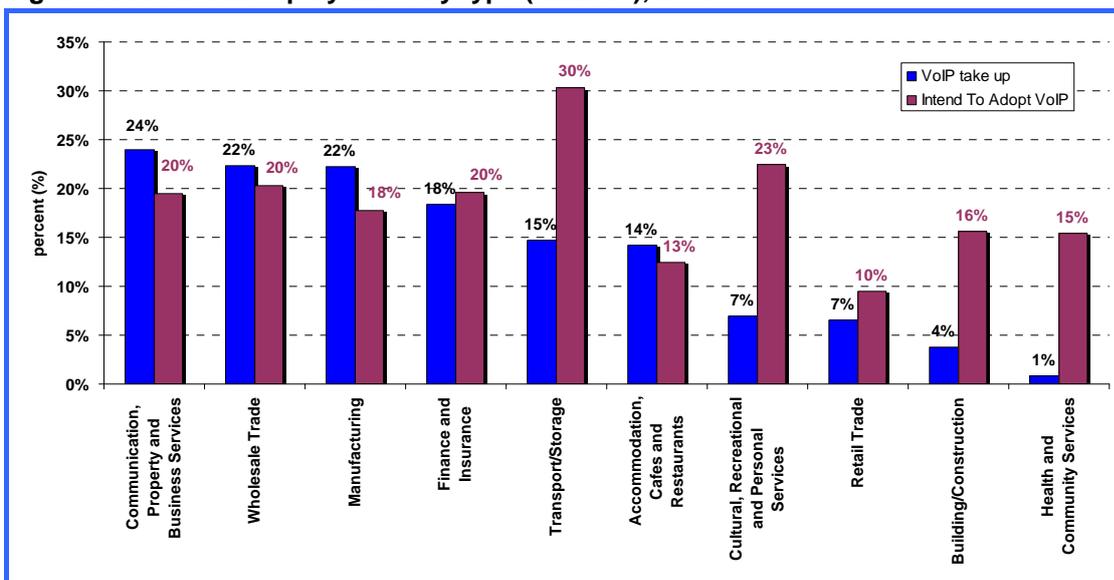
Source: Sensis® Business Index, May 2007, n=1668

5.3.2 VOIP TAKE-UP BY INDUSTRY TYPE

While interest in adopting VoIP is common to all industries, there seems to be a higher take-up in particular sectors. This is likely to be because the business case for adopting VoIP varies—Figure 11 suggests that the business case for VoIP is stronger for businesses in the following sectors:

- communication, property and business services
- wholesale trade
- manufacturing
- finance and insurance

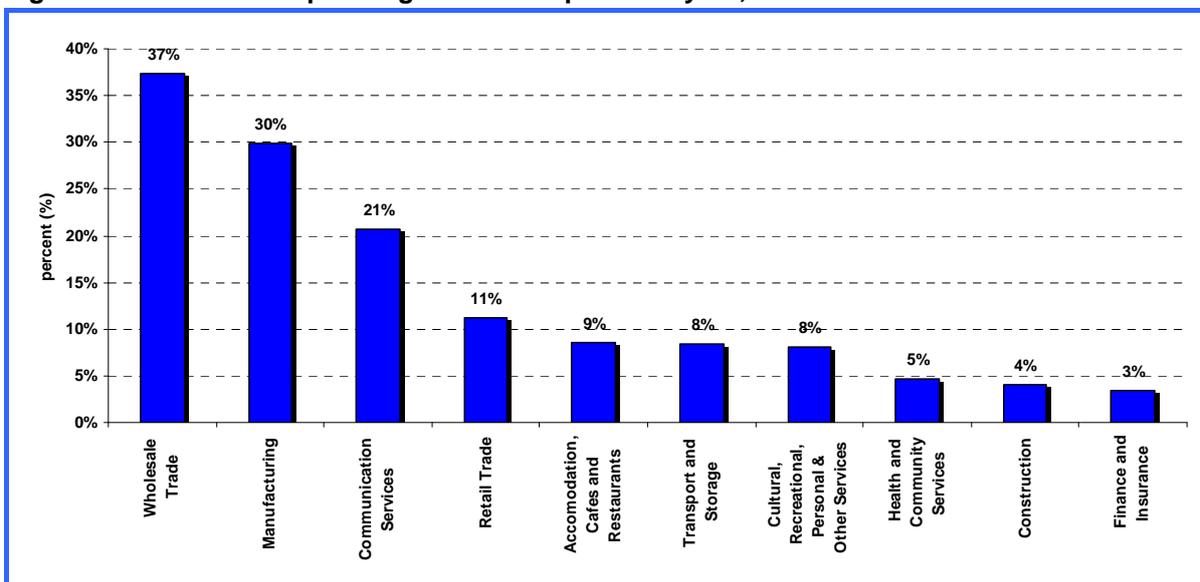
Figure 11: VoIP take-up by industry type (ANZSIC), 2007



Source: Sensis® Business Index, May 2007, VoIP take-up n=1668, Intention to adopt VoIP n=1398

These sectors are more likely to make calls to overseas clients and business partners where VoIP cost savings are apparent. Interestingly, those SMEs exporting goods overseas (where long-distance communications is more likely) had a higher take-up of VoIP (29 per cent) than SMEs not exporting goods (11 per cent). In fact, the three industries with the highest VoIP take-up were the industries with the highest proportion of SMEs that exported goods in the previous year (Figure 12).

Figure 12: SMEs that exported goods in the previous year, 2007



Source: Sensis® Business Index, May 2007, n=1800

6 Results – SMEs and the internet

Ninety-two per cent of SMEs are connected to the internet, with 92 per cent of small enterprises and 99 per cent of medium enterprises connected. The eight per cent of SMEs that are not connected to the internet comprise four per cent that own a computer without internet access and four per cent that do not own a computer.

The ABS *Patterns of Internet Access in Australia*¹¹ report found that 63 per cent of households had an internet connection at August 2006 and 40 per cent had a broadband connection. This ABS report did not undertake any detailed sector analysis hence ACMA commissioned research to understand internet take-up and use in the SME sector.

6.1 Broadband take-up in SMEs

Broadband provides opportunities for SMEs to promote and market their goods and services to almost anyone, anywhere in the world, and to achieve productivity benefits that may be derived from email and VoIP communication services.

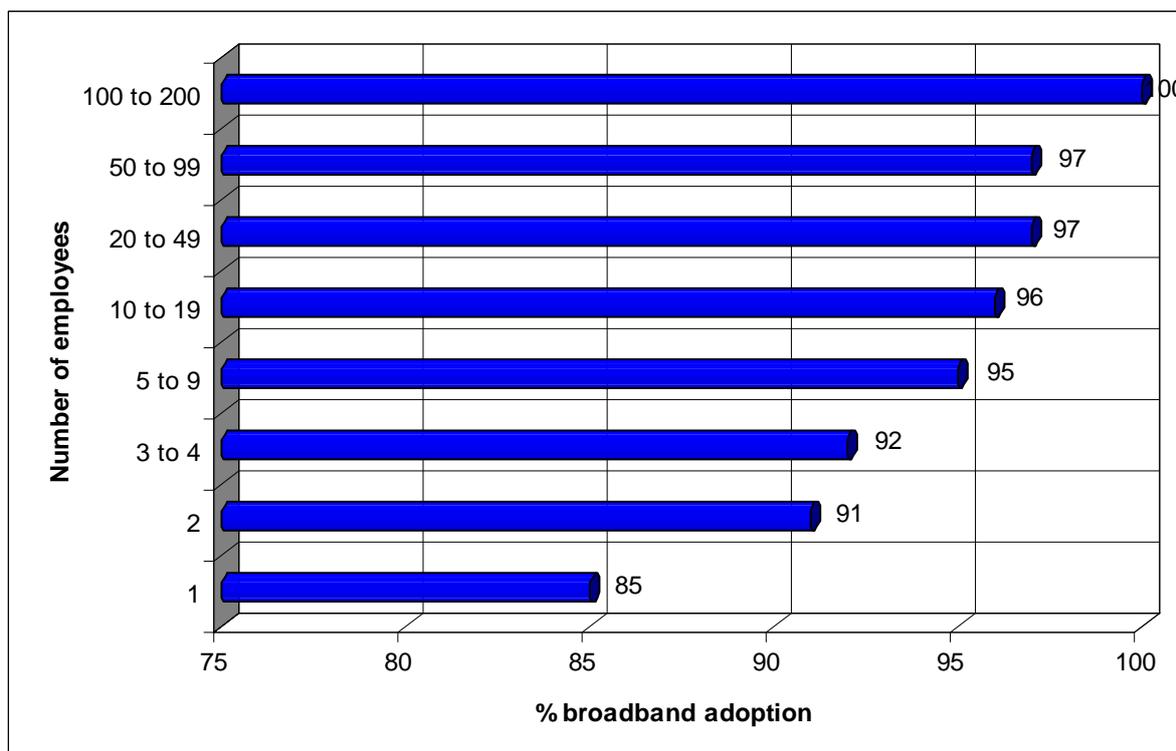
Business size is an important determinant of broadband take-up, with 97 per cent of medium-sized enterprises connected to the internet having broadband access compared with 90 per cent of small enterprises. The lowest rate of broadband take-up was found to be in single-employee small businesses (85 per cent take-up), while all (100 per cent) businesses with more than 100 employees that were surveyed had broadband access. Table 1 and Figure 13 show how rate of broadband take-up increase as the number of business employees increases.

Table 1: Currently have broadband access by business size (of those SMEs connected to the internet), 2007

Currently have broadband access	Small businesses	Medium-sized businesses	SME total
	90%	97%	91%

Source: Sensis® Business Index, May 2007, n=1668

¹¹ Australian Bureau of Statistics (November 2007), *Patterns of internet access in Australia*, cat. no. 8146.0, ABS, Canberra.

Figure 13: Percentage broadband access by number of employees (of those SMEs connected to the internet), 2007

Source: Sensis® Business Index, May 2007, n=1668

6.2 Broadband take-up in metropolitan and non-metropolitan Australia

Small businesses in metropolitan (91 per cent) and non-metropolitan (88 per cent) areas have similar rates of broadband take-up (Table 2). Medium-sized businesses in metropolitan (99 per cent) and non-metropolitan (96 per cent) areas were also found to have similar rates of broadband take-up, indicating that business size rather than geographic location may be a leading determinant of broadband take-up.

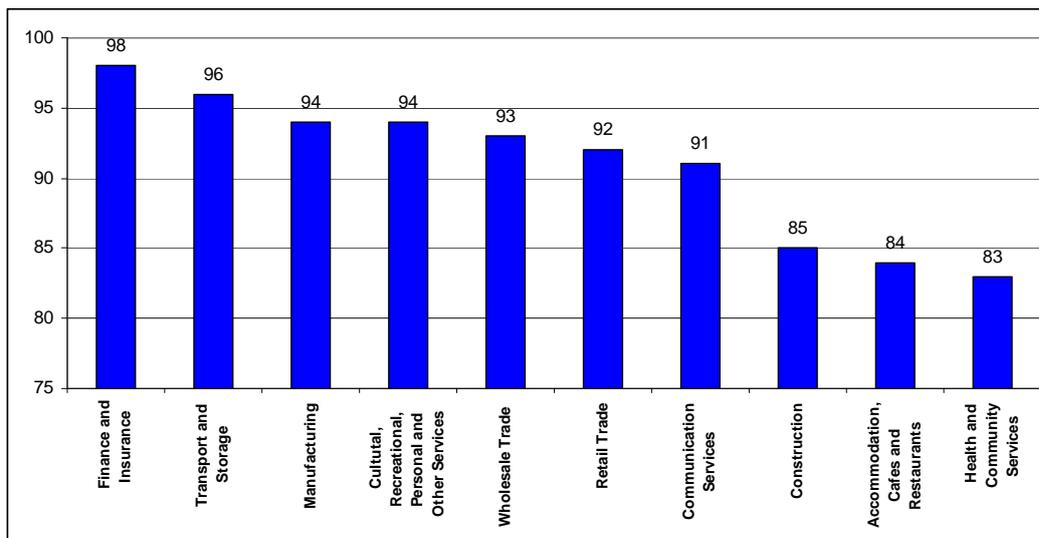
Table 2: Currently have broadband access by location and business size (of those SMEs connected to the internet), percentage, 2007

	Small businesses	Medium-sized businesses	SME total
Non-metropolitan	88%	96%	89%
Metropolitan	91%	99%	92%
Total	90%	97%	91%

Source: Sensis® Business Index, May 2007, n=1668

6.3 Broadband take-up by industry

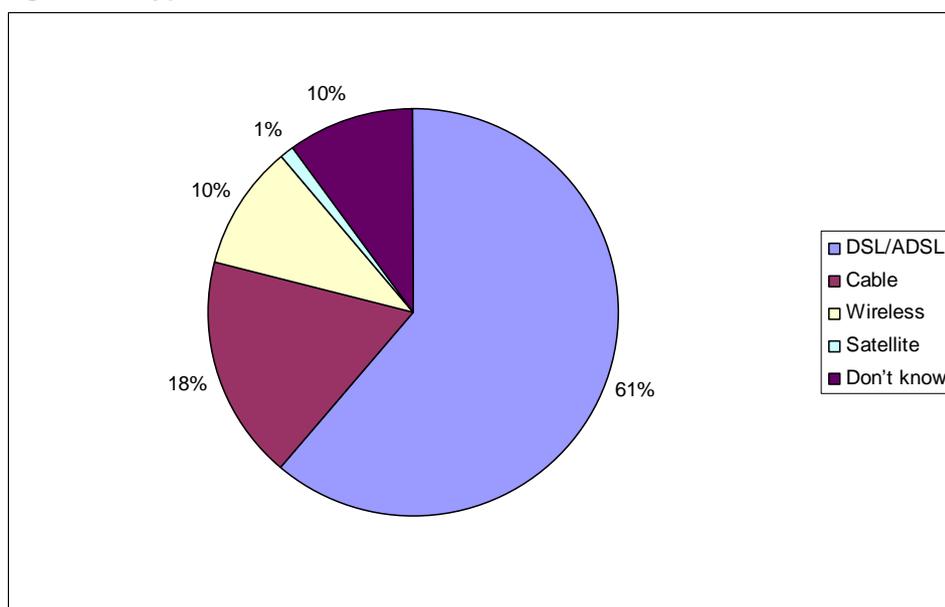
SMEs in the finance and insurance industry sector have the highest level of broadband take-up and those in the health and community services sector have the lowest levels of broadband take-up (see Figure 14).

Figure 14: Broadband take-up by industry, 2007

Source: Sensis® Business Index, May 2007, n=1668

6.4 Type of broadband connection used

For SMEs, DSL is the dominant form of broadband access, followed by cable, wireless and satellite (see Figure 15). Consistent with the findings of other research conducted by ACMA, 10 per cent of respondents were unsure what type of broadband access their business used. Most survey respondents were also unable to accurately specify the speed (data rate) of their broadband service. It should be noted that findings presented are based on respondent perceptions of type of broadband service used and therefore there is a possibility of confusion between cable and ADSL services i.e. the presence of copper pairs to deliver ADSL may be regarded by the respondent as ‘cable’ when this category is intended to reflect Hybrid Fibre Cable (HFC).

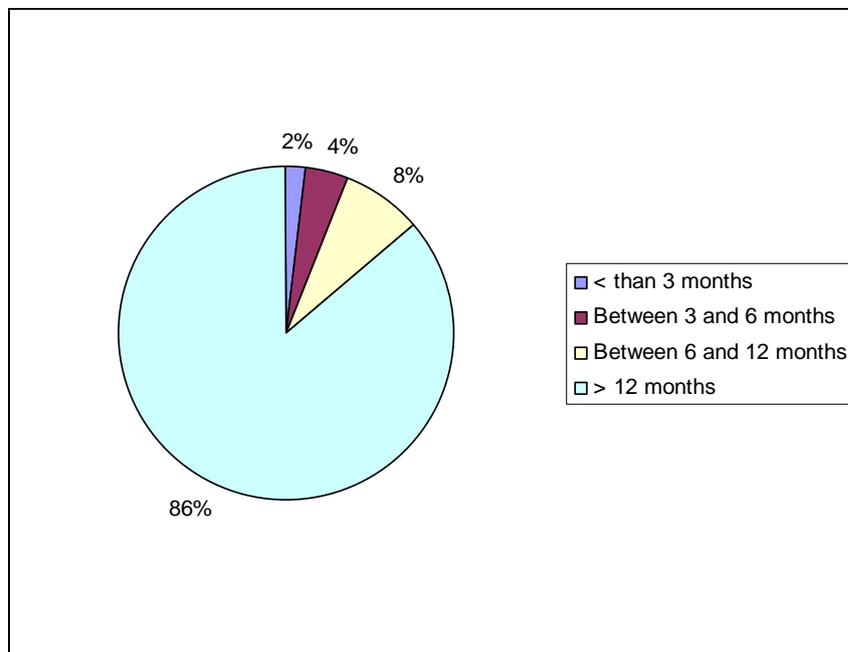
Figure 15: Type of broadband connection used, 2007

Source: Sensis® Business Index, May 2007, n=1508

6.5 Intentions to adopt broadband

More than 85 per cent of SMEs have had a broadband connection for more than 12 months.

Figure 16: Length of time business had had a broadband connection, 2007



Source: Sensis® Business Index, May 2007, n=1508

Of those SMEs without a broadband connection, 48 per cent intend to adopt broadband in the future, with 80 per cent of these SMEs intending to adopt broadband in the next 12 months.

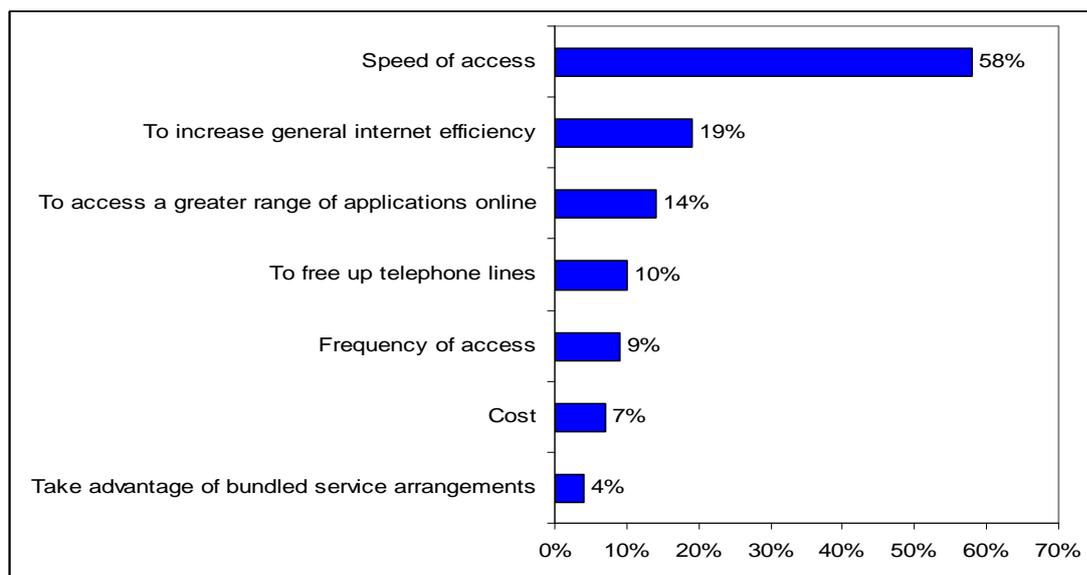
Table 3: SME intention to adopt broadband, 2007

When intend to adopt broadband	Percentage of SMEs
Within 6 months	50
6 to less than 12 months	30
12 months to 2 years	10
More than 2 years	10

Source: Sensis® Business Index, May 2007, n=153

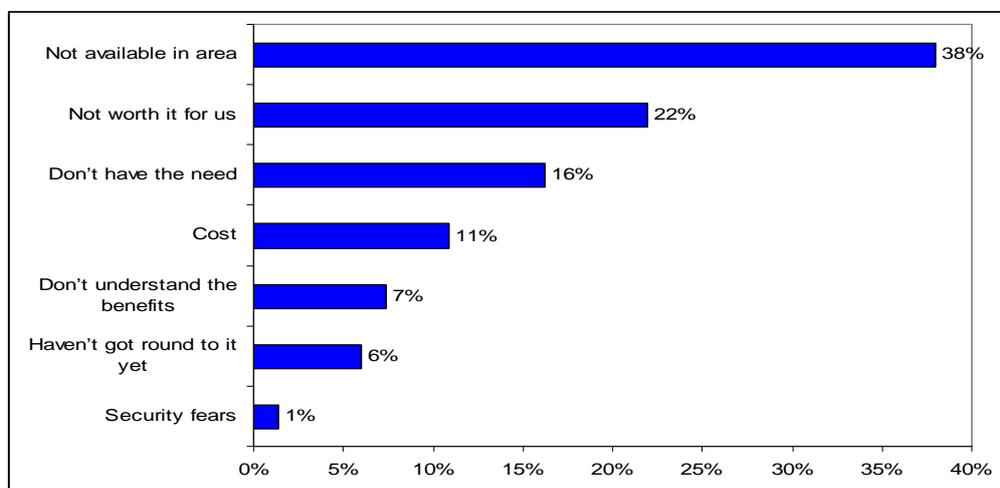
6.6 Drivers and barriers to broadband adoption

SMEs cited productivity-related reasons for adopting broadband in their business. Speed of access, increased general internet efficiency, access to a greater range of applications online, and the ability to free up telephone lines can all contribute to productivity improvements in the workplace. Other factors such as cost savings and the ability to take advantage of bundled service arrangements from telecommunications providers were also cited as reasons driving the adoption of broadband.

Figure 17: SMEs main reasons for introducing broadband, 2007

Source: Sensis® Business Index, May 2007, n=1508

Among SMEs without broadband, 38 per cent perceived a lack of broadband availability to be the main reason they had not adopted broadband. The most common other reasons for not taking up broadband relate to SMEs' own perceptions, such as not recognising or understanding the value or benefits of broadband to their business or not seeing a need for broadband in their business.

Figure 18: SMEs main reasons not adopting broadband, 2007

Source: Sensis® Business Index, May 2007, n=153, multiple answers

6.7 Positive impacts of broadband

More than 75 per cent of SMEs indicated that broadband access had a positive impact on their business. The main benefits cited by SMEs related to productivity gains that broadband access had allowed them to achieve through time-saving benefits, being able to perform tasks more quickly, access information, communicate with others and be more efficient in the workplace.

Table 4: Positive impacts of broadband according to SMEs, 2007

Positive impact	Percentage of SMEs
It is quicker/speed/time saving	45.9
Access information	27.9
Better communication	12.7
It is easier	9.5
More efficient	8.9
Can contact clients overseas/interstate instantly	5.7
Email	5.7
Communication speed up	5.6
No waiting for downloads	5.4

Source: Sensis® Business Index, May 2007, n=1204, multiple answers

6.8 SME adoption of e-business practices

The internet has had a significant impact on transforming SME business practices and driving business process improvements. Today's SMEs are utilising e-business practices to help them communicate with customers and suppliers, to research markets, products and services, and to conduct online sales and purchases of good and services.

There was a strong alignment between SMEs' current use of the internet and their perceptions of the internet applications that are essential to their business.

Email is the most commonly used internet application, with 95 per cent of small businesses and 99 per cent of medium-sized businesses using email (96 per cent of all SMEs). The second most common use of the internet was to get reference information or research data, and the third most common reason was to look for information about products and services. In general, small businesses tend to use internet applications less than medium-sized businesses, which may be a reflection of their lower levels of internet take-up.

Table 5: Current uses of the internet (percentage of SMEs), 2007

Use of the internet	Small businesses	Medium-sized businesses	All SMEs
To communicate via email	95	99	96
To get reference information or research data	87	97	87
To look for information about products and services	84	94	85
Internet banking	80	92	80
To pay for products and services	72	78	72
To access and use online catalogues	67	75	68
To streamline communications with customers and staff	66	84	67
To place orders for products and services	63	73	64
To receive payments for products and services	59	63	59
To use a website to advertise or promote business	56	82	57
To take orders for your products and services	51	55	51
To monitor your markets or the competition	41	61	42

Source: Sensis® e-Business Report, August 2007.

Communication via email and internet banking were identified as the most essential applications, with access to reference information/research data and the ability to look for information about products and services also considered important.

Table 6: SME essential applications (percentage of SMEs), 2007

Essential application	Small businesses	Medium-sized businesses	All SMEs
To communicate via email	87	95	87
Internet banking	70	82	71
To get reference information or research data	63	74	63
To look for information about products and services	61	68	61
To streamline communications with customers and staff	52	69	53
To pay for products and services	50	52	50
To receive payments for products and services	48	51	48
To place orders for products and services	44	49	44
To use a website to advertise or promote business	42	57	43
To access and use online catalogues	42	45	42
To take orders for your products and services	40	40	40
To monitor your markets or the competition	24	35	24

Source: Sensis® e-Business Report, August 2007.

7 Conclusion

The significant contribution of SMEs to the economy means that any productivity gains stemming from the effective use of communications services can be important in driving productivity in the greater economy.

This report has found that the fixed-line telephone is still the backbone of SME operations, with 98 per cent of SMEs using fixed-line voice communications.

Mobile phone take-up is high, however, it has not occurred at the expense of fixed-line telephony, but has complemented it. The mobile phone has allowed businesses to operate more flexibly and efficiently, enabling business operators to communicate more readily when not in the office or in the primary place of business.

Business adoption of the internet has had a significant impact on transforming SME business practices and driving business process improvements. Today's SMEs are utilising e-business practices to help them communicate with customers and suppliers, to research markets, products and services, and to conduct online sales and purchases of good and services.

Broadband in particular is playing a key role in enhancing business productivity with 92 per cent of SMEs connected to the internet, of which 91 per cent have a broadband connection. Speed of internet access, increased general internet efficiency, access to a greater range of applications online, and the ability to free up telephone lines contribute to productivity improvements in the workplace. Other factors such as cost savings and the ability to take advantage of bundled service arrangements from telecommunications providers were also cited as reasons driving the adoption of broadband.

Communication via email and internet banking were identified as the most essential internet applications for SMEs, with access to reference information/research data and the ability to look for information about products and services also considered important.

Voice communication over the internet in the form of VoIP is also assisting business productivity. Integrated voice and data networks often provide cost savings in addition to per call rates that are typically lower than fixed-line call rates. While only 13 per cent of SMEs currently use VoIP another 14 per cent of SMEs stated that they intend to adopt VoIP in the future.

SMEs have embraced many of the options that modern communications offer. These options provide more flexible ways of conducting business, and consequent efficiencies free up scarce business resources to be directed elsewhere. Looking to the future, as more sophisticated communication technologies are supplied to the market, so long as they are useful to business, will continue to assist and shape the way that business is conducted.