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Communications report 2013–14 series

Report 2—The evolution of VoIP in Australia

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Contents

Executive summary	1
About the research	2
Differences between OTT and managed VoIP use	2
Introduction	3
What is VoIP?	3
The VoIP market	4
Managed VoIP services	5
Managed service providers	5
Offerings and pricing models	6
The OTT challenge	7
OTT provider models	7
Revenue models	8
Voice over LTE—the next development	10
Consumer take-up of VoIP services	11
How are consumers using VoIP services?	11
Communications applications	12
Communications channels	12
What's age got to do with it?	14
Video calls	16
Are consumers satisfied?	18
Appendix—Research methodology	19
Data sources	19
ACMA-commissioned survey	19
Roy Morgan Single Source	19
Other sources	19
Data analysis	19
Endnotes	20

Executive summary

Voice over internet protocol—VoIP—is the name for a range of technologies that allow voice communication to be made using internet protocol (IP) technology, rather than traditional circuit-switched technology used to supply voice services over the fixed-line public switched telecommunications network (PSTN).

The ACMA last reported substantially on the VoIP industry in December 2009. Since then, the VoIP market has undergone substantial change, experiencing the disruptive effects of over-the-top (OTT) communications.

At March 2014, there were 216 VoIP service providers, while over five million Australians (28 per cent) were using some form of VoIP service at December 2014. VoIP has also become an integral part of the wholesale telephony market, with 75 per cent of international wholesale traffic being transported via VoIP or IP backhaul in 2014.

The proportion of adults using OTT VoIP services (on mobile phones, tablet devices, laptops or desktops) increased from 15 per cent to 24 per cent in the four years to December 2014.

Managed VoIP retail services are facing a decline in revenue streams (similar to the decline in use and revenue across PSTN services). Providers of managed VoIP services are exploring business strategies in order to compete with the OTT market, including developing their own communications apps and partnering with OTT VoIP providers.

Consumers are continuing to take advantage of cheap or free OTT services such as Skype and Viber by diversifying their communications channels. Young adults use a greater number of channels—those aged 18–24 use an average of six types of communications channels, while those aged 65 and over use an average of three. However, levels of satisfaction for VoIP services are lower than those for fixed-line telephones and mobile phones—72 per cent of consumers are satisfied or very satisfied with their VoIP service compared with 89 per cent for fixed-line telephones and 86 per cent for mobile phones. Satisfaction levels increase when focusing on those with a paid subscription to a VoIP service—84 per cent of those with a paid subscription to a VoIP service are either satisfied or very satisfied with their service.

OTT communications services are becoming a more integral part of Australians' communications use. With ISPs increasingly offering VoIP as part of a package of OTT communications services, and with consumers using a range of OTT communications channels, the identification of a separate VoIP market is becoming less meaningful.

About the research

This report is designed to assist the ACMA in its role as industry regulator and is consistent with its regulatory responsibilities to provide information about the telecommunications industry. As VoIP services (both managed services and OTT) are a potential future substitute for the PSTN fixed-line voice service, the ACMA is monitoring their development and has undertaken this examination of the supply and demand of VoIP services.

The purpose of this report is to:

- > provide an update on developments in the Australian VoIP market since the ACMA's last substantial report on this area (see [Changes in the Australian VoIP Market](#), 2009)
- > review challenges to VoIP providers, including OTT services, as the communications service market evolves in Australia
- > review consumer use of, and attitudes to, VoIP services.

As an evidence-informed regulator, the ACMA's research program—research**acma**—underpins our work and decisions. It contributes to our strategic policy development, regulatory reviews and investigations, and helps us make media and communications work for all Australians.

research**acma** has five broad areas of interest:

- > market developments
- > media content and culture
- > social and economic participation
- > citizen and consumer safeguards
- > regulatory best practice and development.

The evolution of VoIP in Australia contributes to the ACMA's market developments and social and economic participation research themes, and complements the [Communications report 2013–14](#). The communications report is an annual comprehensive overview of the changing communications and media landscape in Australia.

Differences between OTT and managed VoIP use

The ACMA has used Roy Morgan Single Source data in order to understand consumer use of OTT and managed VoIP usage. Roy Morgan's survey questions on VoIP asks respondents how they access VoIP, with the options of using a PC/laptop, tablet computer, mobile phone or home phone. In considering the Roy Morgan Single Source data provided in this report, those using a home phone to access VoIP can be understood as using a managed VoIP service, while those using the other three methods (PC/laptop, tablet computer and mobile phone) can be considered to be using an OTT VoIP service.

More information on the research methodology can be found in the appendix.

Introduction

The availability of broadband across Australia, combined with developments in the OTT communications and media market and the widespread adoption of smartphones and tablets, has provided the background for rapid change in the voice communications market, of which VoIP services are a growing feature.

What is VoIP?

Voice over internet protocol—VoIP—is the name for a range of technologies that allow voice communication to be made using internet protocol (IP) technology. Depending on the user's connection speed, the hardware used and the service type, VoIP technology can provide voice or video communication services over fixed or mobile networks, and often a text service as well. VoIP services can be accessed over a range of broadband devices.

VoIP can be contrasted with traditional 'circuit-switched' technology used to supply voice services over the fixed-line public switched telecommunications network (PSTN). Circuit-switched voice services are sometimes described as 'plain old telephone services' (POTS).

Previous ACMA research classified different types of VoIP according to call capability; that is, whether the service only offers calls to or from subscribers to the same VoIP service ('on-net') and the degree of interactivity with the PSTN.¹ However, these service distinctions have become less useful over time as OTT developments and consumer behaviours in accessing OTT services has changed.

There are now two main types of VoIP services offered to Australian consumers:

- > **Managed VoIP**—from a consumer's perspective, this operates in a similar way to a traditional fixed-line telephone, in that the service is bought through a service provider that typically provides hardware (such as a VoIP handset or adapter), issues a phone number and may set quality of service expectations. Users of managed services are able to contact, and be contacted by, all other end users connected to a public telecommunications network. Managed VoIP services may also offer a degree of 'walled garden environment'; for example, offering calls made within their network for free. On its Netphone plan, for instance, iiNet offers VoIP calls to other iiNet customers for free.²
- > **Over-the-top (OTT) VoIP**—delivered by an application that is run over the top of another carriage service. OTT VoIP services can be accessed using any compatible internet access device, including PCs, laptops, mobile handsets, tablets and gaming consoles. Skype and Freshtel are examples of this business model. Historically, OTT VoIP customers have only been able to make and receive calls to that same provider's customer base—not to end users who were not subscribers to the OTT service. For example, device-based VoIP services, such as FaceTime (Apple) and PS3 (Sony), restrict users to on-net connectivity. However, several OTT VoIP providers have now expanded their services to include off-net calls at a premium, offering connectivity with the PSTN. Skype, for example, can now provide its Australian users with a phone number and VoIP-in calls for a fee, while Viber offers cross-platform outbound calls through its Viber Out service.

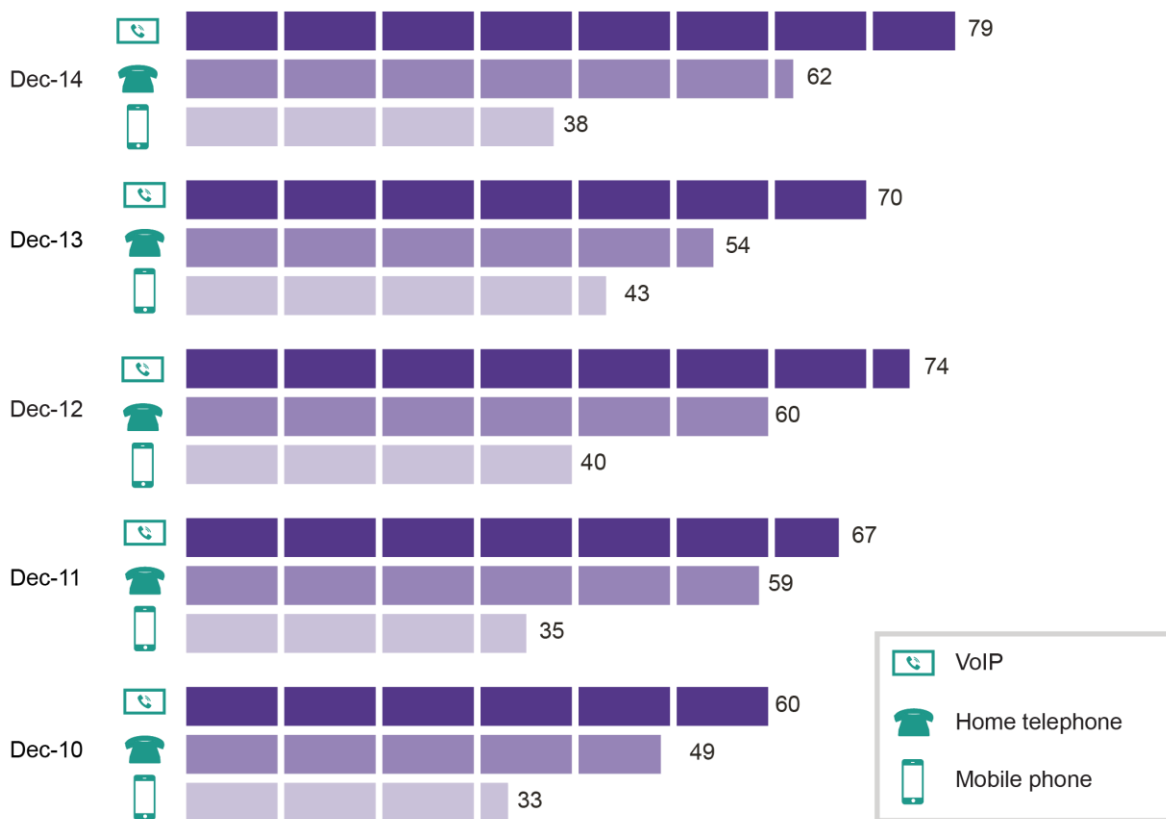
This report looks at the evolution of these two main service models, and examines the changing ways Australian consumers are using these services.

The VoIP market

Since the ACMA last reported on the Australian VoIP market in 2009, VoIP services have undergone substantial change. In 2009, there were 268 VoIP service providers offering voice services over the internet, with internet service providers (ISP) accounting for two-thirds of this total.³ The growth of VoIP was facilitated by the introduction of naked DSL services in Australia in 2007.

At March 2014, there were 216 VoIP service providers in Australia.⁴ The reduction in the number of VoIP service providers is consistent with the overall consolidation that has occurred over this period within the ISP market. However, the number of users of VoIP services (both managed services and OTT) has increased and the supply of VoIP now includes a wider range of service offers. Data from the Australian Bureau of Statistics (ABS) at June 2014 showed over half of medium and large ISPs (55 per cent) offered VoIP as part of a bundled package to residential and small to medium-sized enterprises (SMEs), an increase from 42 per cent in December 2007. At June 2014, the proportion of those providing VoIP services had steadily increased to almost 80 per cent (see Figure 1).

Figure 1: ISPs offering voice communications services, by type of service



Base: Percentage of Australian ISPs with more than 1,000 subscribers.

Source: ABS, [8153.0—Internet Activity](#), Australia, December 2014.

VoIP is also an integral part of global communications traffic, with 75 per cent of international wholesale traffic being transported via VoIP or IP backhaul in 2014. Research analysts forecast an increase to 100 per cent in the next five years.⁵

Within the two broad service models of managed VoIP and OTT VoIP, there is growing differentiation of service types, reflecting technology developments occurring at the platform and device level.

Managed VoIP services

As providers of residential and business internet phone services, VoIP managed service providers are challenging the sectors of the communications market once occupied by traditional fixed-line PSTN voice service providers. This group is giving the consumer the ability to talk to others on VoIP via a fixed handset at home. In Australia, there are three main forms of managed VoIP service:

- > **ISP offering a VoIP and broadband bundle**—VoIP services are made available to customers who are connected to the provider's broadband service. iiNet is an example of this business model.
- > **ISP offering hybrid approach**—providers offer VoIP services to their own broadband customers as well as to customers of other broadband services. GoTalk and MyNetFone are examples of this business model.
- > **VoIP-only service provider**—provider offers solely VoIP services to residential, business and wholesale customers, as well as a range of hardware devices. FaktorTel is an example of this business model.

Managed service providers

In Australia, ISPs are the main providers of managed VoIP services, typically offering internet and voice service bundles for a fixed period, usually 12 to 24 months. Market Clarity notes that at March 2014, 216 service providers were operating in the VoIP market in Australia, largely dominated by ISPs such as TPG, iiNet or MyNetPhone.⁶

Table 1 provides a snapshot of the major managed VoIP service providers and the types of services they offer. The majority of Australia's VoIP providers offer both retail and business services, with options of provider-hosted PBX technology⁷ and SIP trunking⁸ services. By contrast, Dodo offers services exclusively to residential customers.

Voice services provided over the National Broadband Network (NBN) are VoIP services. Two of Australia's largest communications service providers, Telstra and Optus, who previously provided VoIP services only to business, are now offering residential managed VoIP services over the NBN.⁹

Table 1: Major managed VoIP services available to consumers in Australia

	Retail NBN	Retail non-NBN	Business services	Hosted PBX	Wholesale	SIP trunking	Included in residential plan*	
							Unlimited local /National calls	Contract min. (months)
iiNet	✓	✓	✓	✓	✓	✓	✓	1
MyNetPhone	✓	✓	✓	✓	✓	✓	✓†	1
TPG	✓	✓	✓	✓	✓	✓	✓	6
Faktortel	✓	✓	✓	✓	✓	✓	✓	6
engin	✓	✓	✓	✓	✓	✓	✓	1
Dodo	✓	✓	–	–	–	✓	–	24
Telstra	✓	–	✓	✓	✓	✓	n/a	n/a
Optus	✓	–	✓	✓	✓	✓	n/a	n/a

*Cheapest residential plan available, non-NBN. †200 calls per month included in plan.

Note: n/a=not applicable.

Source: Provider websites.

It has been reported that MyNetPhone, an early pioneer of VoIP, has approximately 10 per cent of the landline market.¹⁰ It provides hosted voice and data communications services for residential, business and government.¹¹ It also offers customers VoIP-related equipment (a customer's normal home phone can be plugged into an analog telephone adaptor provided by MyNetPhone, which then connects to a customer's router). This, it is suggested, has been a key reason for its success.¹²

Offerings and pricing models

The pricing of VoIP varies between service provider plans. Many VoIP providers use a subscription-pricing model or a fixed-term service contract, with the option to include equipment at a subsidised rate and payment at a monthly rate.¹³

Depending on the service plan and type of calls made, customers may be charged per call untimed (for example, local or national calls charged at 10 cents) or per minute (such as mobile calls charged at 20 cents per minute).¹⁴ Some providers' plans include heavily subsidised or free calls between customers who use the same provider ('on-net' calls).

In addition, a number of VoIP services are offered as part of a bundle with a broadband service.¹⁵ For example, customers may have the option to add a VoIP service when buying an ADSL broadband or NBN plan, with included local and national calls, and timed international calls, as well as the option to buy hardware.

All of these plans are post-paid, which is a common form of provider offering. However, some providers offer pre-paid VoIP services—where customers pay 'credit' to their service provider and are charged only for the calls they make.¹⁶

The OTT challenge

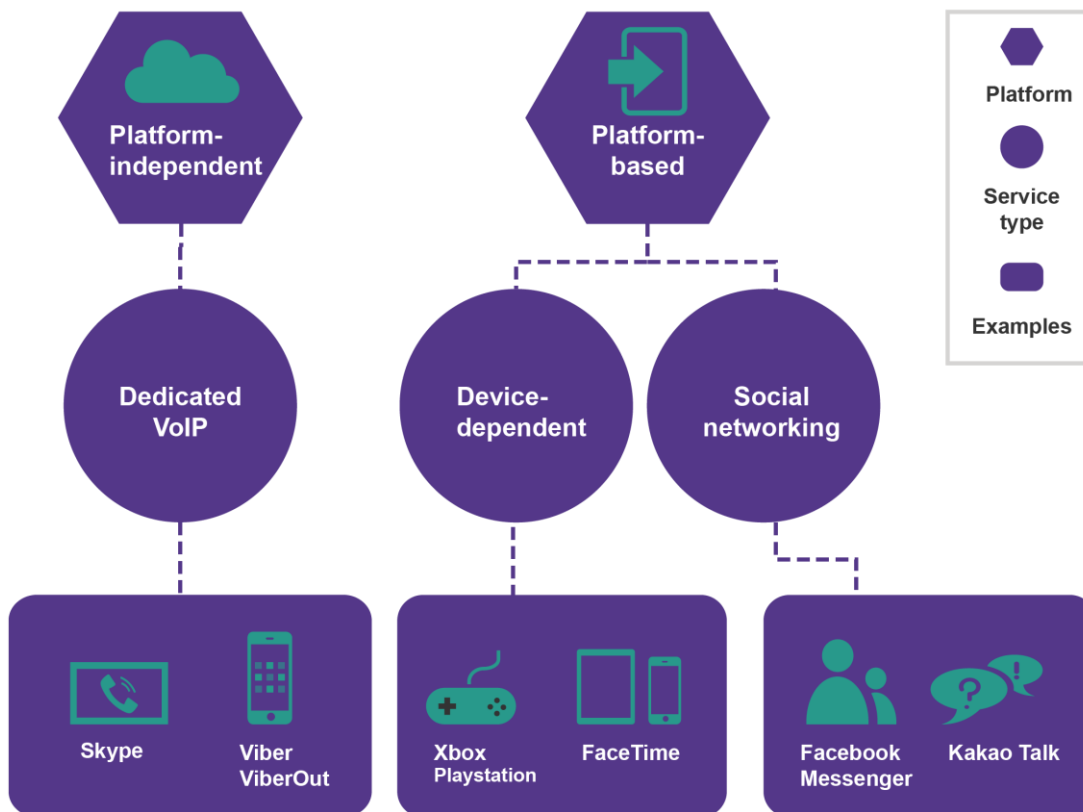
The OTT environment is highly dynamic, with innovative new players joining long-established service providers. Skype remains one of most popular OTT VoIP services, with millions using the service worldwide each day.

While early OTT VoIP services focused on substituting traditional fixed-line PSTN voice services with access via a desktop computer, almost all VoIP providers are expanding their range of OTT services to create an online communications ecosystem that offers mobile voice, video and text. Technological developments in both software and internet access devices have produced a wave of new players, many in the area of mobile VoIP and app-based messaging services. The expansion of 4G long term evolution (LTE) networks and increased take-up of compatible smartphones has encouraged growth in the mobile VoIP service market in particular.

OTT provider models

As shown in Figure 2, there are two main forms of OTT VoIP services.

Figure 2: OTT communications services in summary



Source: ACMA, based on provider websites.

Platform-based VoIP refers to services that come as part of a device's software and are usually exclusively 'on-net' services; that is, they can only be used to contact other users of the same device and software. Within this service category, there are two main forms of service available in Australia:

- > **Social networking VoIP providers**—most commonly established as an extension to social networking sites, these services give users real-time online text, email-type communications, as well as video and voice chat from a social networking webpage. Examples include KakaoTalk and Facebook. Facebook, with some 13.6 million Australian users at September 2014, has recently enabled a VoIP feature on its Messenger App.¹⁷ The feature, previously only available to those residing in the United States, Canada and the United Kingdom, is now available to all users and Australians can now make voice calls using the Messenger App over Wi-Fi or mobile networks.¹⁸
- > **Device-dependent VoIP providers**—offered as hardwired features of internet access devices or software, these services are typically promoted as features to attract additional customers. Since 2013, for example, users of various Apple devices have had access to FaceTime, an app that enables users to video chat with other iOS device users for free. Introduced in 2010, FaceTime is an on-net service used by almost half of Australia's VoIP users (see Figure 4 on page 12).¹⁹ Some internet-connected gaming devices and internet-enabled televisions also come pre-programmed with communications services that are typically free but limited to users of the same technology.

Platform-independent services refer to online communications services that are associated with a dedicated messaging application, VoIP site or social networking service. Importantly, they may be accessed by multiple devices and are more likely to offer off-net connectivity (in return for a premium) and greater flexibility to the user. This form of service is supplied by dedicated OTT VoIP providers.

Dedicated VoIP offerings can be accessed by any compatible internet access device, provided there is coverage and the appropriate software loaded. While any-to-any connectivity is offered, there may be service charges for connecting to users outside the network. Microsoft's Skype service remains one of the most popular VoIP services used by Australians. In 2013, Skype carried an estimated 214 billion minutes of international calls around the globe.²⁰ Initially, the majority of Skype calls were made and received from a PC, though the introduction of smartphone and tablet apps has made mobile VoIP using Skype much more common. Skype has also entered the handset market, offering Skype-branded handsets that plug directly into a router.²¹

Revenue models

The majority of OTT VoIP services are provided to consumers largely free or at a very low cost, with the main source of revenue being on-site advertising and licensing deals with device manufacturers to enable software integration. These services may also offer a for-payment premium service to allow users off-net capability such as calling PSTN numbers. Table 2 provides information about the major OTT VoIP service providers and the range of services offered by service type.

Table 2: Major OTT VoIP service providers available to consumers in Australia

OTT service type	Company	Product name	Revenue model				Communication restricted to service	Voice calls	Video calls
			Free-to-use	Pay-to-use	Ad-funded	Freemium model ²²			
Social networking VoIP	Facebook	WhatsApp*	✓	–	✓	–	✓	✓	–
		Facebook Messenger	✓	–	✓	–	✓	✓	–
	Kakao	KakaoTalk	✓	–	✓	–	–	✓	✓
	Google	Google Hangout	✓	–	✓	✓	✓	✓	✓
Device-dependent	Apple	FaceTime	✓	–	–	–	✓	✓	✓
	Sony	Playstation Portable ²³	✓	–	–	–	✓	✓	✓
	Microsoft	Xbox One ²⁴	✓	–	–	–	✓	✓	–
		Xbox 360	✓	–	–	–	✓	✓	–
Dedicated OTT VoIP	Microsoft	Skype	✓	✓	✓	✓	–	✓	✓
		Lync†	–	✓	–	–	–	✓	✓
	Viber	Viber	✓	✓	–	–	✓	✓	✓
		ViberOut	–	✓	–	✓	–	✓	–

*WhatsApp's newest version will include VoIP telephone calls.²⁵

†Soon to be Skype for business.

Note: While some services are free of call usage charges, all services attract data traffic fees.

Source: Provider websites.

OTT VoIP is increasingly affecting traditional communications revenues, with the impact felt by providers of both mobile and traditional fixed-line services.²⁶ In 2014, Ovum projected a loss of global voice revenue of \$296 billion to OTT VoIP between 2014 and 2018. Even though this is a small percentage (3.6 per cent) of telecommunication service revenues, managed VoIP service providers are exploring business strategies in order to compete with the OTT market.²⁷ Some of the strategies (employed by managed service providers such as Telstra) include producing their own OTT VoIP apps.²⁸ Other responses include joint ventures with OTT providers and providing infrastructure required to carry VoIP calls.

Several Australian companies are also offering OTT VoIP services to businesses on a wholesale basis, including cloud-based PABX services. However, like much of the OTT world, geographic boundaries bear little relevance to VoIP provision, with many companies being global entities.

Voice over LTE—the next development

With the increasing rollout of 4G networks across Australia, providers have been exploring the use of new technologies such as Voice over LTE (VoLTE). VoLTE phone and video calls are made over the 4G LTE network (currently data-only), instead of existing 2G and 3G networks. At present in Australia, 4G services carry data only, with calls from 4G-enabled phones reverting to the 2G and 3G networks.

VoLTE will enable consumers to make voice calls over the 4G LTE network. VoLTE is envisioned to provide higher quality calls and be able to support a suite of communications services such as SMS, video telephone and multimedia sharing during voice calls.²⁹ In addition, VoLTE is said to improve mobile device battery life and mean less complicated billing—which will not distinguish between voice calls and other data usage but instead combine everything. This means voice calls will be seen as data usage, and the number and duration of calls that can be made will depend on the size of each individual's data plan.³⁰

VoLTE is currently being tested by a number of service providers in Australia, and two Australian mobile phone network operators have announced the launch of VoLTE services in 2015:

- > In early 2015, Telstra announced plans to enable VoLTE across its 4G network coverage area by April 2015, with a full commercial launch planned for later in the year.³¹
- > Vodafone has announced successful trials of VoLTE, with plans to make this service available to customers later in 2015.³²

Optus ran trials of VoLTE in November 2013 over its 4G LTE network, but has yet to make any announcement about enabling commercial VoLTE capabilities on its 4G network.³³

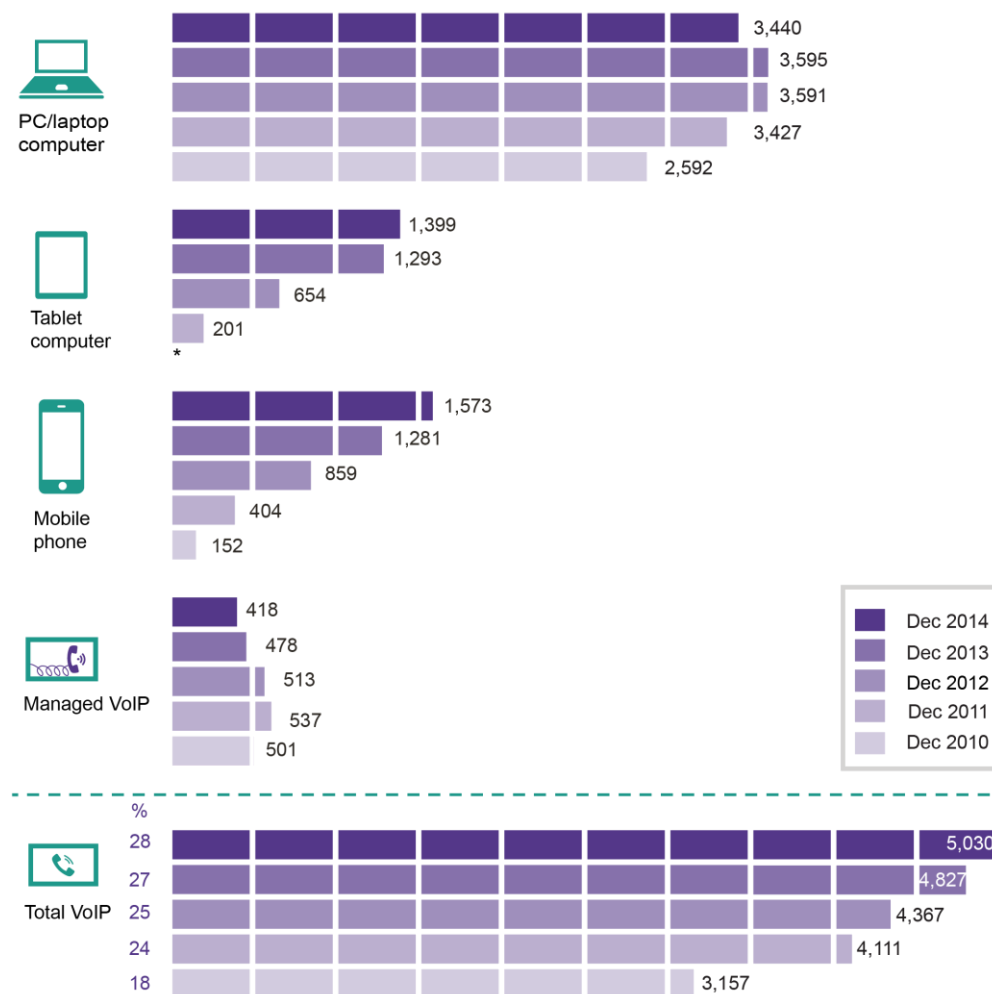
Consumer take-up of VoIP services

How are consumers using VoIP services?

Over the past four years, consumers have been increasingly using VoIP as a service complementary to their traditional fixed-line telephone services and mobile phones. An estimated 6.2 million adult Australians (35 per cent) used a communications app to either make phone or video calls, or send messages, in the six months to May 2014.³⁴

At December 2014, just over five million adult Australians (28 per cent) had taken advantage of VoIP services to make phone or video calls and 21 per cent had a paid subscription to a VoIP service. This is consistent with previous ACMA analysis showing that consumers are increasingly using a range of OTT services and building their own communications access pathways.³⁵ Figure 3 shows the popularity of all types of VoIP.

Figure 3: Type of devices used to access VoIP services



*Data not available for December 2010

Base: People ('000) aged 18 and over.

Note: Those who responded 'Can't say' to the question on type of device used to access VoIP are included in the total. Managed VoIP includes VoIP services accessed via fixed phone handset.

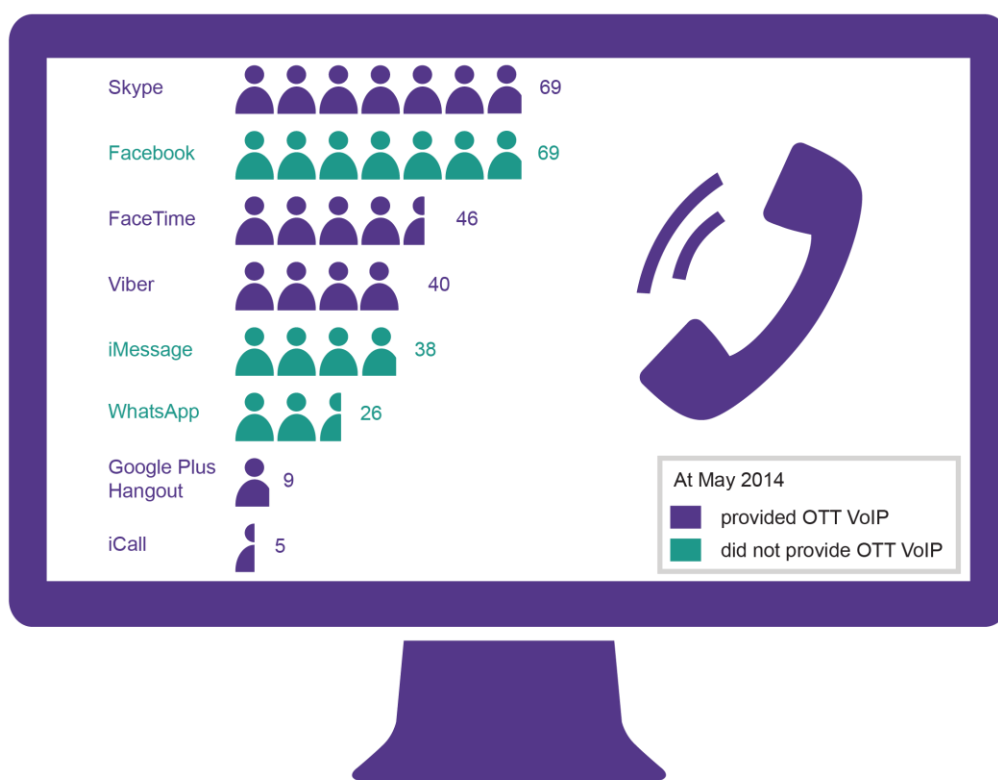
Source: Roy Morgan Single Source.

Communications applications

Consumers are using a range of applications to access VoIP communications. Figure 4 shows the top communications applications used by Australians aged 18 years and over (including voice/video calls and messaging services). Facebook and Skype are equally popular, with each used by 69 per cent of communications applications users. Of the OTT VoIP communications applications used at May 2014, Skype is the most popular, followed by FaceTime (46 per cent) and Viber (40 per cent).

Just over half of those aged 18–34 used at least one type of communications application (increasing from 51 to 55 per cent over the year). This compares to 12 per cent of those aged 65 and over.³⁶ Further information about the increasing popularity of these services can be found in the first complementary report to the ACMA Communications report 2013–14, [Australians' digital lives](#).

Figure 4: Top communications applications used



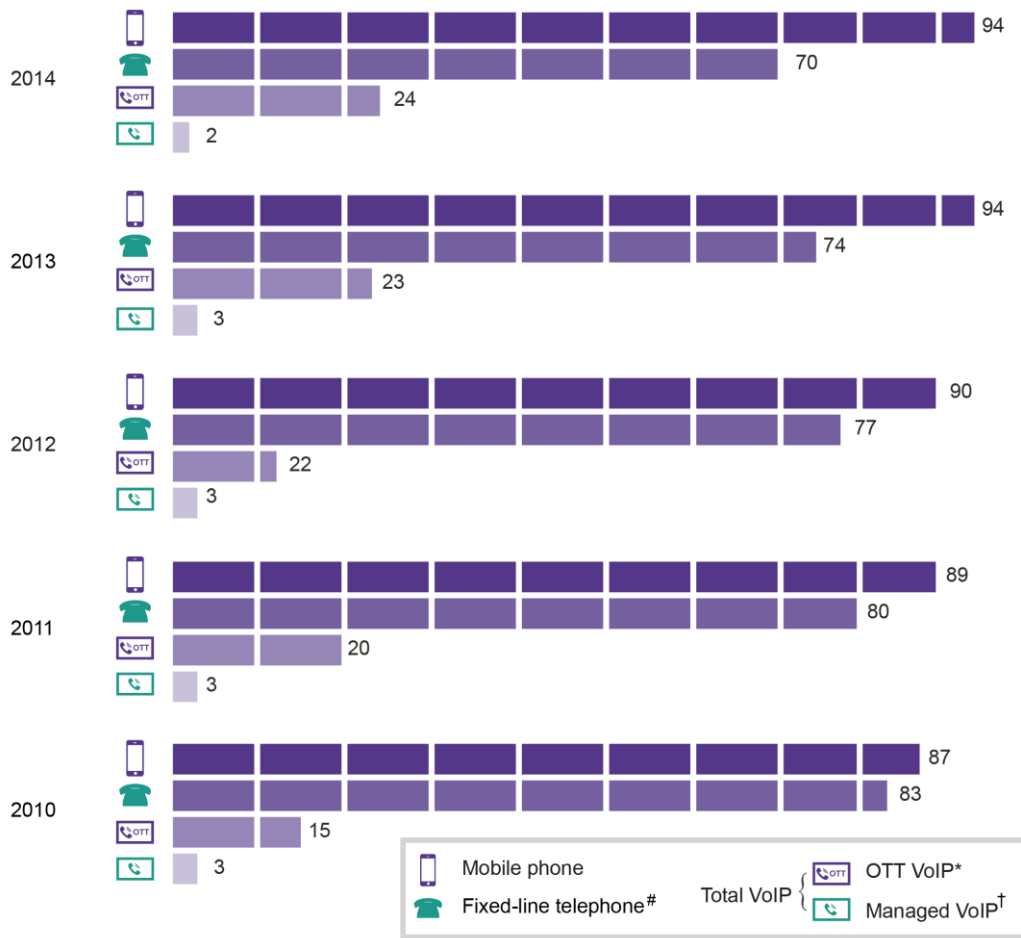
Base: Percentage of people aged 18 and over who used an application to make phone or video calls or send messages in the six months to May 2014.

Source: ACMA-commissioned survey, May 2014.

Communications channels

OTT VoIP services appear to have contributed to the decline in traditional fixed-line telephony. This trend is likely the result of a number of factors—the most prominent being the rise in the popularity of mobile phones (up seven percentage points from December 2010 to December 2014), as well as the increased popularity of OTT VoIP (up nine percentage points in the same period). Figure 5 shows that consumers with a fixed-line telephone decreased from 83 per cent at December 2010 to 70 per cent at December 2014, while consumers using OTT VoIP increased from 15 per cent to 24 per cent over the same period.

Figure 5: Communications services by type



#Fixed-line telephone includes traditional fixed-line telephone and managed VoIP services.

*OTT VoIP includes VoIP services accessed over PC/laptop, mobile phone and tablet computer.

†Managed VoIP includes VoIP services accessed via fixed phone handset.

Base: Percentage of people aged 18 and over.

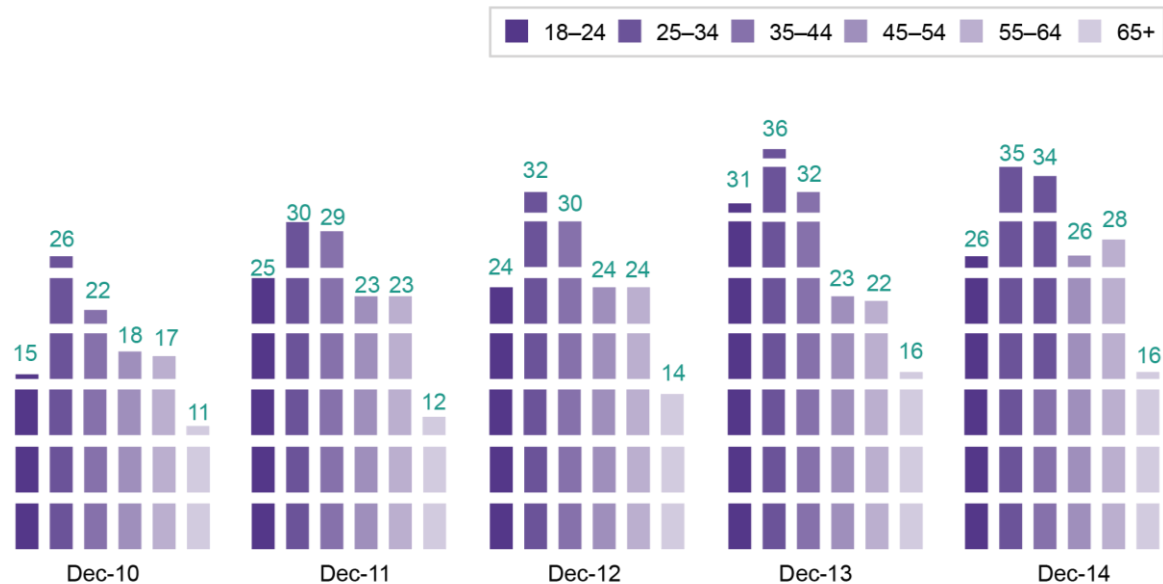
Note: Total VoIP does not include 'Can't say' responses (four per cent of VoIP users responded 'can't say' for type of device used to access VoIP).

Source: Roy Morgan Single Source.

What's age got to do with it?

The use of communications channels for VoIP differs according to the age of the user. As shown in Figure 6, just over one-third of Australians aged 25–44 used a VoIP service at December 2014, compared with 16 per cent of those aged 65 and over.

Figure 6: VoIP users, by age



Base: Percentage of people aged 18 and over.

Note: Includes managed VoIP and OTT VoIP.

Source: Roy Morgan Single Source.

While demand for some types of communications services is in decline, evidence suggests that Australian consumers are diversifying their communications channels, including the use of VoIP services, and this is particularly the case for younger adults. ACMA-commissioned research shows that, on average, six types of communications services were used by those aged 18–24, which is double the average number for those aged 65 and over (three types). Figure 7 illustrates this relationship, with 60 per cent of those aged 18–24 using six or more types of communications services, compared with 52 per cent of those aged 24–35. This falls to 29 per cent for those aged 55–64 and 11 per cent for those aged 65 and over.

Figure 7: Number of communications services used, by age



Base: Percentage of people aged 18 and over who used at least one communications service.

Note: Data less than one per cent not displayed. Numbers may not add up to 100 per cent due to rounding. Types of communications services include mobile phone calls, email, text from a mobile phone, fixed-line telephone call, social networking, VoIP (including Skype), instant messaging and public telephone.

Source: ACMA-commissioned survey, May 2014.

Video calls

Of VoIP services used, making video calls showed a particularly strong relationship with age. Almost half (45 per cent) of internet users aged 25–34 made video calls, decreasing to 14 per cent for those aged 65 years and over (Figure 8).

Figure 8: Proportion of Australians who made video calls, by age



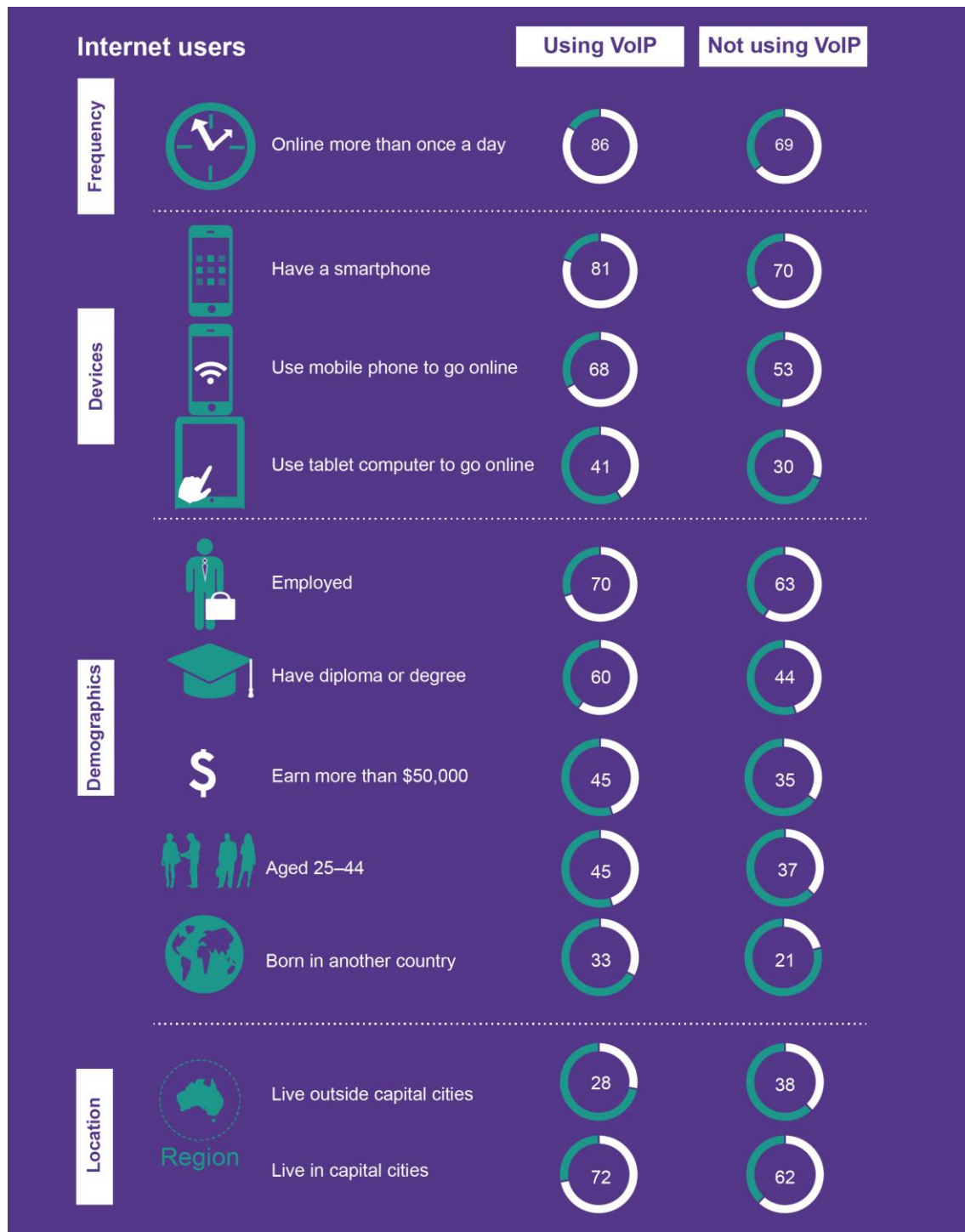
Base: Percentage of Australians aged 18 and over who performed one or more internet activities in the last six months.

Source: ACMA-commissioned survey, May 2014.

A number of other user characteristics are also evident when looking at the profile of VoIP users (see Figure 9). Internet users who use VoIP services are more likely than those who do not use VoIP services to:

- > be degree-educated—60 per cent versus 44 per cent
- > be aged between 25 and 44—45 per cent versus 37 per cent
- > earn more than \$50,000—45 per cent versus 35 per cent
- > go online more than once a day—86 per cent versus 69 per cent
- > use a mobile phone to go online—68 per cent versus 53 per cent.

Figure 9: Profile of internet users who use VoIP services versus those who do not



Base: 'Using VoIP'—percentage of internet users aged 18 and over who use a VoIP service, 'Not using VoIP'—percentage of internet users aged 18 and over who do not use a VoIP service.

Note: Includes managed VoIP and OTT VoIP.

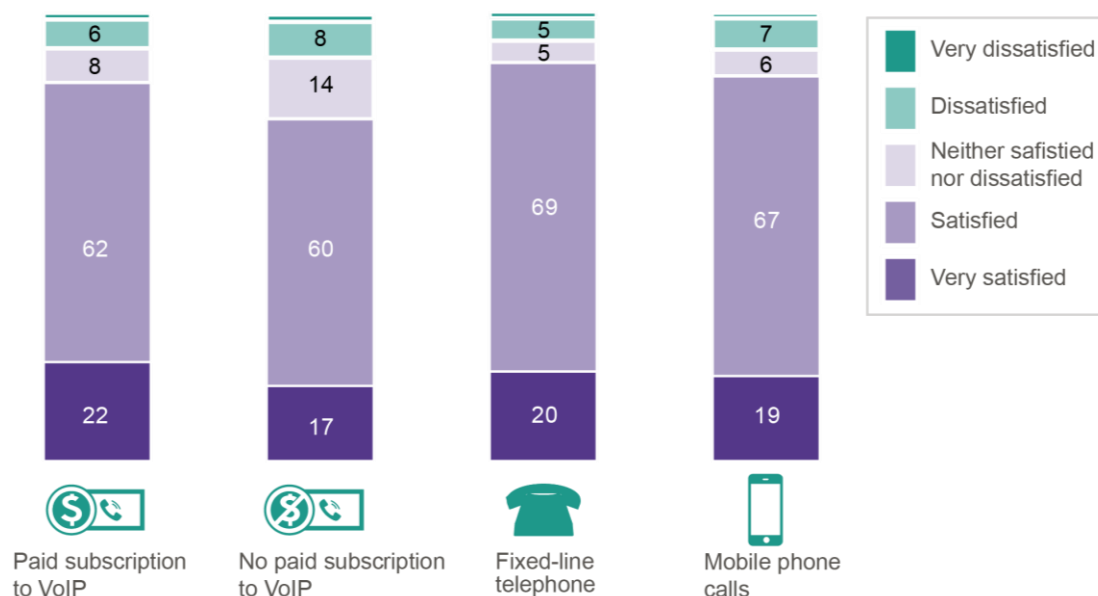
Source: Roy Morgan Single Source, December 2014.

Are consumers satisfied?

As data speeds have increased, so too has the delivery quality of voice and video. However, in comparison to other voice communications services, general satisfaction levels for VoIP services are lower than those for fixed-line telephones and mobile phones.

Figure 10 shows the level of satisfaction with various types of phone services based on research conducted by the ACMA—77 per cent of consumers were satisfied or very satisfied with their VoIP service, compared with 89 per cent for fixed-line telephones and 86 per cent for mobile phones. Satisfaction levels were higher for those with a paid subscription to a VoIP service than for those without—84 per cent of those with a paid subscription to a VoIP service were either satisfied or very satisfied with their service.

Figure 10: Satisfaction with phone and VoIP services



Base: Percentage of people aged 18 and over who have used a VoIP service in the last six months.

Note: Data less than two per cent not displayed. Numbers may not add up to 100 per cent due to rounding.

Source: ACMA-commissioned survey, May 2014.

While general satisfaction data provides an indication of the quality of service, with paid subscribers more likely to be satisfied, more detailed information about satisfaction with different types of paid subscriptions is not available.

Appendix— Research methodology

Data sources

The data contained in this report is from two main data sources:

ACMA-commissioned survey

The ACMA-commissioned survey of consumers was conducted by Newspoll Research in May 2014. The sample was taken from the Australian population aged 18 and over. The ACMA survey was conducted in May 2014 with a sample of 1,800.

The ACMA conducted computer-assisted telephone interviewing (CATI) to both fixed-line and mobile phone numbers. The quota sample for 2014 included two subsets:

- > fixed-line sample of n=1,440
- > mobile phone sample of n=360.

Roy Morgan Single Source

Roy Morgan Research (Roy Morgan Single Source product)—data generally covers changes occurring from January to December 2014 unless otherwise specified.

The research samples were as follows:

- > January to December 2014, aged 18 and over—some 15,245
- > January to December 2013, aged 18 and over—some 17,761
- > January to December 2012, aged 18 and over—some 20,737
- > January to December 2011, aged 18 and over—some 18,131
- > January to December 2010, aged 18 and over—some 18,301.

Australian population

Total population estimates for Australian adults aged 18 years and over are:

- > 18,309,000 (Roy Morgan Single Source—average from January to December 2014)—based on ABS data table 6202.0 *Labour Force, Australia*
- > 17,896,525 (ACMA-commissioned survey—May 2014)—based on ABS data table 3101.0 *Australian Demographic Statistics, March 2014*.

Other sources

The endnotes list other information sources used in this publication.

Data analysis

Results from both data sets were analysed using descriptive analysis techniques, and by socioeconomic and demographic factors, to identify areas with significant patterns or differences.

Endnotes

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