

Deloitte.



Mobile Consumer Survey 2016

The Australian Cut

Hyper connectivity: Clever consumption



Contents



Foreword



Theme 1: *Peak smartphone*



Theme 2: *Internet of things...and they will come*



Theme 3: *Continuous consumption*



Theme 4: *Digitally disrupted*



Theme 5: *Mobile payment and biometrics*



Theme 6: *The phone is not for calling*



Insights: *Under the smartphone spotlight*



Impacts on Industry



Contacts



References

Foreword

It is hard to believe that January next year will mark ten years since the launch of the first full touchscreen smartphone – our most beloved device, personal assistant and constant companion.

The smartphone really is the hero in our story. This year the Mobile Consumer Survey 2016 – The Australian Cut report dives into six key themes at the intersection of our favourite device and the mobile consumer. We also bring to life the core themes of the report through enhanced insights ‘under the smartphone spotlight’ – that further delve into the evolving, hyper connected and cleverly consuming mobile consumer.

The survey looks at the continued rise in smartphone penetration locally and globally – as we head toward a **‘peak smartphone’** environment in Australia. We discuss what will likely be the final up-tick in penetration rates here in Australia, as network operators switch-off their 2G networks, forcing the last remaining feature-phone users to convert to smartphones in the coming year.

The **Internet of Things (IoT)** continues to be a much hyped and anticipated area of interest in both consumer and business technology circles. But all the hype has not yet translated into consumer reality just yet. Connected entertainment devices remain the driving factor to what is still a rather embryonic IoT market in Australia. We are not yet seeing consumers buy-in to or take advantage of the multitude of connected home devices available on the market (for a number of years now).

From a **continuous consumption** perspective, over three quarters of Australians are now on a 4G network which has both fuelled and helped to surge our collective and continuous data appetite. This growing hunger for more data and an always-on mindset is shaping consumer purchasing behaviours and their growing expectation for better quality networks and much larger mobile data plans – all for a lower price.

When it comes to mobile consumers being **digitally disrupted**, we have explored the range of interactions and distractions that effect our daily behaviours and consumption patterns. And without question, we are increasingly being distracted by our favourite device. Australian mobile consumers interact with their smartphone 480 million times a day – that’s a 40 million increase over last year’s survey. We are spending more time with our phone during all hours – including in the middle of the night and in social situations that once would have been a no-phone zone.



Biometrics and mobile payments

are quickly gaining traction with mobile consumers and being seamlessly incorporated into many authentication and payment processes. One in three Australians has a fingerprint scanner on their smartphone. Almost 70% regularly use this capability – a significant and sudden uptake and one that has implications across all aspects of the mobile consumer experience.

We have foreshadowed the ‘slow death of voice’ in prior reports and called out the rise of the ‘data exclusive’. **The phone is not for calling** looks into these trends and how they are continuing to pick up speed here in Australia and globally. This year nearly 30% of mobile consumers do not regularly use their phone to make a voice call. We are however ‘in contact’ and communicating more than ever – through the many data based communication channels enabled by our smartphone including text messages, emails, instant messaging and video calls.

This year, once again, Australians have demonstrated our growing and rather clever ways of consuming more – content, experiences, mobile purchases, communications, and data. Mobile consumers have shown they are increasingly hyper connected and require devices, applications and networks to keep up with our ever expanding expectations.

We hope that you find this year’s set of insights useful, and we welcome further conversations based on the content included in the report or to explore the full data sets available from the survey.

It’s great to connect.



Jeremy Drumm

TMT Partner, Consulting,
Monitor Deloitte
jdrumm@deloitte.com.au

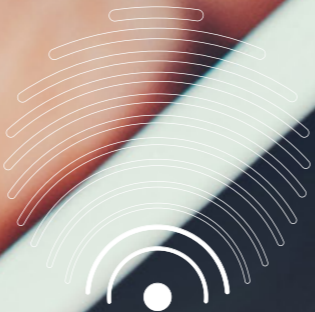


Stuart Johnson

Partner, National TMT Leader
stujohnston@deloitte.com.au

On the navigation bar to the right, click on **T** for Themes or **I** for Insights to start your journey





THEME 1
PEAK SMARTPHONE



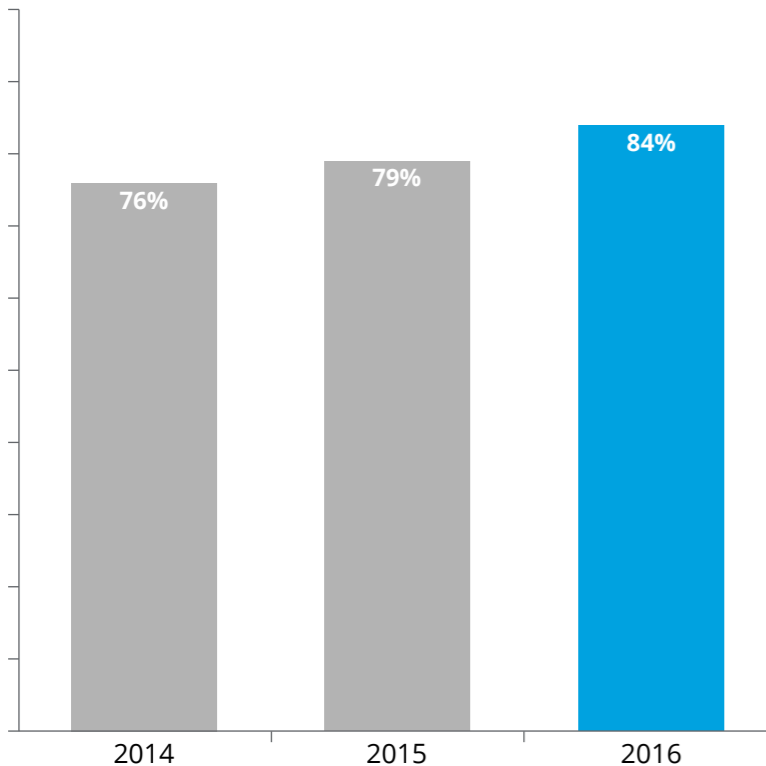
The smartphone approaches the perfect peak

Smartphone penetration in Australia is approaching its peak with penetration rates likely to slow in the years after 2017. Smartphone ownership rose to 84 per cent this year. However, we expect this to plateau over the coming 12 months after the remaining feature phone owners are forced to convert to smartphone following the 2G shutdown by each of Australia's major mobile network operators.

Notwithstanding Australia approaching peak smartphone, the replacement market is likely to remain healthy – estimated from our survey at 5 million sales per year. Given the roughly 16 million smartphone base and with mobile consumers replacing their smartphones on average every 3 years the smartphone market in Australia will remain attractive for the foreseeable future.

Which, if any, of the following devices do you own or have ready access to?

Smartphone ownership



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All survey respondents 2006

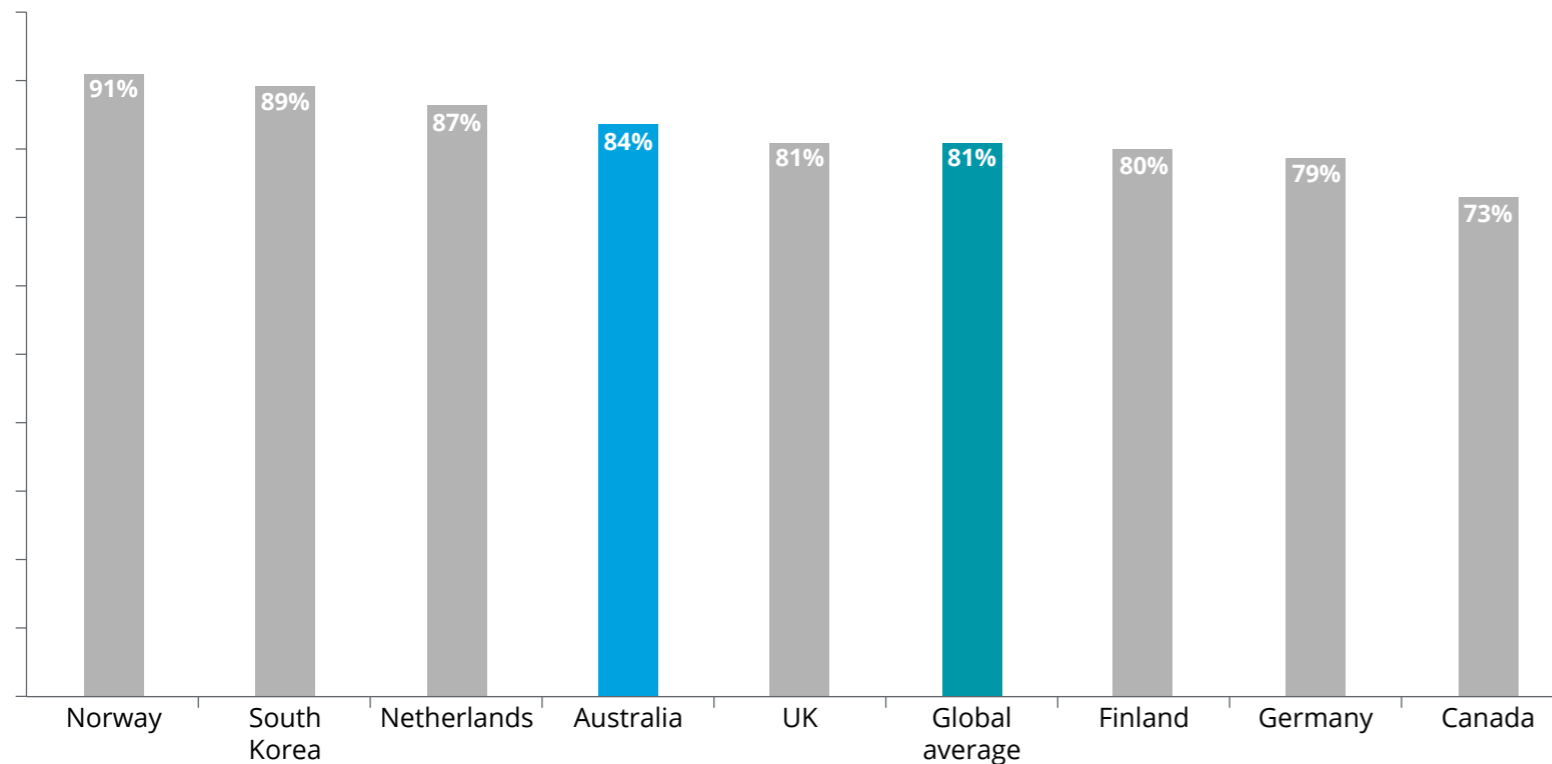


Peak smartphone | The smartphone approaches the perfect peak

It is no surprise that younger mobile consumers are smartphone hungry. 94 per cent of mobile consumers aged 18-24 have a smartphone (increasing from 91 per cent in 2015), highlighting the importance this demographic places on being connected and mobile.

Australian smartphone penetration rates are higher than the global average of 81 per cent with only a few countries in our global survey having higher ownership.

Which, if any, of the following devices do you own or have ready access to? Global smartphone ownership (selected countries)

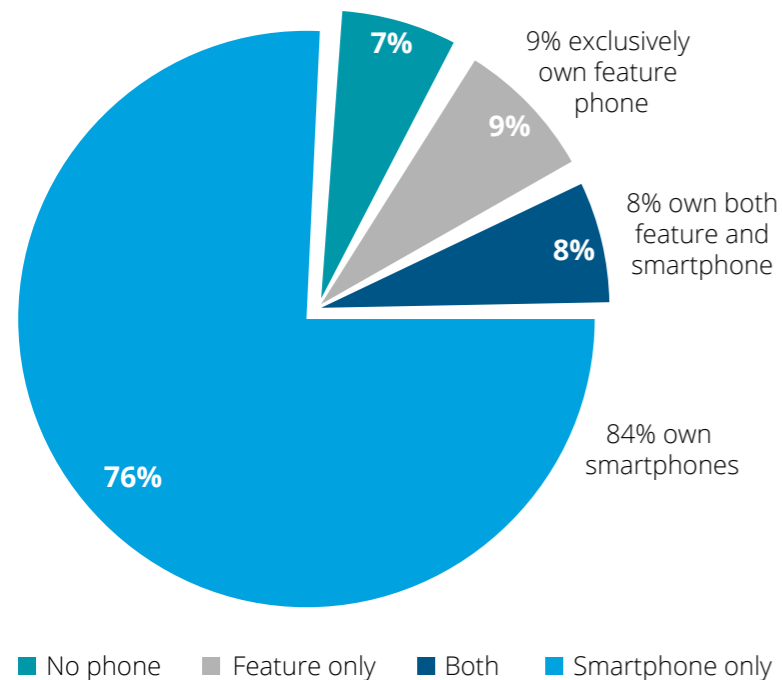


Ready. Set. Switch!

The countdown has begun for Australia's 20 year old 2G networks, also known as the GSM network. Occurring from December 2016¹, our GSM networks will be gradually switched off by the network operators following the trend in South Korea and Japan. The US is due to shut down their GSM networks by the end of 2017.

Which, if any, of the following devices do you own or have ready access to?

1 in 5 Australians will be impacted by the phase out of 2G



GSM was the second generation of mobile technology after analogue, and on it we saw innovations such as international roaming, SMS texting, and the early mobile internet. Some carriers indicate that today the 2G network carries less than 1 per cent of its total network traffic, and that they have not sold a 2G handset in a number of years.

Despite the impending 2G shutdown, up to 17 per cent of Australians are still relying on a feature phone, 9 per cent exclusively (i.e. they only own and use a feature phone). All of these users will be impacted to some extent, many needing to purchase their first smartphone or rely on a hand-me-down when the networks are switched off.

Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All survey respondents 2006

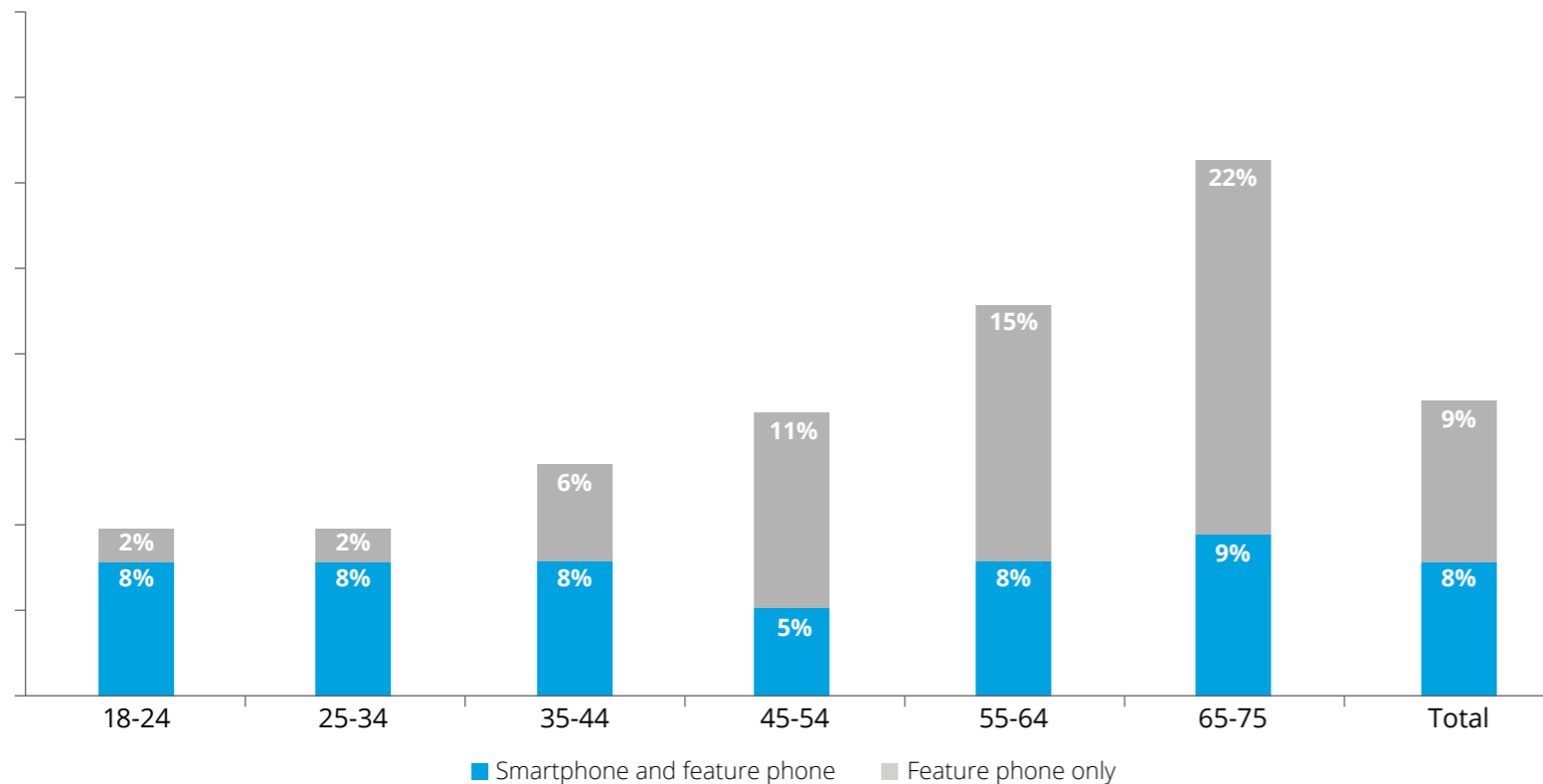


Peak smartphone | Ready. Set. Switch!

Mobile consumers over 55 will be the most impacted, with 15 per cent of consumers aged 55-64, and 22 per cent of consumers over 65 currently using a feature phone only.

We do expect this shutdown to result in the last bump in smartphone ownership in Australia before it plateaus.

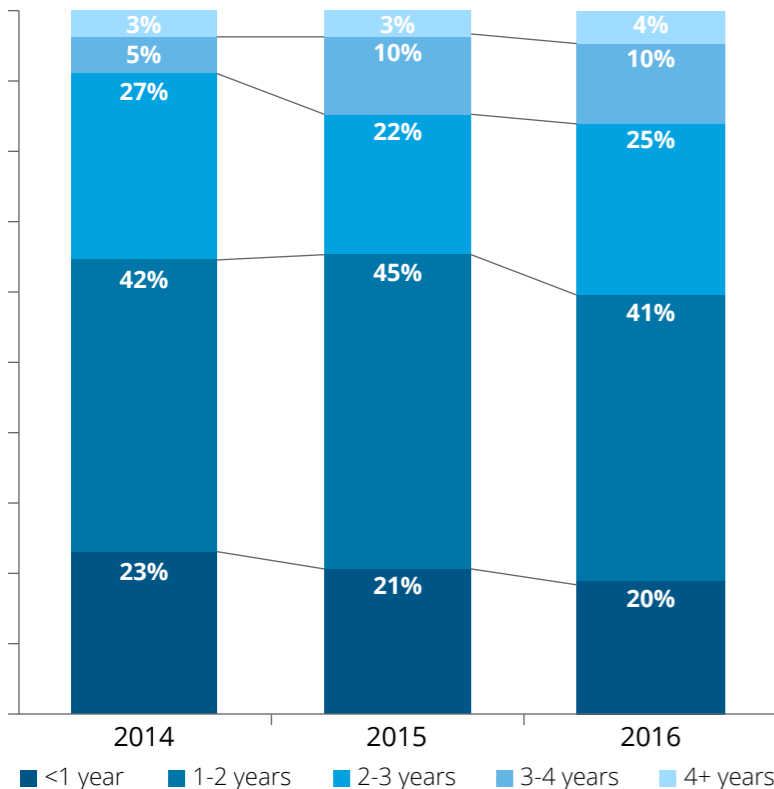
Feature phone ownership by age



Out with the old, in with the new?

While smartphone penetration is plateauing, the replacement market remains healthy – albeit a little less vibrant than in prior years. World wide smartphone shipments at 363 million for the third quarter of 2016 saw just a 1 per cent year-on-year growth.² The saturation of the smartphone market is a worldwide phenomenon, and is probably most pronounced in developed countries, such as Australia.³

When did you buy or receive your current phone?
% distribution of replacement cycles



A key challenge for smartphone vendors is that while the pace of innovation from a supplier’s perspective may remain as fervent as ever, the changes may be less perceptible to, or valued by, consumers. With each year, the smartphone has moved closer to its optimal combination of size, weight, features and performance.

The latest releases of smartphones are starting to look and feel homogenised. As a consequence there are arguably now fewer visual cues to signify ownership of the latest model of smartphone, unlike in previous years. The consequence is that smartphone owners may no longer feel the same compulsion to upgrade to the latest device, so long as operating system upgrades continue to deliver new applications, features and enhancements.

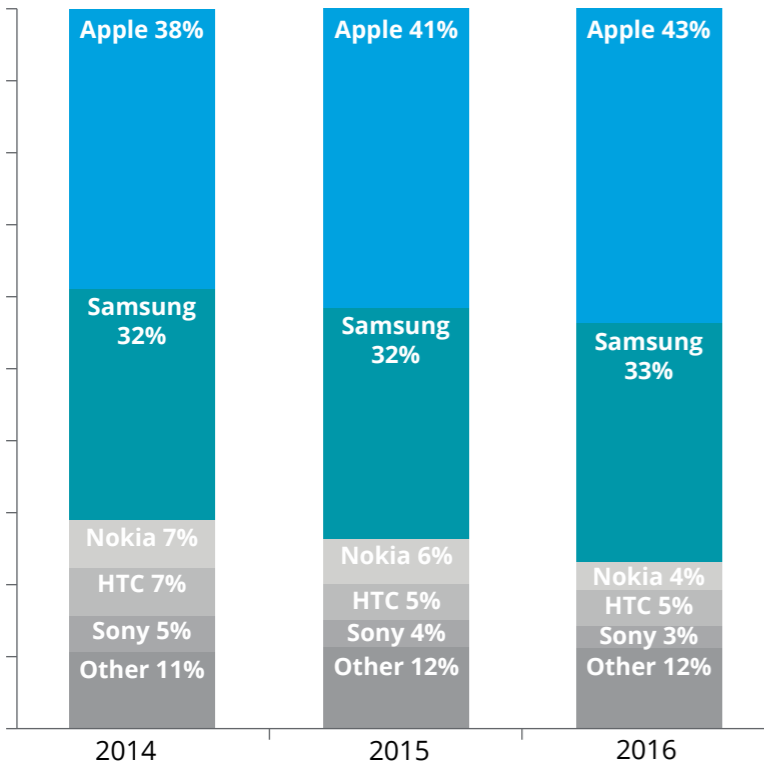
Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
 Base: All smartphone owners 1681



Survival of the fittest

And then there were two. Looking at the smartphone market share in Australia, Apple device ownership has grown again to 43 per cent and Samsung up to 33 per cent, demonstrating the power of both brands. Nokia, Sony, Huawei and HTC combined represent just 12 per cent of the market, raising questions as to whether or not they will persist in such a competitive and relatively small market.

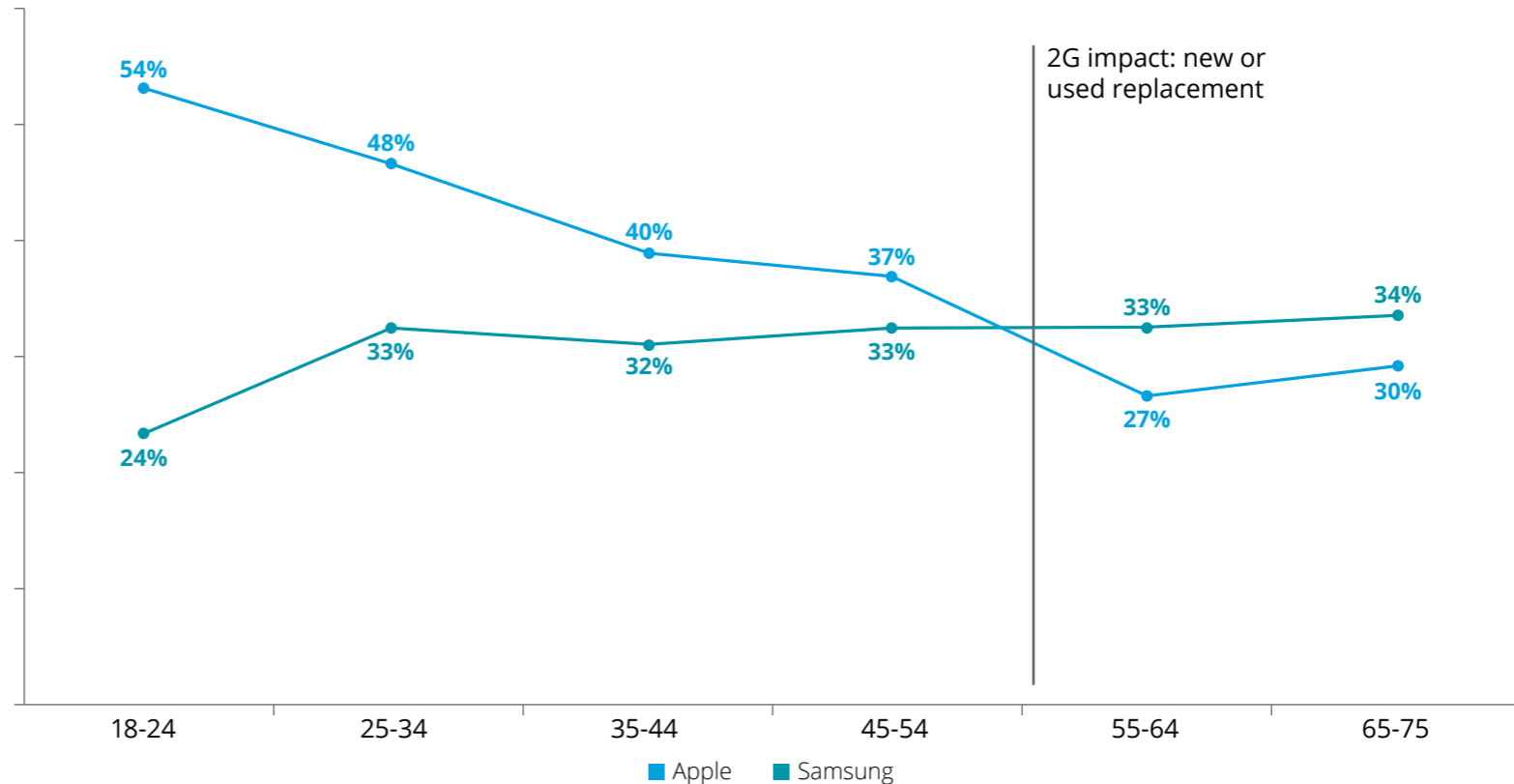
Thinking about your smartphone, what is the brand of your current handset?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681

Samsung has had greater success with over 55 year old consumers in Australia. With this age bracket being most affected by the 2G transition, we could see a rise in Samsung market share as a result. However, recent issues with the batteries in the Galaxy Note 7 may provide a glimmer of hope for other device manufacturers.

Thinking about your smartphone, what is the brand of your current handset?



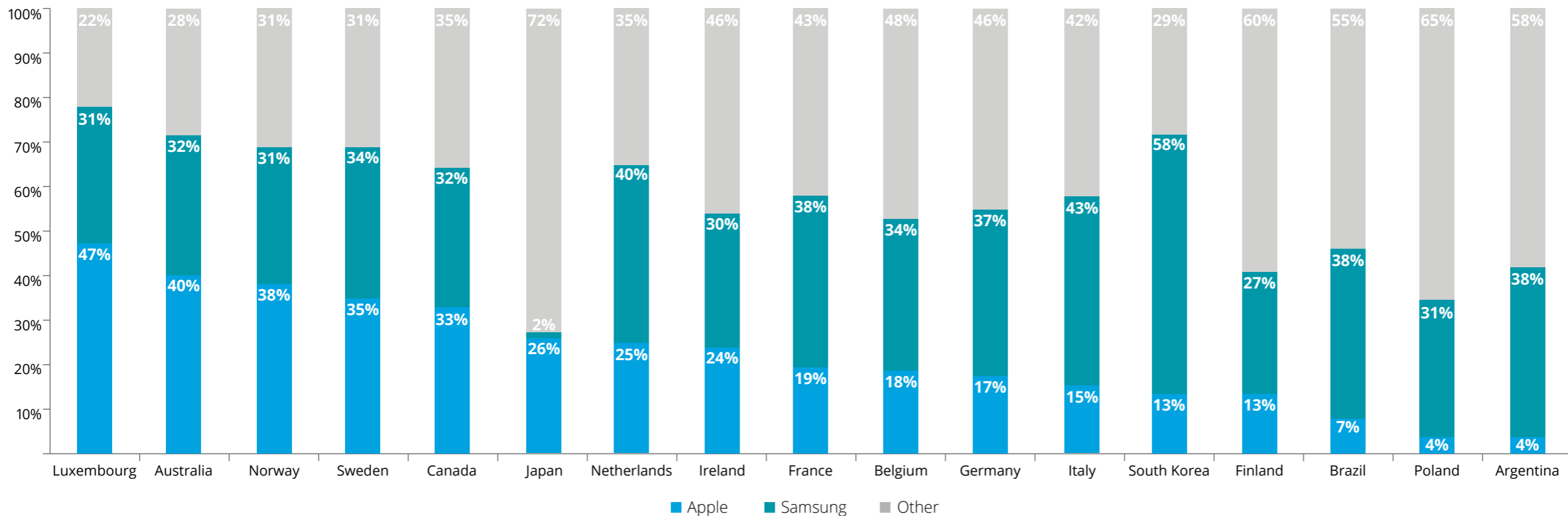
Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681

Android continues to dominate the global operating system race with 84 per cent share of mobile devices, including Samsung, HTC and Nokia.⁴ Apple's IOS by contrast has just 15 per cent global market share, and is only used within the Apple ecosystem.



Looking globally the 'Sa-pple' dominance is present in most markets, however, only Luxembourg has a higher combined Apple + Samsung in-country market share compared to Australia.

Thinking about your main phone, what is the brand of your current handset? (All phones)
Apple vs. Samsung globally



Source: Deloitte Global Mobile Consumer Survey, 2016
 Base: All survey respondents 2006



Second hand farmers market

Compare that desk drawer where you stash old handsets with the farm-shed full of old and rusty equipment and tools. It seems that even if we know we can make some money from our old mobile devices, monetisation of them remains low in Australia.

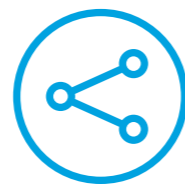
Just 1 in 10 Australian mobile consumers are choosing to participate in the second-hand phone market, lagging the global average of 15 per cent and less than half that of the 22 per cent of UK mobile consumers making some money from an old device prior year's device. The majority of Australian consumers prefer to save their old device (47 per cent), or they have shared their old device with family or friends (28 per cent).

The smartphone resale market still has room to grow in Australia, and with a number of resale companies available to us, we would expect mobile consumers to take advantage of what is a \$17 billion global marketplace.⁵

What did you do with your previous mobile phone when you last upgraded? (Selected countries)



Saved it



Shared it



Binned it (recycled)



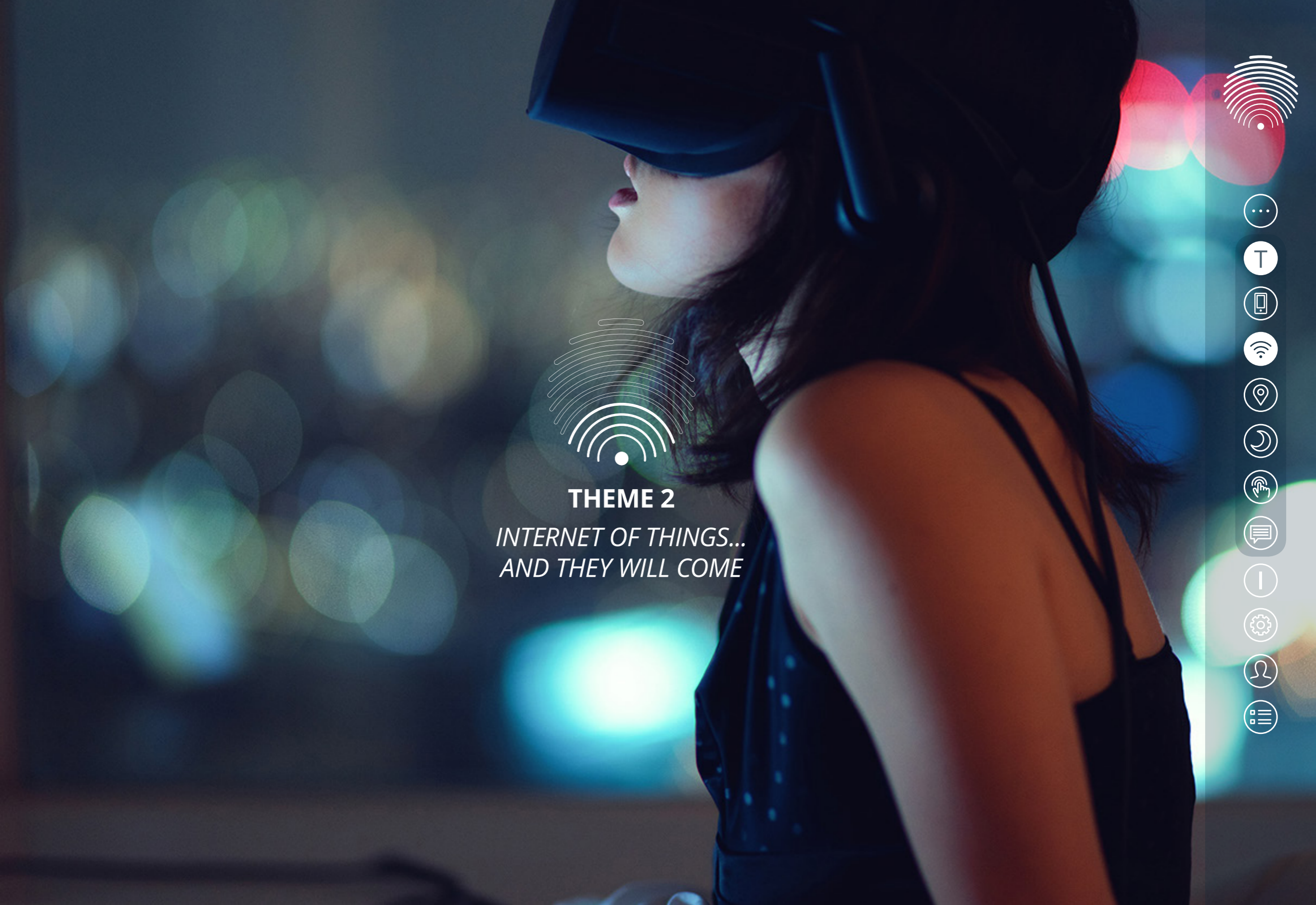
Sold it



Lost it

	47%	28%	13%	10%	2%
Australia	47%	28%	13%	10%	2%
UK	48%	20%	9%	22%	1%
Japan	49%	5%	14%	31%	1%
Canada	49%	15%	19%	15%	2%
Global	49%	23%	10%	15%	3%





THEME 2

*INTERNET OF THINGS...
AND THEY WILL COME*



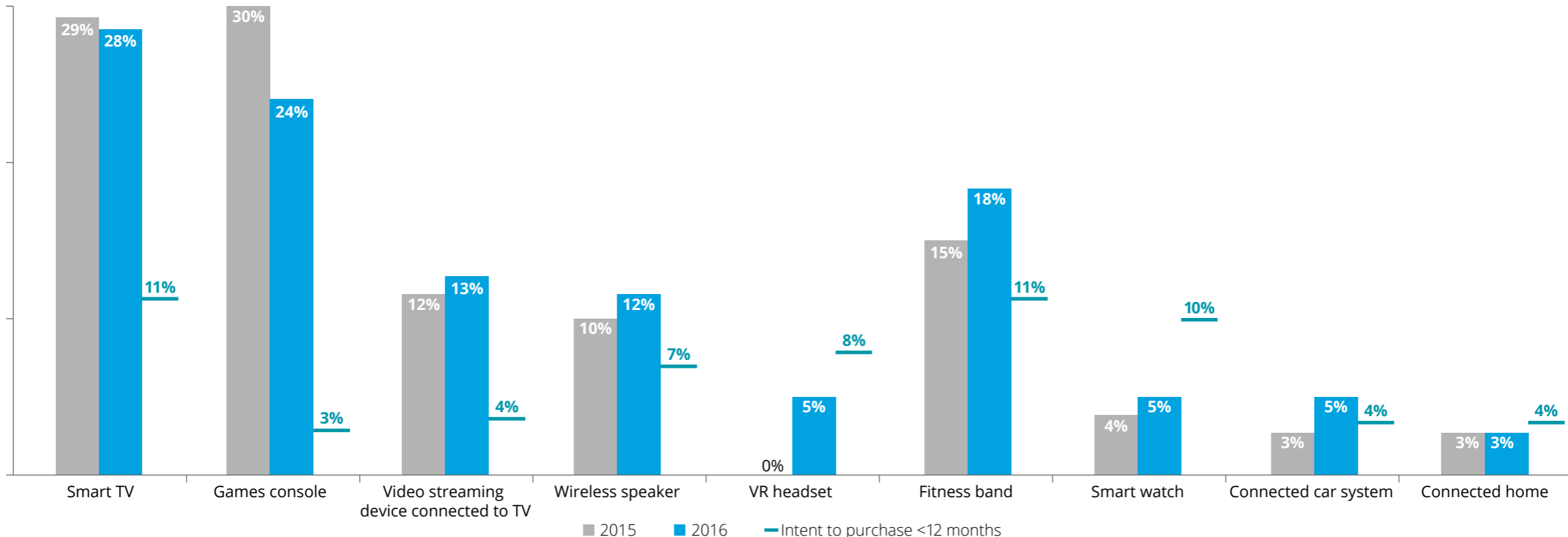
Connected entertainment drives consumer IoT spend

The utopian vision often portrayed of an Internet of Things (IoT) enabled world is still just a vision. We are believers in this vision, one in which people are consuming less energy, are healthier, are safer, and have more time to spend with family and friends.

Who wouldn't want to buy-in to this vision? But in this case it is not as simple as 'build it and they will come'. All of the devices required to achieve the vision exist and are on sale now, and in some cases have been for years. Yet we are still not seeing the surge in demand for connected devices that we may have expected.

For the second year, the connected entertainment device market remains the primary driver of consumer IoT growth with just under 30 per cent of Australians owning Smart TVs or gaming consoles. There was no growth in the connected home device market this past year with just 3 per cent ownership. Only 4 per cent of consumers intend on making a connected home device purchase in the next year.

Which, if any, of the following devices do you own or have ready access to?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All survey respondents 2006, VR headsets; Mid to High range only



Consumer adoption of connected entertainment devices are supported by the fact that they are effortless and easy to manage. Games consoles incorporate advantageous features such as automated software updates and online tournaments which enhance the consumer experience. Smart TVs allow users to stream libraries of content without leaving the couch. Online gaming and social media has driven adoption of connected entertainment, and the strong uptake of Streaming Video On Demand services in Australia since the arrival of Netflix has seen many consumers using the capability of their connected entertainment systems to a greater extent.⁶

From an enterprise perspective, IoT allows businesses to harness the power of monitoring, tracking and reporting. Take for example a mining company who has all their valuable assets tagged in order to assess performance, efficiency and productivity – meaning that a drop or rise in a certain result can trigger management to respond.

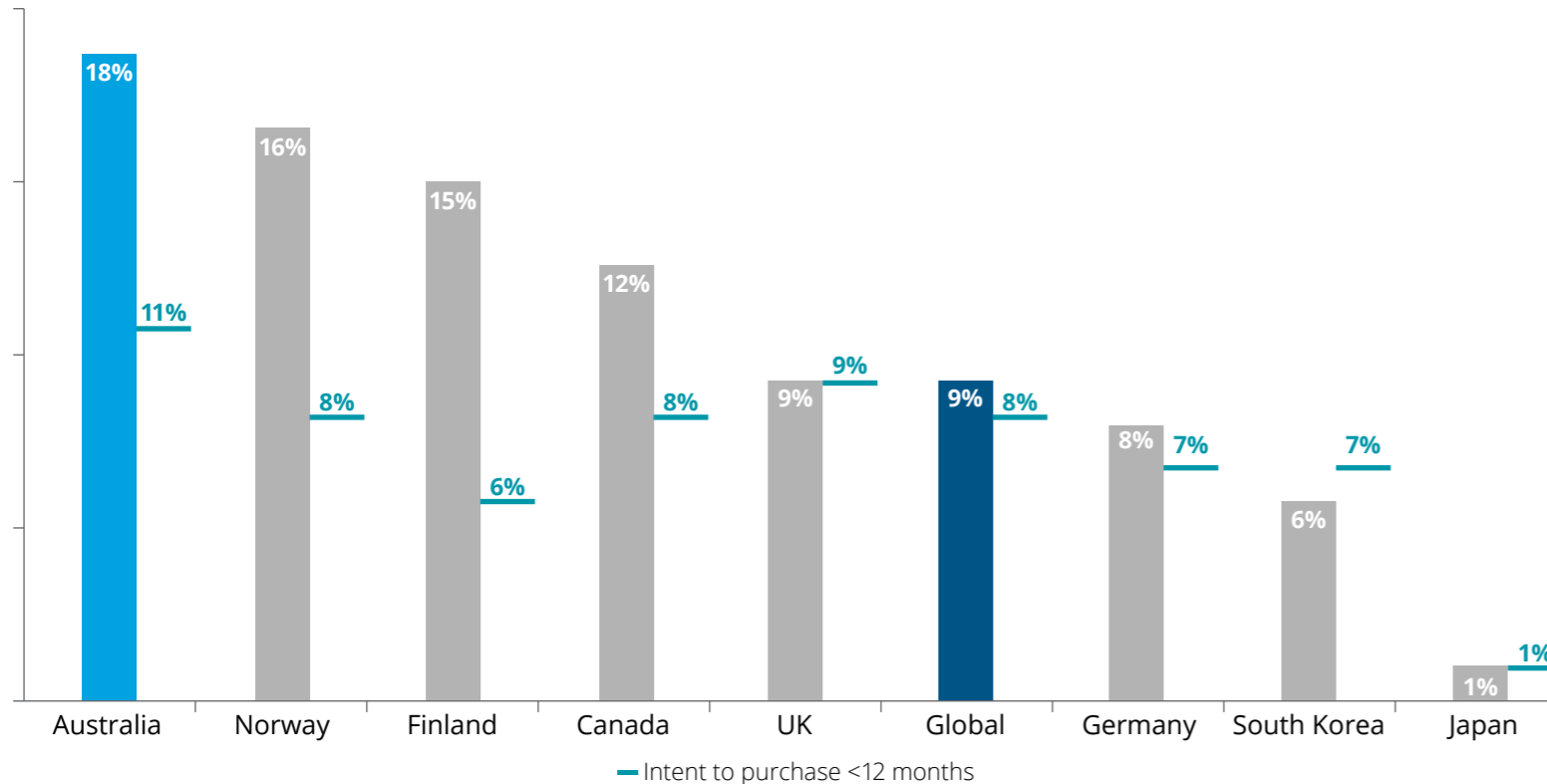


A step ahead

Australians lead the world in terms of fitness band adoption, with 18 per cent of us sporting our chosen tracker. This is double the global average of 9 per cent, highlighting just how much of an outlier we are with respect to our love of fitness. The closest other countries are Norway (16 per cent), Finland (15 per cent) and Canada (12 per cent).

Even more surprising is that 11 per cent of us intend to purchase a fitness band in the coming year, which is again, the leader globally when compared with those countries surveyed. Three quarters of respondents indicating they intend to buy a fitness band do not currently own one, suggesting that next year penetration could exceed 25 per cent. Clearly Australian's love being a step ahead.

Which, if any, of the following devices do you own or have ready access to? (Fitness band)
(Selected countries)



Home seamless home

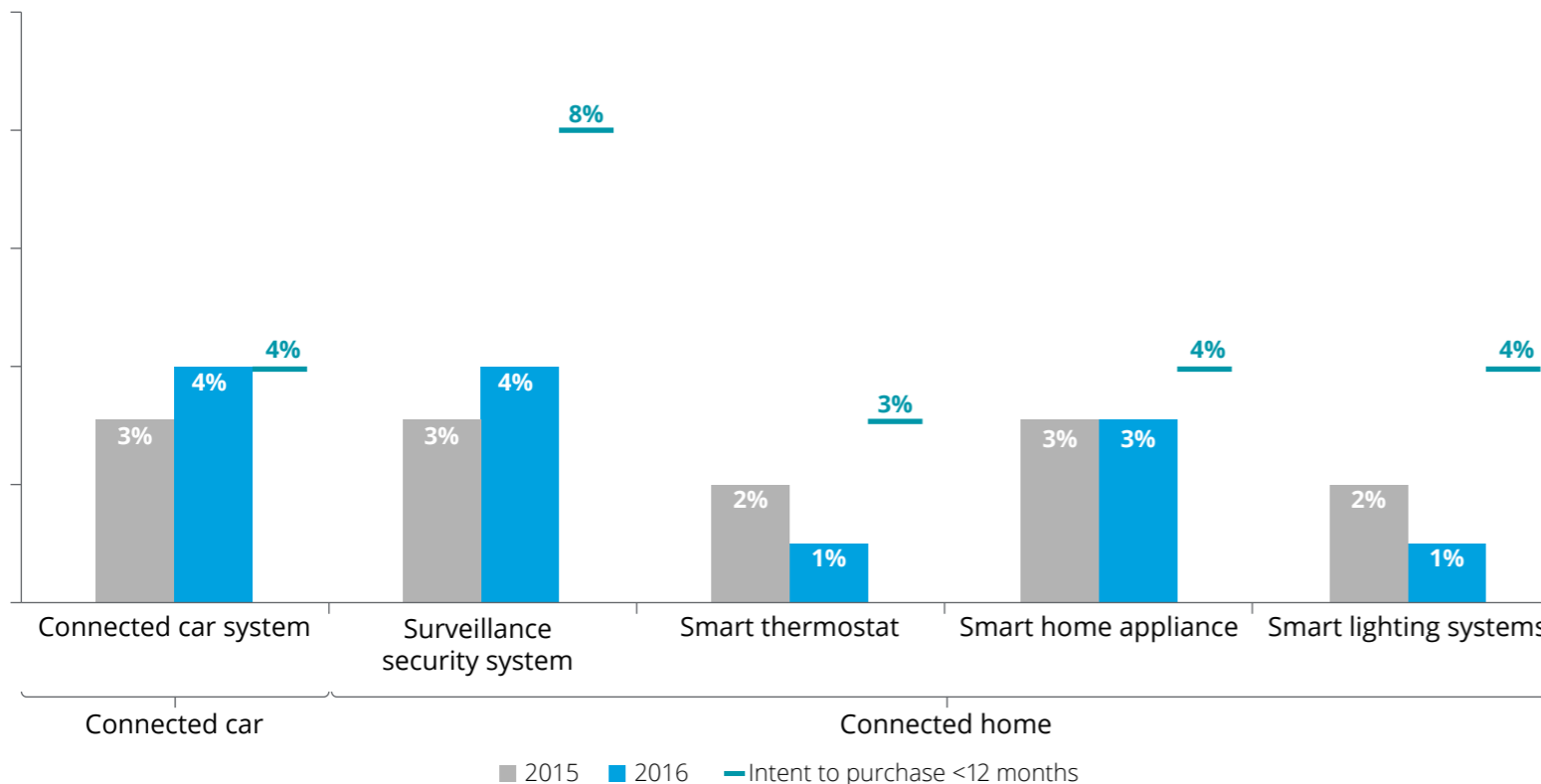
In the connected home category, we haven't seen much, if any uptake this past year. The smart connected security system market has risen to 4 per cent with a further 8 per cent of consumers noting they do intend on making a purchase in the next year. Smart appliances remain at 3 per cent; smart thermostats and lights declining to 1 per cent.

With many of the connected devices having been on the market for years – the first connected fridge went on sale 15 years ago – the question device manufacturers should be asking is 'are Australian consumers oblivious to IoT devices or are they simply indifferent to them?'

One simple explanation is that despite consumers understanding the potential benefits of connected devices they do not yet 'need' them. Being able to use your smartphone to turn your house lights on or off, or arm your home security system from the airport because you forgot to on your way out would be great, but clearly not compelling enough for more than 96 per cent of Australian mobile consumers who have not yet purchased a connected home device.

It seems that for many of us the value proposition promised by IoT in the home is simply not yet worth the revolution to our current way of living, and for most, it won't be until a major home renovation project that we will see broader adoption of technology into our homes.⁷

Which, if any, of the following devices do you own or have ready access to?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All survey respondents 2006





THEME 3

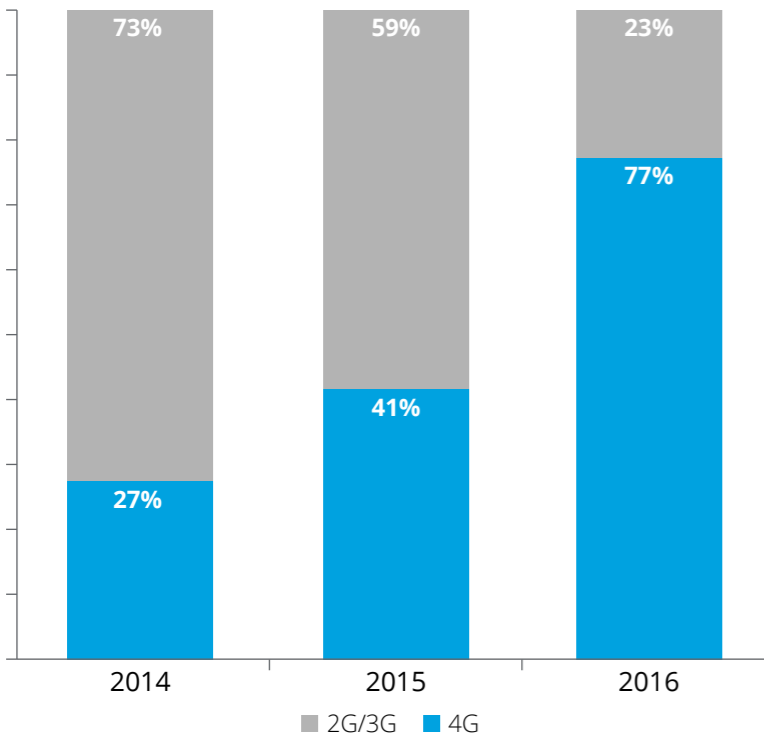
CONTINUOUS CONSUMPTION



Gearing up for gigabit mobile speeds

In June 2016, the first 500 megabit per second (Mbit/s) mobile broadband services were launched in South Korea, with a gigabit per second (Gbit/s, equivalent to 1,000 Mbit/s) service planned for 2019.⁸ Delivering a Gbit/s connection over a mobile network is a phenomenal technological achievement. However, when it goes live, it may be met not only with acclaim but also with questions over the need, and commercial viability, of such high speeds.

Is your mobile on a 4G network?
% of subscribers on 4G/LTE subscription



More than three quarters of Australians surveyed now have a 4G connection, with peak headline speeds approaching 100 Mbit/s across parts of the country, which is much lower than the 360Mbit/s mobile consumers have on offer in South Korea.⁹ It does raise the question of who will benefit from such speeds?

Although today it may seem far-fetched that there will be demand for a 1 Gbit/s service to smartphones, the availability of much faster mobile broadband speeds – as has been the case historically – will undoubtedly expose unseen and unmet needs, not least of which could be by-passing fixed line broadband services completely.

Will the need for speed ever be satisfied?

One key indicator of Australian mobile consumers' appetite for faster mobile speeds is the pace of adoption of 4G. Two years ago, just over a quarter of our survey respondents had 4G. Last year, adoption had risen to 41 per cent. This year it surged to 77 per cent. Mobile consumers and businesses have benefited from the increase in speed and quality of connectivity. Although we may question the need for a 1 Gbit/s mobile connection now, none of us could have predicted the unprecedented behaviours we are witnessing in mobile consumers across all age categories, be it 'live-streaming' an egg and spoon race at a sports day, to scavenging around major cities collecting digital artefacts on your smartphone, or consuming an endless stream of your favourite shows or random cat videos. Perhaps, unlike IoT, in this case if the network operators build it, we will come, smartphone in hand.

Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681



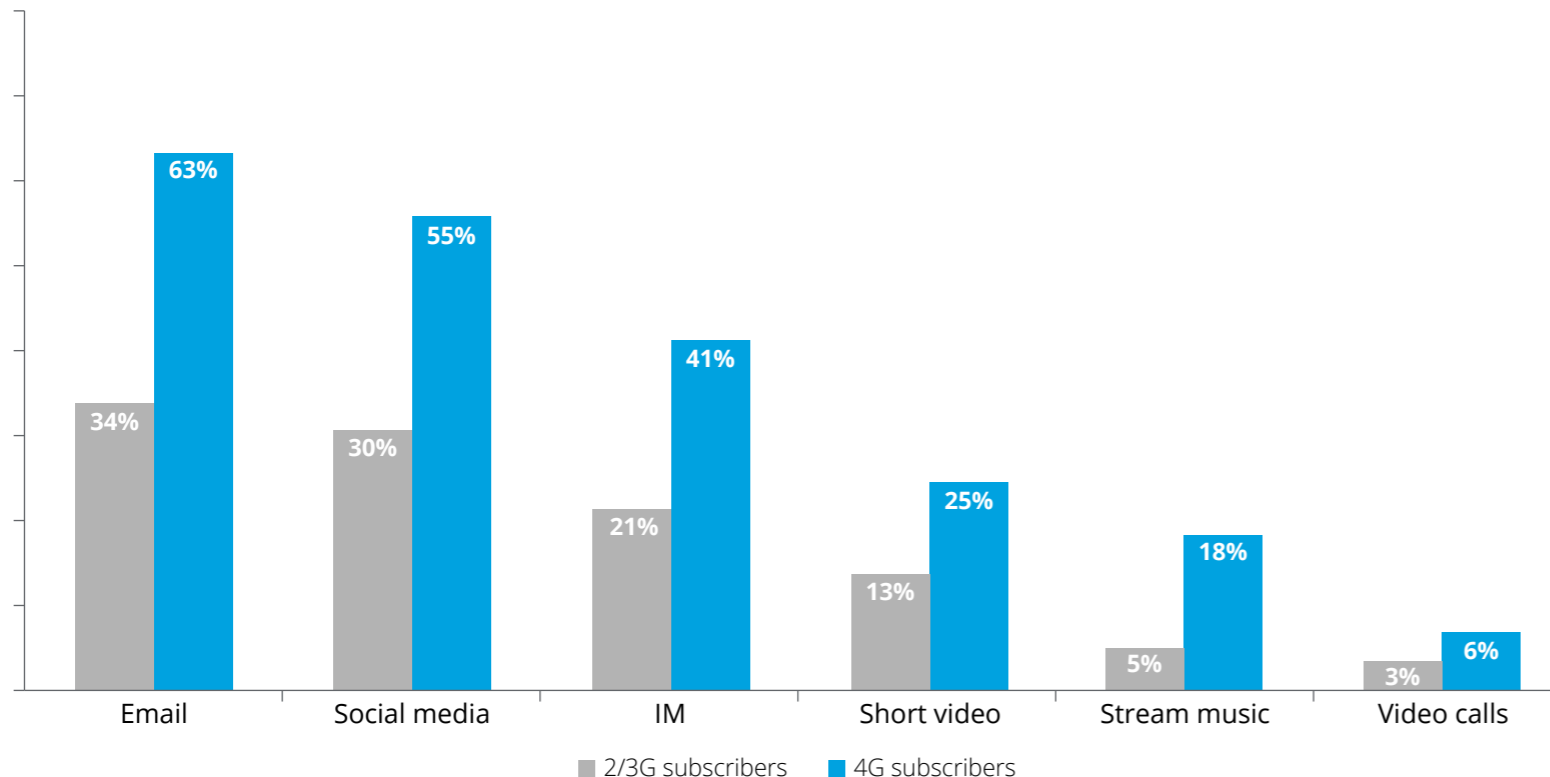
Smartphone check, 4G check, what now?

Australians on 4G mobile plans consume twice the amount of content compared to non 4G subscribers. There's an expectation that one should be able to watch videos, download documents, email and interact with content seamlessly – without the need to second guess whether it's possible within your current data plan.

Email, social media and instant messaging our most favoured activities on our smartphones. Looking at additional categories such as watching short videos, streaming music, and video calling, 4G subscribers use about twice the amount of data as 3G subscribers.

This level of consumption would not be possible without quality 4G networks, combined with advanced smartphone devices, plus the improvements made in over-the-top (OTT) platform providers' ability to curate and deliver relevant and timely content and an enhanced consumer experience.

**Which of the following do access daily?
Daily usage 2/3G vs. 4G**



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All survey respondents 2006, select responses from various questions

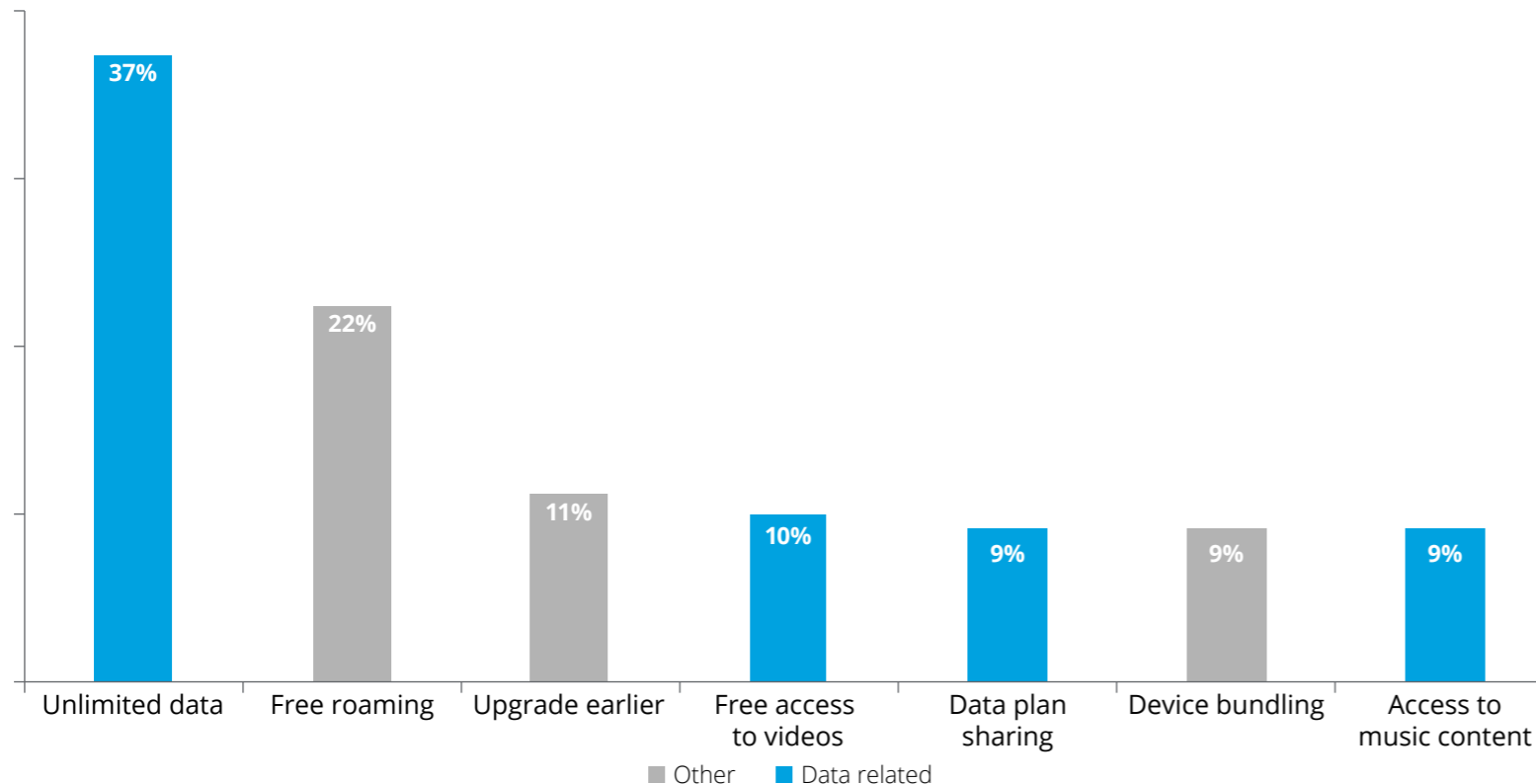


The curse of the dreaded bottleneck

1 in 5 smartphone users often go over their data plan limit, with trailing millennials 8 times more likely to blow their plans than those over 50.¹⁰ The \$10 top-up is now an industry standard and seems to have proved successful with users alleviating the fear of data plan and bill shock.

Regardless of this apparent acceptance of the \$10 top up, more than a third (37 per cent) of us would like to add 'unlimited data' to our current mobile plan, and 1 in 5 consider 'unlimited data' a feature they would consider changing operators over. This would suggest that many Australians are feeling constrained by the data allowances they have in their plans.

Which feature(s) would you like to add to your package? (% of respondents)

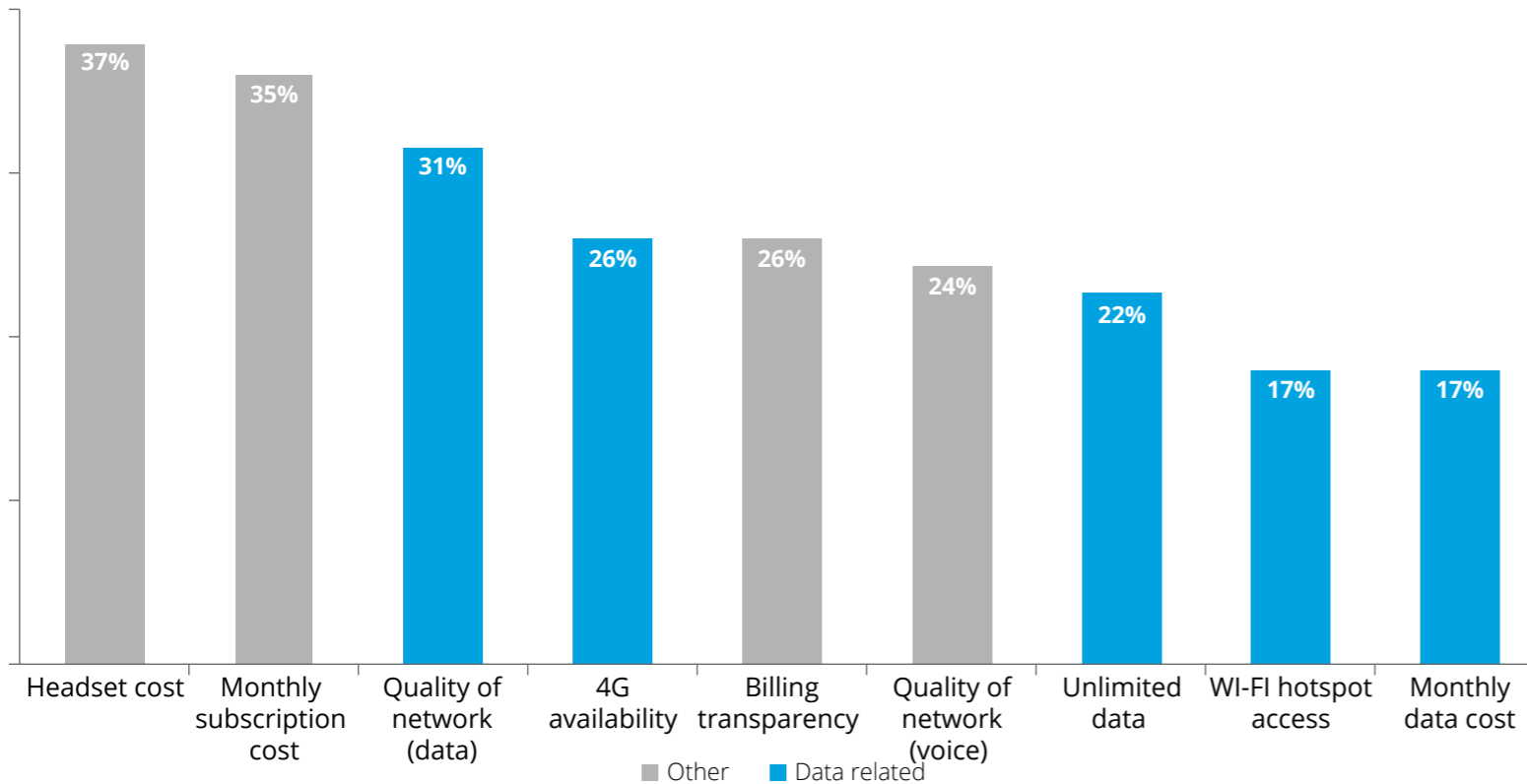


Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681





Which feature(s) would you consider when changing providers? (% of respondents)



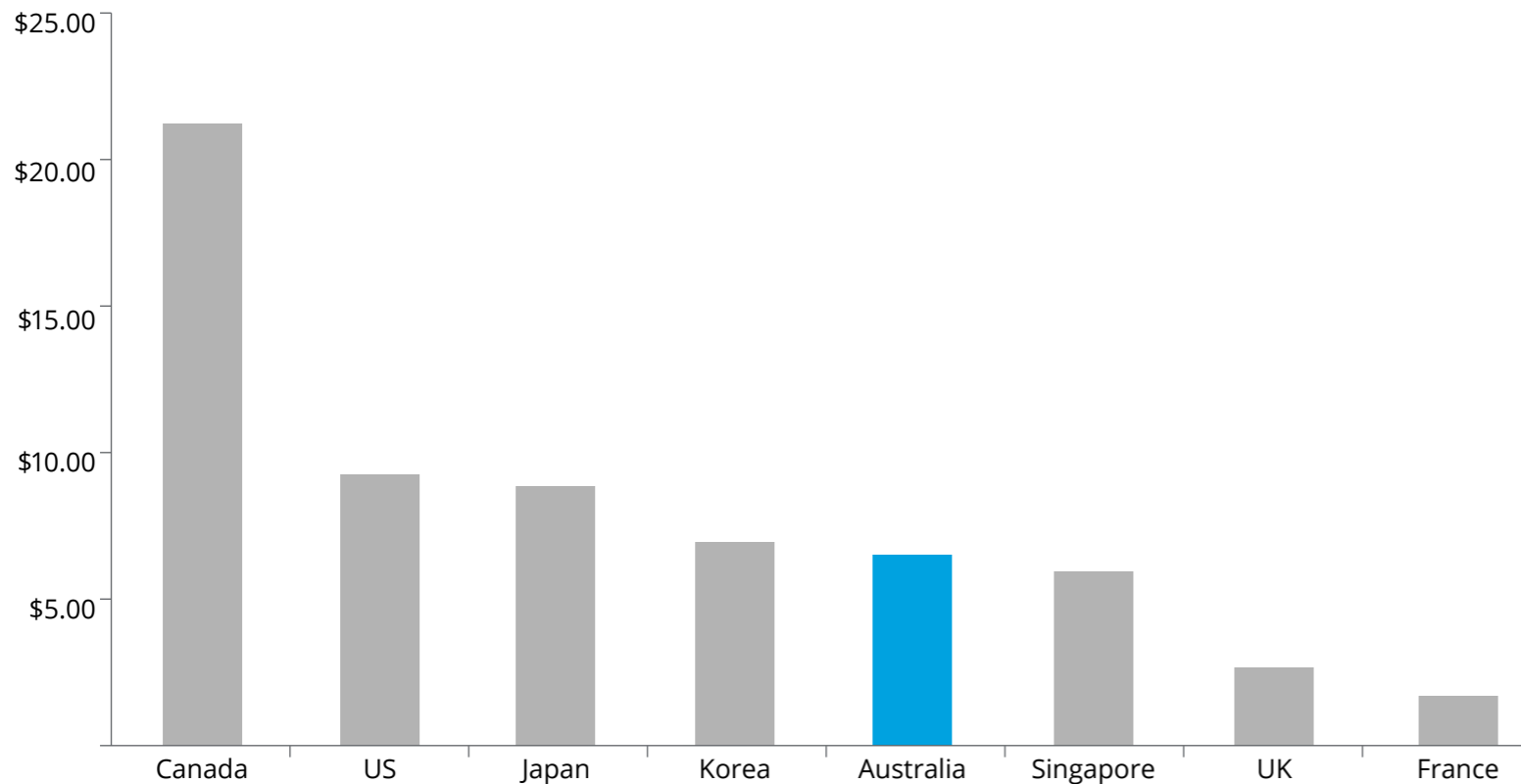
Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
 Base: All smartphone owners 1681

Continuous consumption | The curse of the dreaded bottleneck

Mobile network operators have started to respond to this consumer preference and all now use data plan size as the product headline to capture data-hungry consumers. Gone are the days of the '300 min plan', it is now the '5 GB plan'. But how does this compare globally?

Over the past 6 months data plan sizes have begun to creep up, and where a year ago the typical \$80 plan had 3-5 GB of included data, \$80 plans are now typically 8-10 GB. In comparison, today in the UK subscribers can get 25 GB for £25 (AU\$40).

Selective country mobile data plan cost comparison (\$AU per GB)



Source: Deloitte Desktop research, based on BYOD

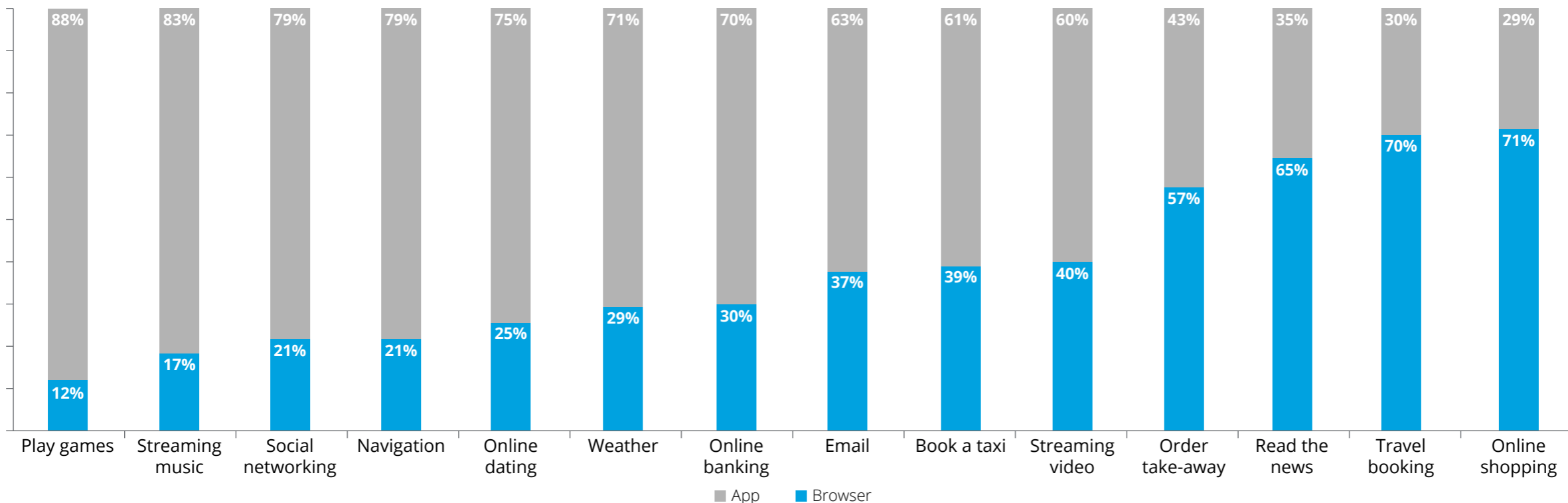


Apps versus browsers

The 'app' has to be considered one of the most disruptive innovations of the last decade – fuelling smartphone penetration rates and becoming a key part of the 'mobile economy'. What might appear to be a straight forward business decision for companies wanting to jump in to the mobile-commerce market is not so easy.

Apps lead the way when it comes to playing games (88%), streaming music (83%), social networking (79%) and navigation (79%). And while apps are the preferred channel for most of our entertainment activities, the browser moves ahead as the preferred option for completing transactions such as online shopping (71%), and travel bookings (70%).

**For each of the mobile activities below, would you typically use an app or a browser?
If activity is undertaken on mobile, % using an app or browser**



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681

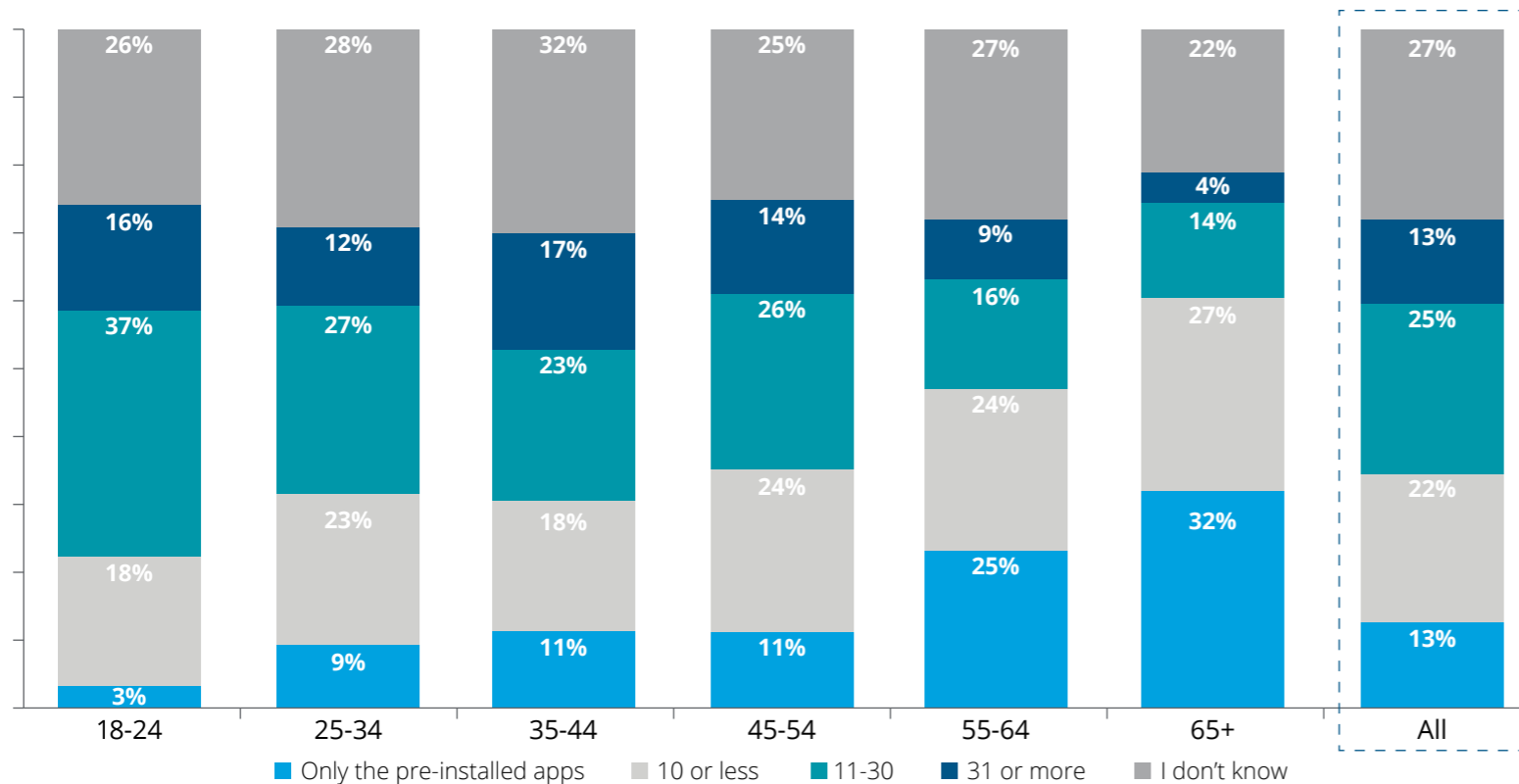


Two dozen apps is the limit

While we do have a soft-spot for adding the latest app, mobile consumers appear to be curating the apps they keep on their smartphones, limiting the number of apps to 25 on average. In fact only 13 per cent of mobile consumers have more than 30 apps on their smartphone (not including the 27 per cent of consumers that do not know).

The reluctance to download large volumes of apps spans all age groups: even among 18-24 year-olds the majority are within the average of 25 or fewer apps downloaded.

Excluding any pre-installed apps, approximately how many apps are currently installed onto your phone?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681

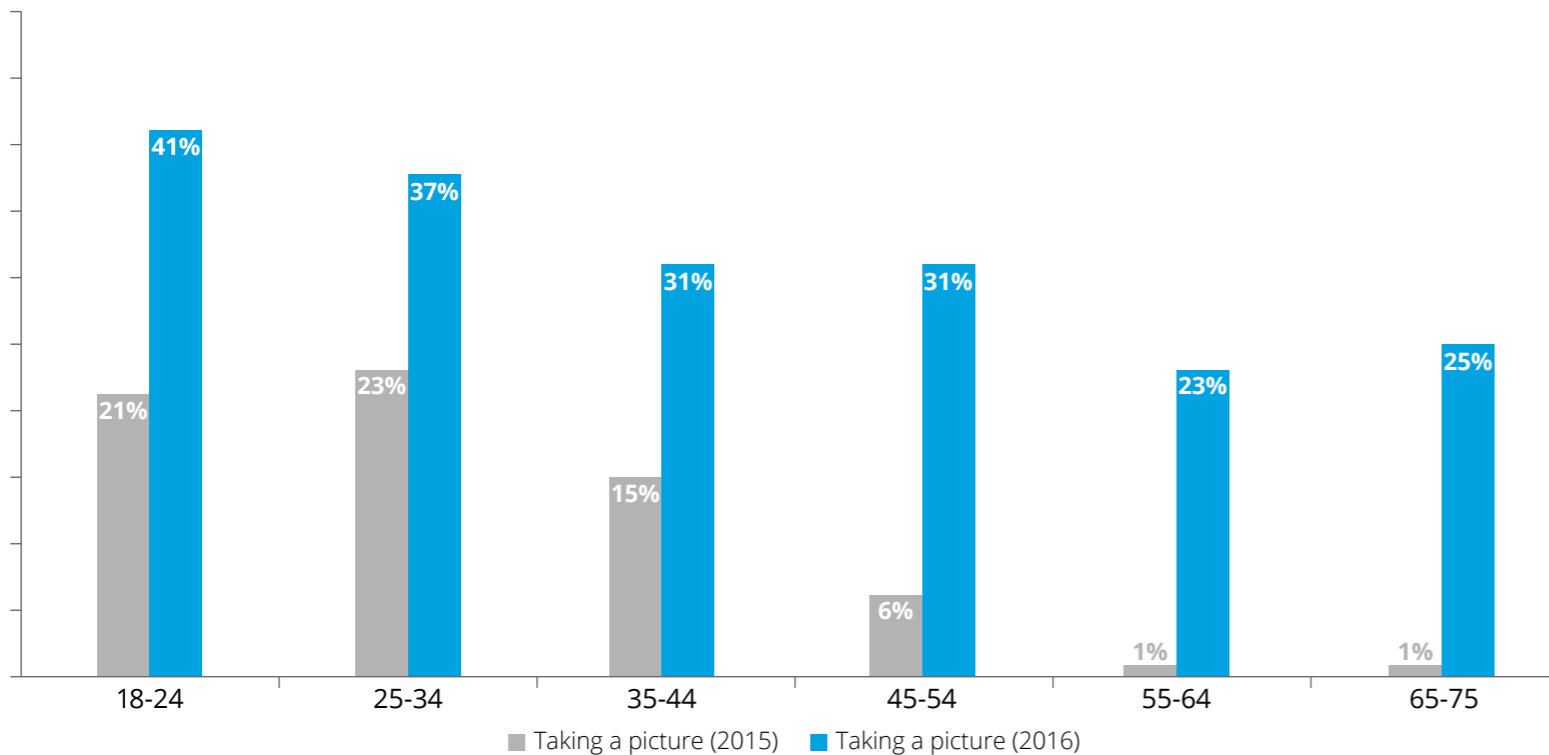


I don't want to tell you, I want to show you

Over the past few years we have all experienced the increase in photos being taken on our smartphones, and the resulting surge in data consumption stemming from our social need to share these prized pics with our networks instantly. The smartphone is our camera of choice and our picture taking frequency has jumped dramatically across all mobile consumers over the year. A large proportion of us also share on a daily basis, a trend that continues to rise.

Beyond photos, sharing panoramas, 360 degree photos, and in particular video content has seen similar growth to that of photos, with video sharing trending at a pace to what we saw with photo sharing last year. This spike in sharing is enabled by our preference for higher end handsets and the jump in mobile consumers now on a 4G network.

% of respondents taking a picture daily



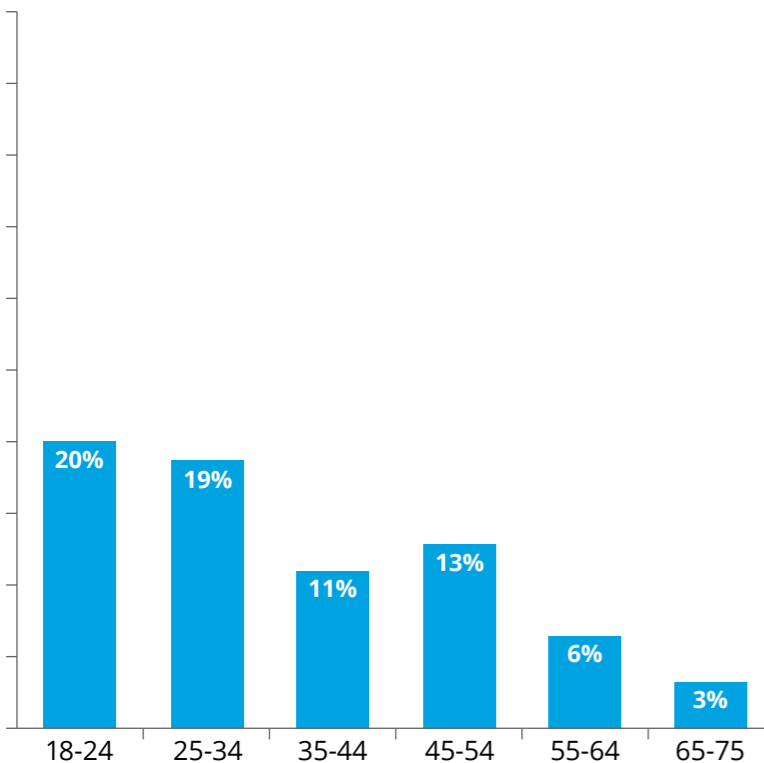
Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681



Facebook recently released the capability to share live video content via their social media platform, enabling friends to subscribe to live notifications for alerts to content that might interest them.

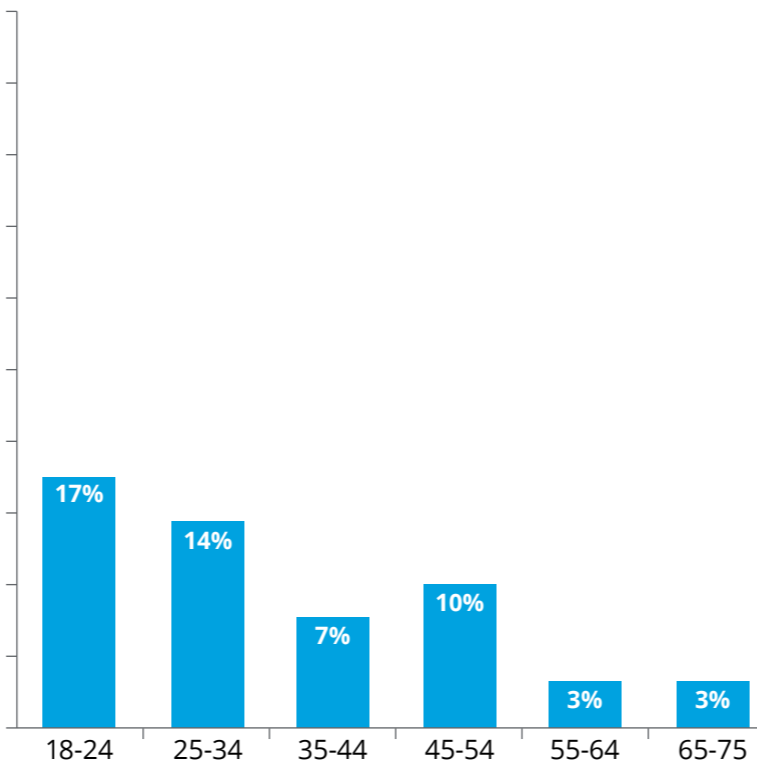
In the near future we can expect to see parents streaming real time 4K video and commentary from sports grounds on Saturday morning or the dance recitals to relations and friends who can watch in real time or playback at a later time.

% of respondents sharing a picture daily



SnapChat has released sunglasses which a user can use to capture 10 sec bursts of what they are seeing and directly upload and share this content with friends. These innovations and the many more in development will continue to drive the hunger for larger data packages and frequency of exceeding data plans that we see today.

% of respondents sharing a video daily

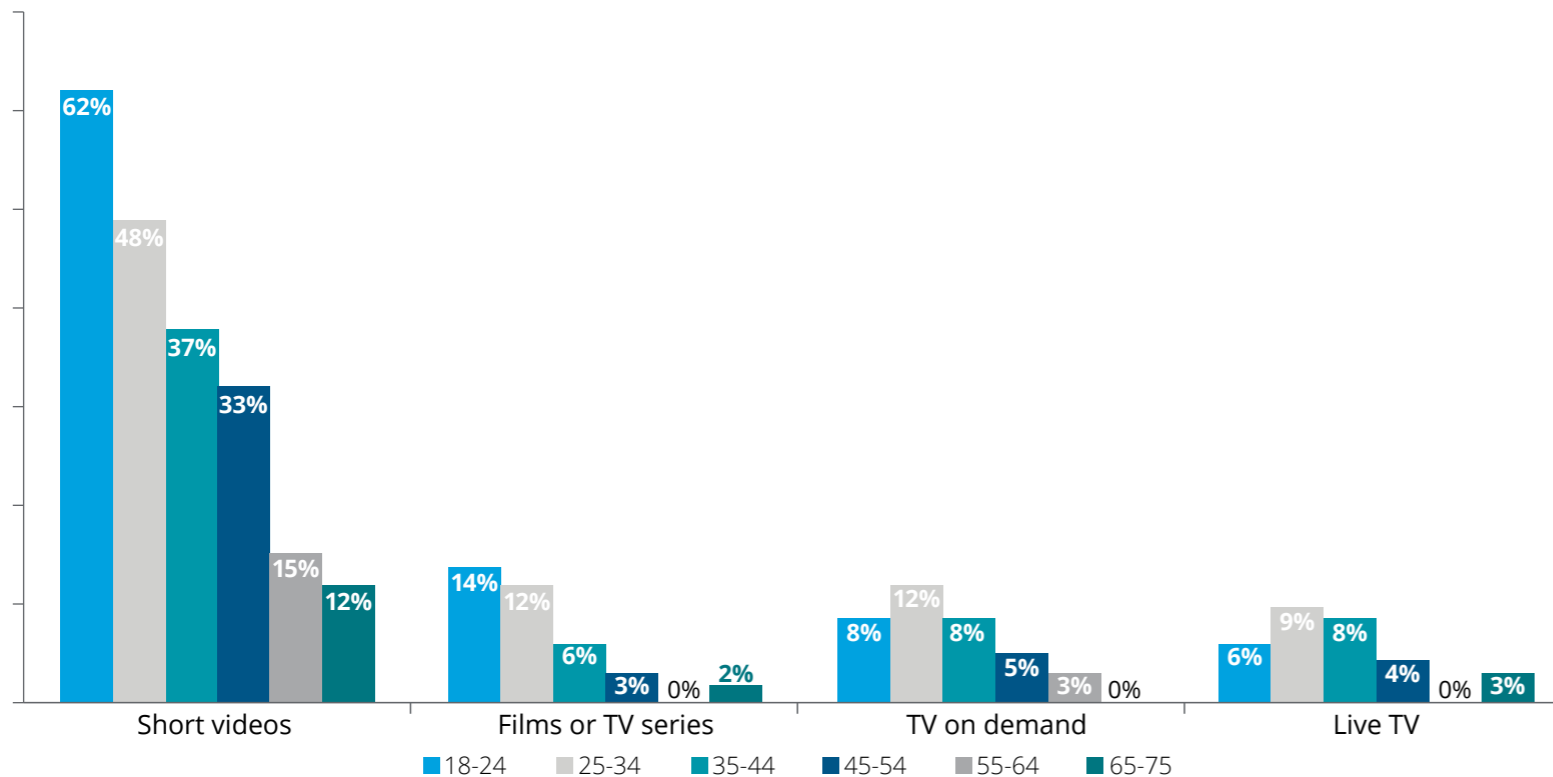


Lights, camera, action!

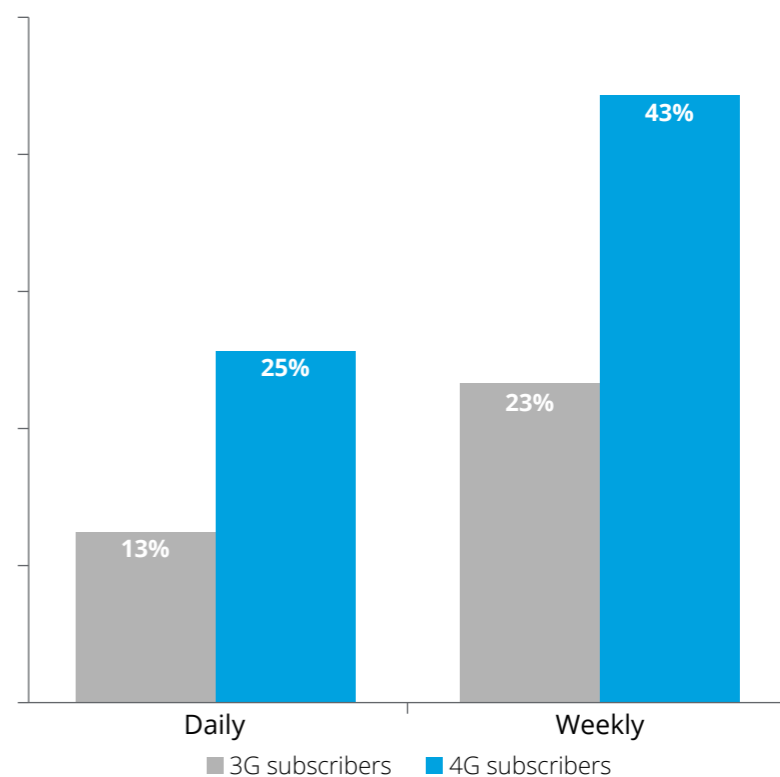
With such a prevalence of quality video content being shared, it is no surprise that we are seeing an increase in video content being watched via mobile. Over 60 per cent of 18-24 year-olds watch short videos on their phone every week and 4G subscribers are two times as likely to watch videos daily.

This year we saw SVOD subscriptions exceed pay cable TV subscriptions for the first time in Australia. This fact, combined with high definition mobile screens, wide-scale adoption of 4G, and the beginning of larger data plans being rolled out, suggests we can expect to see a rise in the consumption of longer form video content by mobile consumers, especially those with longer commutes to and from work.

How often do you do the following on your mobile phone? (Weekly)



How often do you watch short videos on your mobile phone? (3G vs. 4G)



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681





THEME 4
DIGITALLY DISRUPTED



- ⋮
- T
- 📱
- 📶
- 📍
- 🌙
- 👉
- 💬
-
- ⚙️
- 👤
- ☰

A day in the age of the smartphone

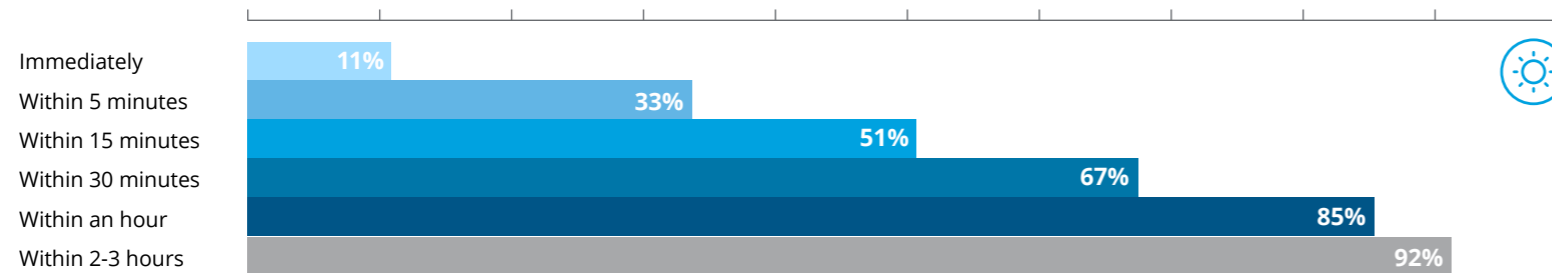
Nine years since hitting the market, the smartphone has had a massive impact on Australian consumers and society. Collectively, we are interacting with our smartphones over 480 million times a day.¹¹ For the majority of mobile consumers their favourite device is always by their side. It is both functional, entertaining and at times ostentatious. The thought of losing your smartphone is likely now considered worse than losing your wallet or purse.

The smartphone may be a personal device, but its impact extends beyond the user.

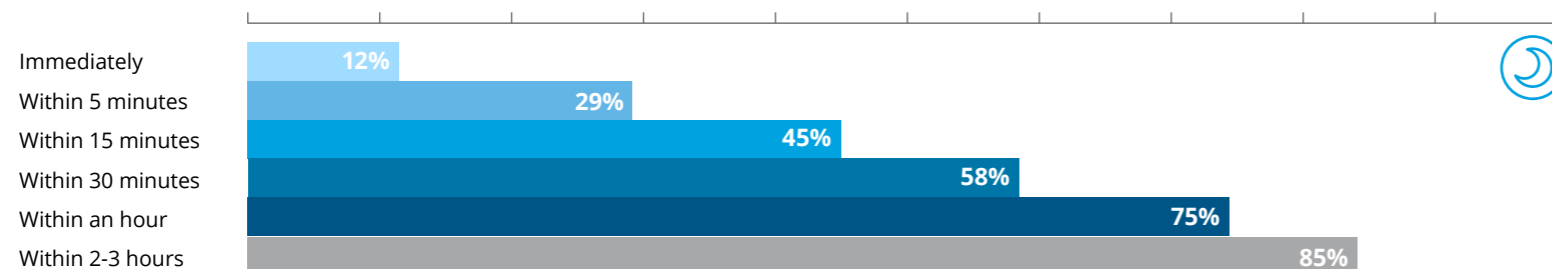
A tenth of smartphone owners instinctively reach for their phones as soon as they wake up – and not just to turn off their alarm. A third have reached for their phones within five minutes of waking, and half within a quarter of an hour. This same pattern is repeated as mobile consumers prepare to sleep.

We all know that getting a good night's sleep has benefits for our physical and mental wellbeing. Screen time just before going to sleep, can confuse the brain into thinking it is still daytime, and inhibit the process of falling asleep.¹² And despite recommendations that screens be turned off at least an hour before turning out the lights, only 25 per cent of Australians are switching off in time.

Typically how long is the interval between waking up and looking at your phone for the first time?



At the end of the day, typically how long is the interval between looking at your phone for the last time and preparing to sleep?

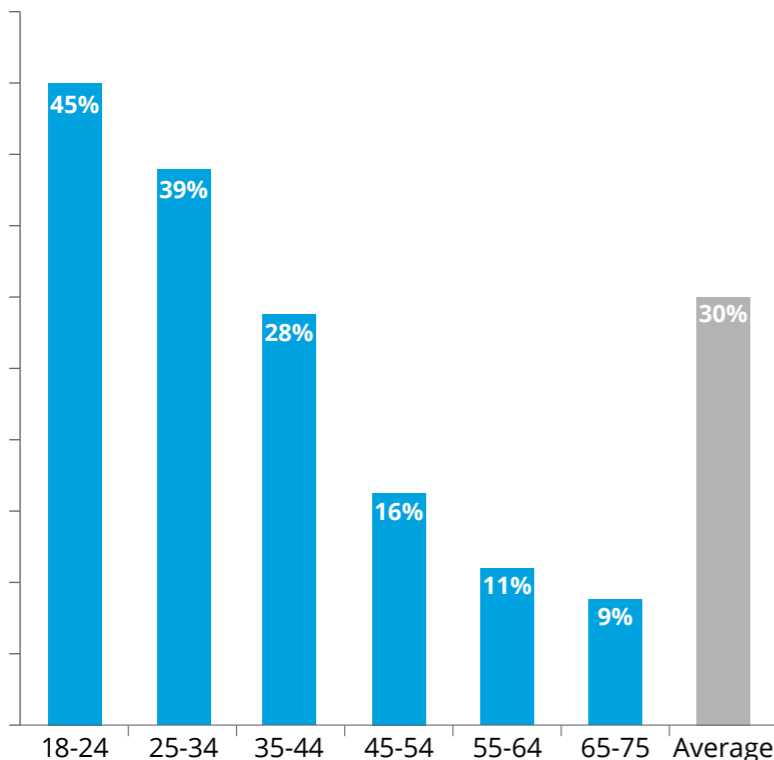


The deep guttural howl of the nocturnal user

As has already been highlighted we are highly active when it comes to interacting with our smartphone – from the moment we wake until the moment we head to sleep. While most of us ignore our smartphones through the night as they recharge there are an astonishing 30 per cent of us who are interacting with our device during the night

Which of the following activities do you do if you check your phone in the middle of the night?

% of people who check their phone during the night for more than just the time



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681, adjusted to remove those who only check the time
(Not: I don't check my phone and those who only check the time)

and that does not include checking the time. Of those nocturnal users 9 per cent are not just checking but responding to messages during the night.

This night time behaviour is most pronounced among younger age groups. Almost half of all 18-24 year-olds check their phone for instant messages or social media notifications in the middle of the night.

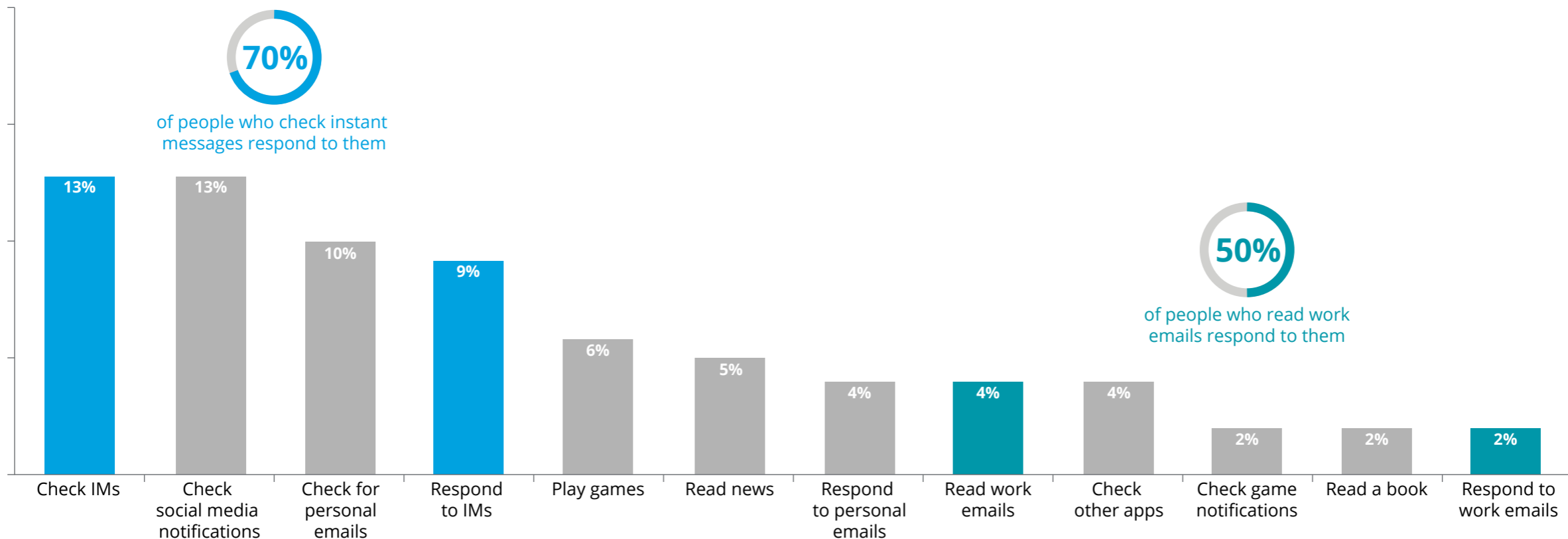


And although the survey does not include statistics on consumers under 18 years old, there is anecdotal evidence of parents needing to lock away their children's devices for fear of midnight video watching, texting, and gaming.

But it is not all bad news, with only 4 per cent of Australians checking work emails during the night, and about half responding.

Without question we are fast becoming (if not already are) an always-on mobile society. Our addiction to our favourite device and the apparent need to check regularly and respond instantly must be in response to our growing fear of missing out or perhaps our love of being always-on.

Which of the following activities do you do if you check your phone in the middle of the night?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
 Base: All smartphone owners 1681, adjusted to remove those who only check the time
 (Not: I don't check my phone and those who only check the time)

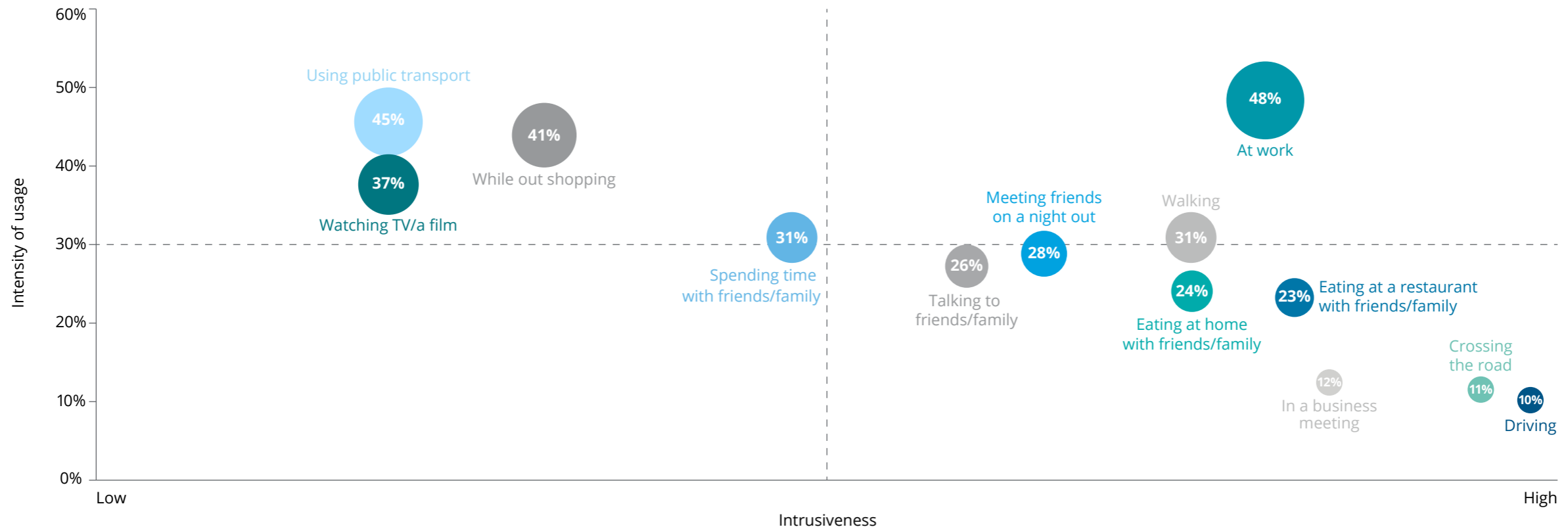


Etiquette under the smartphone spotlight

We have seen how smartphones can enhance our lives, but there is a fine-grey-line where use can be perceived as anti-social, cause arguments, and endanger those around us. We are all increasingly enthusiastic smartphone users and doing so across a growing range of social (and solo) situations.

A third use their devices 'always' or 'very often' when spending time with friends, walking or watching TV. Almost a quarter of mobile consumers use their phones 'always' or 'very often' talking to friends and when eating at home, or eating out with family or friends. And a disturbing 1 in 10 of us use our smartphones when crossing the road or driving.

How often, if at all, do you use your mobile phone while doing the following?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All phone owners 1864





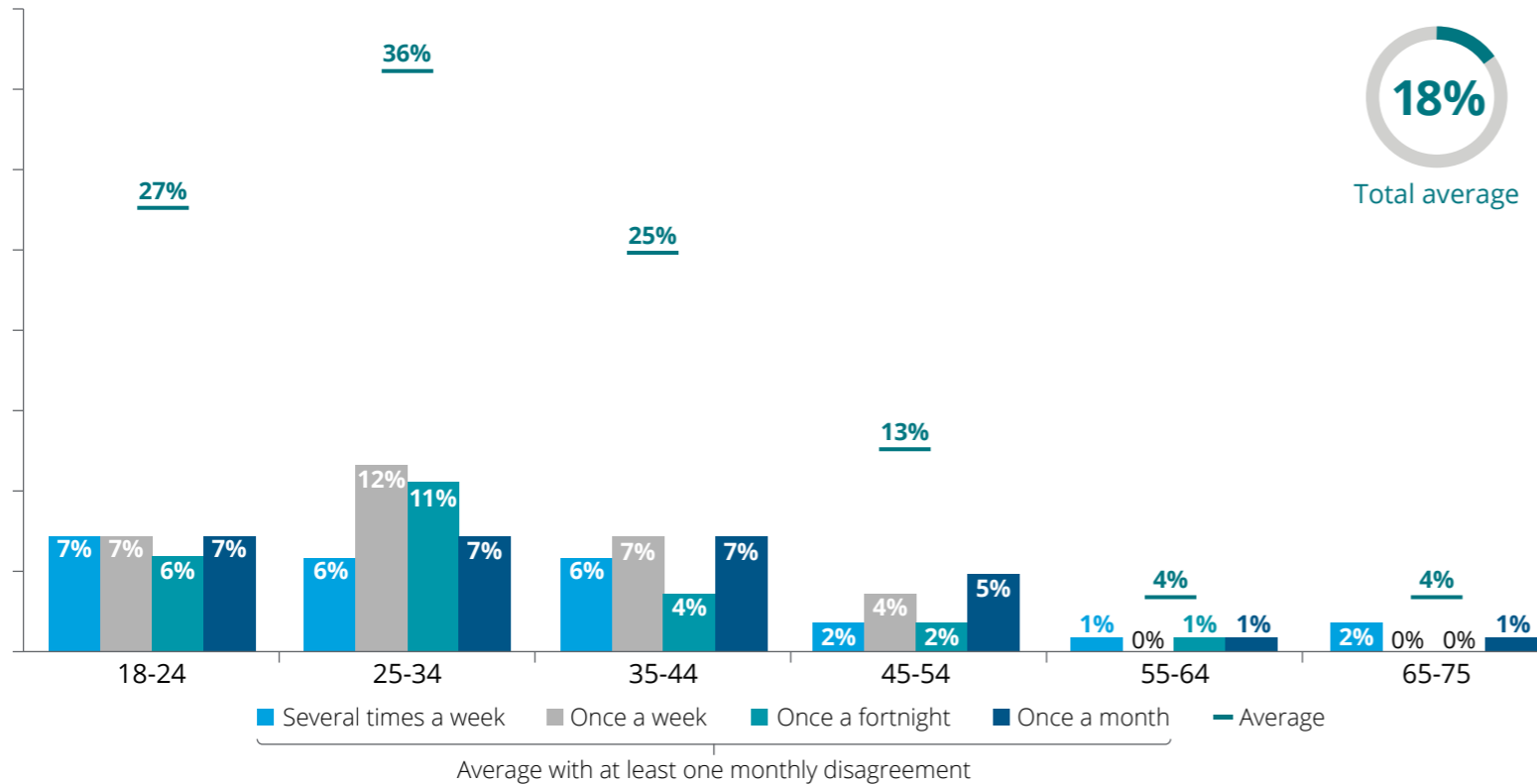
The phone is driving a wedge into our relationships

A quarter of Australian 18-24 year-olds noted that their excessive use of smartphones had caused disagreements with their partners. For 25-34 year-olds the proportion was even higher, at 36 per cent. Overall, 1 in 5 Australians admit to arguing with their partner at least monthly over their phone use.

Smartphone usage can certainly be considered objectionable. But this is the same as for any activity that distracts, be this looking at one's watch or looking out the window during a dinner for two. Formal and informal rules are likely to emerge to direct our behaviour. In cinema and theatres, strong guidance on phone usage is commonplace. Similar rules are appearing in the workplace with smartphones being forced off during meetings.

Apps are also available to curtail usage. One rewards users for not looking at their device.¹³ Another sums up total time spent on a device, on social networks or messaging. Parents can use apps to control their children's access and time spent on their connected devices.¹⁴ Will phone plans of the future need to include a dispute resolution hotline service?

How often, if at all, do you have disagreements with your partner because they think that you use your mobile phone too much?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All phone owners 1864



Wellness

Are smartphones ruining our lives?

The story isn't all bad. Just like chocolate, burgers and other vices, most things are fine in moderation. There are many inbuilt phone settings or downloadable apps that can be used to curb our addictive behaviours and the very real side-effects of excessive phone use. Mobile consumers need to embrace the do-not-disturb functions, use blue light reducers before bed, and if you're a full blown phone-aholic, there are apps for that too. You can restrict use of Facebook or SnapChat by placing a freeze on the applications if they are overused for example.

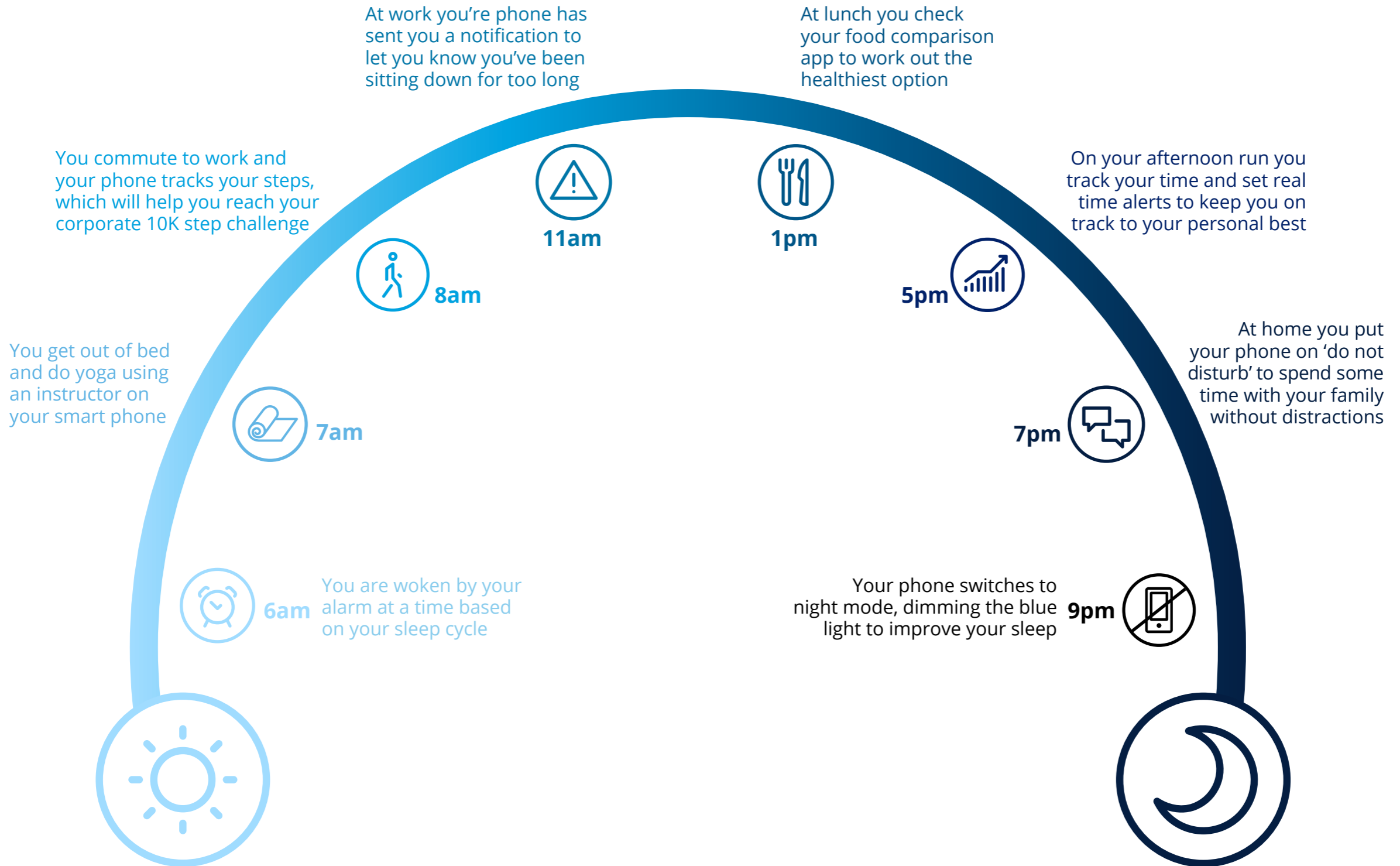
Recently, a support group was established in Sydney for those trying to break their smartphone addiction and the impact certain behaviours were having on children. The group aims to provide education and support people to adopt healthy smartphone usage behaviours.

Once you've managed your cravings, smartphones can give you access to many health activities at the touch of a button. For less than the price of one exercise class you can be guided through yoga, meditation, high intensity fitness classes and weight workouts all from your smartphone. Workplace wellness programs are also utilising the tracking and location services on smartphones and fitness tracking devices to gamify exercise, motivating employees and their families to get fit, sleep well and live a healthier life.

Has your organisation established accepted norms when it comes to smartphone usage? Should these be challenged?



A day in the life of a smartphone...



GUIDELINES FOR KIDS AND SMARTPHONES

#1 No technology in the bedroom

The number one recommendation from experts in addressing cyber bullying. Cyber bullying is most likely to occur behind a closed door.

#2 No screens at bedtime or during family time

You don't have to confiscate their phones, you can get an app that can automatically block activity at a certain time or when a time limit is exceeded.

#3 Approval required

Only allow apps to be downloaded if approved by parents or block access to app store purchases with a password.

#4 Understand online security and safety

Educate your kids, let them know that sharing photos and videos, as well as anything written, can be saved and shared without their knowledge. Invest in kid-safe browsers.

#5 Practice acceptable online behaviour

Let your kids know that they should talk to you if someone is harassing them online or through text. Make sure your children are also aware of the harm they can cause through online bullying.





THEME 5
*BIOMETRICS AND
MOBILE PAYMENTS*



Biometric authentication is going mainstream

Thousands of years ago, the citizens of Ancient Babylon imprinted their fingerprints into clay tablets to authenticate transactions. Today the problem of authentication remains and a multiplicity of passwords have become an awkward part of everyday life.

The rise of the fingerprint reader has been rapid. Just three years ago, few devices had one. Today, one in three Australians has a fingerprint scanner on their smartphone, with two-thirds regularly using this feature. Awareness of fingerprint biometrics is greater with Apple iPhone 6 users (81 per cent), compared to less than half of Samsung Galaxy 6 owners. Over the next few years we expect usage of fingerprint readers to increase markedly as they are incorporated in mid-range smartphone models and users become more comfortable with the authentication process. We should also expect to see more and more applications and sites incorporating the fingerprint authentication into their payment or authorisation experience.

The primary drivers of the surge in usage of fingerprint sensors are to unlock devices and authenticate an ever-widening array of products and services accessible via a smartphone, including personal banking, business email and online purchasing.

By 2020, it is forecast that each user may have as many as 200 online accounts, each with the need to authenticate the user to gain access and make authorisations.¹⁵ Remembering passwords as we know can be horribly frustrating. Using your fingerprint to gain access requires a single tap and you are in.

The fingerprint seems to be gaining traction as the preferred approach for biometric identification. On smartphones it has proven by far the most popular. Just 3 per cent of smartphone owners have used either voice or facial recognition on their smartphones to unlock their phone or authorise a mobile payment or another transaction.





Biometric applications

The range of applications in which fingerprint readers are used is likely to grow. We would expect the smartphone's fingerprint reader to be used in conjunction with websites accessed by computer to authorise payments.¹⁶ The user could opt to pay via their smartphone, and authenticate the purchase using their smartphone's fingerprint reader.

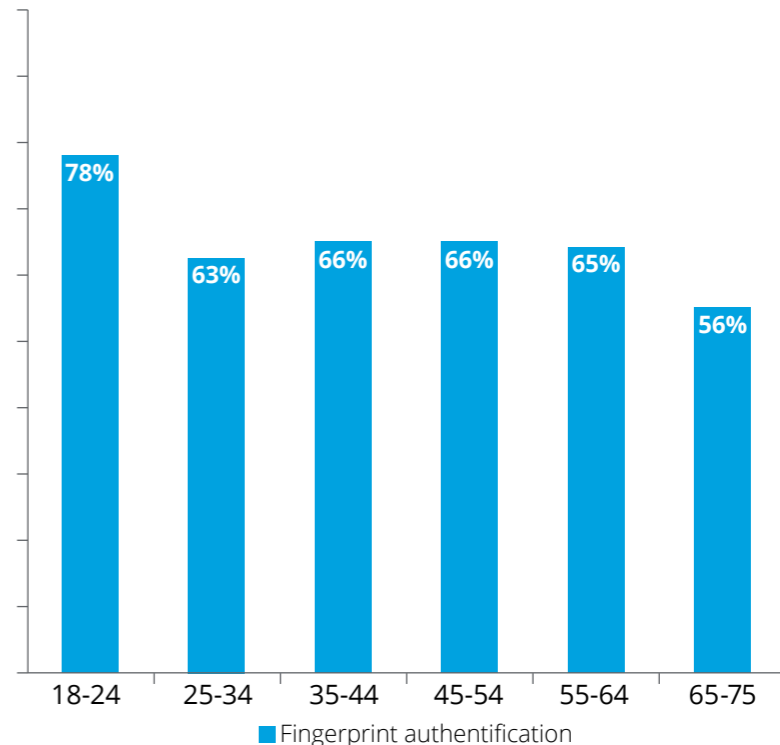
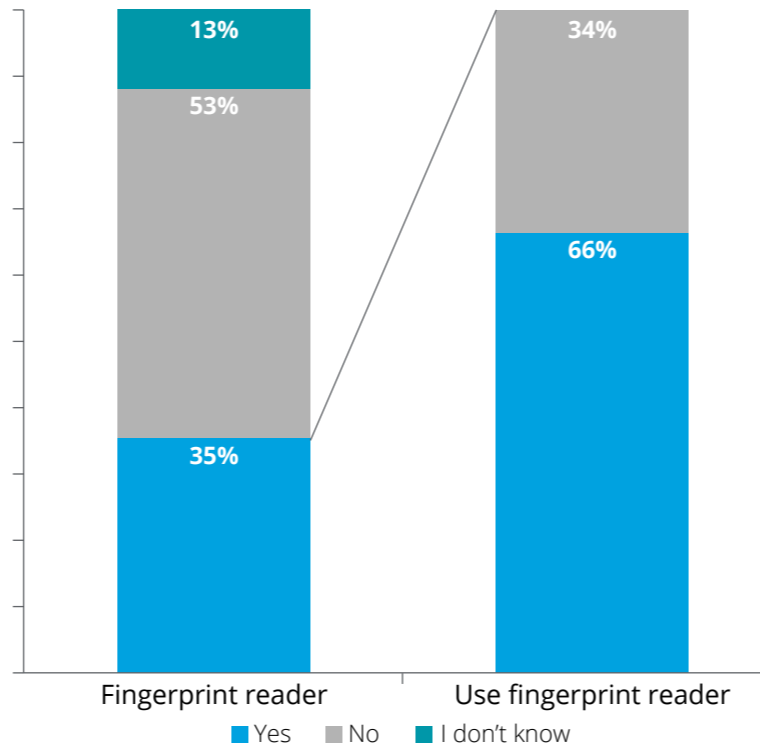
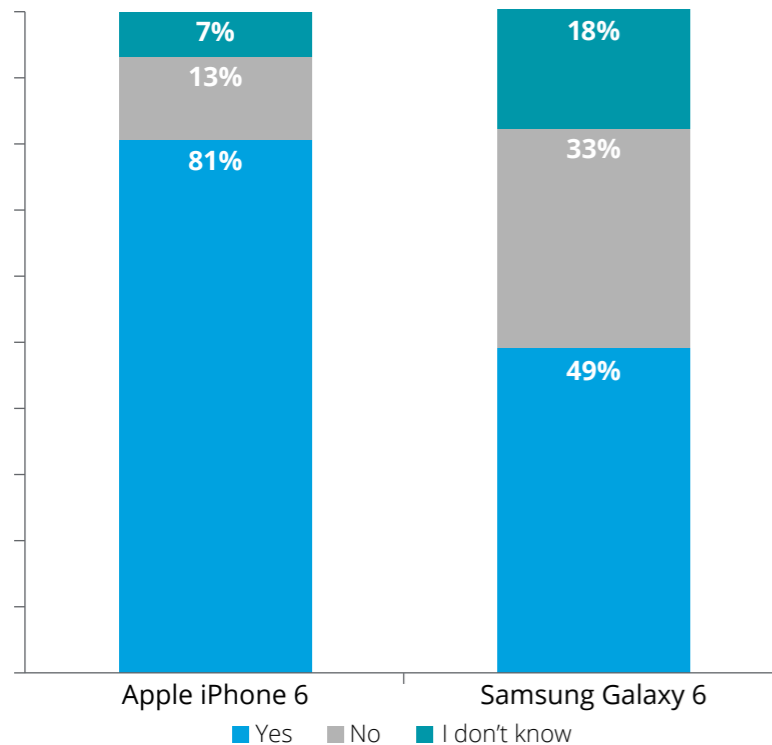
This approach would make the transaction more secure, as the user would need to have possession of both computer and smartphone to complete the payment.

For all its evident merits, the fingerprint reader is not infallible. It is possible – albeit increasingly difficult – to make copies of a fingerprint. Earlier fingerprint readers are more susceptible¹⁷, but the latest readers are becoming more sophisticated and harder to fool as they capture a more detailed image of the original fingerprint.¹⁸

Does your mobile phone have a fingerprint reader? (selected devices)

Does your mobile phone have a fingerprint reader? (all devices)

If yes, Do you use your fingerprint reader to unlock your phone or authenticate yourself?



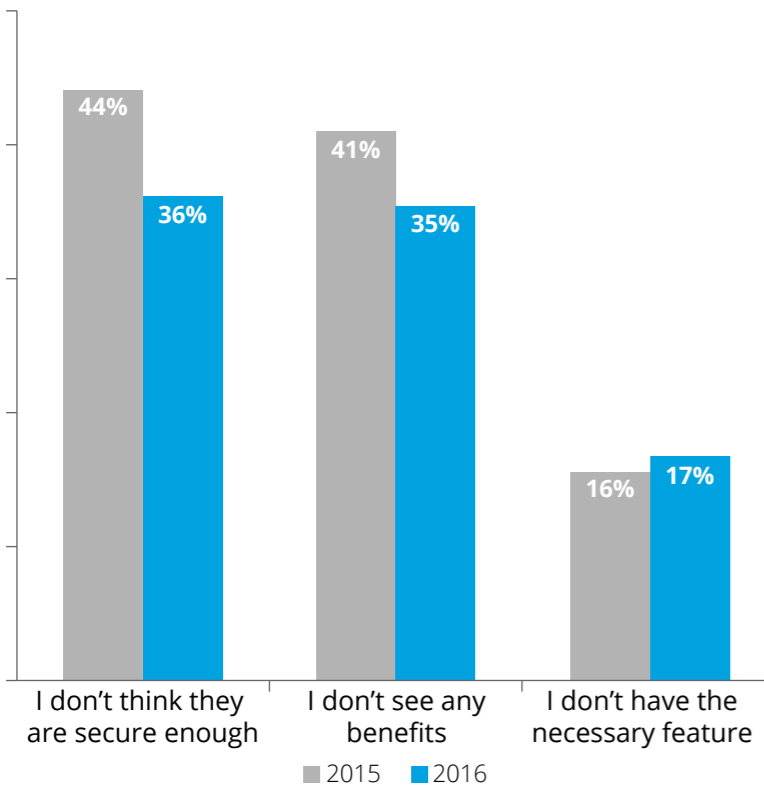
Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All iPhone 6/6+ and Galaxy 6 owners

Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681, Use of fingerprint authentication based on respondents who are aware of their fingerprint scanner



How would you like to pay; cash, card, phone or 'no need, it is already done'? Consider how your favourite ride sharing app has embedded payment in the experience of pre-ordering and collecting your decaf soy latte. The payment for these services has been made seamless, with one touch payment linked directly to you placing an order.

Why you don't use your phone to make payments?



At the time of our survey in 2016, Apple Pay was just being introduced in Australia, and uptake was still reasonably low. In fact, only 9 per cent of Australians use their mobile for payments, either through near field communication, or purchasing through apps or browsers. The primary reasons Australians are not yet engaging mobile payment are perceived lack of security and lack of benefits, but both of these perceived barriers have come down over the last year, with lack of security reducing from 44 per cent in 2015 to 36 per cent in 2016 and lack of benefits from 41 per cent in 2015 to 35 per cent in 2016.

We can expect the number of Australians making payments on their smartphone to continue rising. This is in part due to our comfort levels rising around security and the innovative solutions that are being incorporated into the payment process to simplify what was once a frustrating entry of credit card details and verification codes.

Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners that have not used their phone to make an instore payment, 1518

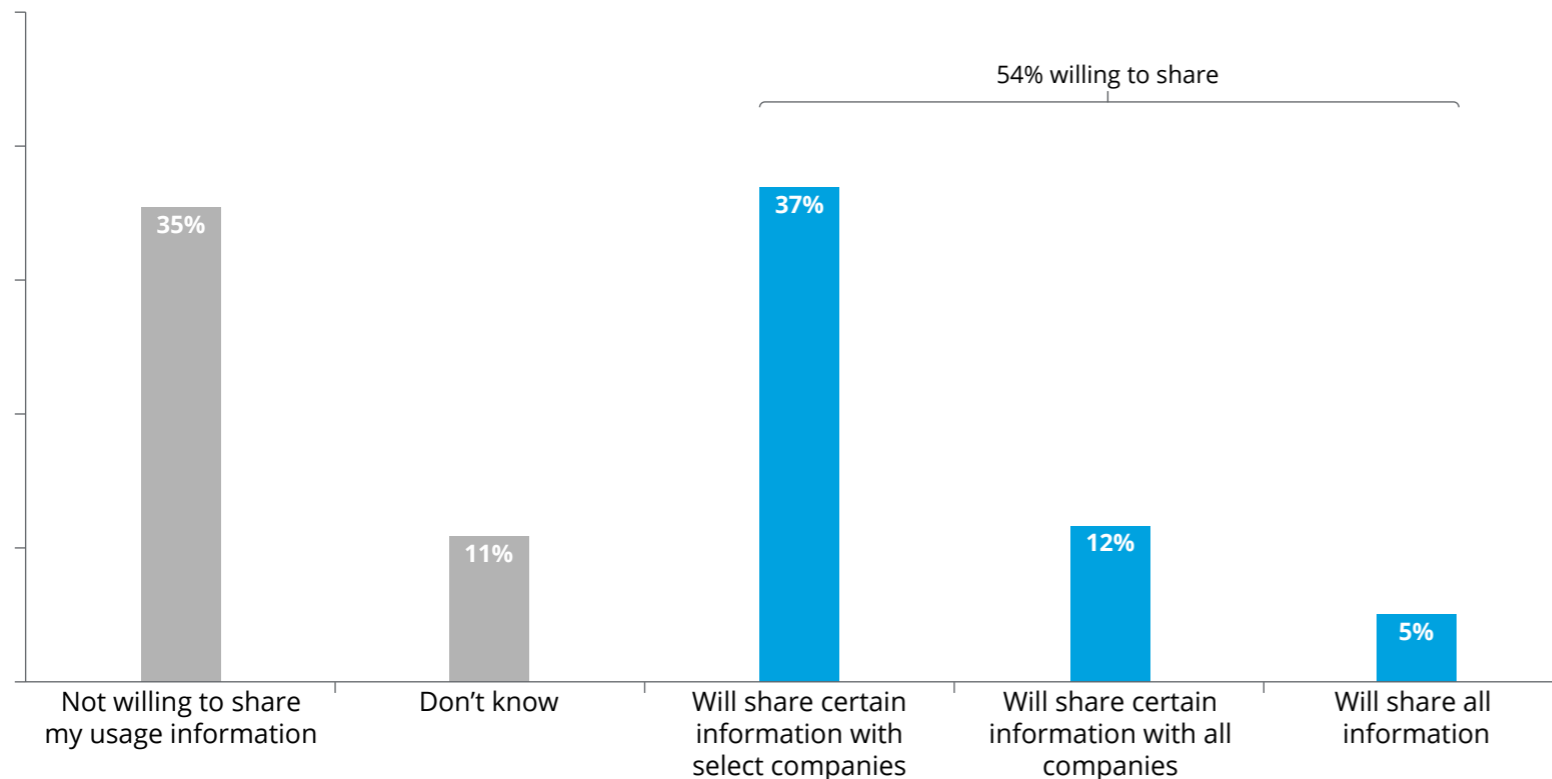


Do you know who has your data?

For many Australians, the persistent calls from telemarketers often drove us to pay our operator for not listing our phone numbers. Our privacy is precious, and the intrusion of a marketer calling was not only interruptive but felt like a breach of trust. Fast forward to today and marketers have many sources of data from which to use to determine who, when and where to target their pitch.

It turns out that many Australians are unaware of the information that they are sharing, and the data trail being left behind as they surf the web, hover over advertisements, or interact on social media. Over half of Australians are willing to share information with organisations via online channels, with 37 per cent qualifying that they would only share it with select companies.

How willing respondents are to share usage information



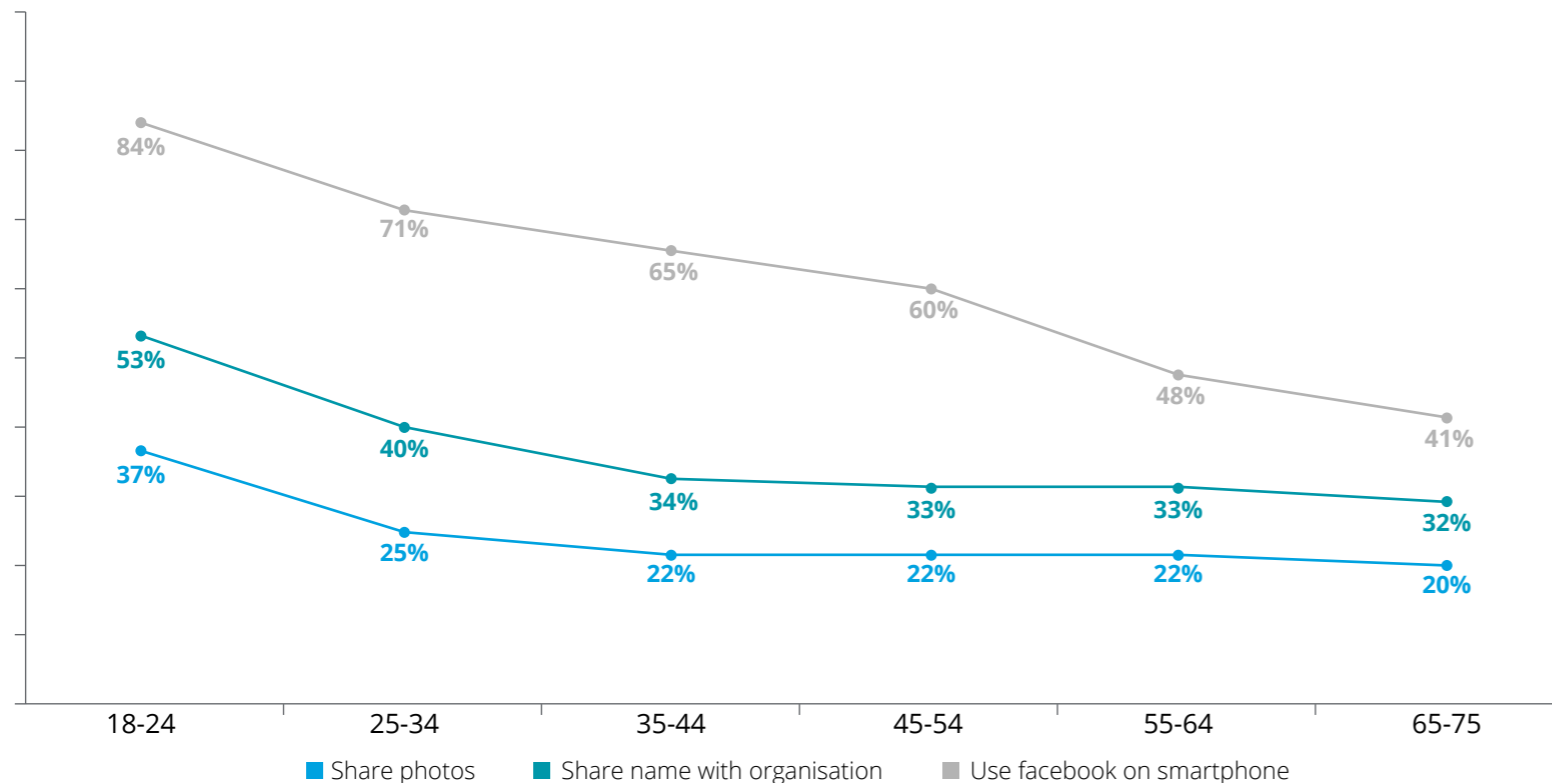
Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone interested in a connected device 1070



Australians mistakenly believe they have not shared their name or any personal information with any organisations online. This misunderstanding is indeed worrying, and illustrated by the fact that 84 per cent of 18-24 year-olds are active users of Facebook, yet only 53 per cent believe they have shared their personal information with an online organisation.

The older the wiser, or perhaps more sceptical it seems, when it comes to online privacy. A trend demonstrated by the reduced gap between using social media and understanding that your name has been shared with an organisation.

Respondents who don't believe they share any personal information online



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681





THEME 6
*THE PHONE IS
NOT FOR CALLING*



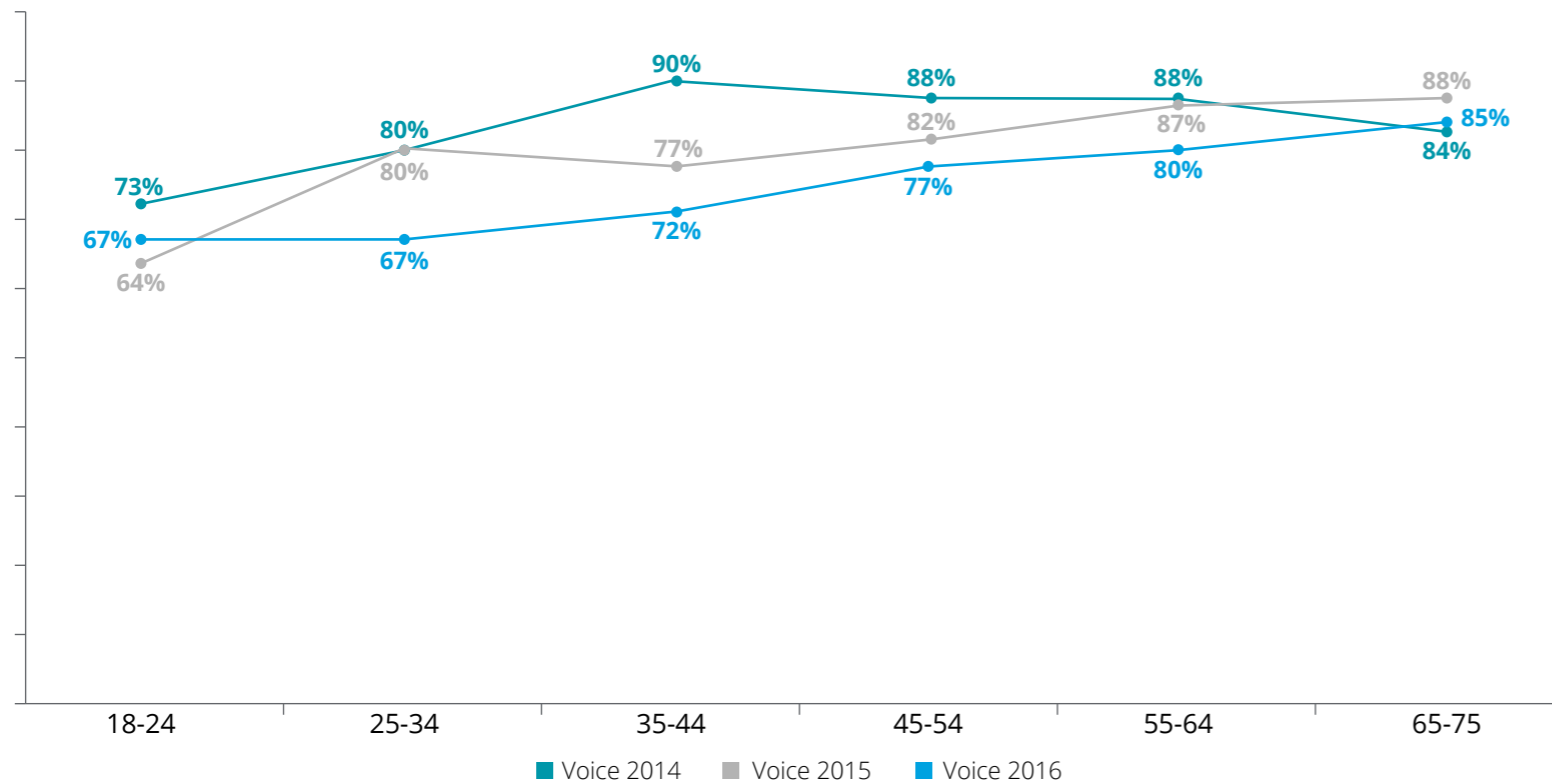
Call me? Maybe. Not.

'Generation-smartphone' – those born in 2000 or after – may struggle to comprehend why those born just a decade previously used to use their mobile phones principally to speak with someone, just as individuals born in the 90s are bemused by the sight of corded telephones.

As of mid-2016, 27 per cent of mobile consumers claimed to have not made any standard voice calls in a given week compared to 23 per cent in 2015.

**In the last 7 days, in which of the following ways did you use your phone to communicate with others?
(for smartphone users)**

Usage of communication services by age groups



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681



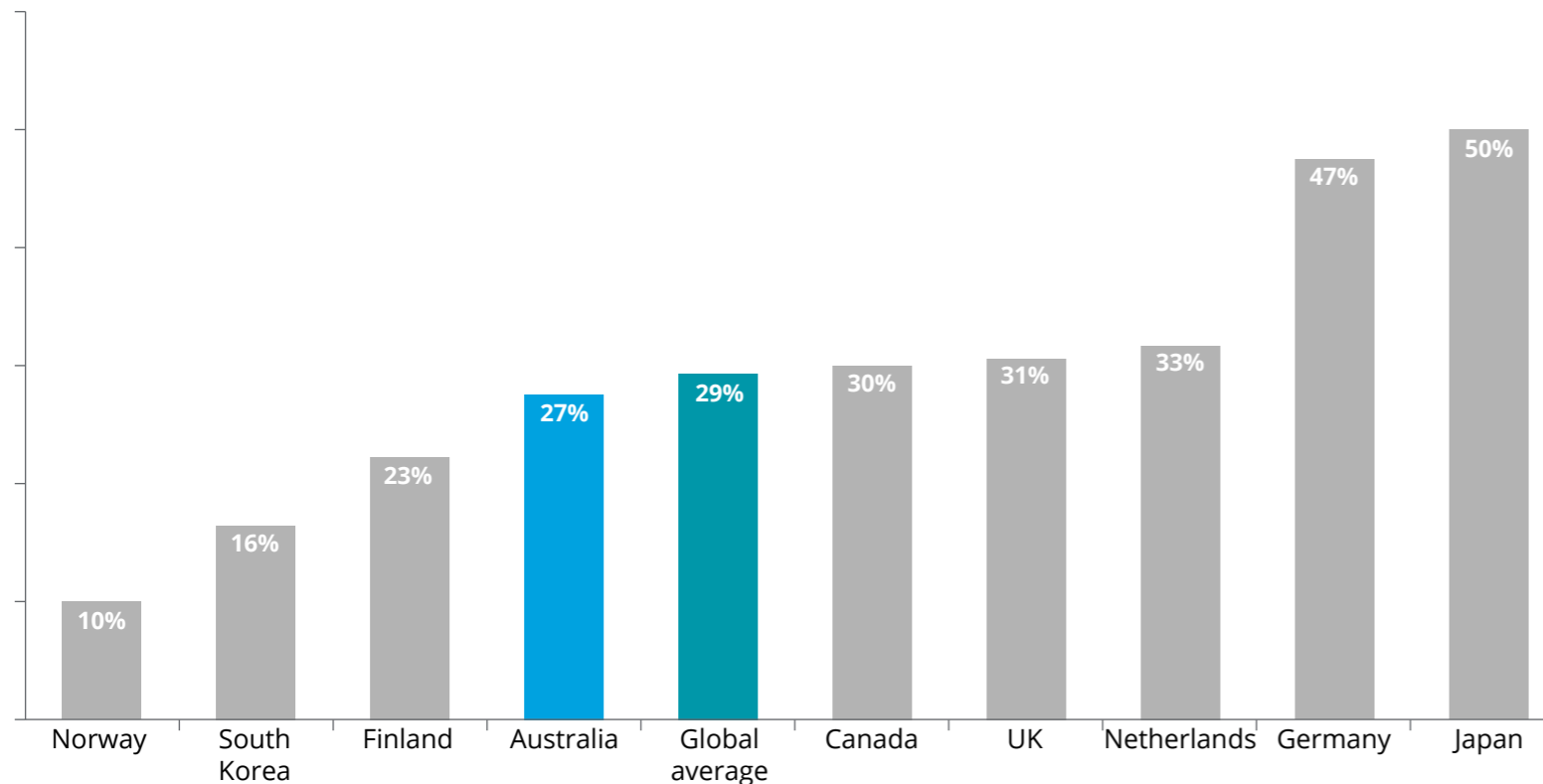
The phone is not for calling | Call me? Maybe. Not.

The telephone has evolved to such an extent that for many its original purpose is now defunct. The rise of alternative messaging applications and improved connectivity has provided alternative ways to communicate rather than to just phone home.

The rise of the 'data exclusive' would suggest a drop in the number of voice calls, and a steady rise in other forms of communication. Text messaging remains our preferred method of regularly communicating (88 per cent) with instant messaging (IM) and communicating through social networks jumping in use year-on-year.

It seems that mobile consumers are becoming increasingly comfortable with video calling on our smartphone, taking advantage of the voice and video quality improvements of this interaction medium over the past 12 months. Indeed, looking at the entire base, there has been a marked increase over the last two years in the proportion of people using non-voice communication methods.

In the last 7 days, did you make a standard voice call on your phone? Global data exclusions (selected)



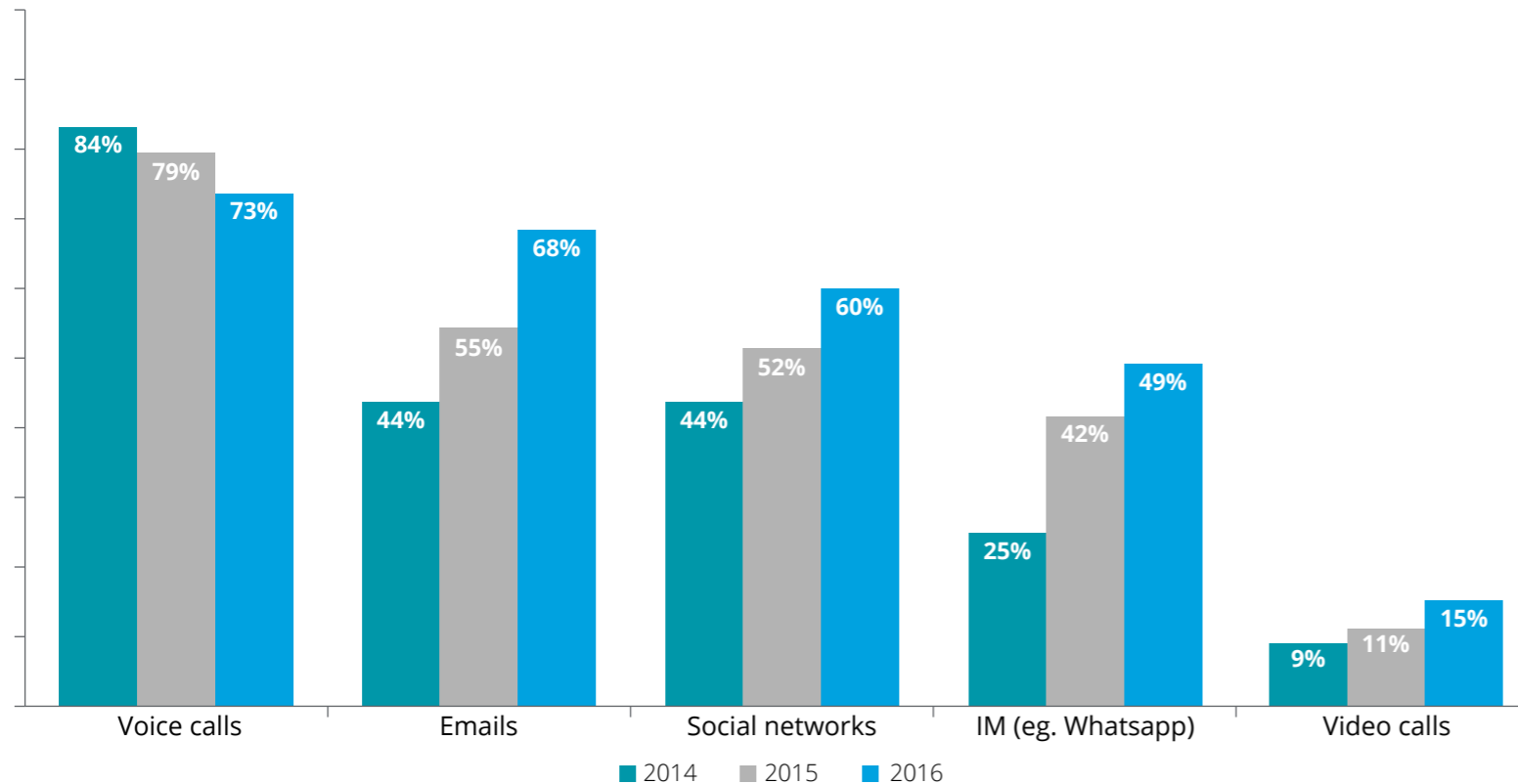
Source: Deloitte Global Mobile Consumer Survey, 2016
*Selected countries shown, global average consists of more responses



The phone is not for calling | Call me? Maybe. Not.

Email has traditionally been considered our primary business communication tool, but a 13 percentage point increase year on year suggests we are as comfortable using email for business communications as we are personal. This means that email has remained the most popular data enabled form of communication method on a smartphone in each of the last three years.

***In the last 7 days, in which of the following ways did you use your phone to communicate with others?
(Select paths of communication)***



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun – Jul 2016
Base: All smartphone owners 1681



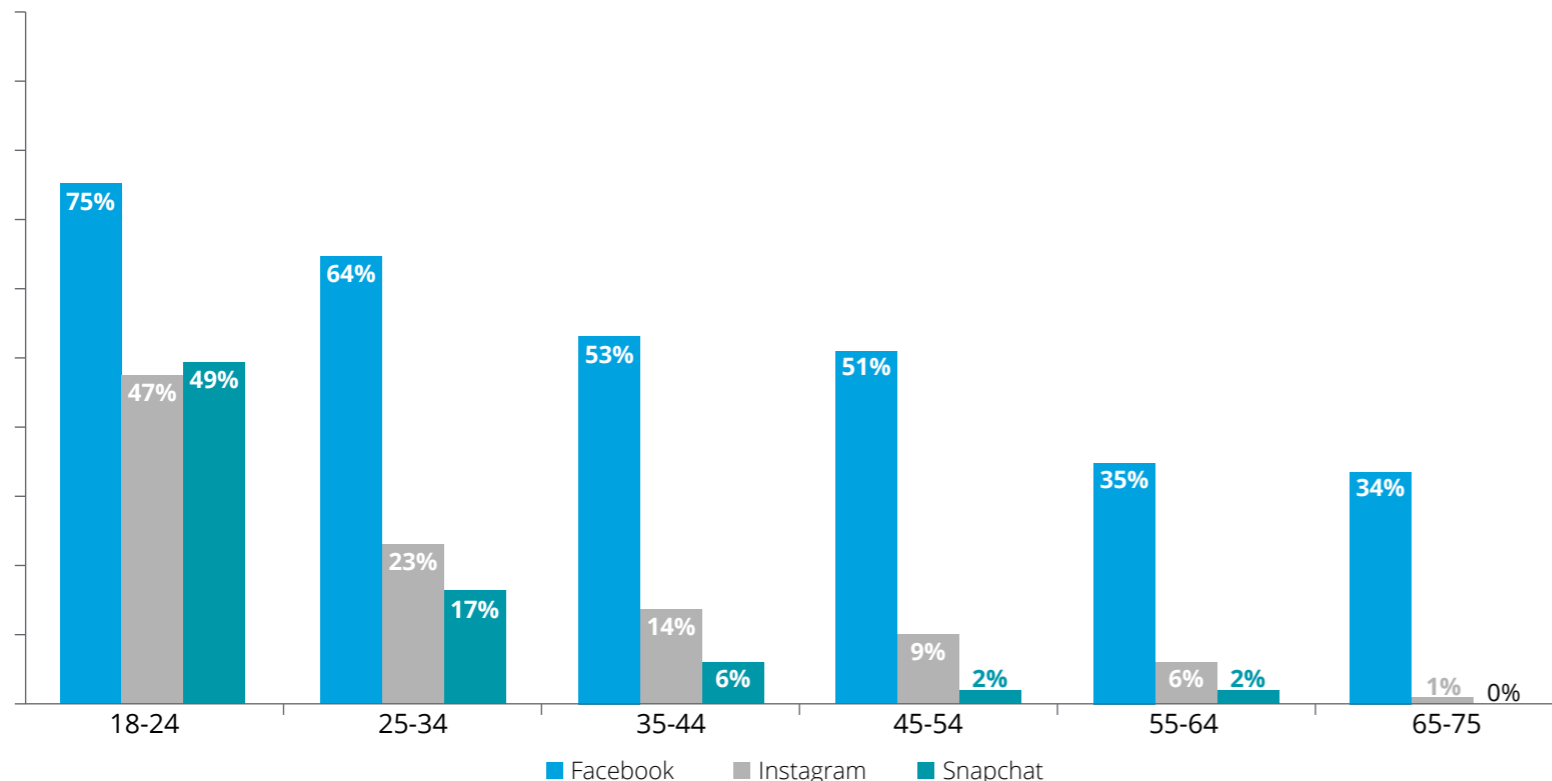
Social dominance

Social media has now become popularised across all age demographics, with Facebook leading the way in the race for social dominance. 87 per cent of 18-24 year-olds are consistently communicating weekly through social networks.

Facebook is our first choice for social connectivity, 54 per cent are checking in daily. Social and photo-sharing are synonymous, with the rise of video sharing starting to kick in given added features on social networking sites in the past 12 months. The frequency of our interactions with social media apps continues to grow, 33 per cent of mobile consumers proclaim to have increased their use compared to last year.

Like the first smartphone, social networking started having an impact about ten years ago. Today, Facebook has more than 1.7 billion mobile monthly active users world-wide, and the use of other social networking sites and apps such as SnapChat, WeChat, Instagram and Pinterest continues to grow every year.¹⁹ What may have started out as simple sites to connect, post, share, and 'like' have grown into significant enterprises that are transforming much of how we connect as individuals, as businesses, and across nearly all aspects of the economy.

Use of photo social media apps daily



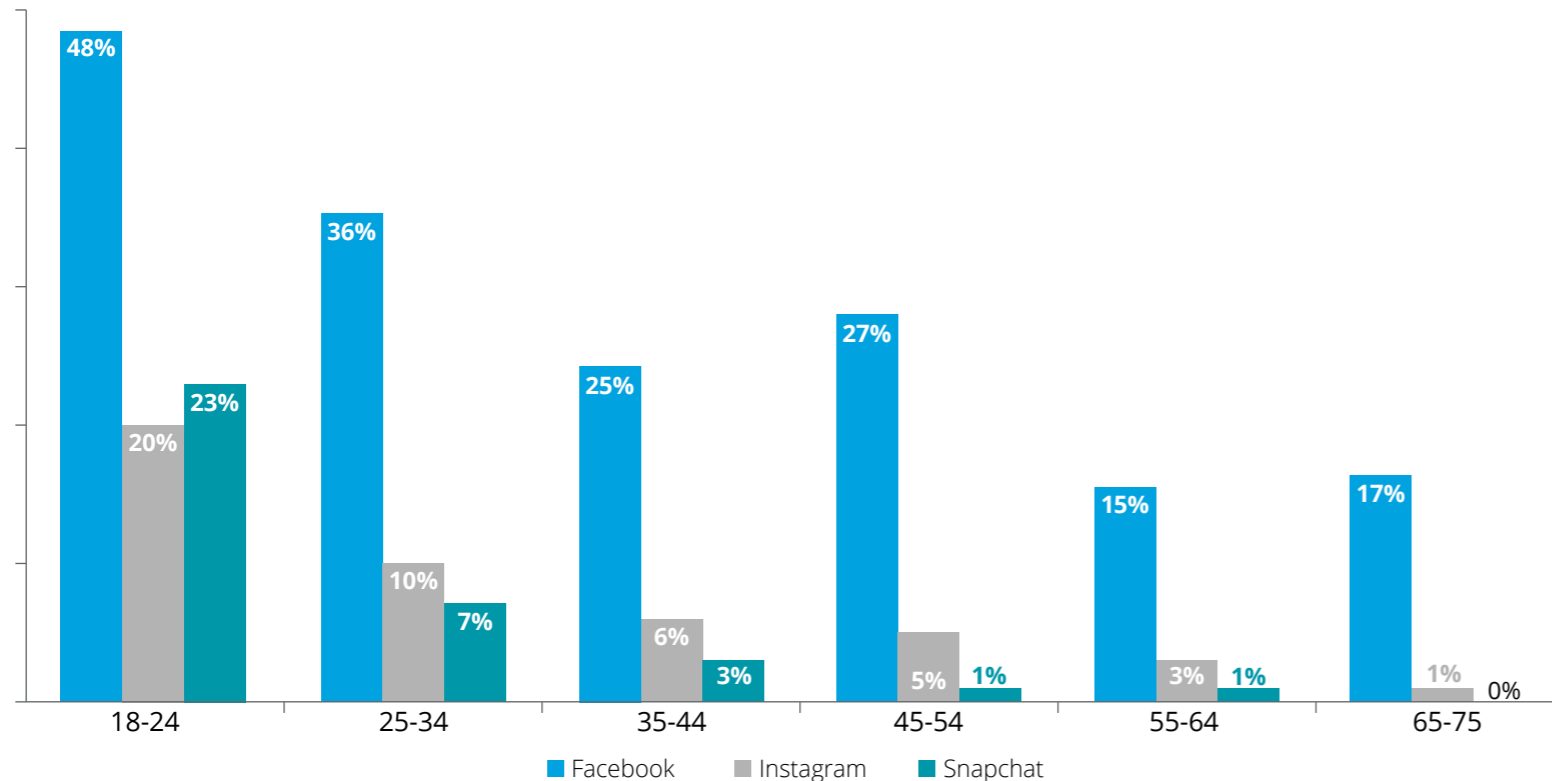
Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681



The rate of innovation within social media remains high. In the past year we have seen the introduction of mainstream chat bots that can monitor your posts and respond, 360 degree photos have enabled users to share amazingly immersive experiences, live video streaming on social has launched, and payment services are becoming more common across social media apps and IM.

WeChat in China enables restaurant bookings, taxi services, banking and payments, all without leaving the app. We are indeed a social society looking to connect more frequently and across a broad spectrum of ways.

Frequency of daily social media apps (percentage of users checking hourly)



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681

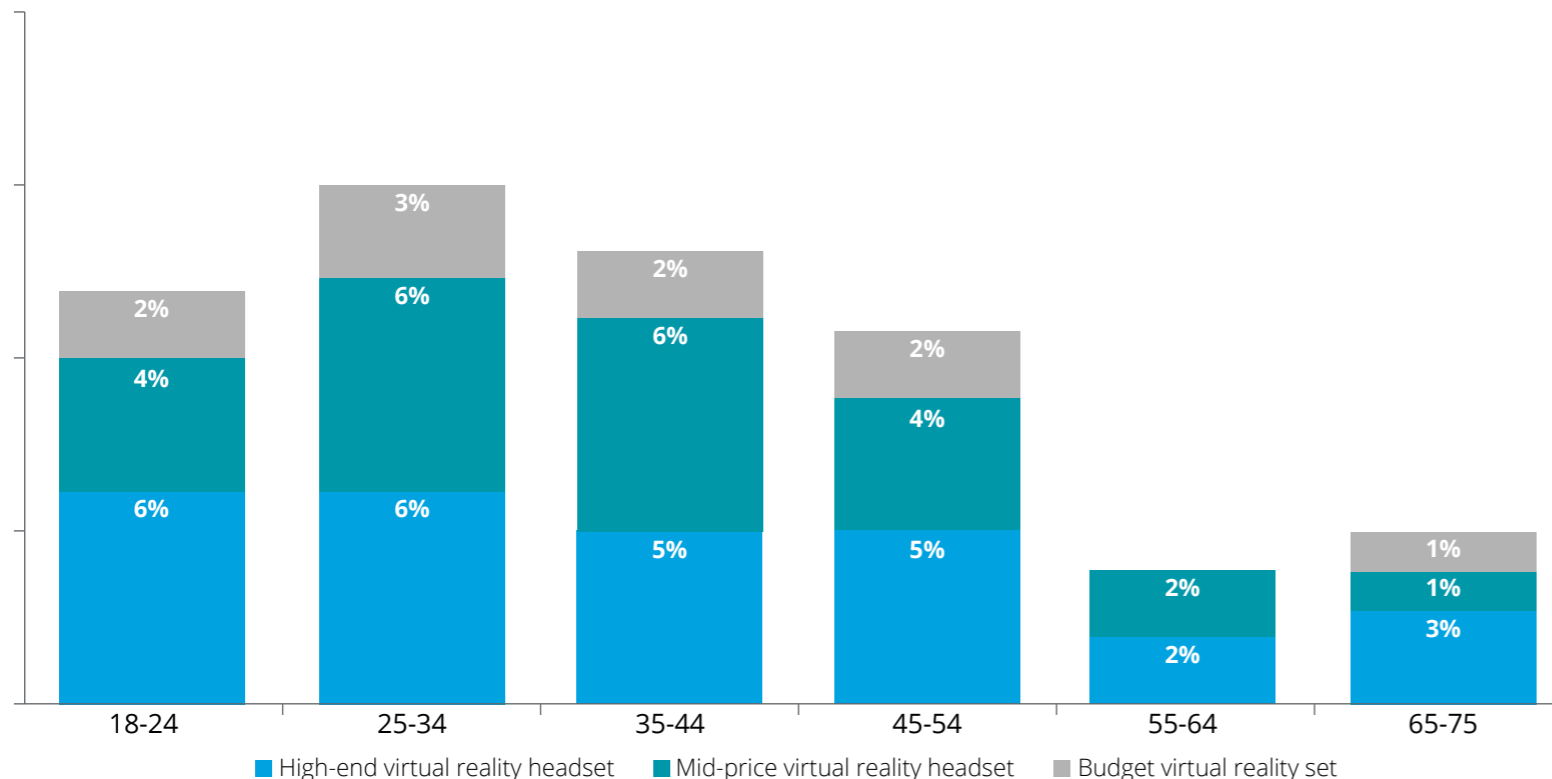


The evolution of hybrid reality connectivity

This year we have witnessed the smartphone enabling near-mainstream adoption of both augmented reality (AR) and virtual reality (VR). This latest connectivity market has risen from relative obscurity in 2015, to 5 per cent penetration for non-smartphone VR devices in Australia. And what will be interesting to watch is the 10 per cent of mobile consumers that plan on purchasing a VR headset in the coming 12 months.

For now it is gaming and entertainment related usage that dominates consumer VR. However the spectrum of applications is quickly broadening and of those who plan on buying a VR headset in the next year, 20 per cent would not classify themselves as a 'gamer'.

Which of the following devices, if any, are you likely to buy in the next 12?



Source: Australia edition, Deloitte Global Mobile Consumer Survey, Jun - Jul 2016
Base: All smartphone owners 1681



The rapid rise of VR and AR uses that extend beyond incredible games and breathtaking experiences will have a positive impact on mobile consumers and businesses alike – be it visualising a home renovation or inspecting a property before purchase, test driving a range of different cars, visiting a university campus from your parents' home, being trained on new skills or learning new techniques to master a craft. This evolution of hybrid reality is so much more than chasing digital tokens, and we can expect many more applications on this technology to be introduced and adopted across both the consumer and business markets.

It would be remiss in a mobile consumer report not to briefly mention what will be signalled as the moment AR became a real thing. Pokémon Go has absolutely kick-started consumer awareness world wide to the potential application of AR. Love it or hate it, the game has exposed mobile consumers around the globe to the basics of AR by combining a straight forward game concept with a number of the features embedded in our smartphones – geo-positioning and location services, maps, cameras, and an accelerometer. Launched initially in July this year across Australia, New Zealand and the US, it has taken everyone by surprise, smashing five Guinness World Records including the most download and revenue grossed mobile app in its first month.²⁰ 45 million users were playing daily within 10 days of the release date, before we started to see the inevitable engagement drop-off and average daily users drop to under 30 million (still an astonishing number we might add!).²¹





INSIGHTS
*UNDER THE
SMARTPHONE SPOTLIGHT*

Entering the peak smartphone era

Life's interactions experienced through a 5 inch screen

With 84 per cent of Australians owning a smartphone in 2016 (compared with 79 per cent in 2015), connecting through a 5 inch screen has become a ubiquitous way of life – with our chosen device there to guide, inform and distract us throughout the day, and for some even during the night. 18-24 year old mobile consumers are leading our national push toward 'peak smartphone', with 94 per cent of this trend-setting demographic having access to at least one smartphone. This year Norway (91 per cent) and South Korea (89 per cent) have taken top spot on the global leader board, with the global average penetration rate being 81 per cent.*

The Australian smartphone market is approaching a 'peak' in terms of saturation. Many of our mobile consumer demographic groups have breached 90 per cent penetration this year, smartphone refresh cycles (i.e. the time between us replacing our current device with a new one in the next 12 months) have extended from last year moving from 34 per cent to 31 per cent, compared to South Korea which has 40 per cent intent to purchase in the next 12 months). There are not many un-marketed segments remaining for growth, but all is not lost. 1.5 billion smartphones are expected to be shipped globally this year, with approximately 5 million here in Australia.²² This number is larger than the combined total of all PCs, tablets, televisions and gaming consoles shipped.²³

2G fadeout

The 2G networks in Australia are set to be decommissioned from December 2016²⁴, with 1 in 5 mobile consumers impacted. Australia is not the first to take this step, with Japan and South Korea already shutting their 2G networks down, Singapore scheduled in the next 12 months²⁵, and US operators planning for their respective fade outs.²⁶ Closing down the 2G network will release much needed spectrum in Australia and is expected to reduce operating costs for mobile network operators. Despite the many benefits of this fade out, roughly 3 million mobile consumers in Australia who are currently using a feature phone which functions on the 2G network will be required to upgrade to a 3G enabled smartphone should they wish to remain connected. The group most impacted by the shutdown are consumers over 55, many of whom may not even know a switch is required and could struggle in a similar way to our national digital TV cut over from analogue in December 2013.

*19 countries available for comparison at the time of publication – a full data set of the 31 countries available on request.



Market share

Competition amongst device manufacturers has been fierce in recent years, but in Australia we are now seeing what appears to be a market share stabilisation and it is a clear two-horse race. Apple (43 per cent) and Samsung (33 per cent) dominate our smartphone wallet share and extended their lead this year with Nokia (4 per cent), HTC (5 per cent), Sony (3 per cent) all losing ground.

Samsung has higher penetration success with more mature mobile consumers, which could result in Samsung market share jumping slightly if they are able to attract the 2G cohort needing to upgrade in the coming years, not withstanding their ability to work through the impacts of the Note 7 challenges experienced this year. And although Apple may have captured the Australian mobile consumer device market, it is Samsung that has the largest market share globally at 23 per cent over the 12 per cent held by Apple based on second quarter 2016 shipments.²⁷

In terms of global smartphone operating system market share, Google's Android OS continues to dominate. Android has held between 82-87 per cent²⁷ of the global OS market over the past few quarters in terms of their share in smartphone unit shipments. In Australia Android enabled smartphone shipments have ranged between 50-65 per cent of the market over the last year.²⁸

Ready to re-fresh?

While smartphone penetration is reaching its peak, the replacement market remains healthy – albeit a little less vibrant than in prior years with just 31 per cent of mobile consumers anticipating to purchase a new handset this year down from 34 per cent in 2015. Mobile consumers appear to be less likely to jump at the latest smartphone release as perhaps they were in prior years. The primary reason for this relates to the somewhat incremental innovations that are being incorporated into new smartphone devices. A better camera, faster processor and perhaps minor design adjustments do not appear to be sufficient to sway consumers from their year-old device.

A focus on enhanced operating systems and improved digital assistants is where device manufacturers are investing to fuel what they hope is a new round of growth.²⁹

When it comes to selling our old smartphones, it appears we have a hard time letting go. Just 1 in 10 Australian mobile consumers are choosing to sell their old phone – with 47 per cent keeping their phone as a backup in their desk drawer or handing it down to a family member or friend (28 per cent).



BOTTOM LINE – we're heading to 100% mobile penetration

While worldwide shipments for the second quarter of 2016 revealed just 0.7 per cent year-on-year growth³⁰, the smartphone is still the most ubiquitous device across the mobile consumer landscape and its penetration rate is quickly approaching 100 per cent.

The impact of the 2G phase out in Australia (and globally) will have an impact on almost 1 in 5 mobile consumers and will more than likely see our smartphone penetration rate increase and further fuel data consumption patterns as more consumers become 4G enabled.³¹

The lure to a new smartphone appears to be fading, with just 31 per cent of consumers planning to purchase over the next 12 months. Hardware innovations are viewed as just slight enhancements and perhaps too incremental to warrant upgrading unless absolutely needed. The device battleground will likely be waged around advancements in the operating system and their respective investments in digital agents and artificial intelligence, which will no doubt be an exciting area to watch in the year ahead.



Demanding more data – our consumption craving

Consumers want to have their data shackles removed

Mobile data is seen by many as the hottest commodity on the planet³² and with 74 per cent year on year growth in mobile data traffic our consumption craving does not appear to have any limits.³³ For Australian mobile consumers, the feature that tops the most wanted list is 'unlimited data' as part of their mobile package (37 per cent).

The ACMA reports that most Australian mobile consumers are on a monthly plan that ranges between 1 to 6 GB³⁴, and requiring negotiation around how and when they use their data to stay on plan.

Mobile consumers in the United States, United Kingdom and most European countries, have access to substantially higher monthly data plans, ranging on average between 25 to 40 GB per month. This seemingly 'un-shackled' limit allows consumers to effectively use their smartphone when they want, to view what they want, for as long as they want, without having to constantly monitor their consumption. At the extreme end of the market, Telia in Denmark is now offering a 100 GB plan.

Everybody's snapping

With 77 per cent of mobile consumers now on a 4G network, we are likely to see a continued rise in data consumption behaviour on our smartphones. In 2015, a 4G connection generated 6 times more traffic than a non-4G connection.³⁵ Our consumption behaviours are continuing to evolve as we are seeing increases in many social and consumer interactions including mobile shopping³⁶, uploading of photos, and viewing and sharing videos.

The smartphone has indeed revolutionised the world of photography. Australian mobile consumers are snap-happy, with 1 in 3 taking a photo daily and in certain age demographics we have seen a doubling of this behaviour year on year (41 per cent compared to 21 per cent in 2015 for consumers aged 18-24). 1 in 5 of consumers aged 18-24 go on to share or post a picture daily.

Battle for your bandwidth and speed

In one lunchtime of surfing the net, how much would you consume? By the time videos have been downloaded, articles explored and apps upgraded, most consumers could expend 700-800 MB in a serving. For those on a 4 GB monthly cap, a week of this sort of consumption would leave you high and dry in search of the dreaded 'data top-up'.

It is now accepted practice for operators to offer an extra GB for around \$10 once data caps have been reached. And with 1 in 5 Australians that regularly exceed their data allowances³⁷ this monthly top-up is becoming business as usual. Given the trends for much higher data allowances globally and the likely consumer backlash that will start from having to continuously top-up we expect to see changes to pricing and packages here in Australia, although we are not sure how quickly (or if ever) local operators will align with a number of operators globally that are pricing a gigabyte at less than a dollar.³⁸





BOTTOM LINE – our hyper-connected behaviours require much greater data

Mobile consumers are demanding the data plan ‘ball and chain’ to be un-shackled. Just five years ago the requirement for ‘livestreaming’ an egg and spoon race at a sports day, scavenging around major cities collecting digital artefacts on your smartphone, or consuming an endless stream of your favourite shows or random cat videos did not exist. Arguably, technology and data availability, not consumer desire – given the popularity of Pokémon Go – was the constraint.³⁹

From apps to photos, videos to shopping, consumers are expecting a seamless and integrated experience, without having to worry about how much data they might be using. With our desire to access more content, mobile consumers are exceeding data plans, and looking to the operators to respond by providing larger and ideally lower priced data plans.

While we may feel constrained by our data plans, this doesn’t appear to be slowing the digital degustation of ever-growing content and many social, retail and business related interactions we use our smartphones for on a daily basis. And what used to be the device used primary for voice calling is quickly becoming so much more. In any given week, over a quarter of Australian mobile consumers are not using their smartphones to make a ‘traditional’ voice call – a true rise of the ‘data exclusive’.

As we produce, share and consume ever more content, the need and expectation for operators to provide faster and larger data plan options is here. And although we may be reaching a ‘peak’ in smartphone device penetration, the consumption ‘peak’ is still well and truly above the clouds.

Unsocial mobile

Our most favourite and divisive device

Half of the Australia mobile consumer population engage with their smartphone within 15 minutes of waking up. This sets the tone for the day and the way in which our most favourite device has become an extension of us, embedded into our daily routines, experiences and interactions.⁴⁰

The same phenomena occurs at the end of the day, with the same proportion of mobile consumers checking our smartphones within just 15 minutes of going to bed. Throughout the day, we admit to using our smartphones in meetings, when driving, with friends, and even during family meals.

Some suggest that this behaviour is the same for any activity that distracts, be this looking at your watch or looking out the window during a dinner for two.⁴¹ But is it really?

The phone is driving a wedge into our relationships

Smartphones have moved front and centre, across many of our relationships for better and in some cases, for worse.⁴² A recent study looked at the relationship between the presence of mobile devices and the quality of face-to-face catch-ups. The results, not surprisingly, found that conversations in the absence of mobile devices were rated as significantly higher compared with when the individuals communicating had access to their mobile devices.⁴³

The debate is beginning to intensify in business and social settings as to what constitutes appropriate smartphone behavior.⁴⁴ The rules are not written and what one mobile consumer might think is appropriate, another might deem abhorrent. When phones were first released the act of taking a call or even looking at your phone at a restaurant was a no-go zone, compared with today where the standard protocol is to take a photo of your dish to post online for your friends to join in your dining experience.

It seems that as much as we love our smartphones, our adoring connection with them is creating distances and disharmony in many of our closest relationships – nearly a third of Australians admit to having had a row about mobile phone usage with their partner and 1 in 5 do so at least monthly. If we are not careful our most favourite device could become our most divisive device.



The deep guttural howl of the nocturnal user

Fuelling the argument, or perhaps in an effort to hide our phone addiction, 30 per cent of Australians continue to use their smartphones throughout the night, checking and responding to emails, messages and social media notifications.

This number is higher for 18-24 year olds, with 45 per cent of them checking their devices during interrupted sleep patterns. It seems we live, breathe, work and sleep (or not) in a society where there is an increasing expectation to respond instantly.

With device manufacturers aware of the growing impact of smartphones on health and wellbeing, features are being introduced such as do not disturb, night shift, app lockout, and screen lockout to help curb our seemingly addictive usage behaviours. There are also an increasing number of digital detox services, and social media addiction help groups responding to this 'epidemic'.⁴⁵





BOTTOM LINE – the codification of smartphone behaviours

Putting etiquette under the smartphone spotlight clearly suggests we have much to do to improve – with unwritten rules, goal posts moving and behaviours drastically changing when it comes to smartphone use and expectations.

We expect the focus on health and wellbeing to increase. The effects of the smartphone are being examined more regularly in both business and social contexts. What might seem like an innocent habit, whether it be checking work emails or responding instantly, can escalate into a routine that is non-productive, un-healthy and even relationship destroying.

Will device manufacturers and mobile operators be asked to fund a dispute resolution hotline service? While the social etiquette around mobile phone is certainly evolving and very subjective, more and more people seem to be frustrated with their partner and their smartphone behaviours, particularly during ‘family time’.

The use of social media might not be as negative as some would think⁴⁶ – it might just need to be managed. The following are a few tips for managing unsocial mobile behaviours at work and at home:

- #1** For the kids – keep technology out of the bedroom. Cyber bullying experts have identified that much of this negative behaviour occurs behind closed doors. Teach kids about their digital footprint.
- #2** Set time limits, right now – only allow children or family members to have their devices on before or after but not during meal time.
- #3** For important work meetings, turn your phone off completely, don't leave it on silent.
- #4** Only check your emails at certain designated times, to avoid the constant scanning and knee-jerk replies that can take over your working day.
- #5** Out at dinner? Get everyone to put their device in the middle of the table and the first to check pays the bill.

A penny for your prints

Who has your (finger) print?

Thousands of years ago, the citizens of Ancient Babylon imprinted their fingerprints into clay tablets to authenticate transactions. Today the problem of authentication remains and a multiplicity of passwords have become an awkward part of everyday life. That is why the fingerprint is making a comeback.

Passwords have inherent limitations. Ideally they should get steadily stronger over time, as the digital tools used to crack them become ever more powerful. A stronger password is longer and composed of a blend of numbers, letters and special characters, in a sequence that does not resemble a word. 'Pa\$\$w0rd' is easier to remember but not ideal. Those blessed with an exceptionally precise memory could create even longer passwords for a growing range of services. However, for most people, between five and nine characters is the limit. When people are asked to create strong passwords for a rising number of services, and to refresh them every three months, their typical response is to use the same password for multiple accounts which is not ideal.

By 2020, it is forecast that each user may have as many as 200 online accounts, each requiring secure controls over access.⁴⁷

Fingerprints to the rescue

Access using a fingerprint reader requires a single tap. With more recent smartphone models, the time taken to read the fingerprint is imperceptible.

The range of applications in which fingerprint readers are used is likely to grow over time. Initially fingerprints were used to unlock phones and were a faster alternative to a numeric password. This was extended to authorise payment for online content from an app store. As finger readers have become more secure they are being used for higher-value in-store and app payment verification. The fingerprint can now be used to authorise a transaction as high as the user's credit card limit.⁴⁸

Awareness of fingerprints biometrics is greater with Apple iPhone 6 users (81 per cent), compared to Samsung Galaxy 6 owners (49 per cent), most likely due to the more controlled experience when using an Apple device. However the demographics of biometrics tells another story, with relatively consistent adoption across age demographics.

The fallibility of the fingerprint

For all its evident merits, the fingerprint reader is not infallible. It is possible – albeit increasingly difficult – to make copies of a fingerprint. Earlier readers are more susceptible to spoofing.⁴⁹ But readers are becoming more sophisticated and harder to fool as they capture a more detailed image of the original fingerprint.⁵⁰ The latest fingerprint readers can readily differentiate between a real finger and a copy of one.

Another potential problem is that in humid or wet conditions, water on the surface of the finger may inhibit the sensor, increasing the likelihood of false negatives. But these are minor inconveniences compared to the task of remembering and entering a complex password.

The password landscape is changing and new technologies – biometrics, user analytics, Internet of Things applications are offering companies the opportunity to design applications and interactions based on bilateral trust, user experience, and improved system security.⁵¹





BOTTOM LINE – the continued rise of the fingerprint

We're living in an age of heightened security and scrutiny. Businesses owe it to their stakeholders to guard the vast and increasing digital treasure chest of information by providing more robust online access protections.⁵²

Over the next year we would expect the smartphone's fingerprint reader to be used in conjunction with websites accessed by computer to authorise payments.⁵³ The user could opt to pay via their phone, and authenticate the purchase using their phone's fingerprint reader. This approach would make the transaction more secure, as the user would need to have possession of both computer and smartphone to complete the payment.

In future, fingerprints and other forms of biometric measurement could be used for a growing range of government related services and applications, from voting to submitting online tax returns.

The rise of biometrics, however may not 'help' those that are more prone to impulse purchases – where you can easily process a payment with the touch of a finger. In a seamless digital experience, this limits abandonment rates and simplifies the payment process done to a single print.

How the phone has lost its voice

The rise of the 'data exclusive'

Over a quarter of all Australian mobile consumers have not used their phone to make a traditional voice phone call in a given week. This new mobile consumer segment, the 'data exclusive',⁵⁴ is redefining what it means to communicate via the smartphone. We appear to be moving toward a time where traditional voice calling is seen as the exception rather than the norm – with a nuanced world of communication emerging.

While traditional voice calling might be going from hoarse to non-existent, mobile consumers are communicating more than ever – just in a different ways.

Consumers are increasingly using text messaging, email, social media, instant messaging, VOIP and video – as data enabled communications. The rapid rise in these more digital forms of communication has seen a significant investments by operators in their core mobile networks, in response to the data tsunami that is associated with this change in behaviour.

Let me show you *right now*

Beyond words, people are now increasingly responding to messages with photos, images and/or emoticons.⁵⁵ Mobile consumers across the globe want to show you, rather than just tell you – and the many forms in which we are now able to communicate are enabling this shift. Indeed, a picture may 'tell a thousand words', but increasingly it's a video or even live streaming that allows you to share the experience.

We are beginning to see the development and adoption of innovations that enable the 'connected self'. Snap Inc. have released sunglasses that allow users to record ten second bursts of video footage. This content can then be transferred to the 'memories' section of SnapChat and be broadcast to the user's followers.⁵⁶ Facebook now offer live video feeds and notification for broadcasting. These innovations are underpinning mobile consumers demand for creating video content and sharing it with the world, or at least their close friends.





BOTTOM LINE – beyond the phone call lies a world of increased connectivity

With the rise of the ‘data exclusive’, we need to ask ourselves: in a world dominated by the SIM card and a demand for ubiquity of communication, could there be a replacement for the 10 digit number that has served us so well?

After all, if we are ‘connected’ on Instant Messenger or WhatsApp, your contacts can call you directly from the app. And although our phone number has served us well as a unique identifier, might we be on the verge of an alternative to the SIM?

Whilst the Quality of Service (QoS) of data based communications today may not be sufficient for all purposes, this is rapidly improving, and enterprise businesses are now moving to VOIP based conference facilities. HD Voice continues to have superior sound quality, but the continued trend in the rise of ‘data exclusive’ may be signalling that call quality is not our top priority when it comes to communicating.

This changing landscape presents both challenges and opportunities for telcos, device manufacturers, network engineers and social platforms. The move to a numberless society may never eventuate, but it is not hard to imagine with our rapidly increasing use of data based communication mediums – that this approach is not being considered.

Before this happens expect to see a dominant social media or IM calling service arise to define the future of phone calls, including QoS management, most likely integrated in the device operating system to simplify mass adoption.

Apps versus browsers

Are you building an app for that?

The app is one of the most disruptive innovations of the last decade and has been pivotal to the commercial success of the smartphone and for the overall 'mobile economy'.

Appolutely fabulous, mostly

Millions of apps are now available to mobile consumers, with the vast majority of our time spent interacting with our smartphones via apps that enable social networking, charting your route and ordering (and paying) for transportation.⁵⁷ The app market in aggregate is lucrative, but this value is spread thinly across thousands of publishers. Over the last eight years, app stores have generated tens of billions of dollars in revenues via download sales and in-app payments.⁵⁸ The most successful apps have been downloaded over a billion times.⁵⁹

It would therefore appear logical for all companies to want to create an app. If smartphone users want to spend the bulk of their time in apps, then shouldn't all companies, from retailers to news providers and airlines, want to create apps.⁶⁰

However, apps may not always be the best approach for businesses. While for some categories – most obviously games – the app is almost always the right way to go, there are many instances in which a browser is preferred. In a few cases obliging users to download an app might deter potential customers.

When apps are preferred

Apps tend to be most successful for processes or tasks which are completed regularly. Among Australian smartphone owners, over two thirds (71 per cent) would typically use an app to check the weather, rather than a browser. Checking the weather is a simple process and is able to employ smartphone data inputs such as GPS, forgoing the need to type in the name of a town or place. An app can meet this need with a single touch. For more occasional tasks where content is not uniform, such as shopping, using a browser may be more effective – and for this to work on smartphones, companies should create mobile-optimised websites.

When browsers are better

Shopping online via a phone, whether looking at products or purchasing, is a common activity. An app may be suitable when making regular purchases, such as the weekly order from an online grocer. But when searching for a new outfit the first action might well be a browser-based search as this would return results from a range of retailers, not just a single one. According to our research, an online search for a product is over three times more likely to start in a browser (50 per cent) than in an app (15 per cent).⁶¹

A browser-based search returns hyper-linked results which, when clicked, open up webpages. Requiring a potential customer to download an app before seeing a product may put them off. Similarly a browser would be the likely starting point for the majority of people when booking travel – but not for the minority of frequent travellers, for whom an app is preferable.





BOTTOM LINE – the continued benefits of browsers

One of the core benefits of access via a browser is its immediacy. When looking for information or a service that has never been used before, a browser is ideal. A browser, for example, can show shop opening times, directions to a location or reviews for a product within seconds.

By contrast, an app must be downloaded before it can be used. Obliging a user to download an app to find out a shop's opening times, or to be able to pay for on-street parking, may deter the user who may not want to wait for the app to download, or pay for the cellular data usage required.

One approach to delivering the functionality of an app without the inconvenience of requiring a download is to enable individual components of an app to be searched for and then streamed to the device via a browser.⁶² When a user chooses to stream an app in this way, the app loads in a virtual environment and the user sees a copy of the app.

While apps can be very useful, smartphone owners are in general disinclined to download them in large numbers. Among smartphone owners aware of how many apps they have, the majority have downloaded 30 or fewer. Only 10 per cent have downloaded 30 or more.⁶³ The reluctance to download large volumes of apps spans all age groups: even among 18-24 year-olds the majority have downloaded 30 or fewer, and only a tenth have 30 or more. This means that most users download just 0.00001 per cent of the millions of apps available.





IMPACTS ON INDUSTRY

WHAT DO OUR INSIGHTS AND ANALYSIS MEAN FOR YOUR INDUSTRY?

From hyper connectivity to clever consumption, we take a look what the survey results reveal through an industry lens – across the Public Sector, Financial Services, Energy and Resources, Healthcare, and Consumer Business.

Public Sector

Across the public sector landscape, we're seeing a consistent expectation that every transaction should be browser enabled and responsive – irrespective of the device. Citizens, consumers and organisations as a whole are always looking for ways to make processes and transactions more seamless and integrated.

As the public sector continues to grow and mature, there will likely be a move towards having more services digitised across the board. This moves the smartphone front and centre stage, as services and information will need to be responsive and accessible across all devices.

As the mobile consumer landscape continues to evolve rapidly, the public sector will need to assess what can be done to harness the power of a digital currency. Smartphones are at the epicentre of our daily lives and might hold the key to driving significant efficiencies and reforms. If we think about the process of infringement management, the smartphone technology available should enable them to be paid on the spot – without investing the need for services to chase payments and collections. This integration of technology within the public sector might see an increasing focus on the smartphone as a valuable tool.

The public sector will also need to balance the role of policies, regulations and frameworks in managing the frenetic rise of technology and disruption. Having the right regulations in place to deal with a diversity of digital issues is a focus area for policy makers – as we move to an era where the smartphone dominates our daily existence.

In the sphere of automation, biometrics and fingerprints, there is a key focus area on alerts and notifications for the public sector to pay attention to. This could range from reminders to renew a driver's licence through to prompts around paying for any upcoming registration. Consumers will increasingly expect to be able to make payments via processes that embed their accurate and up to date details.



Financial Services

When putting the smartphone under the financial services spotlight, a primary area for focus is mobile payments, either through apps and browsers, or using NFC. As the industry continues to evolve rapidly against a backdrop of increasing technological changes and smartphone innovations, payments will be an area to watch.

A number of innovations have emerged in the past five years that leverage mobile devices and connectivity to make payments simpler and more valuable, these include digital wallets to automated machine-to-machine payments.⁶⁴ The industry will need to grapple with what this means for the future and how businesses can keep up to date with improvements and enhancements – to drive efficiency of payment methods and an integrated approach. Consumers will increasingly demand accessibility and ease of payment as a standard requirement across transactions.

The continued disruption of payments will likely drive further innovation and renewed focus on the client relationship. Innovative solutions to payment are increasingly offering value-add functionalities that go beyond the mere act of payment, thereby enabling merchants and financial institutions to interact more closely with their customers. Outcomes of this further knowledge might contribute to prolonging the client interaction through loyalty programs, discounts, offers and a more tailored client experience. The point of payment becomes the opportunity to further understand the needs of the client and whether there are specific solutions across financial services that might assist.

This changing mobile landscape might also herald more questions than immediate answers. With payments being more integrated into apps such as social media – what does this mean for the relationship that banks have with customers? As disruptors continue to shake up the market, who will emerge as the lead relationship contact for consumers? What role will trust, efficiency, accessibility and profitability play?

Another key area for financial services and the impact of the smartphone will be the insurance sector – with 2016 shaping up as the inflection point for InsurTech.⁶⁵ Across the wearable devices segment, smartphones are increasingly able to connect with and aggregate data from these items, tracking a user's lifestyle, vitals and specific insights. All of these data points might then allow insurers to tailor products that are customised to a person's specific needs.



Energy and Resources

Is the smartphone fuelling a change in the Energy and Resources landscape? We're seeing key themes from our Mobile Consumer Survey 2016 that have direct implications for the Energy and Resources sector.

The current state of smartphone penetration means that connectivity and accessibility will continue to rise, thereby promoting consumer demand for the way in which the utilities such as power, gas and water are consumed within the connected home. This directly brings to life a focus on the Internet of Things (IoT) and the extent to which the home environment will continue to change as consumers drive changes in demand and consumption through more interactive devices and in-home applications.

The enablement of mobility, telecommunications and smartphones paint a powerful picture of what might be possible in a fully connected home environment. Fixed assets such as power, water and gas are being disrupted more than ever, as consumer expectations and demands drive changes to the way people interact with technology in their home.

The smartphone is becoming the key device in the hands of the consumer, able to control a range of functions the utilities provide. The increasing ability to respond to more distributed grid technologies such as micro-grids, micro-generation, and non-traditional energy sources such as renewable energy in the form of solar, wind and emerging technologies will be enabled through the innovations in mobile technology.

Beyond the energy impact around the connected home, we're also seeing a broad digital disruption in the power and utilities sector- as new technologies shape the way in which energy and resources are sourced, distributed and acquired.



Healthcare

Is the smartphone becoming the heartbeat of connectivity for the healthcare sector? We are seeing a number of our providers both public and private launching 'Virtual Care Delivery' initiatives not only to address access blocks and skills shortages (particularly in rural and remote areas) but also to align with patient centred care delivery. This will necessitate both a transition of operating models but also both public and private insurance funding models which currently constrain the extent of uptake in Australia.

Across this landscape we're also seeing that there is a significant change with families of the older demographics insisting they have a mobile phone with them at all times for safety reasons. For some, the smartphone allows the elderly to stay in their homes for longer. Rather than moving to residential aged care facilities, some are able to maintain living at home – using the smartphone as a way to connect to any needed services and to sustain their independence. As the population gets older and transitions from residential care into supported aged care facilities, the smartphone is providing the elderly with a continued connectivity to other services and support.

This brings to life the theme around the Internet of Things (IoT), with healthcare a prime sector for the way in which this can be extended, refined and enhanced. Remote monitoring and support through smartphones might pave the way for a new framework of services. From a communication perspective, patients in assisted living facilities or even in a hospital situation might decide to use a 'show me' rather than 'call me' approach, harnessing the power of video to see and connect with loved ones rather than the traditional phone call.

As the future unfolds with technology merging into healthcare innovations, the smartphone's connectivity with external wearable devices is likely to play a key role. From insulin pumps through to embedded devices, wireless communications and robotics are likely to be areas of continued development, debate and regulatory discussion.



Consumer Business

In a hyper connected world filled with clever consumption, what's next for consumer business?

Fuelled by the revolution of smartphones, we have already seen the pervasive digitisation of the path to purchase. Consumers nowadays seamlessly interact and switch between digital channels and physical stores. Alternative payment platforms leveraging mobile have started to become the norm.

The next exciting wave that builds on the mobile consumption growth, is the connection that the consumer will have with the physical product in the coming years. Particularly when the product truly matters to them.

Consumer electronic companies were one of the first to jump on the Internet of Things (IoT) in the physical product. Home owners could start to interact with their dishwashers, security and lights by using their mobile phones and information on usage was made visible with a touch of a button. We have watched this trend of the connected home evolve and couldn't help but feel somewhat disappointed with the relatively slow pace of adoption locally and globally.

One of the questions we can ask ourselves is whether the consumer cares enough about the value add – convenience, sustainability and lower electricity bills.

What has seen a rapid adoption is the use of personal health and fitness mobile apps supported by wearables. That growing knowledge thirst of consumers on personal health includes food and implications of food intake. Imagine what could happen if we extend the concept of connected product to areas that the consumer does care about, being personal health and food?

That future might paint a powerful picture of being able to scan certain food and beverage products with our smartphone and have the nutrients, implications and outcomes revealed in terms of what exercise or steps should accompany the meal or what balance is required for optimal wellbeing and personal benefit. Smart packaging can involve the ability to alert a consumer around the quality, condition, expiration or optimum time for consumption. That expensive bottle of wine in your cellar may not be at its best at 2019 as indicated by your wine merchant, but will perhaps reach its peak this year based on the transport and storage conditions. Imagine the benefit of having that information at hand.

The consumer electronics space may have lead the way in terms of digital integration but we are reaching a point where the food and beverage industry starts to follow suit. The extension of the Internet of Things (IoT) to the *Internet of Food* might herald a wave of increased focus on education and connectivity around products and food consumption.

In an increasingly competitive market with brand equity at its lowest point, this is the time for consumer businesses to consider value added digital services to the consumer, and the way in which digital interactions can take consumer engagement at the point of sale or consumption to another level.



Contacts

Authors



Jeremy Drumm

TMT Partner, Consulting,
Monitor Deloitte
jdrumm@deloitte.com.au



Nicholas White

TMT Principal, Consulting
nickwhite@deloitte.com.au



Morne Swiegers

TMT Manager, Consulting
mswiegers@deloitte.com.au



Contacts

TMT Leadership contacts



Stuart Johnson

Partner, National TMT Leader
stujohnston@deloitte.com.au



Clare Harding

Partner, Financial Advisory
Leader, TMT
clharding@deloitte.com.au



Niki Alcorn

Partner, Consulting,
Monitor Deloitte
nalcorn@deloitte.com.au



Stuart Scotis

TMT Partner, Consulting
sscotis@deloitte.com.au



Kate Huggins

TMT Partner, Consulting
khuggins@deloitte.com.au



John O'Mahony

Partner, Deloitte
Access Economics
joomahony@deloitte.com.au



Dennis Moth

Partner, Risk Services
dmoth@deloitte.com.au



Joshua Tanchel

Partner, Deloitte Private
jtanchel@deloitte.com.au



Contacts

TMT Leadership contacts



Mason Davies

Partner, Consulting
madavies@deloitte.com.au



Sandeep Chandha

Partner, Assurance and Advisory
sachadha@deloitte.com.au



Jamie Gatt

Partner, Assurance and Advisory
jagatt@deloitte.com.au



Eamon Fenwick

Partner, Tax
efenwick@deloitte.com.au



Damien Tampling

Partner,
Financial Advisory – M&A
dtampling@deloitte.com.au



Contacts

Industry contacts



Arthur Calipo

Partner, Consulting,
Financial Services
acalipo@deloitte.com.au



Dr Stephanie Allen

Partner, Consulting, Health
steallen@deloitte.com.au



Jason Hutchinson

Partner, Consulting, Public Sector
jhutchinson@deloitte.com.au



Michael Rath

Partner, Consulting,
Energy and Resources
mrath@deloitte.com.au



Vanessa Matthijssen

Partner, Consulting,
Consumer and Industrial Products
vmatthijssen@deloitte.com.au



Contacts

Contributors



Paul Lee
Head of Global Research,
TMT Client Manager



Jared Landman
Manager, Consulting



Nitin Shastri
Manager, Consulting



Daniel Edgar
Consultant, Consulting



Guen Lasalarie
Senior Consultant, Consulting



Maggie Davey
Senior Consultant, Consulting



Robert Price
Senior Consultant, Consulting



Neil Glaser
Manager, Content Marketing



References

1. Seniors weigh up smartphones ahead of the 2G shutdown, Adam Turner, 14 March 2016, Sydney Morning Herald, Adam Turner, March 2016, <http://www.smh.com.au/technology/gadgets-on-the-go/seniors-weigh-up-smartphones-ahead-of-the-2g-shutdown-20160311-gngn6c.html>
2. <https://www.idc.com/getdoc.jsp?containerId=prUS41882816>
3. Worldwide Smartphone Growth Goes Flat in the First Quarter as Chinese Vendors Churn the Top 5 Vendor List, According to IDC, IDC, 27 April 2016, <http://www.idc.com/getdoc.jsp?containerId=prUS41216716>
4. Gartner Says Worldwide Smartphone Sales Grew 3.9 Percent in First Quarter of 2016, Gartner, 19 May 2016, <http://www.gartner.com/newsroom/id/3323017>
5. Used smartphones: the \$17 billion market you may never have heard of, Deloitte TMT Predictions, 2016, <http://www2.deloitte.com/global/en/pages/technology-media-and-telecommunications/articles/tmt-pred16-telecomm-used-smartphones-17-billion-market.html>
6. More Australians now have SVOD than Foxtel, Roy Morgan Research, 8 September, 2016, <http://www.roymorgan.com/findings/6957-svod-overtakes-foxtel-pay-tv-in-australia-august-2016-201609081005>
7. Deloitte reveals stagnation in UK smart home market, Michael Carroll, Aug 29, 2016, <http://www.fiercewireless.com/europe/report-deloitte-reveals-stagnation-uk-smart-home-market>
8. SK Telecom to launch 500Mbps LTE-A Pro on June 1, 1Gbps by 2019, ZDNet, 24 May 2016, <http://www.zdnet.com/article/sk-telecom-to-launch-500mbps-lte-a-pro-on-june-1-1gbps-by-2019/>
9. EE LAUNCHES NEXT PHASE OF 4G FOR THE WORLD'S FASTEST SMARTPHONES, EE, 6 September 2016, <http://newsroom.ee.co.uk/ee-launches-next-phase-of-4g-for-the-worlds-fastest-smartphones/>
10. 1 in 5 smartphone users often go over their data limits, Roy Morgan Research, 05 September 2016, <http://www.roymorgan.com/findings/6948-australians-who-go-over-their-mobile-phone-data-allowance-june-2016-201609050906>
11. Calculated by extrapolating GMCS survey results with ABS Australian demographic data – 2014 Australian Demographic Statistics (31010DO001), Dec 2014, Table 7 estimated resident population
12. Electronics in the Bedroom: Why it's Necessary to Turn off Before You Tuck in, National Sleep Foundation, as accessed on 1 September 2016, <https://sleepfoundation.org/ask-the-expert/electronics-the-bedroom>
13. See Pocket Points by Pocket Points, iTunes, as accessed on 8 September 2016: <https://itunes.apple.com/us/app/pocket-points/id908136685?mt=8>



References

14. This is a summary of multiple apps on the market to meet this functionality. See Screen Time Parental Control By Screen Time Labs, iTunes, as accessed on 8 September 2016, <https://itunes.apple.com/in/app/screen-time-parental-control/id1055315077?mt=8>; (OFFTIME) light – Track how much you use your phone & Digital Detox and unplug to focus By OFFTIME, iTunes, as accessed on 8 September 2016, <https://itunes.apple.com/us/app/offtime-light-track-how-much/id974022309?mt=8>; Moment – Track how much you and your family use your phone By Kevin Holesh, iTunes, as accessed on 8 September 2016: <https://itunes.apple.com/in/app/moment-track-how-much-you/id771541926?mt=8>
15. A world beyond passwords: Improving security, efficiency, and user experience in digital transformation, Deloitte University Press, Deloitte Development LLC, 25 July 2016: <http://dupress.com/articles/moving-beyond-passwords-cybersecurity/>
16. Apple Pay For Safari Is Like Having The Amazon 1-Click Shopping Cart On Any Website, Medium, 13 June 2016, <https://medium.com/@brianroemmele/apple-pay-for-safari-is-like-having-the-amazon-1-click-shopping-cart-on-any-website-db1fb29930a9#.qud94cvrc>
17. Your smartphone fingerprint reader could be hacked using paper and ink, Naked Security, 8 March 2016, <https://nakedsecurity.sophos.com/2016/03/08/your-smartphone-fingerprint-reader-could-be-hacked-using-paper-and-ink/>
18. For more information see Breakthrough 3D fingerprint authentication with Snapdragon Sense ID, Qualcomm Technologies, 2 March 2015, <https://www.qualcomm.com/news/snapdragon/2015/03/02/breakthrough-3d-fingerprint-authentication-snapdragon-sense-id>
19. <http://newsroom.fb.com/Company-Info/>
20. Pokémon Go catches five new world records, Rachel Swatman, 10 August 2016, <http://www.guinnessworldrecords.com/news/2016/8/pokemon-go-catches-five-world-records-439327>
21. These Charts Show That Pokémon Go Is Already in Decline, Bloomberg, 23 August 2016, <http://www.bloomberg.com/news/articles/2016-08-22/these-charts-show-that-pokemon-go-is-already-in-decline>
22. Worldwide Smartphone Growth Forecast to Slow to 3.1% in 2016 as Focus Shifts to Device Lifecycles, According to IDC, IDC, 1 June 2016, <http://www.idc.com/getdoc.jsp?containerId=prUS41425416>
23. UK edition, Deloitte Global Mobile Consumer Survey, May-Jun 2016.
24. Sydney Morning Herald, Adam Turner, June 2016, <http://www.smh.com.au/digital-life/computers/gadgets-on-the-go/telstra-2g-nana-phones-living-on-borrowed-time-20150706-gi5yun.html>
25. <http://www.telecomtv.com/articles/mobile/singapore-to-switch-off-its-2g-networks-12545/>



References

26. <http://www.rcrwireless.com/20160324/carriers/att-shutdown-2g-gsm-network-jan-1-2017-tag17>
27. <http://www.idc.com/prodserv/smartphone-market-share.jsp>
28. <http://www.kantarworldpanel.com/global/smartphone-os-market-share/>
29. <http://www.economist.com/news/business/21706559-slowing-growth-and-less-innovation-do-not-spell-end-era-still-ringing-bells>
30. Worldwide Smartphone Growth Goes Flat in the First Quarter as Chinese Vendors Churn the Top 5 Vendor List, According to IDC, IDC, 27 April 2016, <http://www.idc.com/getdoc.jsp?containerId=prUS41216716>
31. Sydney Morning Herald, Adam Turner, March 2016, <http://www.smh.com.au/technology/gadgets-on-the-go/seniors-weigh-up-smartphones-ahead-of-the-2g-shutdown-20160311-gngn6c.html>
32. Sydney Morning Herald, Jessica Sier, June 2016, <http://www.smh.com.au/business/markets/how-to-invest-in-the-mobile-data-explosion-20160620-gpnanv.html>
33. Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2015–2020 White Paper, <http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/mobile-white-paper-c11-520862.html>
34. ACMA Communications Report 2014 – 2015, page 48 and 49
35. Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2015–2020 White Paper, <http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/mobile-white-paper-c11-520862.html>
36. Sydney Morning Herald, Declan Harty, August 2016, <http://www.smh.com.au/technology/mobiles/ecommerce-smartphones-now-the-most-popular-way-to-shop-online-20160726-gqdvoe.html>
37. Roy Morgan Research, 1 in 5 smartphone users often go over their data limits, <http://www.roymorgan.com/findings/6948-australians-who-go-over-their-mobile-phone-data-allowance-june-2016-201609050906>
38. Digital Fuel Monitor, Unlimited mobile data is back, <http://dfmonitor.eu/>
39. Deloitte UK Mobile Consumer Survey 2016 – page 34
40. The Guardian, Michael Lynch, February 2016, <https://www.theguardian.com/technology/2016/feb/19/iphone-apple-privacy-smartphones-extension-of-ourselves>
41. There's no place like phone – Global Mobile Consumer Survey 2016 – UK Cut.
42. AFR Weekend, Hara Estroff Marano, August 2016, <http://www.afr.com/lifestyle/you-me-and-the-smartphone-the-latest-twist-on-the-menage-a-trois-20160815-gqt1y5>



References

43. The iPhone Effect: The Quality of In-Person Social Interactions in the Presence of Mobile Devices, <http://eab.sagepub.com/content/early/2014/05/31/0013916514539755>
44. The Washington Post, Caitlin Dewey, August 2015, <https://www.washingtonpost.com/news/the-intersect/wp/2015/08/26/when-it-is-and-isnt-okay-to-be-on-your-smartphone-the-conclusive-guide/>
45. ABC News, Psychologists scramble to keep up with growing social media addiction, 2016 <http://www.abc.net.au/news/2016-04-03/psychologists-scramble-to-keep-up-with-social-media-addiction/7293862>
46. Australian Financial Review, Jill Margo, August 2016, <http://www.afr.com/lifestyle/health/why-facebook-and-social-media-is-not-turning-teenagers-antisocial-20160814-gqs9is>
47. A world beyond passwords: Improving security, efficiency, and user experience in digital transformation, Deloitte University Press, Deloitte Development LLC, 25 July 2016, <http://dupress.com/articles/moving-beyond-passwords-cybersecurity/>
48. You can use Apple Pay to pay as you go. See Apple Pay, Transport for London, as accessed on 6 September 2016, <https://tfl.gov.uk/fares-and-payments/contactless/other-methods-of-contactless-payment/apple-pay?cid=applepay>
49. Your smartphone fingerprint reader could be hacked using paper and ink, Naked Security, 8 March 2016, <https://nakedsecurity.sophos.com/2016/03/08/your-smartphone-fingerprint-reader-could-be-hacked-using-paper-and-ink/>
50. For more information see Breakthrough 3D fingerprint authentication with Snapdragon Sense ID, Qualcomm Technologies, 2 March 2015, <https://www.qualcomm.com/news/snapdragon/2015/03/02/breakthrough-3d-fingerprint-authentication-snapdragon-sense-id>
51. Deloitte Review, Issue 19, 2016, <http://dupress.deloitte.com/dup-us-en/deloitte-review/issue-19/moving-beyond-passwords-cybersecurity.html>
52. Deloitte Review, Issue 19, 2016, A world beyond passwords, By Mike Wyatt, Irfan Saif, and David Mapgaonkar, p 64, <http://dupress.deloitte.com/dup-us-en/deloitte-review/issue-19/moving-beyond-passwords-cybersecurity.html>
53. Apple Pay For Safari Is Like Having The Amazon 1-Click Shopping Cart On Any Website, Medium, 13 June 2016, <https://medium.com/@brianroemmele/apple-pay-for-safari-is-like-having-the-amazon-1-click-shopping-cart-on-any-website-db1fb29930a9#.qud94cvrc>
54. Deloitte Global, TMT Predictions 2016, The rise of the data exclusive, <http://www2.deloitte.com/global/en/pages/technology-media-and-telecommunications/articles/tmt-pred16-telecomm-rise-of-data-exclusive.html>. Deloitte Global predicts that in 2016, 26 percent of smartphone users in developed markets will not make any traditional phone calls in a given week. We call these individuals 'data exclusives'. They have not stopped communicating, but are rather replacing traditional voice calls with a combination of messaging (including SMS), voice and video services delivered 'over the top'.



References

55. The Guardian, Michael Brenner, January 2015, <https://www.theguardian.com/media-network/2015/jan/26/rise-emoji-brand-marketing>
56. <https://www.linkedin.com/pulse/snap-inc-introduces-spectacles-sunglasses-record-upload-brian-solis>
57. Number of apps available in leading app stores as of June 2016, Statista, 31 August 2016, <http://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>, App Store Metrics, Pocket Gamer.biz, 31 August 2016, <http://www.pocketgamer.biz/metrics/app-store/>, Seven Years Into The Mobile Revolution: Content is King... Again. Flurry Insights. 26 August 2015. See: <http://flurrymobile.tumblr.com/post/127638842745/seven-years-into-the-mobile-revolution-content-is>
58. Apple moves to maintain the allure of its apps, Financial Times, 13 June 2016, <http://www.ft.com/cms/s/0/a30ca956-319b-11e6-ad39-3fee5ffe5b5b.html#axzz4lmgYJP>
59. See WhatsApp has grown to 1 billion users, The Verge, 1 February 2016, <http://www.theverge.com/2016/2/1/10889534/whats-app-1-billion-users-facebook-mark-zuckerberg>
60. Google just took a much clearer stance on banning ad blocking apps (but ad blocking browsers are still OK), Business Insider, 2 March 2016, <http://uk.businessinsider.com/google-just-took-a-much-clearer-stance-on-banning-ad-blocking-apps-but-ad-blocking-browsers-are-still-ok-2016-3>; Apple pulls the plug on in-app ad-blockers, MacWorld, 9 October 2015, <http://www.macworld.com/article/2991342/security/apple-pulls-the-plug-on-in-app-ad-blockers.html>
61. UK edition, Deloitte Global Mobile Consumer Survey, May–Jun 2016, Figure 26
62. Instant Apps on Android are the most fascinating thing Google announced today, The Verge, 18 May 2016, <http://www.theverge.com/2016/5/18/11705918/google-instant-apps-android-hands-on-video>, See Google Search Now Surfaces App-Only Content, Streams Apps From The Cloud When Not Installed On Your Phone, TechCrunch, 18 November 2015: <https://techcrunch.com/2015/11/18/google-search-now-surfaces-app-only-content-streams-apps-from-the-cloud-when-not-installed-on-your-phone/>
63. UK edition, Deloitte Global Mobile Consumer Survey, May–Jun 2016, Figure 27
64. The Future of Financial-Infrastructure, The World Economic Forum in collaboration with Deloitte, 2016, <https://www2.deloitte.com/au/en/pages/financial-services/articles/future-financial-infrastructure.html>
65. Turbulence ahead – the future of general insurance, Deloitte, 2016, https://www2.deloitte.com/au/en/pages/financial-services/articles/turbulence-ahead.html?utm_source=internal&utm_medium=email&utm_campaign=fsi-future-general-insurance-1016&utm_content=report



About the research

The Australian data cut is part of Deloitte's Global Mobile Consumer Survey, a multi-country study of mobile phone users around the world. The 2016 study comprises of 53,000 respondents across 31 countries and five continents.

Data cited in this report are based on a nationally representative sample of 2,000 Australian consumers aged 18-75. The sample follows a country specific quota on age, gender, region, working and socio-economic status. Fieldwork took place during May to June 2016 and was carried out online by Ipsos MORI, an independent research firm, based on a question set provided by Deloitte.

This brief report provides a snapshot of some of the insights that the survey has revealed. Additional analysis can be made available such as:

- Development of new segmentation models to provide a fresh view on customer centricity
- Smartphone purchasing channels and replacement cycles
- Smartphone device 'Net Promoter Score', loyalty and churn
- Mobile network operator 'Net Promoter Score', loyalty and churn
- Mobile contract type
- Smartphone usage for work-related activities
- Mobile banking adoption, bill payment and funds transfer
- Preferred device for performing daily activities (Smartphone, Laptop, Desktop, TV or gaming console)
- Use of assistance app on smartphone
- Receptiveness of mobile advertising and use of 'ad blocker'.

Results for other countries are also available upon request.





This publication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or their related entities (collectively the “Deloitte Network”) is, by means of this publication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser. No entity in the Deloitte Network shall be responsible for any loss whatsoever sustained by any person who relies on this publication. Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/au/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

About Deloitte

Deloitte provides audit, tax, consulting, and financial advisory services to public and private clients spanning multiple industries. With a globally connected network of member firms in more than 150 countries, Deloitte brings world-class capabilities and high-quality service to clients, delivering the insights they need to address their most complex business challenges. Deloitte’s approximately 225,000 professionals are committed to becoming the standard of excellence.

About Deloitte Australia

In Australia, the member firm is the Australian partnership of Deloitte Touche Tohmatsu. As one of Australia’s leading professional services firms, Deloitte Touche Tohmatsu and its affiliates provide audit, tax, consulting, and financial advisory services through approximately 6,000 people across the country. Focused on the creation of value and growth, and known as an employer of choice for innovative human resources programs, we are dedicated to helping our clients and our people excel. For more information, please visit our web site at www.deloitte.com.au.

Liability limited by a scheme approved under Professional Standards Legislation.

Member of Deloitte Touche Tohmatsu Limited.

© 2016 Deloitte Touche Tohmatsu.

MCBD_Syd_11/16_053453