Deloitte.

2017 Global Mobile Consumer Survey: US edition

The dawn of the next era in mobile

Contents

Most of us can't imagine life without a smartphone since mobile makes the mundane exciting. Meeting with friends, phoning grandma, organizing a lunch, or checking a statistic a few minutes before a business meeting—how did we ever live without them?

Though adoption was initially driven by the younger generations, the use of mobile is not restricted to the young—there's a new demographic that's leading the charge now. Consumers age 55 and older in the United States now are among the leading adopters and drivers of many devices and services. For example, consumers in this age group have a three-year smartphone compound annual growth rate (CAGR) of nearly eight percent compared to roughly two percent for 18- to 34-year-olds.

This is just one of the findings of Deloitte's 2017 Global Mobile Consumer Survey, which has now been fielded for seven consecutive years. For the first time, however, we are seeing the use of smartphone apps and functions beginning to mature—across all age groups—after a boom generation of constant growth.

Deloitte's Global Mobile Consumer Survey is grounded in a study of 2,000 US-based consumers, ages 18 to 75. This year's survey marks the seventh consecutive year that Deloitte's global Telecom practice has assessed and analyzed consumer attitudes about mobile technology. It confirms again the continued vibrancy of the mobile sector.

Device addiction shifts to device etiquette

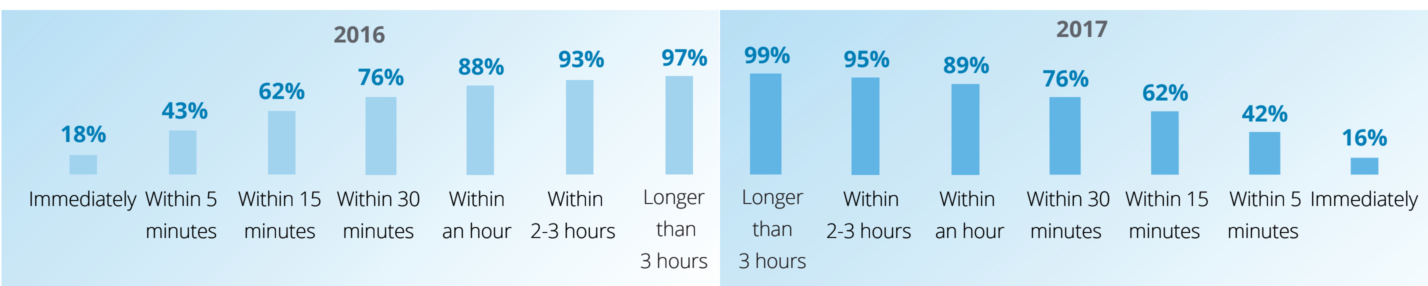
The number of times we look at our phones each day has not increased over the past three years, and the urgency with which we reach for our phones has plateaued as well. Eighty-nine percent of consumers still indicated that they first looked at their phones within an hour of waking up. This is almost the same as last year's number which was 88 percent. Similarly, this year's survey indicates that at the close of the day, 81 percent of respondents looked at their phones in the hour before going to sleep. This number is also 81 percent in 2016, and 79 percent in 2015, again a confirmation of a trend forming.

In a similar vein, for the past three years the overall number of times users look at their phones has plateaued at approximately 47 times per day. One of the few exceptions is the youngest group (ages 18 to 24). They check their phones 86 times a day (up from 82 times in the prior year), and their group represents the highest percentage increase across all generations.

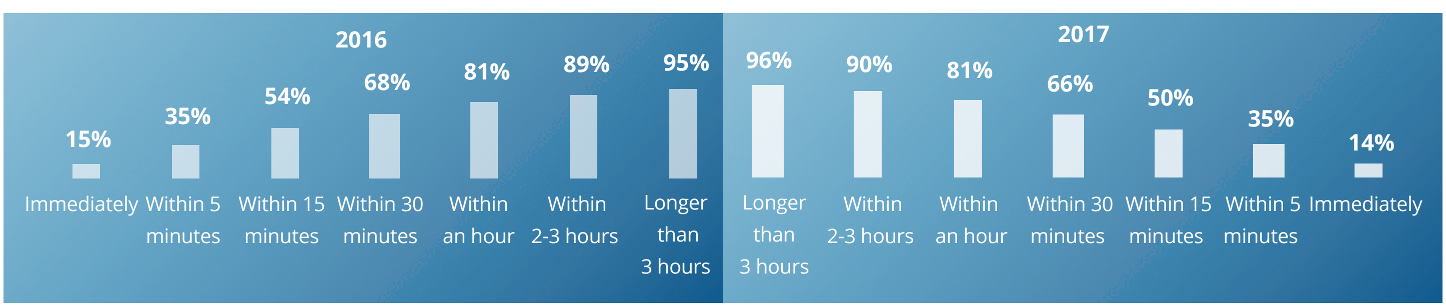
Despite this relative leveling off, we still consult our phones a staggering number of times a day. All 264 million US smartphone users collectively look at their phones some 12 billion times a day!

The 2017 survey also indicated that usage in most of the typical places in which we employ our phones has declined or remained constant since 2016. Again, a notable trend given that it is a first of its kind. These places or circumstances include phone use when eating at home and in restaurants, watching TV, talking to friends, or shopping.

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



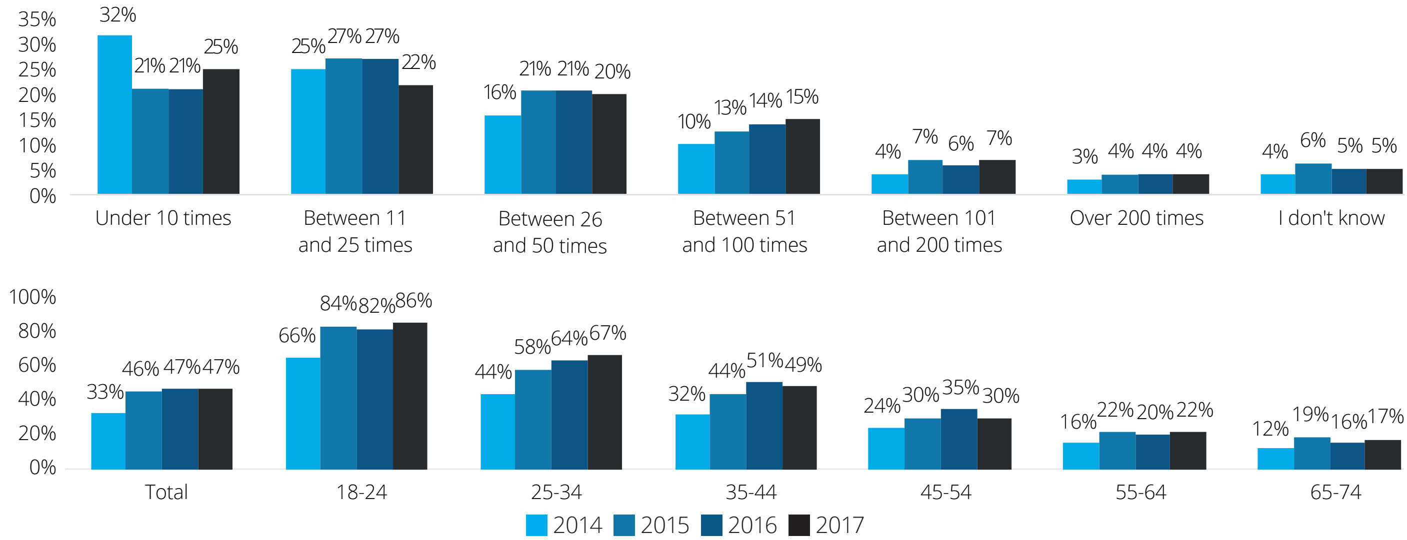
At the end of the day, typically how long is the interval between looking at your phone for the last time and preparing to sleep?



Source: US edition, Deloitte Global Mobile Consumer Survey
Base: Smartphone owners 2014-2015: 1458, 2016: 1530, 2017: 1634

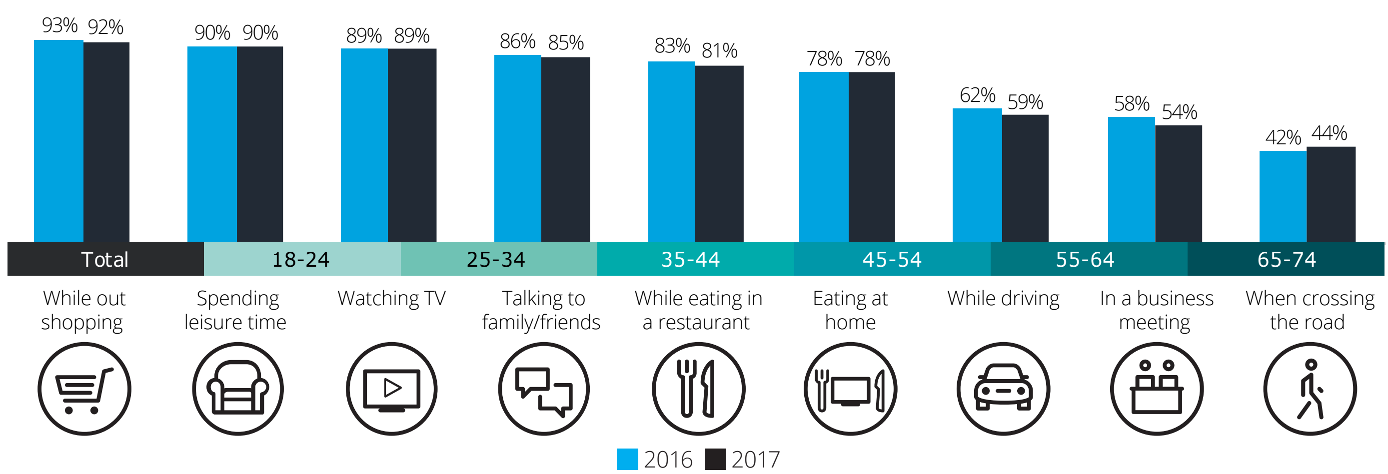
Even the number of apps consumers download and install on their devices has more or less plateaued. The average number of apps installed has increased only marginally to 23, from last year's 22. Asked for their reasons for not installing more apps, 57 percent of respondents said they didn't see the need for them, while 25 percent maintained they did not have enough space on their phones for more. For road warriors who spend most of their time outside the office and rely on their mobile devices for work-related communications, it is much the same story. Work activities, such as email and calendar management, remain important tasks, but only at roughly the same level of last year.

How many times would you estimate you look at your phone in a day?



Source: US edition, Deloitte Global Mobile Consumer Survey, July 2017
Base: Smartphone owners aged 18-24 years, US, 2017: 1634 (233 age 18-24)

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

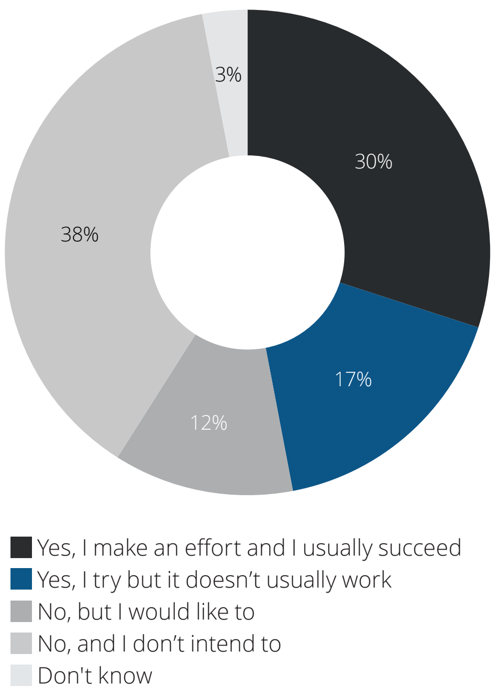


Source: US edition, Deloitte Global Mobile Consumer Survey, Aug 2016, July 2017
Base: Smartphone owners: 1530 (2106), 1634 (2017)
Note: Respondents for which a particular activity does not apply have been excluded from this analysis (i.e., respondents who do not work have not been asked if they use their phone in a business meeting).

With such a prodigious variety of mobile products and services available, it may come as no surprise that some consumers believe that they may be using their smartphone too frequently. And which age group expresses the highest levels of concern? Seventy-five percent of those ages 25 to 34, and 72 percent of those ages 18 to 24 report that they "definitely" or "probably" use their phone too much. Contrast that with only 13 percent of those over 55 who report the same concern, despite the rapid increase in usage by that age group. Almost half (47 percent) of all ages said they try to reduce or limit their smartphone use. Again that trend is led predominantly by the two youngest age groups.

How often, if at all, do you use each of these on your mobile phone?

Attitude towards limiting phone usage



Source: US edition, Deloitte Global Mobile Consumer Survey, July 2017
Base1: All smartphone owners, US, 2017: 1634
Base2: All who tried to limit phone usage, US, 2017: 774
Deloitte Global Mobile Consumer Survey, 2017

Top 5 steps taken to limit the usage

1 **38%** Keep their phone in handbag/ pocket when meeting other people

2 **32%** Turn off audio notifications

3 **27%** Keep phone in bag/ pocket when on my own

4 **26%** Deleted apps

5 **26%** Turn off phone at night

Older generations mirror the younger

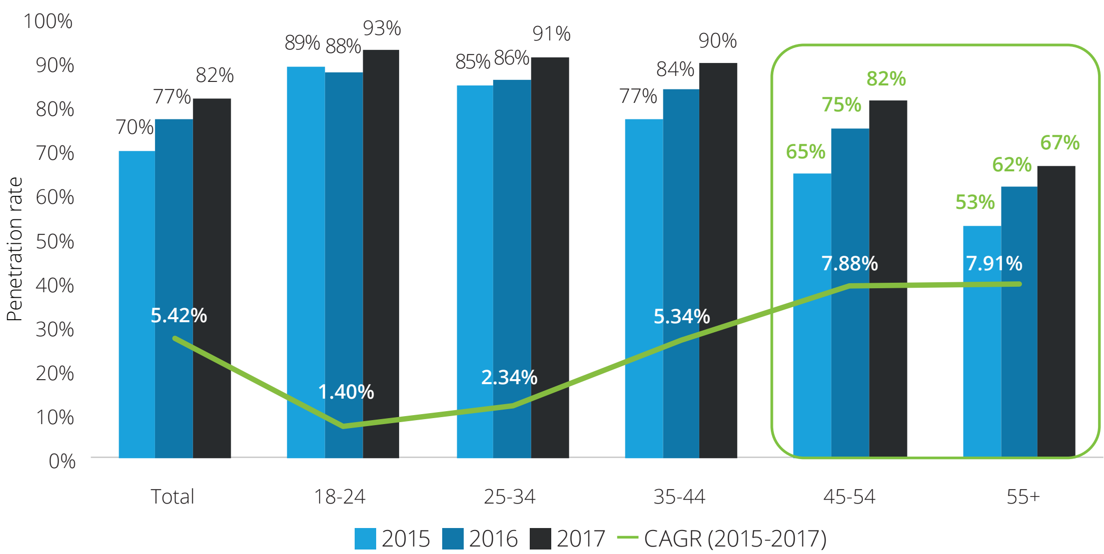
So who is driving the future trends of mobile? The natural assumption is teens (18 to 24) and young adults (25 to 34)—and in many cases that is true. 2017 data indicates, however, that some of the technology adoption habits traditionally associated with younger users are now becoming the habits of the oldest users—not just all ages, but the oldest. Which raises the intriguing question: Could the oldest generations be mirroring the youngest in terms of their usage?

Let's look at the facts. The strongest growth in smartphone ownership for two years running is among those 55 and older. The three-year CAGR for ownership among consumers over 55 is 7.91 percent.

And what about our teens and young adults? The CAGR is just 1.40 percent and 2.34 percent, respectively. The median age group sits right around the average CAGR of roughly five percent. For ages 45 to 54, the smartphone penetration in 2017 was at 82 percent—the same as the overall average.

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

Smartphone penetration by age group

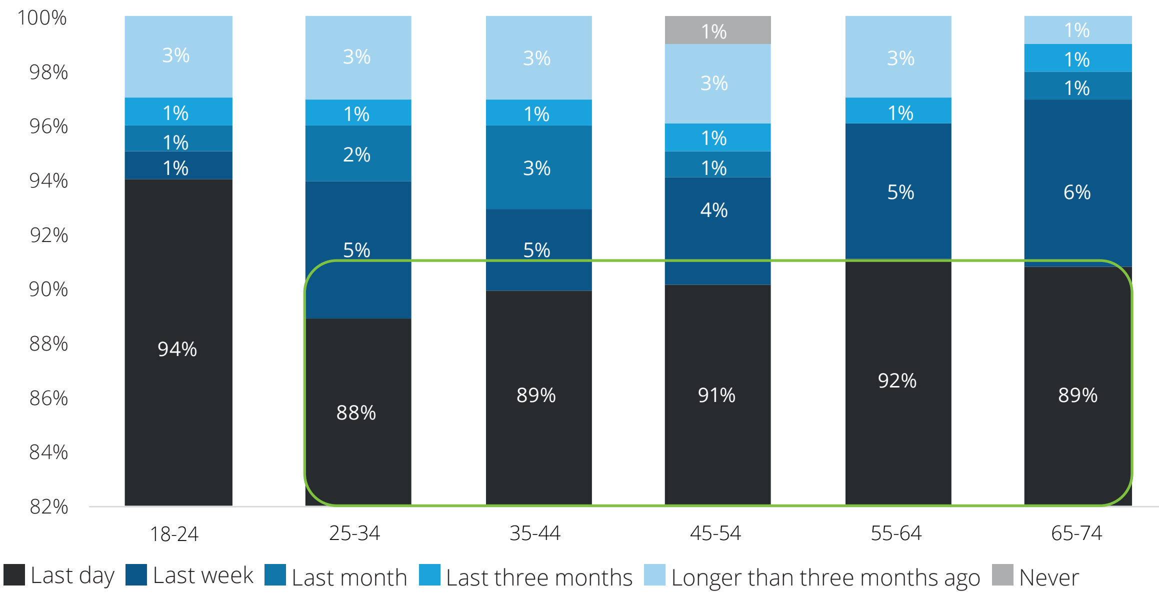


Source: US edition, Deloitte Global Mobile Consumer Survey, August 2015, August 2016, August 2017
Base: All respondents US, 2015: 2069, 2016: 2000, 2017: 2000

But the trend doesn't stop there. When it comes to smartphones, the oldest generations have equivalent or higher frequency of use among any age group except those 18 to 24. When it comes to smart watches, the oldest generation has the highest rate of daily use. For those ages 55 to 75, daily use of smart watches reached 75 percent, compared to just 58 percent for 18- to 24-year-olds. Note that the greatest penetration of smart watches is among young people ages 25 to 34 (25 percent), but only 60 percent of that age group reported daily use.

Here's the "so what?": Daily life in the US without a mobile phone, and now potentially without connected "wearables," is becoming less and less possible for all ages. That is particularly the case if you want to engage and communicate with the youngest generations who now rely on various apps on their smartphones to do so...text (SMS), IM, social media, etc.

When did you last use your smartphone?
Frequency of usage by device—smartphones



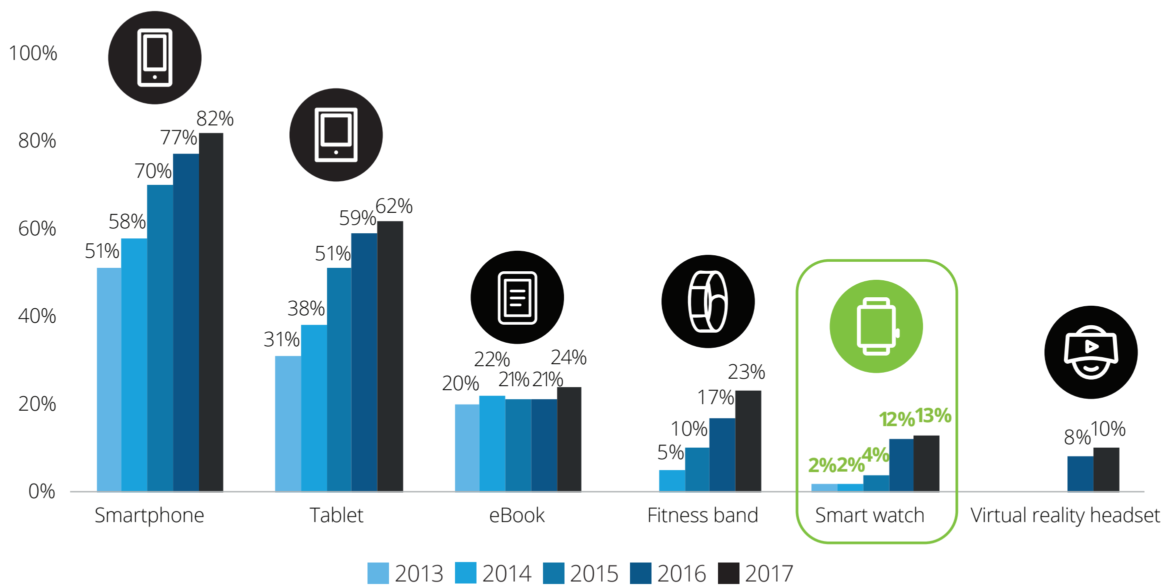
Source: US edition, Deloitte Global Mobile Consumer Survey, July 2017
Base: All respondents aged 18-75 years , US, 2017: Standard cell phone: 325, Smartphone: 1,634, Small tablet 7-9 inch: 744, Large tablet over 9 inches: 728, Laptop Computer: 1561, Desktop/tower computer: 1228, eBook: 479, Smart watch: 255, Fitness band: 452, Portable games player: 414, VR Headset: 205

Wireless is everywhere

Despite evidence that consumers' wireless usage habits are beginning to mature, our wireless society has continued to thrive over the past several years. Our survey data indicate that smartphone penetration has reached 82 percent across all age groups—that's nearly 264 million smartphones in the US. By age group, smartphone penetration is the highest among ages 18- to 24-year-olds, at a staggering 93 percent.

However, while 25- to 34-year-olds dominate the use of smartphones, the lead in virtually every other device category resides among 25- to 34-year-olds—be it for tablets (16 points ahead of 18 to 24s), smart watches (18 points ahead), fitness bands (8 points ahead), and virtual reality (VR) headset penetration (9 points ahead).

Which, if any, of the following devices do you own or have ready access to?
Device penetration 2013–2017



Source: US edition, Deloitte Global Mobile Consumer Survey, July 2013, Jul-Aug 2014, July 2015, Aug 2016, July 2017
Base: All respondents aged 18-75 years, US, July 2013:2000, Jul-Aug 2014: 2001, July 2015: 2069; Aug 2016: 2000; July 2017: 2000

What about interest in purchasing mobile devices in the coming year? The largest increase, on a percentage-growth basis, is likely to be in smart watches and VR headsets. It's noteworthy that in 2017 smart watches experienced a relative lull in penetration growth compared to 2016. But this could simply be an indication that consumers are awaiting the next generation of smart watches, which will be more powerful, have longer-lasting batteries, and will be "natively connected" (as opposed to requiring a smartphone to connect).

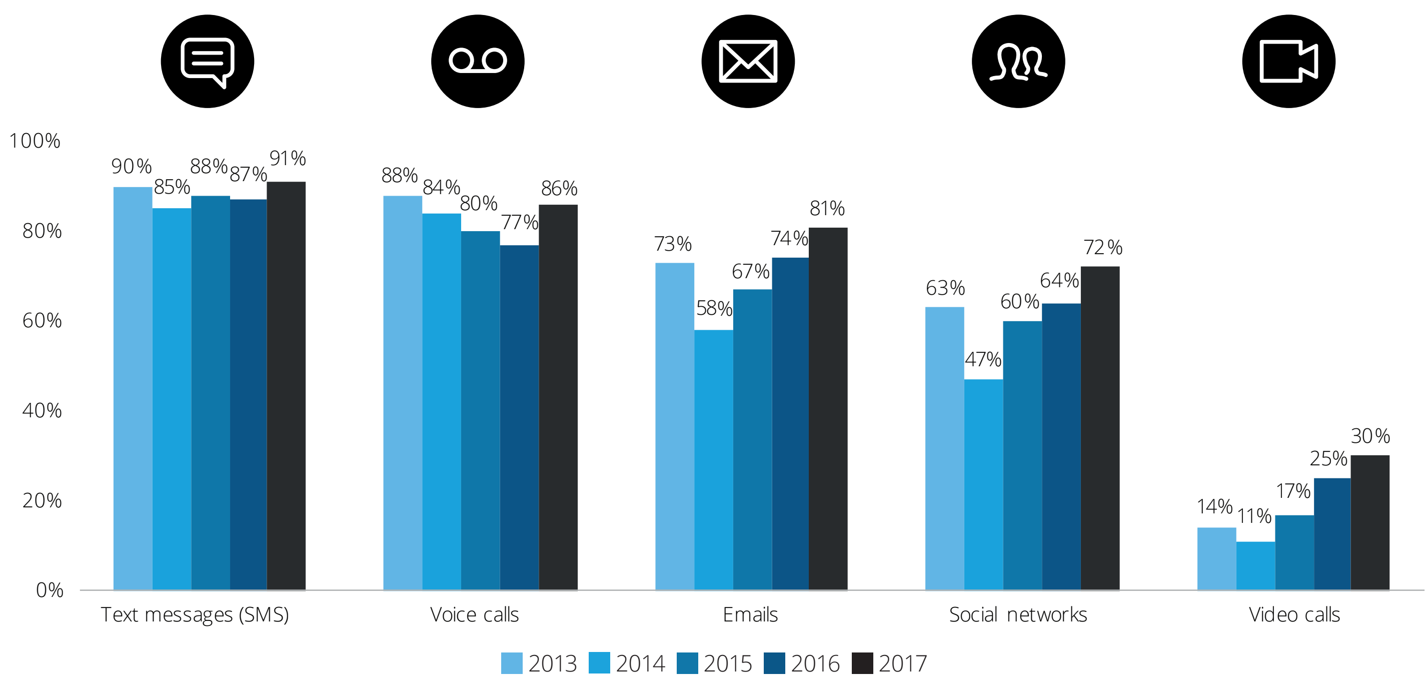
Although still a niche product—with a reported 10 percent product penetration—VR headsets enjoy a relatively devoted user group. Nearly half of the respondents who own VR headsets said they had used the device in the last week, and 15 percent watch VR content on a daily basis.

Let's now look beyond the devices themselves and at communications services. All areas of that sector saw at least some growth. Text messages were again the top service on a weekly basis—used by 91 percent of those surveyed. But this general increase was also true for voice calls. That result reverses a four-year decline. In the latest survey, 86 percent of respondents said they make a voice call weekly. That statistic corroborates survey data that indicate the third most important feature offered by a mobile operator is "quality and coverage of network for voice calls."

The story for mPayments was also positive in 2017, despite its relatively limited adoption. Those who said they made an in-store mobile payment with a smartphone or other device reached 29 percent in 2017.

That's a nearly 50 percent increase over 2016—and that includes a 50 percent increase among those who use it weekly (the percentage rose from 8 percent to 12 percent). Still a niche app, but one that is growing steadily. The key barriers to greater adoption of mPayments remain the concerns about security and a lack of understanding of its potential benefits.

How often, if at all, do you use each of these on your mobile phone?
Weekly usage of data communication services



Source: US edition, Deloitte Global Mobile Consumer Survey, July 2013, Jul-Aug 2014, July 2015, Aug 2016, July 2017
Base: Smartphone owners aged 18-75 years: 2013: 999 2014: 1167, 2015: 1458, 2016: 1530; 2017: 1634
Note: Until 2015 the question asked was In the last 7 days, in which, if any, of the following ways did you use your phone to communicate with others?

Choosing a network: Down to the core of wireless

There are two aspects of the wireless network that consumers fundamentally care about—performance and cost. Together, these two factors shape consumer choices among different networks—Wi-Fi or cellular—with due consideration of performance and cost. The 2017 survey findings show an increased preference to Wi-Fi compared to previous years.

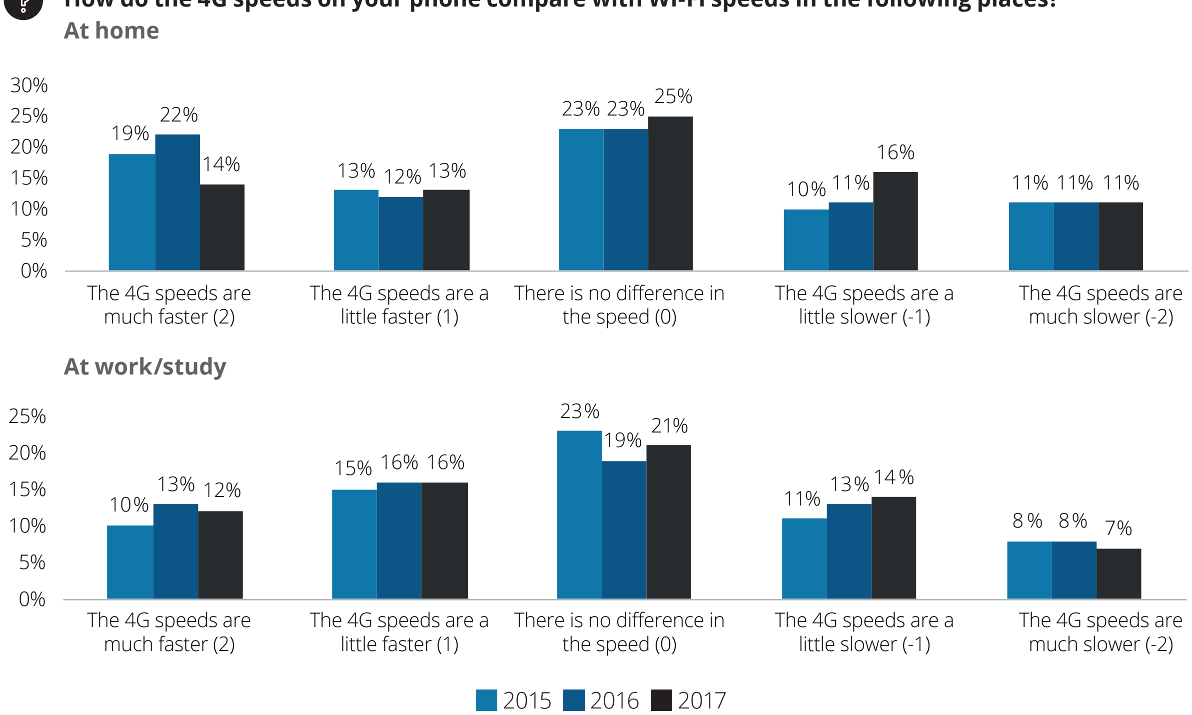
So what about performance?

Mobile phone users were asked to compare their 4G wireless speeds—when out and about, and at work—with those of their home Wi-Fi. For several years, 4G narrowly edged out Wi-Fi in terms of better performance. This year though, for the first time, 4G has slipped behind Wi-Fi in terms of overall performance. Network statistic data indicates that this is in part being caused by an overall slowdown of 4G networks globally. At home, those people reporting 4G speeds as "much faster" dropped from 22 percent to 14 percent, while those reporting 4G speeds as a little slower increased from 11 percent to 16 percent. This result comes about as those who report that they have a 4G service plan has increased from 70 percent in 2016 to 74 percent in 2017.

What about cost?

When asked, most consumers rank cost as the most important consideration in selecting their wireless carrier and plan. That said, one in four consumers choose unlimited data plans. This would indicate that the freedom to use their phone at their leisure is their most important consideration. An additional 16 percent of users don't know the limits of their data plan, the highest proportion of those being people 65 years and above. A little over half (54 percent) have some sort of recognized limit to their data plan. However, more than half of consumers exceed their data plan allowance at least occasionally, with 25 percent exceeding it "often." Excess usage is most typical among those ages 18 to 34, with nearly 70 percent exceeding their allowances.

How do the 4G speeds on your phone compare with Wi-Fi speeds in the following places?



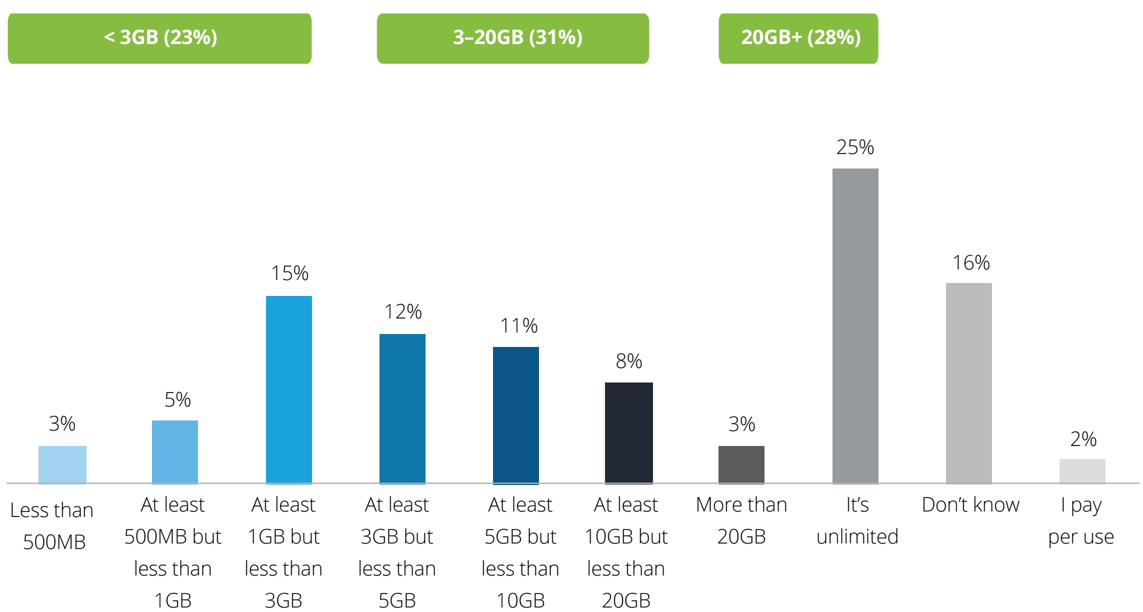
Source: US edition, Deloitte Global Mobile Consumer Survey, July 2014, July 2015, Aug 2016, July 2017
Base: 4G subscribers, 2014: 555, 2015: 1055, 2016: 1242, 2017: 1338

Exceeding the limit of a data plan likely plays a key role in user preference for Wi-Fi over cellular networks. Since 2013, Wi-Fi has generally been the preferred means of connecting to the Internet with a mobile device. That trend has increased substantially since 2016, with 53 percent preferring Wi-Fi then to 67 percent in 2017.

Looking to 5G, the next generation of mobile networks—about half of consumers think that 5G is important.

Sixty-four percent of those ages 25 to 34 find 5G important, the highest level of interest by any age group. With 5G network deployments expected to begin in earnest in 2018 (with substantially higher data speeds than 4G), the competition between cellular and Wi-Fi could be poised for a substantive shift next year, again toward cellular—but only if the cost makes sense.

What is your monthly data allowance on your phone?



Source: US edition, Deloitte Global Mobile Consumer Survey, July 2017
Base: All smartphone users aged 18-75 years, US, 2017: 1634

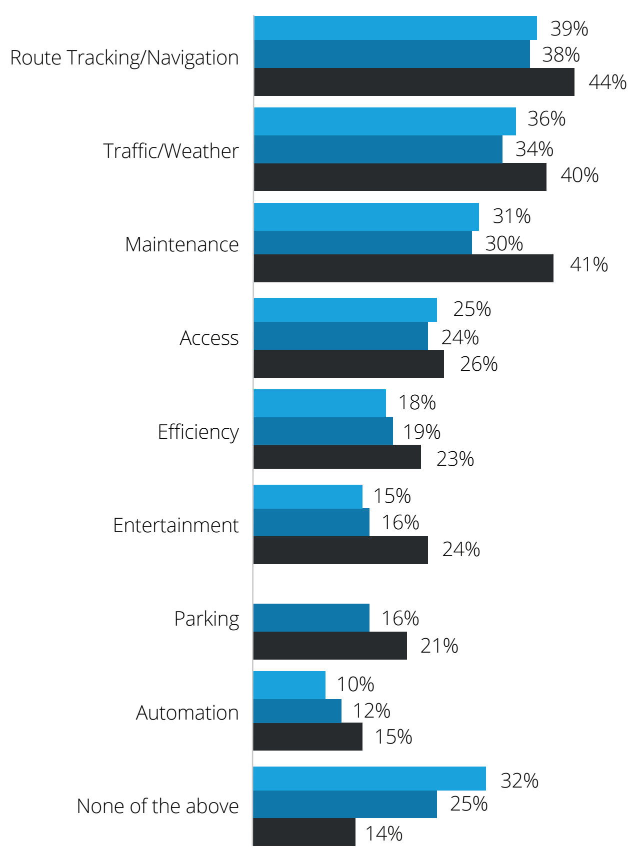
Connecting the dots on IoT

Internet of Things (IoT) technology promises to connect a wide array of objects—everything from thermostats to cars to water meters and bicycles. Consumers are more open to, and interested in, the connected world. But not all IoT is created equal. In terms of consumer interest, connected home systems—a category that includes home security, thermostats, and lighting—continue to lag behind other connected devices such as entertainment systems (e.g., game consoles, wireless TVs, etc.) and connected vehicles (route tracking, predictive maintenance, autonomous vehicles, etc.).

Interest in connected-car features such as navigation, traffic, and maintenance rose significantly in the 2017 survey compared to 2016. It's noteworthy that those not finding any value in connected vehicle functions fell precipitously from 32 percent in 2016 to 14 percent in 2017. The most dramatic increase in interest was for predictive maintenance services: 41 percent of respondents saying they valued it, compared to just 30 percent in 2016. Interest in connected car entertainment rose to 24 percent, up from 16 percent last year.

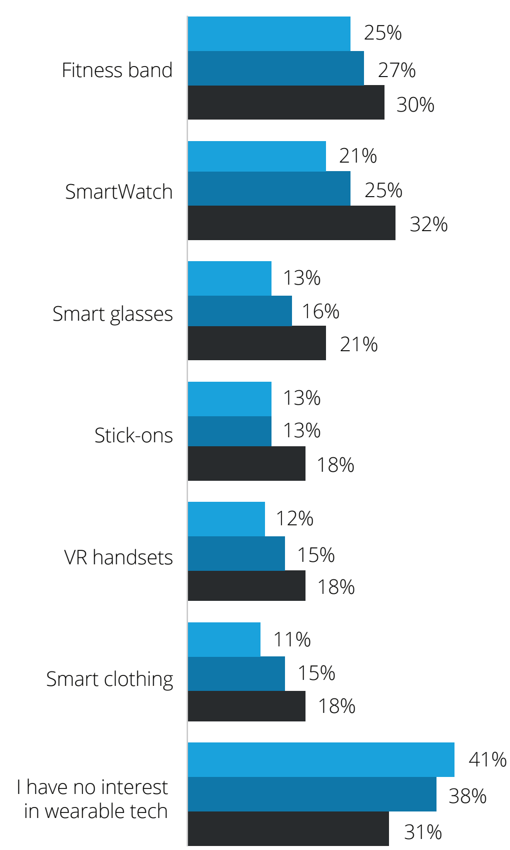
Technology is rapidly allowing consumers to connect their cars/homes to the Internet. Which of these would you find of greatest value if your car would connect to the Internet?

Desired car controls
All adults



Thinking about "wearable technology," which, if any, of these devices would you be interested in?

Desired wearables
All adults



2015 2016 2017

Source: US edition, Deloitte Global Mobile Consumer Survey, Aug 2016 and Aug 2015
Base: All adults: 2015: 2069; 2016: 2,000

Consumers' willingness to pay for connected car and connected home services also rose across the board. But it comes with an important caveat. The largest increase occurred among those willing to pay less than $10 a month, the lowest price category offered as a response in our survey. This finding may indicate that consumers are beginning to view IoT services more as another utility, one for which they want to pay little or nothing at all.

Despite an interest and willingness to pay, as awareness of IoT grows so do concerns about security and privacy. More than 40 percent of respondents agree that smart home technology reveals too much about their personal lives and nearly 40 percent worry that usage can be tracked. In addition, less than one in five consumers believe they are very well informed about the security risks associated with connected home devices; and nearly 40 percent believe they are not properly informed at all.

Autonomous vehicles are emerging as one of the most intriguing use-cases of IoT—one in which consumers are increasingly interested. The number of consumers who said they would never consider owning, or riding in, an autonomous vehicle has dropped significantly since 2015. In the 2017 survey, 28 percent said they would never consider riding in or owning one. That's down from 38 percent in 2015—and an increase of nearly one-third among those who are interested. Another significant revelation of the 2017 survey is the move toward ridesharing. It would appear that the future of automobiles lies more with renting and hiring than with owning. For autonomous vehicles, the growth of interest in various ridesharing categories outpaced that of ownership by a factor of two (14 percent growth in ridesharing compared to seven percent growth in ownership).

When it comes to demographics, twice as many men compared to women express an interest in riding in or owning an autonomous vehicle. Interest also wanes significantly with age. More than half of people over age 65 say they would never consider owning or riding in such a vehicle. That contrasts with just 13 percent in the age segment 25 to 34. Moreover, just as it is with IoT, greater awareness has also engendered more distrust. Nearly 60 percent of all ages do not trust that autonomous driving technology will prevent accidents. All in all though, autonomous vehicles and other forms of IoT are winning greater attention and popularity among consumers. Deloitte expects this trend to continue despite a rise in concerns about the risks and costs associated with the technology.

Machine learning? It's already a reality

Artificial intelligence (AI) and machine learning (ML) are among the more recent cutting-edge industry buzzwords. The 2017 survey showed that already 68 percent of consumers are using some form of AI/ML on their smartphones. Highest use categories include: predictive text, voice assistants, and driving route suggestions. Those are in use by one-quarter to one-third of consumers. However, widespread adoption lies in a more distant future for certain cutting-edge AI/ML services, such as automated calendar entries, location-based app suggestions, etc. Current use is somewhere around 10 percent or lower.

Consumer privacy: A concerned embrace of technology

Consumers continue to express concerns about security and privacy captured in the data regarding the risks they perceive with IoT, mPayments, and autonomous vehicles. That said, consumers have been more open to signing agreements with mobile app and service providers—91 percent willingly accept legal terms and conditions without reading them before installing apps, registering Wi-Fi hotspots, accepting updates, and signing on to online services such as video streaming. For ages 18 to 34, the rate of acceptance of terms and conditions, without reading them, reaches 97 percent. The language of the vast majority of terms and conditions is understandably too complex for many. Given the absence of a choice, consumers don't consider these as a barrier to purchasing and accepting many forms of new technology.

It is important to underscore the fact that more than 80 percent of consumers believe that companies use their personal data. What's more, 78 percent believe that their personal data is shared with third parties. Still, there's a willingness by consumers to share some personal online data, such as their name or email address (by more than 58 percent). But they are far less willing to share health metrics using a phone or wearable (just seven percent). Only 13 percent say they never share personal information such as name, email address, phone number, photos, contact list, browsing activity, purchase history, and health metrics.

The second coming of the second-hand smartphone

Since US carriers put an end to subsidized devices as part of consumers' regular monthly plans, there was a perception by some that the sticker shock of a new smartphone costing well more than many consumers were willing to spend would ultimately curb smartphone purchasing behavior. However, we see from Deloitte's 2017 Global Mobile Consumer Survey data that roughly two-thirds of consumers still plan to change their devices within two years, which is approximately the same common upgrade frequency that existed during the carrier subsidy-plan phase. This is in response to carriers' leasing and purchasing programs that essentially mimic the previous subsidy plans, as well as the increasing utility of a smartphone driving additional demand. It's becoming more and more difficult to live in today's ultra-connected society without a capable smartphone.

Another significant change we see with regard to second-hand smartphones is that far more US consumers are finding more productive ways to utilize their previous phones.

In 2017 those who claimed to "throw their old phone away" were only five percent, less than half of the 12 percent reported in 2016. It was predominantly replaced with those "giving it to a family member or a friend," which increased from 12 percent to 20 percent, nearly doubling. This demonstrates the increasing understanding by mobile consumers that their previous smartphones can be worth significant money—or value—if given within the family.

Summary: The momentum continues

Deloitte's 2017 survey indicates that the mobile universe we have all grown to love—and think we understand—is shifting. The habits governing the use of smartphones and other devices are maturing, as they become commonplace in nearly every consumer's life. Worries about security, privacy, and mobile overuse are on the rise. But for many this won't be enough to deter them from capitalizing on the potential benefits each of these connected services provides. While a certain technology skepticism may be settling in for some, the promise of many exciting technologies lies on the horizon, technologies such as artificial intelligence and machine learning, virtual reality and augmented reality, 5G, and autonomous vehicles to name a few. For all we know, we may just be on the eve of the next generation of mobile and a new growth spurt.

Still, many questions remain: How will user attitudes change with such innovations? What will be the role of carriers, original equipment manufacturer (OEM), and app developers in advancing the adoption and rolling out of new products and services? What will they make of, and will they heed, emerging consumer attitudes? No doubt, the mobile world is evolving, growing more complex and for many becoming ever-more attractive. In the years to come, you can be certain that Deloitte's 2017 Global Mobile Consumer Survey will continue to keep current with the preferences of the mobile consumer.

About the survey

This Global Mobile Consumer Survey covers six continents, 32 countries, and more than 51,000 respondents. The insights in this particular report are extracted and analyzed from data gathered from 2,000 survey respondents within the US.

Fielded by an independent research firm, the survey focuses on consumer behaviors, trends, and opinions for a broad range of wireless and mobility products and services. In addition to exploring year-over-year results and key insights, the survey is also designed to highlight differences between consumers across generational divides—capturing findings from six distinct age groups, ranging from ages 18 to 75.

Contacts

Craig Wigginton
Vice Chairman
US Telecommunications Leader
Deloitte & Touche LLP
+1 212 436 3222
cwigginton@deloitte.com

Mike Curran
Senior Manager
Deloitte Services LP
+1 404 220 1152
mcurran@deloitte.com

Terrence Karner
Manager
Deloitte & Touche LLP
+1 312 486 4172
tkarner@deloitte.com

Marketing inquiries
Ays Aytolu
Senior Manager
Deloitte Services LP
+1 408 704 2246
aaytolu@deloitte.com

Press contact
Anisha Sharma
Senior Manager
Deloitte Services LP
+1 212 492 4427
anissharma@deloitte.com

To learn more about Deloitte's 2017 Global Mobile Consumer Survey, please visit:
www.deloitte.com/us/mobileconsumer
#trendsinmobile

Deloitte.