2018 Telecommunications Industry Outlook
A new era of connectivity is on the horizon
A new era in mobile begins

As the telecommunications sector continues to build on the momentum of 2017, a new mobile era will emerge with the initial commercial rollout of fifth-generation wireless network technology (5G). One of the most anticipated mobile technology platforms, 5G will be the connective tissue that blends nascent uses of mobile technology, such as the Internet of Things (IoT), autonomous vehicles, and mobile media, just to name a few. With the sheer number of applications that 5G will support, we anticipate a tremendous impact on the entire mobile ecosystem, as well as society and the economy overall—even bigger than 4G, where Deloitte estimated more than $150 billion in GDP growth and more than 370,000 new jobs.

While this will be a multiyear journey for major telecom carriers, the foundations will begin to form in 2018. Considering the carriers’ varying approaches to 5G—with some prioritizing fixed over mobile, and others vice versa—it will be an exciting year to see which proves to be more valuable for consumers and businesses.
The telecom ecosystem expects IoT to become a critical engine for future growth. One of the most successful IoT applications thus far has been the connected car. The largest US carriers have made significant investments in the connected-car space over the last several years, and we are already seeing strong growth in mobile subscriptions for connected vehicles. Connected cars, in addition to other categories of IoT, will continue to be an important growth area for carriers in 2018. (Autonomous vehicles, an evolving area of the connected-car industry, are explored in the “What do you see emerging in the sector?” section of this report.)

The potential for IoT extends far beyond connected cars. These opportunities include the connected consumer and the broader universe of connected things with applications such as connected home monitoring and control, entertainment, wearables, and more. In addition, the connected enterprise market features applications such as connected vehicle fleets, predictive maintenance, factory automation, workforce training and field support, and countless other examples. Each of these will dramatically broaden the reach of wireless for consumers and business users.

Looking beyond IoT, many telecom carriers are looking to potentially enter the media space through M&A deals, partnerships, alliances, and the like. Mobile content and video are some of the most significant consumer use cases for 5G, so expansion into the content arena is only natural for carriers seeking growth. We expect this to continue in 2018 through ongoing M&A activity, as well as key partnerships and alliances. While there may be different approaches to media (for example, by buying major media houses, or by purchasing smaller-scale TV distribution technology with the intent to scale it), the objectives are the same: the ability to deliver content to any screen through wireless distribution. M&A in other areas of telecom, such as fiber and towers, is also likely to continue in 2018, building on momentum begun in 2017.

Secondhand smartphones also represent an area of potential growth in the telecom industry. With smartphones continuing to increase in value—some having an initial price point of more than $1,000—there is a corresponding rise in the residual value of smartphones, as well as the desired useful life of these devices. As a result, fewer people are “throwing away” their old phones in hopes of finding a second useful life for them. In fact, according to Deloitte’s Global Mobile Consumer Survey, US edition (GMCS), the number of consumers throwing away old phones fell by more than half in just one year—dropping from 12 percent in 2016 to 5 percent in 2017. Hence, there’s an opportunity for carriers and other businesses to capitalize on the growing value of secondhand smartphones, as well as the increasing volume that will enter this channel.

Finally, we would be remiss to not mention augmented and virtual reality (AR1 and VR) as avenues of potential growth. While both are still emerging, according to Deloitte’s GMCS, approximately 10 percent of consumers own a VR headset, representing a relatively quick adaption curve for such a new product. It remains to be seen if this is just another burden on mobile network spectrum and capacity, or a significant revenue growth opportunity for carriers.
What should businesses be mindful of as they plan for growth?

As mentioned above, for any major mobile telecom provider, the demand for investment dollars is vast. 5G will require major investment over the next several years, in addition to other areas such as IoT and cross-industry partnerships. The good news about 5G investments (along with SDN/NFV and other network upgrades) is they will help minimize service delivery costs and improve time-to-market.

Additionally, carriers have a heavy investment demand related to the core fiber network. While most attention on 5G relates to wireless coverage and the potential use cases that 5G will bring, the success of next-generation mobile networks will rely on substantial investment in the core fiber backhaul network to support anticipated growth in data services. In fact, according to a Deloitte-published 2017 report titled "The need for deep fiber," there will be a fourfold increase in mobile data traffic in the United States between 2016 and 2021. This analysis suggests that an investment of $130 billion to $150 billion could be required over the next five to seven years in the United States alone to adequately support broadband competition, rural coverage, and wireless densification.

Additionally, carriers have the ever-present obligation to continue to update legacy IT systems, particularly as they expand into new areas. These legacy IT systems are key but costly assets for any telecommunications provider and are the focus of far-reaching digital transformation efforts designed to improve customer service, streamline processes, consolidate ERP/financial systems, and so on. Newer, more transformative technologies on the horizon for telecoms also include robotics, automation, and blockchain.

Also of note for 2018 is the important shift in consumers’ usage of mobile services. Insights from Deloitte’s latest GMCS were considered the first to highlight the increasingly balanced approach consumers are taking to their mobile phone behavior—actively curbing their mobile usage habits. According to the survey, almost half of all US consumers believe they use their smartphones too much, and this number rises to more than 70 percent for 18- to 34-year-olds. As a result, 47 percent of consumers are taking active measures to limit their mobile phone use: keeping the device out of sight, turning off notifications, or periodically turning off the device altogether. Given that US consumers look at their phones an average of 47 times a day (translating to about 12 billion looks per day in the aggregate in the US alone), the industry will no doubt continue to thrive. However, mobile telecom providers have an opportunity to develop additional services and apps that will help consumers use their devices even more responsibly.

Of course, security and privacy are key considerations for anyone in the telecom ecosystem. Because security is part and parcel to what telecom companies address on a daily basis, our focus here is on the opportunities potentially left behind due to customer concerns related to security. Ultimately, it often comes down to perception as opposed to reality. According to Deloitte's GMCS, fewer than one in five consumers believe they are “very well informed” about security risks for their connected home devices, and nearly 40 percent say they are not properly informed at all. In addition, for the third consecutive year, the No. 1 reason for not using mPayments is the fear that it is not secure enough, despite mobile payments being more secure than many forms of traditional payments. Hence, Deloitte sees opportunity for telecom ecosystem players to help educate consumers on the benefits of secure network solutions.
What do you see emerging in the sector?

Telecom providers need to be aware of several important emerging developments.

First, as previously mentioned, we will see the first commercial market deployments of 5G in 2018. Associated with this rollout will be the emergence of small-cell densification. For years, carriers have utilized “small cells” to help fill coverage gaps between large macro-site cellular towers that serve sizable geographic areas. As their name implies, these small cells have traditionally been scaled-down versions of large towers’ capabilities, augmenting coverage where towers couldn’t reach. With 5G, small cells become a more standard element of the radio access network. They no longer just fill gaps—they are essential to enabling 5G, particularly in densely populated areas.

A key element for the evolution to 5G will be adequate spectrum, and while small cells can yield better spectral efficiency, strong spectrum strategy and positioning is critical for a robust deployment, especially as carriers commingle traditional mobile spectrum with a shift to more mmWave deployments. With the dramatically higher frequencies that many 5G operators plan to utilize, and the limited distance that these frequencies can travel, 5G operators will need to construct the network with a mesh of small cells that interoperate with the large cells and/or directly with the backbone fiber network.

Autonomous vehicles are another emerging category with ties to the telecom sector. While autonomous cars have been in the testing and development stages for several years, they are gaining popularity. According to Deloitte’s GMCS, the number of consumers interested in renting or hiring an autonomous vehicle increased by nearly 15 percent in just the last year alone. Ubiquitous next-generation wireless networks (for example, 5G) will be critical to eventual mass-market adoption of autonomous vehicles.

Yet another hot topic for tech-hungry consumers is what the smartphone’s future will hold now that the external form factor of most devices has stabilized. According to Deloitte Predictions, 2018 will be a year of “invisible innovation.” This means that progress will be made to functions within the software and/or internal hardware, including AR/VR and artificial intelligence/machine learning—delivering, for example, better route recommendations, more realistic augmented reality, and so on.

Better and faster chips; increases in the number, capability, and sensitivity of sensors; and infrared cameras are other developments to watch in 2018. With these advances, we expect overall US smartphone penetration to approach 90 percent, with much of the growth driven by older generations (ages 45–74). In fact, according to Deloitte’s GMCS, over the last three years, the compound annual growth rate for smartphones among those age 45 and older was more than five times that of 18- to 24-year-olds (7.8 percent vs. 1.4 percent)—a trend we expect to continue in 2018.

Finally, from a regulatory standpoint, 2018 is going to be an important year for the topic of net neutrality. In late 2017, the Federal Communications Commission (FCC) reversed a previous net neutrality order. State and local governments likely will continue to challenge the FCC’s position on net neutrality for some time. While the ultimate outcome is unknown, this issue will be a key focus for the entire telecom industry throughout 2018.
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Endnotes

1. Deloitte predicts that in 2018, more than a billion smartphone users will create AR content at least once, with at least 300 million being regular users.