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INTO THE FUTURE:

Embracing the Challenges of Today to Thrive from the Innovations of Tomorrow

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We are living on the edge of a technological revolution—one that will alter how we live, communicate, and conduct business forever. While we've felt disruption before, like the move from analog to digital, the first smartphone, or the launch of the app store, this time of change is distinctive. We are experiencing a revolutionary shift that will require operators around the world to reinvent their businesses in order to compete and survive in the digital future.

Throughout history, there are examples of businesses that innovated their way to the top of the market, only to fail because they didn't adapt to the changing market once they were there. The introduction of wireless internet access and the proliferation of smartphones has fueled consumers' expectations for more; enhanced connectivity, faster services, personalized features—and tomorrow they'll demand something else.

According to GSMA Intelligence, our industry is currently in a state of stagnant growth resulting from the negative impact emerging competitors have had on mature carrier revenues. After 5 percent growth in 2014, the U.S. market only grew by 1.7 percent in 2015, and then a mere 0.1 percent in 2016[1]. The only way to compete in a shifting market is to adapt—to adjust your business swiftly in order to meet the changing environment and the velocity of your competitors. Without large hardware legacy systems and outdated organizational structures to consider, over-the-top (OTT) providers and new industry entrants are able to adapt and innovate faster than the traditional carrier to accommodate new subscriber behavior. While the reality of this need to change can be intimidating, we must all remember that competition has contributed to a long history of innovation across the wireless value chain[2]. Only by embracing the culture of innovation can we all ensure our future success.

Data demand and connectivity will drive the next era of wireless telecommunications. Cisco predicts annual global IP traffic will reach 3.3 ZB per year by 2021 and the number of devices connected to IP networks will be more than three times the global population[3]. If they aren't already, carriers need to take this into consideration and start making some strategic decisions now on how to operate and survive in this environment. They will absolutely need to focus on retaining, growing, and finding new ways to monetize their customers, while advancing technically at a speed never seen before. The strategy of slowly following others to deploy new technology will likely not be sustainable in this new ecosystem.

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All carriers will eventually have to adapt their infrastructure to facilitate the accelerated service delivery required from a data-driven digital economy. Virtualized infrastructure incorporating Network Function Virtualization (NFV) is a wise path for carriers wanting to secure their digital future, as it will provide the flexible scalability, reduced cost and complexity, and the unprecedented agility that carriers need to compete[4]. It also starts a road towards differentiated services and monetization. Technology Business Research recently reported that NFV and software-defined networking markets are expected to grow from 2016 to 2022 at a 94.3 percent CAGR to over $168 billion. The CAGR will be supported by the redistribution of legacy infrastructure capital expense as carriers implement virtualized environments and gradually decommission legacy infrastructure platforms[5]. As we approach the end of 2017, it's pretty clear that we won't have to wait and see if this transformation is going to happen. It's already happening—operators globally are on their way to redefining the marketplace with virtualized networks and new cloud-based services like Voice-over-LTE (VoLTE), Voice-over-WiFi (VoWiFi), and yes, Rich Communication Services (RCS).

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Virtualized infrastructure and cloud-based managed services provide smaller, regional carriers with an opportunity to join the technology revolution and better compete in the market. Enhanced Messaging or RCS is a great place to start since subscribers are already accustomed to using these similar enhanced features provided by abundant OTT services like WhatsApp, iMessage, Skype, or Viber. With RCS, carriers will have an entry point to Messaging-as-a-Platform (MaaP) to build upon their future business strategy with additional revenue-generating services. VoWiFi, another valuable service that enables WiFi Calling, can immediately enhance and extend a carrier's voice network to improve the quality of experience for their subscribers and enable them to more effectively compete with larger, national operators who have filled their coverage gaps by way of it. It's war and regional carriers can't cede their historical network advantage to their Tier-1 competitors.

The same is true of VoLTE, which these larger operators offer, enabling their subscribers to make high-definition voice calls. Not only are these voice services competitive necessities, they're also spectrally more efficient; paving the way for added flexibility. Calls that are made over 4G networks use half the spectrum of those made over 3G and calls made over WiFi use none at all, providing carriers with added capacity and more availability of existing spectrum. All of these services are critical and without an easy execution plan in place to bring them to market, carriers will have an extremely difficult time surviving in the future.

Unfortunately, many regional carriers do not have the time, expertise, or budgets to get to market quickly, or at all, with these new services through traditional means; and the next wave of solutions will be right behind them as technology is advancing at an unprecedented pace.Survival for our industry depends on carriers focusing their energy on winning the market by teaming with others to keep their services technically relevant and on pace with the industry. The bottom line is that the regional carrier winners will be those who choose partners that provide them with flexible deployment and payment options, personalization based on their needs, and who are truly committed to their success during this period of change. Picking your partners has never before been more important.

It's remarkable to reflect on just how far mobile technology has come since the pioneers of our business shaped the competitive wireless industry more than four decades ago. Thankfully, through organizations like the CCA, the U.S. carrier ecosystem has remained competitive and innovative—and with a little work, it'll remain so tomorrow.

Carriers must start making bold decisions now and collaborate with vendors and partners who are truly invested in their long-term success. As technology continues to move towards a collaborative model, carriers large and small will have the opportunity to think in global terms. This will become even more evident as the industry moves towards the global deployment of LTE, 5G, the Internet of Things (IoT), Messaging-as-a-Platform (MaaP), and beyond. My hope is that we will see all CCA members find their way to success on the other side. ■

[1] The Mobile Economy 2017, GSMA Intelligence, www.gsma.com/mobileeconomy/northamerica/

[2] Benefits of Competition in Mobile Broadband Services, William Lehr, MIT, https://ecfsapi.fcc.gov/file/7521094967.pdf

[3] Cisco VNI, 2017 Global Mobile Data Traffic Forecast Update; Updated: March 28, 2017, Document ID: 1454457600805266

[4] Cisco 'NFV Orchestration with Cisco Network Services Orchestrator'; Updated: March 20, 2017, Document ID: 1490044666393532

[5] The Mobile Economy 2017, GSMA Intelligence, www.gsma.com/mobileeconomy/northamerica/

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