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TECHNOLOGY

Get Connected: Building your Digital Workplace

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Digital transformation is affecting every industry

Digital transformation aims to overhaul existing business processes and models through the use of digital technology. In some cases, change is incremental, in others it's a fundamentally different way of operating. We're surrounded by many recent examples that have had profound changes on their respective industries. Lyft and Uber have completely redefined the transportation industry by solving the ease of use, quality of service and predictability challenges associated with the taxi industry. Amazon has already disrupted the retail industry once by shifting consumer purchases online, and is now experimenting with physical stores that use sensors and artificial intelligence to automatically bill customers, eliminating the need for check-out lines.

Industries are being disrupted by newcomers who are looking at business processes from a completely different perspective. Instead of asking "how can I improve this process," newcomers are asking "do I even need it?" Every company needs to be on their toes and start thinking about how they can evolve their business to stay relevant with customer's wants and needs. If you're not, chances are your competitors are.

The elements of a digital workplace

The digital transformation journey should start with the physical work environments that employees operate in. A digital workplace needs to make it easy to access, record, and share information from a wide range of devices, user interfaces, and locations. It should also enable workplace portability, so that employees aren't confined to a specific location for a given task, but are able to do aspects of their work from many locations. Access and portability enable flexibility and allow companies to respond quickly to changes, such as high customer demand.

While it's possible to put digital "wrappers" around existing processes, the full potential of digital transformation can be realized when processes begin in the digital domain. That means equipping doctors and nurses with smart devices to record information, rather than using paper and pencil processes that are digitized at a later stage. It's much harder to realize the full benefits of digital transformation when underlying workflows continue to rely on off-line processes.

The network plays a critical role in enabling digital workplaces, because it connects all the various devices, applications, information stores, and people together, and allows information to flow between them. This report focuses on the connectivity aspect of a digital workplace, and the factors network managers and business leaders need to consider when embarking on digital transformation projects.

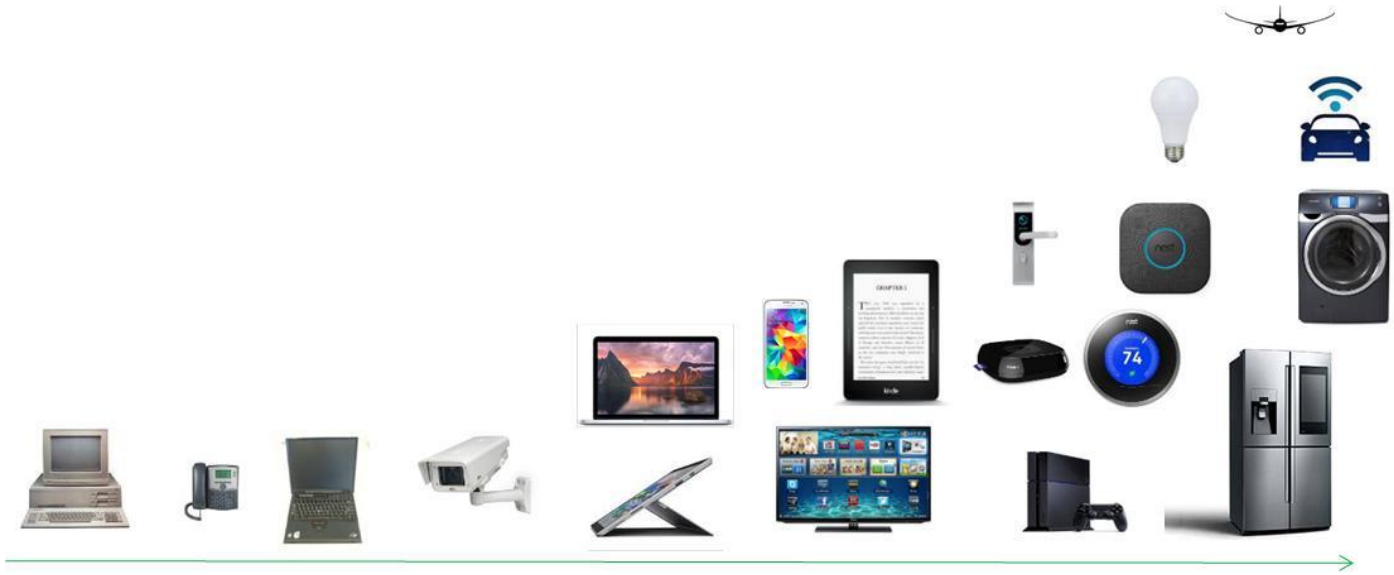
Mobile and IoT devices are exploding

Using a panel of qualified IT decision-makers, we conducted a web survey in September 2016 with 182 organizations that have a wireless LAN and at least 101 employees. We learned that device growth is outpacing user growth, as users access the network from a growing variety of devices, and as companies leverage the power of IoT (Internet of Things).

On average, respondent organizations have over 4K network-connected devices installed today and expect this number to grow by over 20% by 2018. Though respondents expect small growth in most types of devices, the real growth story is in 2 areas:

- Mobile devices, which account for 39% of devices today, growing to 44% by 2018. But this modest change masks a significant underlying trend: almost 2 out of 3 new devices will be mobile, which illustrates just how central mobility—and by extension, wireless networks—have become in network planning. Handheld/rugged computers are growing 86% by 2018, wearables 81%, tablets 76%, laptops 34%, VoWLAN handsets 29%, and smartphones 27%.
- IoT (Internet of Things) is still a niche application but is seeing strong growth as well: IoT devices (e.g., cameras, TVs, sensors, and locks) grow 37% by 2018 to account for 15% of all network-connected devices.

Exhibit 1: Network-connected devices/objects



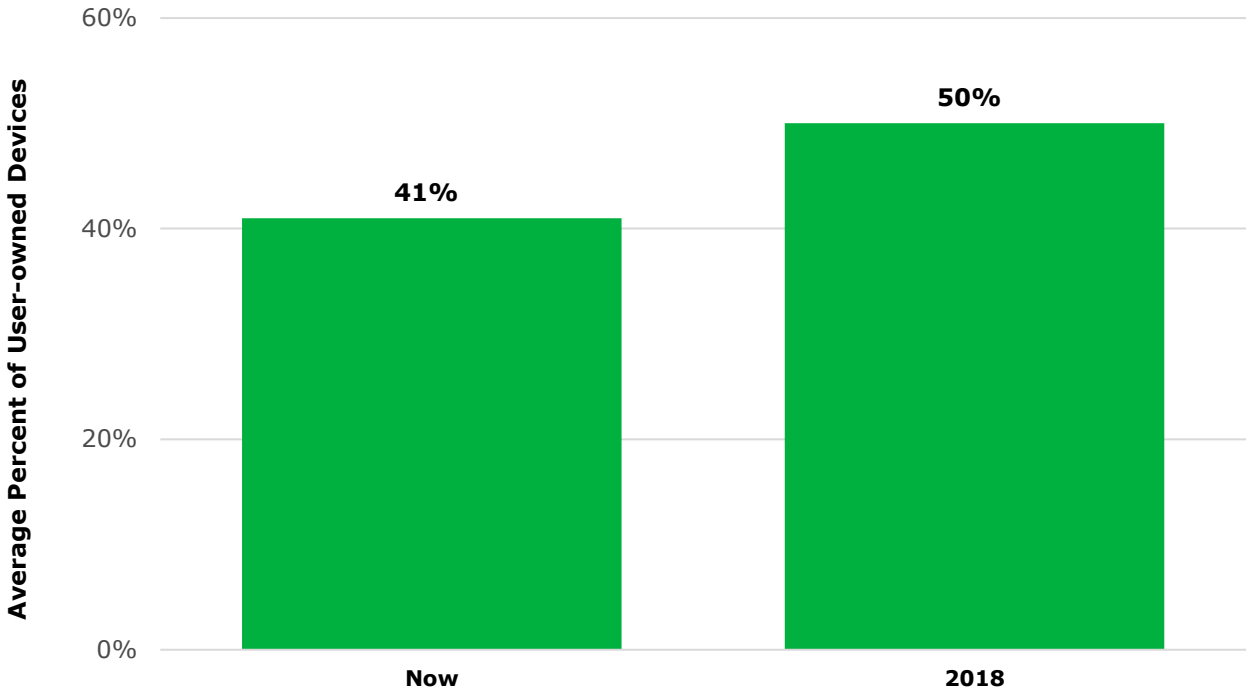
IT will no longer own the devices that connect

As companies have allowed their employees to "bring your own device" (BYOD) and opened up their networks to guests, the number of user-owned devices on the network is rising rapidly: already standing at 41% of all network-connected devices today, they are expected to reach 50% by 2018.

Companies allow BYOD for 2 main reasons: 1) boosting productivity by giving employees more tools for communication and information access to speed up decision-making; and 2) becoming more flexible/agile by getting new devices into employees' hands quickly and giving them greater choice in the devices and applications that they use.

Soon, user-owned devices will eclipse corporate-issued devices, which perfectly illustrates how big of a phenomenon BYOD has become. Unlike the traditional corporate procurement model, BYOD creates uncertainty, because it's impossible to accurately forecast how many devices will connect to the network on any given day, what type of devices they are, and what applications they are capable of consuming. Compounding the uncertainty is a rapid technology cycle for consumer devices with new devices being released annually. This makes a BYOD access platform critical for guaranteeing reliable network access, controlling access to network/data resources, and gaining insight into network usage patterns.

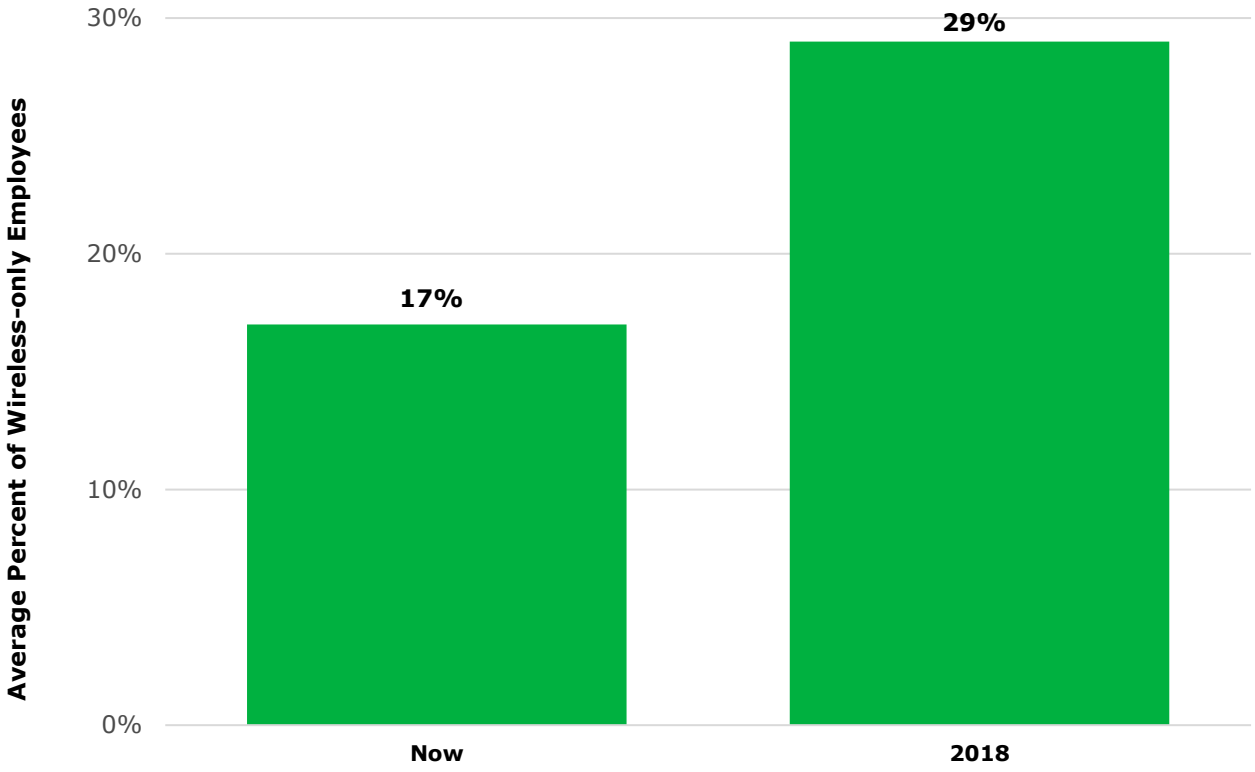
Exhibit 2: BYOD Usage: Percent of All Devices



Cord-cutting is gaining ground

Wires used to rule corporate access networks, but over the past decade wireless has slowly moved in. What started out as point mobile extensions of the wired network, like an access point to cover a specific area, such as a lobby or a conference room, has morphed into widespread and ubiquitous wireless coverage today. Given the direction of device trends, many organizations are re-evaluating whether it makes sense to maintain wired access for employees who do the bulk of their work on wireless devices. Increasingly, the answer is "it doesn't," and cord-cutting is gathering steam. 18% of respondents are giving at least some of their employees wireless-only access, up from 14% in last year's research. And looking ahead, by 2018 almost 1/3 plan to move employees to wireless-only access.

Exhibit 3: Employees with Wireless-only Access

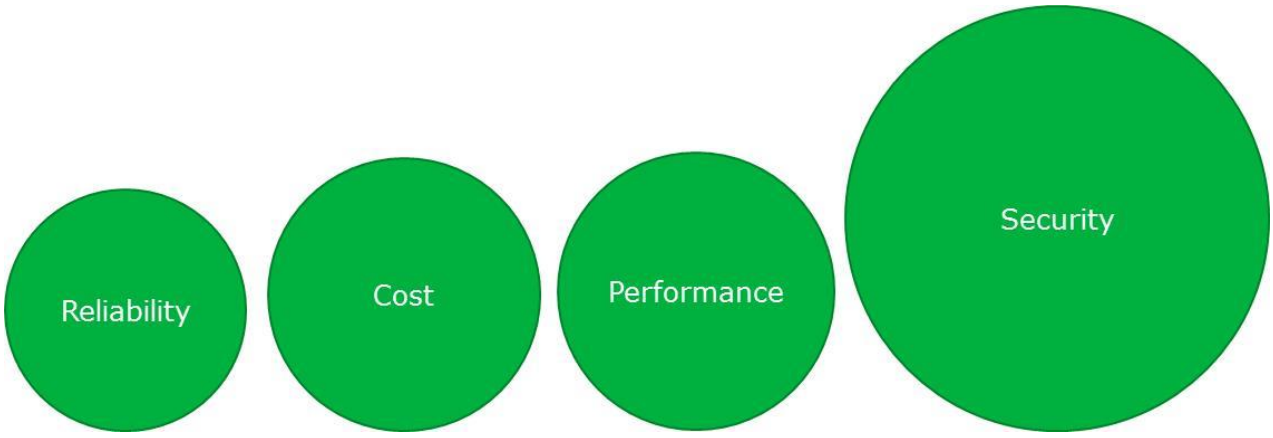


Delivering secure and reliable connectivity

As more users rely on wireless access, the security and reliability of wireless access networks have emerged as the top challenges for network managers. Security is the #1 challenge by far, and in general is a major concern for companies as hacking has evolved from hobby into a multi-billion dollar industry. Security breaches are not some obscure event but affect millions of people and are covered by mainstream news media (almost every week brings news of another major cyber security breach). Not only do security breaches cost significant resources to remedy, but they can also lead to loss of customer confidence, lost revenue, fines, and in some cases bankruptcy.

A second tier of challenges revolves around reliability, performance, and cost. As a critical component of IT and communication infrastructure, network outages or degradations have a widespread impact on the availability of IT applications, which in turn reduces productivity, and can lead to lost revenue and unhappy customers. Often reliability issues aren't as cut and dry as an outage, and present themselves as inconsistent connectivity, which can be very hard to troubleshoot. Performance builds on reliability—the network may be working, but it's not working very well. If performance issues aren't addressed proactively, they can turn into reliability problems when the network slows down to a crawl. Meanwhile, budgets aren't keeping up with demands, making cost another top challenge.

Exhibit 4: Networking Challenges



Bottom Line

Companies across all industries are affected by fundamental changes in customer expectations and how products and services are delivered. Digital transformation needs to start with the workplace in collaboration with employee stakeholders, so that organizations can develop relevant digitally native processes and allow information to flow freely within their organization. Special attention needs to be paid to the network, because as reliance on digital processes grows, so does the need for a network that can support a wide variety of devices and reliably connect them with the users.

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