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SPECIAL PULLOUT SECTION

MSP'S 2018 GUIDE TO

Emerging Technology

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A practical preview of hot new technology areas in three time horizons, ranging from "right now" to "pretty soon" to "maybe someday." **By Scott Bekker**

THAT TIME OF THE YEAR when we're changing from one wall calendar to the next is a good time to think about the future. For managed services providers (MSPs), who have to keep their head on a swivel for the next big opportunity area that customers will need help with, it's especially important to keep an eye on emerging technologies.

The industry is moving very fast on dozens of fronts right now. Some technology advances are very close at hand, others are further off. In an effort to make sense of all the action, we're going to borrow the "three growth horizon" concept from Microsoft CEO Satya Nadella.

In his recent book, "Hit Refresh: The Quest to Rediscover Microsoft's Soul and Imagine a Better Future for Everyone," Nadella describes that "three growth horizon" strategy as Microsoft's model for avoiding the trap of the innovator's dilemma, which is allowing revenues from current products to block next-generation product development that could one day make the current cash cows irrelevant.

"On horizon one, our customers and partners will continue to see quarter-by-quarter, year-by-year innovations in all of our businesses. On horizon two, we're already investing in some exciting nearer-term platform shifts, such as new user interfaces with speech or digital ink, new applications with personal assistants and bots, and Internet of Things experiences for everything from factories to cars to home appliances. On horizon three, Microsoft is highly focused in areas that only a few years ago

sounded distant, but today are frontiers of innovation—mixed reality, artificial intelligence, and quantum computing."

Let's take a look at some of the emerging technologies out there through that three-horizon lens.

HORIZON ONE

On the first horizon are nascent technology areas that MSPs with a thorough Microsoft background are in the early stages of monetizing. When it comes to emerging technologies, these would qualify as quick hits:

Cloud-to-Cloud Backup: One of the most reliable sources of MSP business is backup/disaster recovery, and cloud as a target is a big and growing chunk of that business. The supplemental area of focus that is emerging is the backup and disaster recovery that never involves any on-premises hardware—creating cloud backups for public cloud Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS).

Multi-Cloud Management/Provisioning: If Amazon had its way, every customer's cloud assets would be entirely in Amazon Web Services. Same for Microsoft with Azure and other public cloud infrastructure vendors. In the real world, customers pick and choose, or different departments make independent decisions. Tools and methods are springing up for MSPs to help customers provision and manage their multi-cloud environments.

Managed Cloud Applications: At the end of 2017, Microsoft introduced an initiative for MSPs to develop, deliver and offer ongoing maintenance for turnkey applications that run on Azure. Customers would pay for the applications as part of their Azure spending, but the sealed application packages would be managed by MSPs.

Azure Stack: Speaking of Microsoft, the long lead-up to Azure Stack is over. Microsoft's differentiating hybrid cloud offering, which is a packaged private cloud solution built on certified hardware from OEMs that runs the exact same Azure software that powers Microsoft's public cloud, is now shipping. MSPs running their own datacenters are one of Microsoft's primary use cases for the kit.

Cloud CRM: Salesforce pioneered CRM in the cloud, and MSPs have been offering that or Dynamics CRM Online for a long time. But the emergence within the Microsoft Cloud Solution Provider (CSP) business model of Indirect Providers specializing in Dynamics 365 makes adding CRM to a general-purpose MSP practice more realistic than it was in the past.

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Think of it this way: Anywhere a bot can go, a bot will go. This low level of scripted artificial intelligence is a big opportunity for MSPs, especially those with a vertical focus.

The Graphs: Part of the justification for Microsoft's $26 billion LinkedIn acquisition was the integration of the Microsoft Graph and the LinkedIn Graph. There's a lot of upside for MSPs who can help customers leverage the relationships between business and document data on the Office 365/Microsoft side and the employee, skills and industry data in LinkedIn.

HORIZON TWO

Pulling the lens back to the middle horizon, the focus is less on specifics of what Microsoft is up to and more on general movement across the industry.

3-D Printing: The ability to create objects on-demand with 3-D printers is here already. But the implications have yet to set in, and there are relatively few 3-D printing operations going on at scale. Subtracting shipping time and shipping costs will fundamentally alter a lot of business equations.

Bots: Bots are abundant already, from chatbots on Web sites and automated attendants in call centers to algorithms making decisions on credit scores and processes running robots. Think of it this way: Anywhere a bot can go, a bot will go. This low level of scripted artificial intelligence is a big opportunity for MSPs, especially those with a vertical focus.

Personal Digital Assistants: Alexa, Siri, Cortana, Google Assistant. Yes, they're bots, but they're slightly smarter—or

at least better-scripted—bots backed by a lot of developers and computing horsepower at the big vendors' datacenters. Integration with major personal digital assistants and the artificial intelligence resources behind them is a big opportunity in the medium term.

Internet of Things (IoT): Like bots, IoT devices are everywhere already, but you haven't seen anything yet. Gartner Inc. says there were about 6.4 billion IoT devices at the end of 2016 and projects there will be 20.4 billion of the devices in 2020. MSPs will be needed to develop IoT devices for vertical industries and applications, integrate devices and software, manage them, secure them and make sense of their data.

Machine Learning: A step up from bot-style algorithms, although a piece of the concept, machine learning covers the ability of computers themselves to access programs or data and learn things or improve processes that they weren't explicitly programmed to determine. As the sophistication of the technology improves, so does the sophistication of its potential applications.

Virtual Reality: The headsets are proliferating—the software and business cases are still mostly on the drawing board with many, many more as-yet unimagined.

Desktop as a Service (DaaS): As cloud connectivity increases and licensing arrangements become more conducive, the idea that your desktop environment can follow you to whatever location and device you want is getting closer to reality. The end-user management and security-improvement potential for MSPs could be substantial.

HORIZON THREE

On the farthest horizon are technologies that may not result in wide market products for five years or 10 years or more. With that longer horizon, however, comes more disruptive potential.

Drones: Picture the sky filled with unmanned aerial vehicles (UAVs), making deliveries, patrolling neighborhoods or inspecting remote equipment. A lot of technology companies are betting that's the future. Standing between now and then are both technological hurdles and regulatory fights over airspace and liability.

Mixed Reality: Think Microsoft HoloLens, with its see-through lens, rather than the immersive Oculus Rift virtual reality headset, and you get the idea. With mixed reality, holograms can be projected into the real-world space you're viewing or information can pop up in your field of view about real objects that you're looking at. Virtual reality has a head start in games. Mixed reality is probably a few years behind virtual reality in terms of market readiness.

Artificial Intelligence/Deep Learning: The big theme throughout many of these technology trends is more and more intelligence built into computing systems. The machines may not be thinking, but it will be harder and harder to tell the difference the further into the future we get.

Autonomous Vehicles: Most future watchers have a laser focus on self-driving cars and trucks. The biggest question is how soon they might take over the roads. Estimates are all over the map. But it's not just fleet management and other transportation vertical MSPs who will be affected. Almost every industry would be upended in some way by a shift to autonomous vehicles.

Quantum Computing: The weirdest expected change in the computing world is quantum computing. A quantum computer relies on properties of matter at the sub-atomic level, such as superposition, uncertainty and entanglement. In essence, bits of information in quantum computing, known as qubits, could exist in multiple states at the same time, allowing for massive advances in computational power. Don't expect a quantum computer to sit on your desk between your laptop and your telephone if all that research money being spent at universities and at companies like Google Inc., IBM Corp. or Microsoft does result in a working product. Due to the near-absolute-zero temperatures required, you'll probably interact with that quantum computer over a network.

That's a list to give any technology company some possibilities to ponder during those year-end reflection sessions.

Those three horizons certainly aren't definitive. Some items in Horizon Three may be closer than they appear, while others may fade away before they ever become products. Technologies in Horizon Two, Three and even One may end up swapping places.

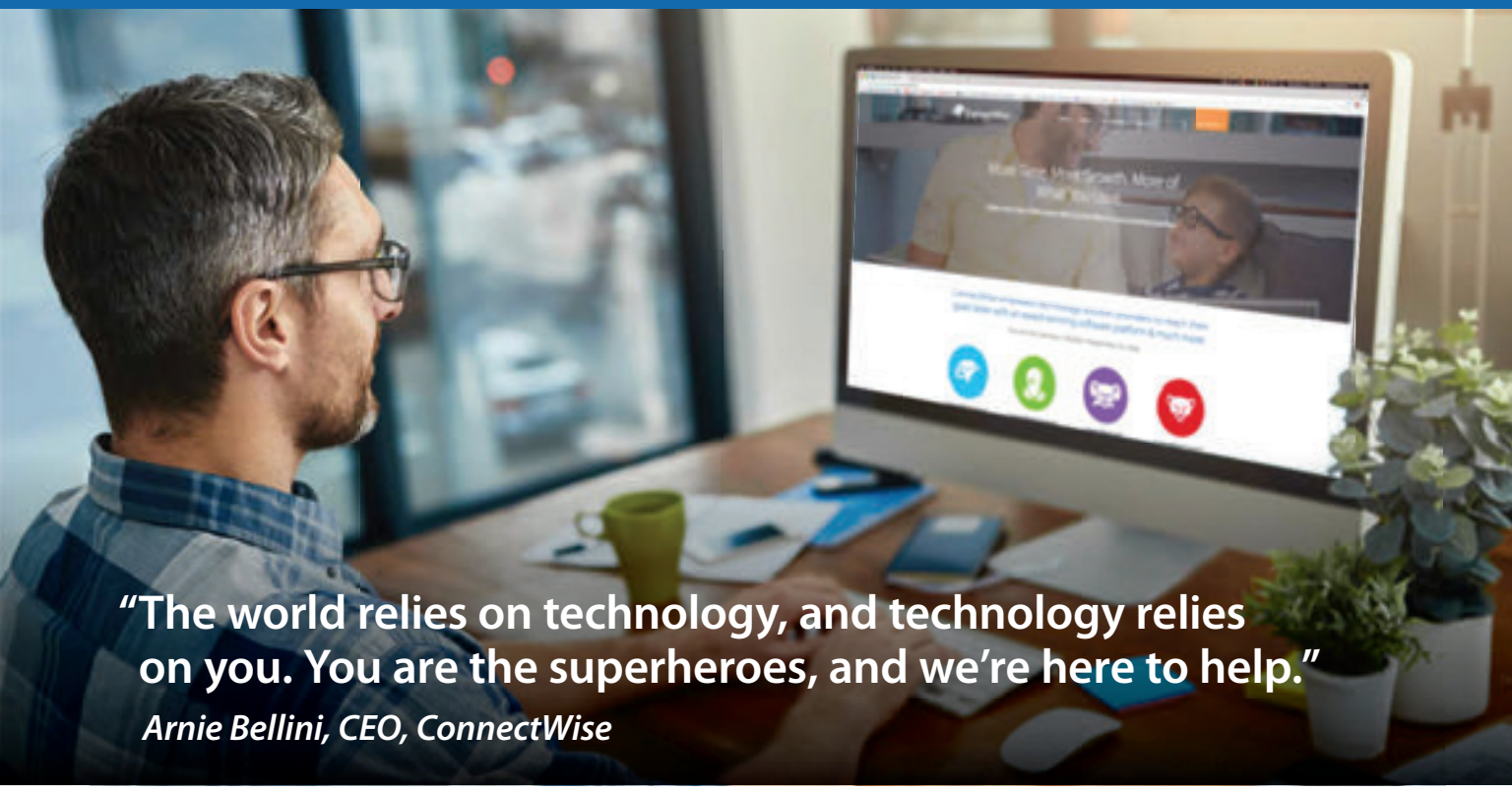
Many of the futuristic technologies already exist in some form, or under slightly different definitions.

A famous quote attributed to novelist William Gibson is always appropriate when future gazing: "The future is already here—it' just not evenly distributed."

We look forward to chronicling the ways that MSPs get ahead of that distribution curve in 2018. •

Scott Bekker is editor in chief of RCP *magazine.*

ConnectWise Renames Flagship Products



The Story Behind the Rename

At ConnectWise Inc., our mission is to support your success with a platform that helps you manage relationships, increase visibility, automate delivery, and control technology more effectively. That's why we've changed the name of our flagship products—to reflect who we are and what our products really do for you. Now simplifying our software under one company means you have one team backing your business end-to-end, every step of your journey.

ConnectWise Manage: Unify everything—from projects to services, marketing to sales, and service delivery to finance—with a business management solution designed to be the hub of your business.

ConnectWise Automate ***(formerly LabTech)***: Solve IT problems at the speed of business with flexible remote monitoring and management that boost your team's effectiveness.

ConnectWise Sell ***(formerly Quosal)***: Boost your sales efficiency with quote and proposal automation that helps you get quotes out the door and profits into your business.

ConnectWise Control ***(formerly ScreenConnect)***: Rely on fast, intuitive remote support to connect instantly, no matter where your customers are, and solve problems before they start.

ConnectWise Unite: Bill, manage, and monitor seamlessly for cloud solutions including Amazon Web Services™ (AWS), Microsoft® Office 365™ and Azure™, and Cisco® solutions including Meraki®, Stealthwatch® Cloud, Cisco Spark™, and Cisco Umbrella™.

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