

## The Epicenter of Digital Transformation

By: Scott St. John

Digital transformation is changing the world. It's connecting us in new ways, providing new entertainment and gaming experiences, redefining the workplace environment, revolutionizing manufacturing, reinventing commerce, changing the customer experience, advancing healthcare, and allowing us to experience new, virtual realities.



Service providers find themselves at the center of this global, social and industrial revolution. They are on the front lines of technical innovation, helping their customers transform while also providing the backbone for transformation to virtually every vertical industry.

[According to IDC](#), the digital transformation opportunity is massive, and expected to grow from \$1.1 trillion in 2017 to \$1.3 trillion in 2018, with compounded annual growth rate (CAGR) of 17.9% to nearly double to more than \$2.1 trillion in 2021. Over half of digital transformation spending is expected to be spent on investments in operational efficiencies, with another 25 percent invested in omni-channel communications, and an additional 18 percent invested in business intelligence and analytics solutions. Service providers are ingrained in each of these areas, as they guide their customers through their own transformation initiatives and build the technology infrastructures to enable digital-transformation innovations for industries around the world. But it's no easy task and, to survive, service providers too must transform.

### Mounting pressures

Service providers are under enormous pressure to transform their own businesses technically, organizationally, culturally and operationally. Digital transformation has become a [business imperative](#), as service providers' customers, channels, and competitors are now digital. Their products, business insights, employees, and operations are digital. By the end of 2018, the majority of consumers will discover, buy and consume services through digital means. Meanwhile, service providers also face enormous pressure from [eroding traditional service revenues](#) for fixed-line, data, and managed services and increased competition from digital, web-native and over-the-top (OTT) competitors – making digital transformation a mission-critical initiative for telecom companies.

To compete, there are three primary areas of transformation that all services providers need to consider:

**Organizational and Cultural Transformation:** Service providers are geographically dispersed with teams and functions spread across a diverse and broad workforce. They also work with a wide variety of contractors, suppliers and partners, which drives the need for cohesive workplace productivity tools and creates unique cultural, regulatory, and governmental challenges.

Digital transformation also changes the way companies work and collaborate, and creates a culture anchored in communication, collaboration, sharing, learning and growth. Service providers must harness the power of advanced, scalable, and carrier-grade commercial solutions – such as analytics, CEM, Cloud, and CRM platforms – to promote a truly integrated digital culture.

**Network Transformation:** Service providers operate the largest networks in the world in the air, on land, beneath the seas, and in the heavens above. But, pressures from over-the-top (OTT) and

web-native competitors are changing the traditional telecom business model, reducing the service delivery time cycle from years or months to days and minutes. New virtual, software-defined, and cloud networking technologies are also transforming networks, and are necessary to achieve operational efficiencies that are needed to profitably deliver and keep up with the demand for bandwidth and next generation services. These market pressures make this transformation mandatory for service providers that must support, use, and deliver these new technologies while maximizing automation and operational efficiency. Meanwhile new use cases, such as 5G and IoT, are adding complexity and additional considerations that touch nearly every part of service provider organizations. Service providers have no choice but to embrace these technologies and move away from a hardware-constrained methodology to compete, be efficient, and continue to meet customers' demands.

**Enterprise Transformation:** Service providers are integral to enterprise transformation around the world as they provide the critical link to transformative technologies such as industrial, municipal and residential IoT; cloud and data center services; workplace and productivity tools; global connectivity for networks and devices; mobility solutions; and digital content offerings.

They are also the key enablers for digital transformation across retail, manufacturing, financial services, health, education, government, and other industries. They connect virtual changing rooms, self-driving cars, industrial factories, agricultural machinery, and surgical robots – putting them at the heart of global digital transformation.

Ultimately, service providers must both enable their customers' transformations while simultaneously managing their own transformation. In fact, no other organization may be more greatly impacted by digital transformation. Seems daunting, to say the least, but the silver lining in the cloud of digital transformation is that they don't have to go it alone.

## Telecom transformation

Telcos are on the precipice of enormous change—as well as promise. They are helping to transform cities, factories, manufacturing, agriculture and transportation. They are connecting smart utility grids, cities, homes, and classrooms. They are enabling mobile services globally, connecting us with the people, content and games we love. They provide fundamental human, commercial, and financial services in under-served areas where these are otherwise out of reach. They make robotic medicine and self-driving cars a reality.

*Pipeline* recently had the opportunity to discuss digital transformation with Eric Troup, Microsoft's CTO for the Telecommunications Industry and an expert on telecom transformation. And notably, similar to how service providers touch nearly every area of digital transformation, Microsoft touches every area of telecom transformation. Microsoft's long-standing customer and partner relationships in the telco industry give it a particular expertise. Combined with its technical leadership in workplace productivity, cloud, artificial intelligence, and scalable, carrier-grade software platforms, Microsoft is uniquely positioned to help service providers drive critical gains from enterprise-wide digital transformation.

"Our perspective," says Troup, "is that there are two angles to consider. The first is: how do we directly enable telcos to achieve that digital transformation? It's not about selling them a business plan or selling them on the cloud. It's about accelerating their ability to implement." Troup went on to explain that service providers, in order to compete, must componentize their network, network functions and computing resources for the purpose of software-defined networking and business application development. He refers to this as "cloudification" of the network.

"The other aspect we consider is: how do we help other businesses build platforms that take advantage of the network, once cloudification has taken place?" Troup notes that the promise of IoT, connected cars, and connected cities all rely on the network and its agility. "Microsoft's role is to enable the actualization to happen so that all of these new business platforms—from social networking to content delivery and more—can work efficiently."

The demand for bandwidth, content and connectivity amidst the proliferation of billions of

connected devices is insatiable and ever-increasing. To meet this, service providers must become more agile. Troup adds, “You cannot keep up with the growth demand, not physically and not cost effectively, using the old hardware-defined model. It is too cost prohibitive, and service providers must move to a software-defined model. They have to transform from hardware-constrained to software-defined.”

There is no other way to efficiently or profitably meet the demand or compete with the threat of web-scale OTT competitors – many of which, such as Netflix, use and consume massive amounts of service providers’ network bandwidth and resources. And let’s not forget about those [billions of devices](#).

A hyperscale cloud platform and automation are critically important for transforming to a software-defined methodology and for new service offerings and use cases such as for IoT, 5G wireless services, and mixed reality, which are not possible without hyperscale, carrier-grade, and software-defined cloud networks and automated network functions driven by artificial intelligence and machine learning running on commodity hardware.

Microsoft Azure provides a hyperscale, carrier-grade and commercially-stable cloud interoperability platform for many telecom-specific use cases on a global scale. It also allows telecom companies to access the Azure marketplace, where they can immediately connect to leading cloud applications which are necessary to achieve operational efficiency, security, and interoperability. This didn’t come about by chance, as Microsoft has invested billions in cloud-aware software running on its own hyperscale cloud platform, Azure, for its globally deployed applications. This provides Microsoft with telecom-specific technical experience as well as experience contending with the unique cultural, governmental and regulatory considerations.

“This is our core business,” says Troup. “It’s important to remember Microsoft is a global service provider, and we have built products that run properly and efficiently on a hyperscale, cloud environment.” As a result, Microsoft has built the world’s only [Telco Cloud](#) environment specifically designed to provide the elasticity service providers need today.

But cloud is only one part of the equation. To effectively and efficiently operate in a software-defined, digital world, operators need data intelligence that can immediately react to change in networks and the services they support. Microsoft’s Cortana Intelligence Suite and Cognitive Services, Autonomous Solutions, Machine Learning, Stream Analytics, and Edge Analytics can help telecom operators transform their customer experience operations. And they’re actually doing it, too.

Earlier this week, [Microsoft announced](#) that Italian telco and ICT Group TIM is basing the foundation of its digital transformation upon Microsoft’s AI technology. Combined with Dynamics and Microsoft 365, CSRs have the powerful tools they need to quickly resolve customer issues across any channel, and predict and avoid issues before they arise.

Amos Genish, TIM Chief Executive Officer was quoted in the [press release](#) as saying, “The present agreement is a step forward in DigiTIM’s strategy. We’re strongly committed to providing digitization of all processes to dramatically enhance the digital experience for best-in-class customer engagement and to create an effective digital journey. Today we confirm once again our relentless commitment to the execution of the Industrial Plan, of which Artificial Intelligence is a key pillar.”

## Embracing the future

Being a service provider today means you are at ground zero of a trillion-dollar global social and industrial revolution. The need to transform is imperative, and touches every part of service providers’ organizations. But service providers don’t have to go it alone or reinvent the wheel. Service providers can turn to technology innovators like Microsoft to learn how many of the challenges have been successfully addressed in a telco-specific environment. They can also leverage their workplace productivity, cloud, and analytics platforms – and their ecosystem of industry partners – to help, as service providers continue to transform their organizations, networks, and vertical enterprise solutions.

