

INTRODUCTION

As organizations embark on their quest for business transformation, one of the most vexing challenges is knowing when the transformation is complete. Even if you have a clear understanding of the current conditions and requirements that shape digital transformation, the goal post surely will move as you adjust business processes and operations to leverage new technologies.

Technology evolves constantly. Look back a couple of decades, and see how each new significant evolutionary change reshaped perspectives and redefined goals, turning the quest to leverage technological advances into a continuum with no discernable end in sight. Think about how the web's commercialization changed business transactions and communication, or how WiFi advanced mobility. Or how the smartphone's introduction, with its anytime-anywhere access combined with the proliferation of cloud apps, has deeply transformed the way we work, receive information, complete transactions, communicate and socialize with each other.

Now with cloud infrastructures firmly in place – and expanding – businesses grapple with the concept of digital transformation and what it means. Google the term, and you'll get a convoluted definition. But what digital transformation boils down to is leveraging new technology advances to improve business outcomes. It's a change that starts with a look within, evaluating how each application, database and hardware component supports the business, and then determining how to align each IT investment to business outcomes – better products and happier customers.

The key to digital transformation, therefore, is understanding how each existing and new IT investment maps to well-defined business goals. Collecting and understanding data is key. If you want to understand why certain products sell better than others in certain geographies, the data can tell you why. The same goes for knowing why your retail checkouts are too slow or your manufacturing assembly line is too costly.

Data is an essential piece of the digital transformation puzzle, but there's more. Digital transformation requires you to address the same network issues you've always faced – speed and performance, connectivity and bandwidth. Only now there are additional considerations – connecting branches and telecommuters across a distributed enterprise, managing WiFi access points, and determining which digital assets to keep on premise or in the cloud. Business leaders and IT need to figure out how to connect a universe of connected machines (the “things” in the Internet of Things) that are critical to your business to glean useful information to improve processes and outcomes. As an example, think of a vehicle fleet connected through GPS and cloud technologies to better manage routing, scheduling, information sharing and – ultimately – customer service.

CLOUD CERTAINTY

Different organizations are driving toward digital transformation at different speeds. Each has unique business goals, budgetary, scalability and network readiness considerations to address. And of course each organization responds to its own drivers and sets its own goals. As a whole, we're all in the early phases. Some of the needed elements already are in place, but others will take more work.

Fundamental pieces already in place include WiFi and cloud. It's hard to imagine a world without WiFi connectivity, but it wasn't all that long ago that accessing the internet meant plugging into a wall socket or, if you go back enough, a chirpy dial-up modem. Being able to move around the workplace, home or a conference center while staying wirelessly connected through a smartphone, tablet or laptop has vastly improved productivity and flexibility.

Zoom out from WiFi to the cloud at large, and the benefits increase manifold. Now a business can shift production workloads to the cloud and materially benefit from its scalability and elasticity. Once dismissed as a buzzword, “cloud” now is reality. In a recent poll of 1,060 IT professionals, RightScale found 95 percent of respondents now use cloud.¹ Private cloud adoption has increased to 77 percent from 63 percent, and hybrid cloud to 71 percent from 58 percent.

In a 2015 study, IDG Research suggests that hybrid cloud may create a preferred path to digital transformation.² Ninety-six percent of participants said their hybrid cloud investments are delivering measurable results, and outcomes exceeded expectations for 21 percent of them. In addition, 88 percent of participants see hybrid cloud as a critical enabler of digital business.

The mobile revolution is another driver of digital transformation. As mobile intertwines with premise-based computing and cloud, it creates an access option to enterprise data. It delivers accessibility to applications and databases, closing the loop on the “anytime anywhere” concept.

MAKING PROGRESS

For true digital transformation to occur, progress on things like turning resources off and on in real time is needed. We’ve seen some early steps, but self-service procurement relies on network connectivity and bandwidth capacity to reach full potential.

Software-defined networking (SDN) will be key to digital transformation. Transferring network control from hardware to software-driven systems will change the game, but as of yet, some factors must be worked out so businesses can store databases and applications in the cloud with the confidence they will be accessible and secure. For example, standards to connect carrier service for bandwidth and connectivity to the enterprise and cloud platform providers will have to be established. A version of network-to-network (NNI) peering will be needed to smooth the flow of information from point to point.

Service providers have started providing direct connections between the enterprise and cloud platforms as Amazon AWS and Microsoft. It’s a significant step that starts to show how it’s possible to link with cloud assets without the dangers – real or perceived – of transmitting sensitive data over public internet pipes. Businesses can enjoy multipoint-to-multipoint connectivity between branches, remote and mobile workers, headquarters and data centers as an extension of their networks.

What digital transformation ultimately will look like is at best an educated guess. There are always unknowns. For instance, 5G networks could be highly disruptive once deployed and have a serious impact on all communications, including IoT transmissions. The potential for added functionality and speed is significant.

Such developments, you can be sure, will impact digital transformation somehow. In the meantime, the need to embark on this transformation is unquestionable if you are to compete and profit in an increasingly digital, interconnected world. The challenge will be to balance the vision for your business objectives with the flexibility to adjust as the goal posts continue to move.

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1. Kim Weins, “Cloud Computing Trends: 2016 State of the Cloud Survey,” <https://www.rightscale.com/blog/cloud-industry-insights/cloud-computing-trends-2016-state-cloud-survey> (February 9, 2016).

2. EMC Corporation, “New Study Reveals Hybrid Cloud is the ‘Great Enabler’ of Digital Transformation,” <https://www.prnewswire.com/news-releases/new-study-reveals-hybrid-cloud-is-the-great-enabler-of-digital-transformation-300206915.html> (January 20, 2016).