MARKET ANALYSIS

DIGITAL TRANSFORMATION IN HEALTHCARE — HOW IT AND THE CIO CAN MEET THE CHALLENGE

The healthcare industry is undergoing profound change as the impact of digital technologies changes how patient care is managed and provided.

Five critical new technology trends are responsible for much of the digital transformation occurring in this industry. These trends are among the reasons why technology pros like Microsoft veteran Venkat Bhamidipati are jumping into healthcare.

Bhamidipati recently joined Provident-St. Joseph Health, a 50-hospital health system in the western United States, as its executive vice president and CFO. After 13 years at Microsoft, Bhamidipati's move to the healthcare industry was driven by its need for change. "The pivots [in healthcare] are around digital transformation, improving patient outcomes, and the drive toward patient consumerism and new business models," he said.

Driving these "pivots" in healthcare are five technology trends, some of which have had an impact across industries, and some are unique to healthcare. They are:

1. Telemedicine and mobility — The ability to transcend the limitations of geography and provide healthcare services regardless of location is a breakthrough in many ways. Patients with chronic disease can get more consistent care; and office visits can be eliminated. As far back as 2015, 80% of doctors agreed that telemedicine is a better way to provide services in specific cases such as chronic disease management.

2. Big data and analytics — The power to more quickly and accurately identify the advantages of specific treatments or pinpoint causal factors in disease is a huge benefit. More important, the ability to develop a more comprehensive view of the patient by using all of that patient's data will yield improved diagnostic capability and earlier identification of health issues.

3. Internet of things (IoT) — Rapid advances in both sensors and wearable devices are changing how services are delivered and how healthcare organizations operate. Not only is more data being collected from patients and the devices that they rely on, but it is now being done in real time—essential for effective treatment. High performance and distributed applications will use/analyze this data, putting additional load on the network.

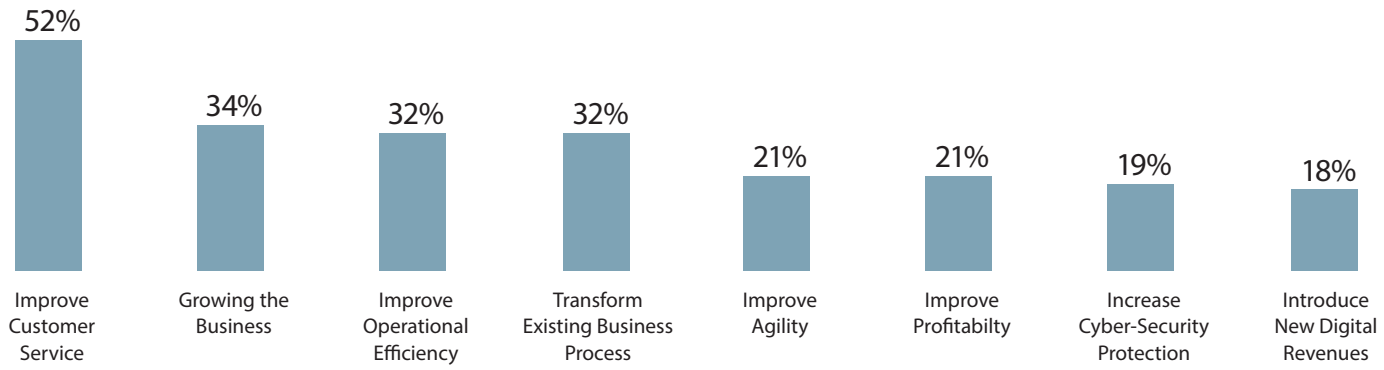
4. Security — It is no secret that healthcare organizations are in the crosshairs of hackers. Hospitals and doctors' offices contain a vast amount of information ranging from healthcare data to personal information to financial information. Moving to an all-digital environment will support deploying consistent and comprehensive security solutions to better protect sensitive data.

5. Next-generation patient-facing systems — A huge trend is the rising level of patient engagement. This leads to empowered consumers who are far more involved with their own healthcare. In addition, many providers are deploying more formal outreach programs. These new systems are dependent on digital information and next-generation applications and networks.

HOW IT AND THE CIO CAN MEET THE CHALLENGE

Assessing the path to digital transformation can seem overwhelming, especially when visualizing all of the possible new applications and processes that must be supported. However, "turning the lens" to look at the key foundational technologies and solutions necessary for change makes it possible to build an effective strategic plan. It has become clear that legacy IT systems and processes will not be able to meet the challenges of the future. This makes the starting point identifying what infrastructure must be updated or enhanced.

FIGURE 1: Business Drivers for Tech Investments in Healthcare *IDG State of the CIO Survey 2017*



To deploy new technologies more quickly, internal IT groups frequently partner with managed service providers (MSPs) that can deliver key components of the transformation strategy. The most common partners are cloud service/technology suppliers, because of the gains possible in "time to solution" by leveraging cloud services.

MSPs are important partners for healthcare IT teams, augmenting in-house resources to support greater speed and agility. Another key benefit of using MSPs is their ability to deploy the most advanced technology solutions quickly, because they already have the skills and expertise to do so.

The software-as-a-service (SaaS) provider that utilizes cloud technology is also an important technology partner. The ability to leverage proven applications that support new digital processes provides the twin benefits of faster time to solution and lower costs.

FOCUSING ON THE BUSINESS DRIVERS FOR TECHNOLOGY INVESTMENTS

The recent 2017 IDG State of the CIO survey identifies the focus of the CIO's efforts to support the business goals of the healthcare organization (Figure 1). The data shows that meeting the demands of the digital patient is the primary objective. There is also a strong emphasis on transformation and increasing efficiency. It is worth noting that "growing the business" is a driver as well. This is a bit unexpected, and is a great indication of how much the "for profit" nature of healthcare is impacting that industry.

DELIVERING ON DIGITAL HEALTHCARE: AN EFFECTIVE NETWORK ENABLES THE FUTURE

In many ways, the network that supports a healthcare organization acts as the "nervous system" for that organization and its operations. Not only is there an increasing geographic scope, with many different locations using the same systems, but the need for up-to-the-minute information can truly be a life-and-death issue.

As healthcare organizations move to a digital future, it is critical that the network is not an impediment to providing services and optimizing operations. The growth of hospital groups, tighter linkage with clinics and doctors' offices, and ever-increasing amounts of patient data are all stressing older wide-area network (WAN) deployments. The ability to optimize existing WAN capability and add new types of networks that can provide options for lower price or higher performance is the road to meeting the demands of the future.

HOW A GLOBAL BIOTECH BENEFITS FROM HYBRID NETWORKING

One of the largest biotechnology companies, dedicated to helping patients by delivering innovative new therapies for a wide range of health conditions chose Masergy hybrid networking solutions. With locations all around the world, the company relies on a robust network infrastructure to support their global operations. The company partnered with Masergy to connect more than 60 locations across four continents with direct private connectivity to the AWS. Masergy customized the network based on the application performance needs, user considerations and risk tolerance criteria. This custom network has proven instrumental in meeting the firm's broader goals for accelerating their digital transformation. As the vice president of technology services noted, "In the end, it's all about transforming our IT to better our user experience and having the most reliable, agile and optimized network from Masergy is key to that."

With the help of Masergy's hybrid network solutions, the biotech can seamlessly connect global offices, data centers, and remote locations with a universal high-performance network that supports changing application performance and user requirements.

SUMMARY

Digital transformation is changing the face of healthcare. Improving patient outcomes, meeting the demands of patient consumerism, and developing new business models all require fundamental change. The job of making the right technology choices and implementing the changes will fall to the CIO and IT. These decisions will lead to growth through both innovation and greater efficiency.