

WHAT'S DRIVING THE HEALTHCARE INDUSTRY TO CLOUD?

A decorative graphic consisting of two overlapping triangles. The top triangle is green and points downwards. The bottom triangle is blue and points upwards. They overlap in the center, creating a white space.

“ Pharmacies, drug wholesalers and benefit managers are trembling at the prospect of competing with Amazon. ”

Erik Gordon, Ross School of Business, University of Michigan, quoted in the [New York Times](#)

Why cloud?

To understand healthcare's foray into cloud technology, we have to first conceptualize the very structure of the industry itself. Mature players are largely transforming through increased consolidation and M&A activity, looking for ways to better react to change. CVS's US \$60 billion bid to buy [Aetna](#) is a clear indication of this trend.

Meanwhile, niche and smaller players are gaining momentum. The incumbents feel the heat and are seeking to differentiate themselves among their peers—to help become more efficient in a market where service and care commoditization is rapidly overshadowing innovation.

While providers have a long history of leveraging new technologies to deliver care, any movement toward a more collaborative, patient-centric ecosystem would help accelerate the rapid adoption of new digital and cloud technologies in the years ahead. What we call “external integration” is beginning to take hold in the healthcare market, with patients, traditional players and new business partners moving the ball unpredictably as the game unfolds. Data sharing and cooperation across modern, intelligent, open platforms will likely become foundational to transacting in this new ecosystem. Those that do it well would thrive, and those that fail to adapt face an uncertain future.

Cloud is the catalyst

In traditional, incumbent healthcare organizations, cloud is generally viewed as a tactical approach to help reduce compute costs. Most perceive public cloud as less secure, more complex and largely unnecessary, and they have invested in various hybrid or private cloud models. The business is rarely driving these decisions, and IT leaders are typically responsible for enterprise cloud strategy.

Among their challenges:

- Most new innovation is happening in the public cloud
- Generally, IT isn't the source of new innovation in most healthcare organizations today.

By 2021, it is estimated that public cloud service providers will process more than 35 percent of healthcare providers' IT workloads, according to the Gartner-Market Guide for Cloud Service Providers to Healthcare Delivery Organizations, November 16, 2016.

Many incumbents ask, "What capabilities should I allow my organization to migrate or build on public cloud, and how do we control public cloud usage?" Perhaps the more important question is, "How are we going to operate and ultimately compete if we are not leveraging public cloud in a material way?"

Going forward, the function of IT—and the role of the CIO—is changing. Rather than developing and maintaining the applications that support the business, tomorrow's IT leadership would be navigating a number of new, rapidly evolving technologies and defining how those technologies would transform the organization's business model and strategy.

The tipping point

Innovation takes many shapes and forms in healthcare. Traditional care delivery models are morphing into on-demand, virtual marketplaces between patients and caregivers—more often from the patients' homes. Remote clinical technologies and data aggregation platforms are blurring the lines between medical devices and consumer wearables. Readily available

cognitive engines are helping to accelerate disruption opportunities for existing players and new entrants. New forms of automation and intelligence are driving efficiencies that were previously unattainable.

Critics, who believe that change is unlikely, could claim that we've been talking about the same issues in healthcare for years. Indeed, it's arguably true that concepts such as collaboration and cooperation are not new topics—they're simply ideas the system has never fully incorporated.

But while the money invested in healthcare startups may not directly translate into the amount of innovation we are seeing in the market, it is an indicator of momentum. Many innovators that don't operate in the healthcare space, such as [Amazon](#), [Google/Alphabet](#), and even [Uber](#) and [Lyft](#) have also taken notice. So, while the issues remain relatively constant, the level and scale has changed significantly over the years, which typically serves as a warning sign for the old guard.

Getting started

Where does a traditional healthcare organization—operating in the payer, provider or pharmacy benefit manager space, for example—get started? How do they unlock the value of technologies such as artificial intelligence, IoT, robotics, analytics and machine learning to fully embrace a digital future? And how could they do so in a way where both legacy and new cloud capabilities peacefully co-exist?

Based on what we're seeing in the marketplace, healthcare players—from hospitals, insurance companies to pharma firms—are looking at cloud's potential by asking three distinct questions:

1. What business value or economic advantage could cloud offer their organization?
2. What applications should they move to cloud from the host of legacy apps they already deal with?
3. What are the security and compliance risks associated with moving to cloud?

For the mature

For companies farther along the cloud capabilities curve, the questions are centered on building the skills and delivery capabilities among a largely non-cloud savvy workforce to execute and progress. Living in the cloud means transforming governance and related IT processes—for example automating everything that could be automated and changing the way teams and departments are organized so they're focused on lean delivery and services.

For many healthcare companies, the biggest challenge is straddling the legacy and cloud worlds, which presents a dichotomy—connecting both worlds with strategies that help support each other.

A pattern emerges: a solid strategy and business case

Though no two journeys to cloud are the same, in the healthcare space, we've seen a certain pattern emerge among incumbents making the transition. It begins with a solid strategy around demonstrating the value of cloud to the rest of the organization and often kicks off with a few quick cloud wins. For example, CIOs may begin by replacing back-office legacy applications with new cloud native Software-as-a-Service applications or experimenting with smaller pilots in the cloud to leverage new services, such as machine learning or predictive analytics.

After a few wins and some momentum, we see other critical elements emerge, including working across corporate silos to define a broader business case for cloud—quantifying more than project-level or IT-only benefits. This is typically done in parallel with a more formal application assessment set of initiatives, where healthcare companies analyze legacy applications and disposition them for cloud suitability. This phase is also important to help define likely cloud patterns for future migrations.

As a healthcare organization's journey to cloud continues and matures, the focus shifts to transforming the enterprise—leveraging cloud as a way to help drive new efficiencies and growth opportunities.

Organizations using cloud at scale are typically driven by other interests—more modern, elastic consumption models and the capacity to uncover new capabilities and services to fuel the business. Tapping into this power at scale requires some heavy lifting, including:

- Defining a new operating model
- Building cloud governance and controls
- Integrating cloud and legacy environments across technologies, processes and people.

Balancing value and risk to drive innovation and disruption

All incumbents want to change—transforming their business and embracing new technologies to help drive disruption in their industry. We're seeing healthcare CIOs beginning to adopt cloud-based strategies with a focus on the work required to accelerate their cloud journey; building Cloud Centers of Excellence, defining patterns and criteria to pre-certify future applications for the cloud and measuring the organization's overall cloud adoption and associated value on an ongoing basis.

Yet, there are still many healthcare companies that lack the vision and plan for cloud adoption. While there are many deviations and potential roadblocks on the journey to cloud, simply getting started and experimenting at a smaller scale often generates significant momentum.

The opportunities that come with cloud are profound—and will likely be foundational to support the healthcare system of the future. Accenture believes that the healthcare companies that succeed in this rapidly evolving ecosystem are embracing the change and laying the groundwork, in preparation for the transformation that the healthcare industry is undergoing today. Accenture has the experience and capabilities and is at the forefront of developing industry cloud solutions and services to guide our clients at the pace of innovation on their journey to cloud.

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