



The cloud imperative in healthcare



Cloud is not new in healthcare

Two years ago, organizations were experimenting in the public cloud. Now their focus is on migrating legacy technology to the cloud and transforming data and applications using capabilities that aren't available in their existing infrastructure solutions. Forty-four percent of healthcare CIOs rank cloud services as a top-three investment priority.¹ Yesterday, cloud was about aspiration. Today, it is about scale.

Yet only half of healthcare organizations have mature cloud practices and tools in place.² Even so, cloud is a disruptive force fueling innovation in the industry. Healthtech players with cloud solutions continue to grow as market influencers. In addition, the big three cloud hyperscalers in the North American market—Microsoft, Amazon and Google—have healthcare in their sights and are investing in innovation.

Cloud is not the only disruptive force in healthcare—there are many. There is nothing quite like the impact of COVID-19. The pandemic environment exposed vulnerabilities and accelerated change. It amplified the need for resiliency and scalability. It created urgency for healthcare organizations to securely handle large volumes of patient data, and quickly migrate and modernize apps while automating IT processes to support a remote workforce and expand virtual care delivery.

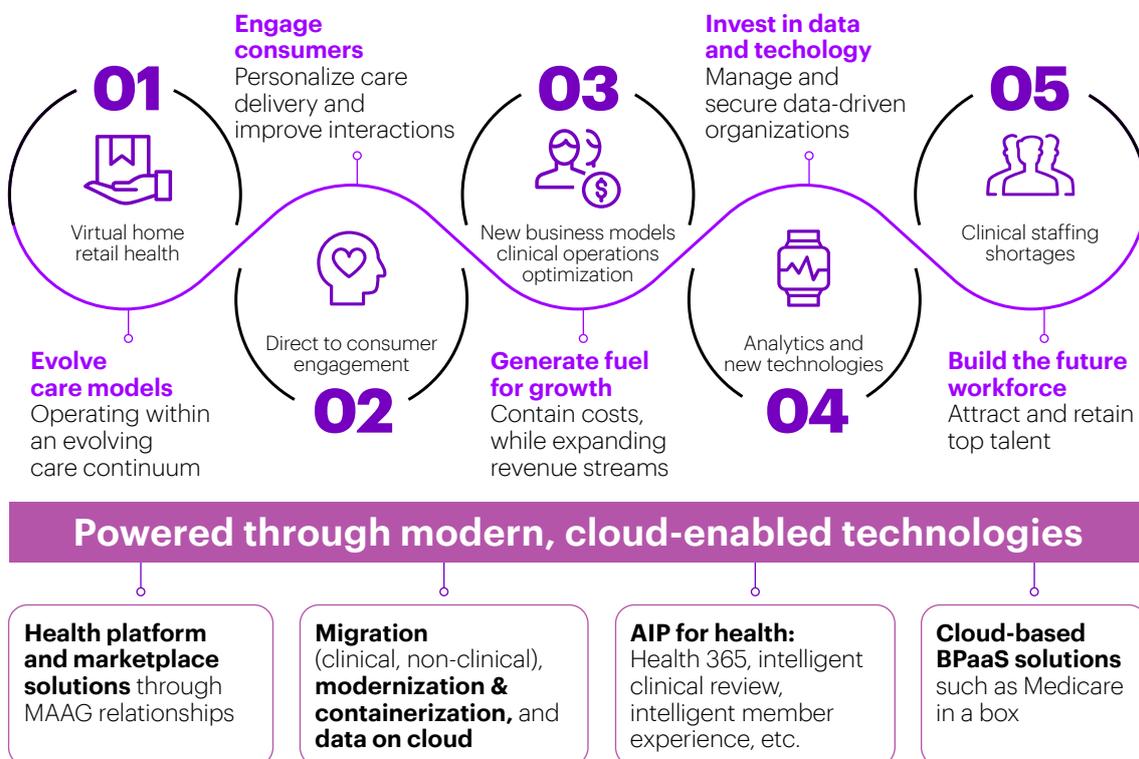
As business priorities shift, modern cloud-enabled technologies are more critical than ever in healthcare. However, scaling cloud can be complicated. There is internal complexity to address. There are relationships with ecosystem partners to navigate. There are data insights to harvest to improve efficiency and patient care. There is the weight of legacy investments to shake off. Healthcare is at a tipping point. A hybrid cloud environment can solve many of its biggest challenges. But how does a historically risk averse industry make it happen fast enough? By working across the business, healthcare players can harness cloud to operate in a climate where the resilience of people, systems and partnerships is paramount.

The path forward

Cloud is a powerful business enabler and a springboard to the future. So it's no surprise that [79% of healthcare stakeholders responded to a survey last summer saying that they would make cloud a strategic priority in 2020](#).³ And that was months before COVID-19.

While every healthcare organization is unique—and the payer and provider segments have specific market, customer and competitive dynamics—there are fundamental business priorities that all healthcare organizations should address to succeed.

Key business priorities are accelerating cloud in healthcare

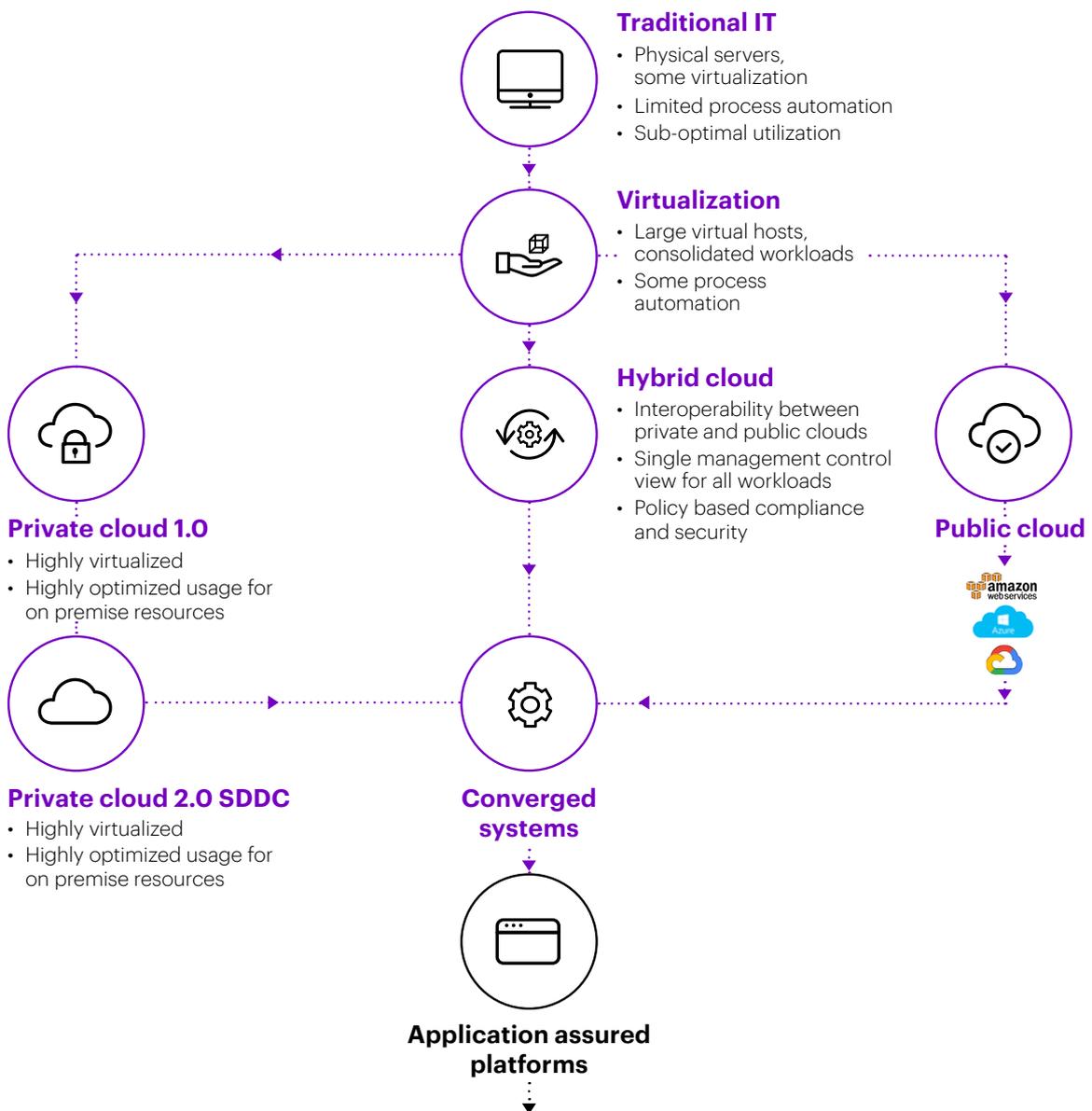


Cloud is the common denominator for the “how” of achieving all these business priorities. Every one of them is powered through modern, cloud-enabled technologies. Over the next three to five years, healthcare organizations will embrace hybrid cloud solutions as they modernize toward public cloud.

As industry players begin their journey to cloud, most will initially land on a hybrid cloud strategy with application and data workloads balanced across both public and private clouds. This is a “best of both worlds” approach that offers low latency for some workloads that live in the private cloud while simultaneously creating opportunity to innovate at scale—via AI, cognitive services, blockchain and more—in the public cloud. [Think of it as combining the public cloud benefits of innovation and speed with the private cloud benefits of regulatory compliance and performance.](#)

However, the most progressive healthcare organizations will move beyond a hybrid cloud strategy and accelerate the move to the public cloud. After all, this is where the most business and technology value lies. There is tremendous opportunity for healthcare organizations to tap into a full range of cloud-native services. In fact, many services are already HIPAA-compliant, and if configured appropriately, can be—and are—used in public cloud architectures. Why is public cloud the ultimate destination? The reality is that the industry’s new business models require elements like streaming and processing data, connected IoT devices and platform plays with ecosystem partners. All of these require the speed and scale that’s only offered in the public cloud.

The traditional data center approach has matured over time to include various forms of cloud



In essence, the path to the future of healthcare runs through the public cloud. While 18 months ago the industry’s top concern involved what capabilities companies needed in the cloud and the best way to control public cloud use, today’s critical issue is how to compete in wildly uncharted territory if the business doesn’t successfully scale cloud.

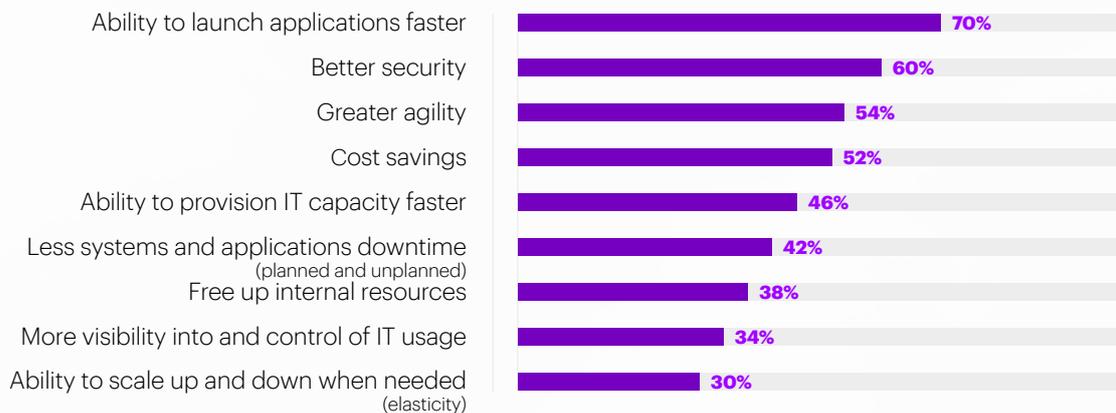
Why cloud now?

Cloud is no longer a pure technology play in healthcare. It's a business play. Consider the four reasons why healthcare organizations should act with urgency to develop and implement their cloud strategy.

Business leaders have a stake in cloud

Healthcare executives most frequently cite the ability to launch applications faster, better security and greater agility as the top benefits of cloud (Figure 1). The fact that cost topped this same list in last year's survey reveals just how quickly healthcare executives' views of cloud have shifted from a transactional to a strategic lens.

Figure 1: Healthcare executives are more interested in business benefits from cloud than cost benefits



Source: Accenture Cloud Readiness Survey in Health industry, 2019. n=50 C-suite executives from US, Canada, Australia, Singapore, France, Germany, and the UK.

Question: What benefits does your organization expect to gain from cloud?

In healthcare in particular, every C-suite leader has a vested interest in cloud and modern technologies. They are each looking for a specific kind of new value, and a different value case resonates with each one:

CEO	<p>Drive transformation and new business models</p> <p>CEOs look for cloud to help turn investments in operations and innovation into new revenue streams. This could mean partnering across the ecosystem to orchestrate the development of research and new products.</p>
CFO	<p>Cost transparency and better technology business management</p> <p>CFOs look to cloud to limit large capital investments and shift from Capex to Opex. They recognize opportunities to use shared services platforms and to reduce shadow IT, which is common in the healthcare industry.</p>
COO	<p>Leverage data to drive outcomes via automation</p> <p>COOs look for cloud to contribute to the integration of business strategy with operations. This could mean leveraging new technologies to new clinical programs to improve outcomes, and positively affect the P&L.</p>
CIO	<p>Provide strategic value to the business</p> <p>CIOs look for cloud to help them shift their focus from hardware and software implementations and managing the physical infrastructure. This frees them to position themselves as strategic thinkers providing business leadership and digital innovation.</p>
CMO	<p>Improve care delivery and clinical operations</p> <p>CMOs look for cloud to provide real-time insights and outcomes-based care. This could mean using data insights to reduce readmissions, improve patient flow, enable virtual health and provide seamless experiences to nurses and clinicians.</p>
CDO	<p>Adapt to industry changes that are reshaping value</p> <p>CDOs look for cloud to accelerate time to market for new, digital capabilities. This could mean brokering and testing new ways of operating and innovating, launching an organization on a digital trajectory to improve experience and create data-driven products.</p>

Cloud service providers are prioritizing the healthcare industry

It's not only executive leadership that is taking notice of the value of cloud for healthcare. Health is the market priority of the leading cloud service providers. Microsoft, Amazon and Google are each investing heavily in healthcare and setting up vertical platform capabilities with specific assets. These companies are looking to partner with major players in the healthcare ecosystem, primarily through joint offerings. The goal is to further expand and democratize their services for use beyond core IT applications.

Amazon Web Services, which had nearly one-third of market share as of the fourth quarter last year, has made several health-related acquisitions, supports over 100 HIPAA eligible services and spent upwards of \$37 billion in R&D last year.⁴ The company has said it wants to give developers the tools to create apps and unlock insights across the entire enterprise. Beyond data scientists and application developers, the company intends to enable operations, marketing, the business and executives with AI and machine learning tools that apply new types of intelligence across functional domains.⁵ This kind of disruption will require traditional healthcare players to rethink their entire organizations, including the role that technology plays outside of IT.

Public cloud unlocks new value—and reduces costs

All of this momentum—this “buzz” from executives and cloud service providers—signals just how strong the value story is for the journey to cloud in healthcare. Cloud is the means to the end for healthcare organizations to improve operations, clinical research and care delivery because it grounds the business in agility, collaboration and insight-based action.

The right cloud strategy pays off



Fulfill the digital transformation agenda



Leverage analytics to improve patient experiences and better treat diseases



Enable new front office benefits such as member engagement



Create operational and capital efficiencies to fund broader transformation programs



Cultivate an organizational culture focused on driving value



Accelerate the modernization of data, infrastructure and applications



Solidify the data foundation for more insight-based healthcare services



Provide easy access to leading open health standards



Drive standardization to improve interoperability, reduce technical debt, and power growth

These are transformational improvements for the entire healthcare ecosystem. With the right cloud strategy and investments, payers, providers, research organizations and new market entrants can evolve their roles, value propositions, business models and partnerships to improve healthcare coordination, delivery—and outcomes.

In our experience, healthcare organizations that implement a multi-cloud operating model can see a **20 to 50%** expansion in productivity, a **30 to 80%** jump in quality improvement and a **2 to 8x** increase in speed to market.

There is also a cost angle to the cloud value story in healthcare. It is much less expensive to utilize public cloud capabilities than it is to use on-premise and private cloud alternatives. Accenture experience reveals that when organizations migrate to cloud at scale and have a modern governance model, they can realize 20 to 40% savings annually.

The economics of the cloud makes it possible for organizations to be more self-funding. Gone are the days when health players had to spend hundreds of millions of dollars over years disrupting their business. Now they can do it in an iterative way. Many of our clients are using cloud savings to eliminate legacy debt and fund their digital transformations. One financial services company realized a 29% cost reduction in product development and launch by focusing on a single application area after implementing cloud native xtreme programming capabilities. This allowed the organization to fund an additional \$20 million in new investments.

Healthcare players that have invested in cloud are reinventing how they do business



A large healthcare payer is broadening its value proposition through a cloud-native, mail-order pharmacy. By expanding the scope of services, payers can improve patient adherence, which is key to improving outcomes.



A Medicare Advantage plan is using cloud, AI and a robust data science organization to transform interactions with members, patients and providers. Using advanced analytics and machine learning, the company is reducing hospital admissions and readmissions and ultimately lowering medical costs for the populations it supports.



A large integrated healthcare payer/provider is modernizing its digital assets by building a cloud native solution that leverages Microsoft's Health 365 offering to drive greater integration between electronic medical records systems and digital front-ends for member and patient interactions.

Public cloud is more secure by default

Despite clear benefits, security concerns are common among healthcare organizations that have been slow to adopt cloud. [This is the case even as 40% of healthcare CIOs acknowledge that the public cloud is more secure than either private cloud or on-premise data centers.](#)⁶

This gap between action and insight suggests that these security concerns come from misperceptions and mindsets, not from concerns about the technology itself. In other words, apprehension is not about the “what” of the technology, it’s about the “how” of implementing it.

But here’s what every healthcare leader should know. Public cloud is more secure by default. With public cloud, the default posture is to deny access; users and services must be explicitly granted permission to access resources. This design significantly enhances the organization’s overall security posture. And in addition, it is the exact opposite of inherently open on-premise environments where policies are manually applied to limit access.

To take advantage of the security benefits of the public cloud, healthcare organizations cannot simply expect to reapply existing security practices, processes and tooling. They must align with other stakeholders—especially the CISO—focusing on desired outcomes and refreshing security controls. They must also be prepared to work differently with partners and public cloud providers to build and maintain security compliance in line with the nuances of healthcare and HIPAA.

Moving to action

There is a big difference between aspiring to scale cloud and acting to make it happen. For healthcare organizations to expand investments in public cloud, they need to answer three common questions.



How do we organize around cloud?

01

A new, cloud operating model is required. It's necessary to drive collaboration across various IT and business domains that have historically been very siloed. Without the right level of senior, cross-functional engagement, organizations cannot realize the full potential of cloud and will struggle to drive change. Given the regulatory, legal and contractual commitments that healthcare organizations face related to protecting health information and personally identifiable information, aligning these teams and building a common understanding of the need to protect and secure data in the cloud in line with policies and regulations is key to success.



How do we drive change quickly despite complex legacy systems and technical debt?

02

While modernizing the legacy is costly and highly complex, healthcare organizations do not have to be overwhelmed by tackling such a monumental challenge. A more reasonable approach is to focus on modernizing key capabilities that drive the experiences that are priorities for reinvention. There is no need to do it all at once. Healthcare organizations can decouple these priority capabilities from the legacy (claims, benefits, EHR systems) to enable easier access to the data to drive insights and new digital experiences. Companies should never fund large, multi-year modernization programs without significant interim milestones.



How do we need to think about value to stakeholders?

03

Today, only about 18% of healthcare IT leaders have engaged non-IT executives on cloud issues or involved them in cloud strategy discussions.⁷ This must change. As healthcare organizations aggressively pursue their cloud strategies, it is critical to engage leaders beyond traditional IT executives to sponsor the transformation. After all, the “buyer” is no longer simply a CIO or an infrastructure leader. And the business case is not just about cost, it is about business value and growth.

Cloud is on the move in healthcare. In fact, 97% of industry leaders—compared to just half of laggards—are leveraging cloud-based capabilities.⁸ Yet scaling cloud successfully requires new muscle. It requires healthcare organizations to marshal a new way of architecting, governing, managing and measuring how technology is “consumed.” The question is no longer about “why” healthcare needs cloud. It’s about how to scale it at a time when the dynamics of the industry are evolving fast.

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