



The Healthcare CIO of 2025: Leading Technology-Driven Growth

To understand how today's executives are preparing for the future, we surveyed more than 600 CIOs, including 100 healthcare CIOs across EMEA, APAC and North and South America, about their plans to innovate and modernize. Our analysis of the data reveals that CIOs have three main priorities: to modernize their application pipeline, to accelerate cloud transformation, and to empower a hybrid workforce. In this report, we consider precisely how they intend to make these changes and how they expect their organizations will benefit.

“Those CIOs of the future are here.
They're doing that transformation today.”

Sumit Dhawan, President of VMware





Healthcare is in a period of dramatic change.

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Competitive pressures are coming from non-traditional competitors including the hi-tech world, and patients (customers) are becoming increasingly well informed and influenced by technology gains in other areas of their life, leading to demand for increased information, transparency, and value.

At the center of this innovation is the CIO. There's no time to waste. "The CIOs of today are the ones who are painting the business picture of the future," says Sumit Dhawan, president of VMware. "That's how powerful the technologies have become. And that's today, not just in the future. They're actually shaping the future today."

Read on to learn more about:

- 1 How today's healthcare CIOs are gaining visibility and importance in the executive suite
- 2 What opportunities are available to those who embrace multi-cloud
- 3 Why modernizing the app pipeline is critical to creating rich and consistent customer experiences
- 4 How CIOs must architect new workflows and environments to exceed expectations around secure hybrid work

Section 1: The CIO's evolving role

Many CIOs are becoming their organizations' most important change agents.

Here, we set the stage for the following three sections by explaining how the CIO's role is changing so dramatically. The data shows that many CIOs are increasingly involved in strategic development and business decisions, and their sphere of influence has expanded beyond just IT.

Healthcare has traditionally been seen as a laggard in implementing new technology. There are many reasons why this might be the case—including security risks of new technology, funding, governance and available skills. Although slow, progress has been made notably with the shift to electronic patient records driven by the HITECH act in 2009. During the COVID-19 pandemic, healthcare had to pivot quickly and decisively in order to deliver care under extremely tight restrictions and at great risk to providers and other staff. This saw some of the most dramatic acceleration of health care technology and the funding that enables it, almost overnight adding telemedicine which became the primary mechanism to deliver outpatient care.

It is perhaps due to this recent acceleration of healthcare IT that healthcare CIOs see their roles as one of leadership, innovation and change. In this research, healthcare CIOs often acknowledge these responsibilities more than CIOs in any of the other industries that participate.

Key healthcare findings

- 79%** agreed CIOs and their teams are creating IT with the goal of exceeding customer expectations, retail at 77%.
- 78%** agreed CIOs and their teams are creating IT with the goal of gaining a defensible competitive advantage, retail at 71%.
- 76%** agreed CIOs are the leaders most responsible for accelerating change in the enterprise, tied with Telco.
- 77%** agreed CIOs and their teams are creating IT with the goal of unlocking the power of employees that are working in hybrid work environments, manufacturing at 72%.
- 77%** agreed CIOs and their teams are laser-focused on creating IT that inspires innovation across the organization, retail and FS 71%.

Exceeding customer expectations is the goal of 79% of healthcare CIOs.



Section 2: Moving to multi-cloud

As the data makes clear, multi-cloud is the future.

Deploying apps across different clouds—clouds often chosen for specific purposes—is being adopted by many CIOs. For healthcare this can be a difficult move. The existing footprint of on-premises datacenters and co-located sites for HA and DR are mission critical always-on environments with high levels of existing investment. Leading EHRs, on which the healthcare organizations are reliant, have very exacting rules that must be adhered to in how the EHR infrastructure is deployed. Many organizations have large investments in on-premises and co-located environments which can also complicate the decision and the timing of when to make the move. To make a wholesale change to this infrastructure brings with it a large degree of risk.

Key healthcare findings

71%

of CIOs agreed that a multi-cloud infrastructure can accelerate innovation and the adoption of other technologies.

83%

of CIOs are most likely using multi-cloud's many applications for improving security (83%), enabling fast scalability (81%) and enabling modern application development (81%).

58%

of companies already use more than one cloud provider; this number is expected to jump to 90% in 5 years.

62%

of CIOs say their top challenge with a multi-cloud environment is lack of interoperability, followed by increased costs (50%), and risks related to security, data privacy issues (45%).

51%

intend to add additional cloud engagements "as the business requires it," and just a tiny minority of CIOs (3%) report having no multi-cloud strategy at all.

91%

currently uses, plans to use or will consider the use of third-party applications that support the monitoring, management and financial control of multi-cloud environments (i.e., multi-cloud control solutions).

Healthcare CIOs are already making incremental steps, and seeing the benefits of a cross-cloud infrastructure.

While security is still a major concern, CIOs appear to be ultimately viewing the cloud as a way to improve security levels over today's environments. A cross-cloud platform makes it possible to run critical healthcare apps with resiliency and security wherever CIOs may need them—private, public or edge. They offer seamless portability between environments, and existing IT skills can be leveraged to modernize apps with built-in Kubernetes.

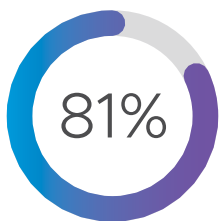
Lack of interoperability is the top multi-cloud challenge cited by healthcare CIOs.



Section 3: Modernizing the app pipeline

New healthcare apps are becoming a standard tool for improving patient care and offering a digital patient experience.

To prepare their organizations for accelerated change in the coming years, nearly all CIOs agree that modernizing their app pipeline must be a top priority. After all, an organization's ability to respond to patient needs and get new patients into their system is becoming critical as a competitive tool. Having a robust, well-managed multi-cloud infrastructure will play a critical role in this process. Here, we explain the importance of modernization; present the most common challenges encountered by CIOs; and explore potential solutions and related outcomes.



of CIOs cite that modernizing apps is their top priority

Key healthcare findings



Modernization is top of mind: **81%** of CIOs say modernizing apps is their top priority.



74% of respondents also believe “CIOs should take a bold leap forward in developing their applications strategy.”



64% agree that modern applications “are seen to accelerate innovation and adoption of other technologies.”



Already, **more than half** of CIOs are managing more than 11 modern applications. One in five are managing between 26 and 50; by 2025, **85%** expect to be managing 11 or more and 2 in 5 26 or more.



Multi-cloud is on most modernization roadmaps. But most CIOs share concerns that introducing multiple platforms may increase complexity and reduce dev-ops efficiencies:

- **74%** believe that a more seamless developer experience would dramatically improve efforts to modernize applications.
- **75%** believe their company would benefit from tools that can provide simplicity over the many unique platforms used by different teams.
- **70%** believe the current management of platforms and systems used by different teams needs to be optimized significantly.



But there are challenges to modernization. They have specifically to do with: maintaining cyber-security standards; overstressing IT staff; and integration across silos and different systems.

Healthcare organizations appear to be on their way in the journey to modern apps but recognize the challenges and complexity.

By using a cross-cloud app platform, CIOs can build, run and manage cloud-native apps at scale. This increases reliability and efficiency, while reducing costs and time-to-market.

Section 4: Building a hybrid workplace

Most CIOs agree that offering a hybrid work experience will be critical to their organizations' success in the coming years.

Many healthcare organizations, particularly in high cost of living areas are seeing remote working as a critical strategy for hiring and retaining non-clinical workers. The past two years have seen more organizations get on board, and our survey reveals that more hybrid support is underway. For most, multi-cloud will play a central role in this evolution.

Key healthcare findings

63%

of CIOs believe “the demands of a hybrid or distributed workforce” as a top factor that will impact their company between now and 2025.

71%

of CIOs say that risks related to data a privacy issues (71%) and network constraints (64%) are keeping them from delivering high-quality work-from-anywhere capabilities.

69%

also believe that “integrated workforce solutions enabling employees to work from anywhere with secure, frictionless experiences” can help accelerate innovation and the adoption of other technologies within their organizations.

68%

believe the CIO can help foster diversity and inclusion in the workplace (68%) and ensure equality (69%), Looking beyond their traditional IT remits. Most are up to the challenges that may come with hybrid work environments built on multi-cloud infrastructures.

67%

of CIOs believe that modernized multi-cloud applications are critical.

77%

claim that hybrid work has also expanded attack surfaces and entry points, thereby increasing their responsibilities.

As in many categories in this research, security remains a concern to CIOs, but the benefits of a hybrid workforce are clear.

While remote work has been a relatively new option mainly reserved for care providers, it is now opening up as a means for recruiting and retaining key non-clinical workers including billing and IT roles. To offer the best hybrid work environment, one must first create a consistent and seamless employee experience. With a multi-cloud platform, workforces can access the same applications they've always used—no matter the device or location. What's more, multi-cloud platforms help to ensure that network data and assets are protected from many of the threats that can come with remote environments.

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Healthcare is firmly on the road to modernization.

Highly aware of the emerging competitive threat from insurance providers, retailers and the high tech industry, healthcare CIOs are stepping up to be the leaders spearheading change. CIOs are recognizing and embracing the pathways that will help them compete and deliver the next generation digital patient experience both by improving information for patients, but also by innovating to unlock the potential for their employees. It is well documented that the healthcare industry faces a shortfall of qualified care providers and that providers spend too much time with technology documenting encounters rather than spending time with patients. By embracing new secure, seamless multi-cloud architectures, hybrid working scenarios and modern applications for patients and providers, CIOs are stepping up to provide the solutions.

Dhawan doesn't see these new responsibilities as theoretical possibilities. To him, this is the reality for today's topperforming tech executives who are overcoming complexity to build bridges on the road to 2025. "Those CIOs of the future are here," he says. "They're doing that transformation today."

Forbes INSIGHTS

Survey methodology

Forbes Insights surveyed 603 CIOs from North and South America (33%), Europe (33%) and APAC (33%) in December 2021 - January 2022. This included 100 healthcare CIOs, 29% from North and South America, 38% from EMEA and 33% from APAC.