



Wipro Healthcare Cloud Report

# The Prescription for Healthcare Provider Cloud Success.

Industry leaders gain major benefits from migrating data and operations to cloud while safeguarding sensitive information.



Moving vital data and operations to cloud has been a bright spot in an otherwise trying period for healthcare providers.

The COVID-19 pandemic showed these enterprises the importance of transitioning to cloud. Providers that are leading the vanguard of this change saw improvements in multiple areas, including data management, which helped them increase productivity and efficiency.

Moving to cloud helped the industry's leaders realize other benefits as well, including an average 6.58% revenue gain from their cloud use and an annualized return on investment (ROI) of 54%, both higher than the healthcare industry averages of 4.24% and 51% respectively. Those achievements came despite tighter budgets and cloud spending that is slightly less than all other industries.

More healthcare providers expect to follow in cloud leaders' footsteps in the near future. To maximize their investments, providers should embrace the following strategies that have made leaders' cloud adoptions successful:

- **Prioritizing data management**
- **Pairing cloud systems with advanced technologies**
- **Centralizing cloud management**
- **Maximizing cloud investments**
- **Expanding ROI analysis**
- **Focusing on cybersecurity**

To further ensure their cloud efforts' success, healthcare providers can also consider reinvesting cloud savings, taking a multicloud approach, closing the perception gap about security risks, and working with a cloud partner.



# Healthcare Providers Embrace Cloud

The global healthcare services sector includes more organizations at the high and low ends of the cloud-maturity spectrum than any of the dozen industries evaluated in our cloud research. We reached this insight after examining healthcare providers' cloud maturity based on their progress migrating processes to cloud or adopting cloud-native applications, the percentage of their total applications that are cloud-based, and the number of advanced technologies they use with cloud (see the "Methodology" sidebar).

Based on this maturity framework, we identified 20% of healthcare providers are cloud leaders, 38% are beginners, and the remainder (42%) are intermediate cloud users. Healthcare has more cloud leaders than other industries (20% vs. 14%), and the largest concentration of cloud leaders is located in the U.S.

For healthcare providers overall, and leaders in particular, the pandemic was a wake-up call. It clarified the role cloud can play in improving providers' resilience, customer experience, and agility. Consequently, it sped up cloud investments and adoption, revealed opportunities for cloud-based products, and underscored the need to address security and compliance issues.

## The Covid-19 Pandemic Has...

	Cloud Leaders	Others
Increased cloud as a priority for resilience	68%	43%
Elevated cloud as a priority for CX	64%	48%
Shown cloud's importance for efficiency/agility	59%	51%
Caused us to increase cloud investments	50%	41%
Accelerated the timetable for moving to cloud	45%	31%
Expanded cybersecurity and compliance issues	41%	31%
Opened opportunities for cloud-enabled products	36%	15%

As the pandemic has unfolded, healthcare providers at all maturity levels have used cloud to improve IT systems as well as industry-specific business functions, such as clinical documentation, patient engagement, and clinical decision support. In the next two years, providers expect to increase cloud spending for other currently underfunded essential industry functions, such as patient care coordination and patient engagement.

# What Healthcare Cloud Leaders Get Right

Cloud leaders have followed a specific approach to cloud adoption that has helped them achieve significant results and positioned them for a higher ROI on their investments. The approach is built on six tactics that offer a roadmap for other healthcare providers to emulate as a means of improving their own cloud practices.

## Improving Data Management and App Development

Think of all the healthcare systems that produce data. Every time someone sees a doctor, gets an X-ray, is connected to a medical device or admitted to the hospital, it generates data that's stored as an electronic medical record. By some estimates, electronic medical records and other healthcare data account for nearly a third of all the world's data.

Moving to cloud enables organizations to transfer healthcare data from older, siloed legacy systems with data formats that don't "talk" to each other into a more usable, shareable form. Leaders are well ahead of other healthcare providers and other industries in using cloud to manage data. More than a third of cloud leaders have adopted cloud-based data centers, far exceeding the industry as a whole (10%) or those in other industries (12%). "We have started keeping cloud-based electronic health records, which has resulted in better efficiency and improved data management," said the chief information officer of a U.S. healthcare provider.

### Healthcare providers' cloud progress

Cloud area	Leaders	All	All industries
Now			
Cloud-based data center	36%	10%	12%
Cloud-native app development	41%	13%	8%
Migration of core processes	32%	11%	7%
Modernization of core processes	23%	7%	8%
In two years			
Cloud-based data center	86%	42%	47%
Cloud-native app development	59%	45%	38%
Migration of core processes	82%	43%	38%
Modernization of core processes	77%	40%	41%

Leaders are well ahead of other healthcare providers and other industries in using cloud to manage data.

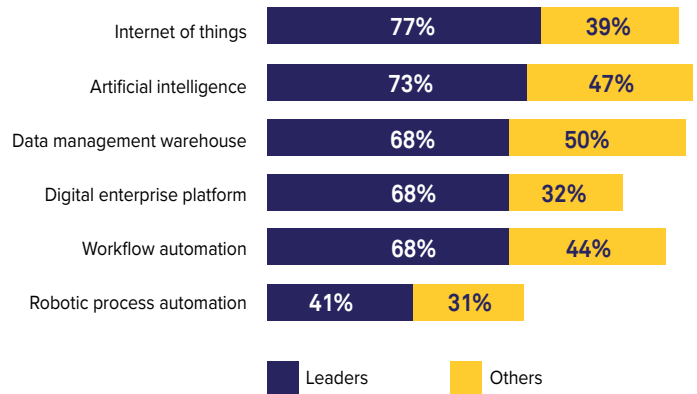
To manage data more effectively, leaders and other healthcare providers are transitioning from using primarily public and private cloud to hybrid cloud environments. This allows them to operate databases with sensitive data on the premises and run applications that require more flexible resources in the public cloud. According to the CFO of a French healthcare provider, hybrid cloud helped the organization optimize data management and process workflows while also promoting interoperability solutions, all of which create revenue-generating initiatives.

Leaders are also ahead when it comes to developing cloud-native applications, as well as modernizing and migrating core processes to cloud. In the next two years, healthcare providers across the board expect to make headway in all these areas, with leaders remaining ahead of the pack.

## Pairing Cloud with Advanced Technologies

With such data-management capabilities in place, providers are improving their ability to manage information from patient records, medical devices, billing systems, and other sources. Yet pairing cloud with advanced technologies such as the internet of things (IoT) and artificial intelligence (AI) enhances these capabilities even further, making it easier to collect, access, and analyze critical healthcare data. These advanced tools can also automate repetitive tasks to streamline workflows, prevent burnout, and drive greater efficiencies that help the bottom line.

The advanced technologies being paired with cloud



More than 7 in 10 cloud leaders are pairing their cloud platforms with IoT and AI, compared with 39% of other healthcare providers. “AI, IoT, and big data analytics are some of the cloud technologies we’ve implemented, and they’ve all resulted in greater returns, which we intend to continue,” said the CEO of a U.K. healthcare provider. A substantially larger portion of leaders is also augmenting cloud with data management warehouses, digital enterprise platforms, workflow automation, and robotic process automation (RPA).



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**—U.K. healthcare provider CEO**

The use of advanced technologies with cloud platforms is expected to surge over the next two years. The adoption of workforce automation is forecast to jump 22%, and increases are also expected in IoT (19%), AI (16%), and data management (13%).

## Centralizing Cloud Management

The local proximity of healthcare services to patients and the sensitivity of healthcare data make providers more likely than organizations in other industries to centralize the management of cloud functions, and leaders even more so than the average.

Of cloud leaders, 86% have centralized cloud management to some degree, slightly more than the 81% of all healthcare providers. According to the chief operating officer of an Australian healthcare provider in our survey, centralizing medical records has resulted in faster access and improved scalability.

### Cloud organizational structures now and in two years\*

Organization type	All firms now	All firms in 2 years	Beginners now	Beginners in 2 years	Leaders now	Leaders in 2 years
Completely centralized	8%	22%	10%	40%	18%	18%
Centralized with some control from functions/business units	48%	35%	69%	38%	36%	36%
Largely centralized with some decentralization	25%	34%	7%	19%	32%	45%
Largely decentralized with some central coordination	15%	6%	12%	2%	14%	–
Decentralized	4%	3%	2%	–	–	–

\* (% of firms surveyed)

In two years, nearly all cloud leaders (91%) expect their cloud capabilities to be either fully centralized, centralized with input from business units, or largely centralized with some decentralization, with the rest of the industry not far behind.

The need to protect sensitive data could explain why leaders and other providers take a centralized approach, with fewer outside contractors involved in their cloud functions. Outside contractors comprise only approximately 15% of healthcare providers' cloud operations staff, compared to 23% in other industries.

## Increasing Productivity to Boost Revenue

Healthcare providers' finances were harder hit by the pandemic than organizations in other industries, which is reflected in the overall dip in the sector's cloud spending. Providers' cloud spending dropped 1.2% last year, compared to a decline of 0.4% for all industries, and represents approximately 5.6% of their overall IT budget.

Despite these budget decreases, cloud leaders had better than average results, achieving a 6.5% revenue gain from their cloud use, compared to 2.7% for beginners and 4.2% for intermediate users. These gains were primarily due to increased productivity, accelerated time to market, and improved market position. Leaders also used cloud to reach new global markets, in some cases opening satellite offices in other countries to market to both expats as well as local clientele. In the next two years, leaders expect their continued cloud use to result in an even bigger lift in profitability, as well as a reduced carbon footprint, more and faster innovation, and greater shareholder value, market share, and ability to scale.

Over half of the healthcare providers surveyed (62%) cited cloud-driven productivity as an effective way to increase revenue, a higher response than other industries (55%). Clearly, the industry as a whole has found growth opportunities within the pandemic-related challenges and adopted transformational

platforms that will continue providing technological and financial benefits into the future. “Leveraging the cloud for IT innovations has been our organization’s most successful revenue-generating cloud endeavor, yielding excellent results,” said the CEO of a French healthcare provider.

### How leaders are using cloud to grow revenue\*

Revenue Sources	
Growing revenue through productivity	58%
Speeding up time to market	58%
Improving market positioning	58%
Reaching new global markets	50%
Penetrating new client segments	42%
Increasing customer retention	25%

\* Asked only of firms citing revenue growth as a benefit of cloud use.

**Cloud leaders had the same budget decreases as other providers but still saw 6.6% revenue gains from their cloud use.**

### Expanding ROI Calculations

Cloud migrations are a central part of healthcare providers’ efforts to modernize, and measuring ROI is an essential step in determining the success of these cloud initiatives. Healthcare providers at all levels of cloud maturity cite modernization costs as the top element they consider when calculating cloud investments’ ROI, with the vast majority of cloud leaders citing these costs as their central consideration. Leaders are also likelier than others in the industry to measure ROI by factoring training staff costs, monthly cloud service fees, running parallel environment expenses, and migration costs into their calculations.

### Top costs and benefits leaders use to measure cloud ROI

Costs	%	Benefits	%
Modernization costs	91%	Decreased IT costs	73%
Training existing staff	77%	Improved planning and decision making	64%
Monthly cloud service fees	68%	Increased revenue	55%
Defining governance standards	55%	Improved profitability	50%
Running parallel environments	50%	Greater and faster innovation	50%
Migration costs	50%	Greater market share	45%
Data storage fees	50%	Greater teamwork	45%

As part of their approach, cloud leaders are also likelier than beginners or intermediate users to consider the benefits they derive from using cloud platforms as well as the costs. These include decreased IT costs, improved planning, better innovation, and greater teamwork. As an example, a French healthcare provider’s chief strategy officer says that adopting cloud has yielded higher returns by improving data storage while reducing data management costs.

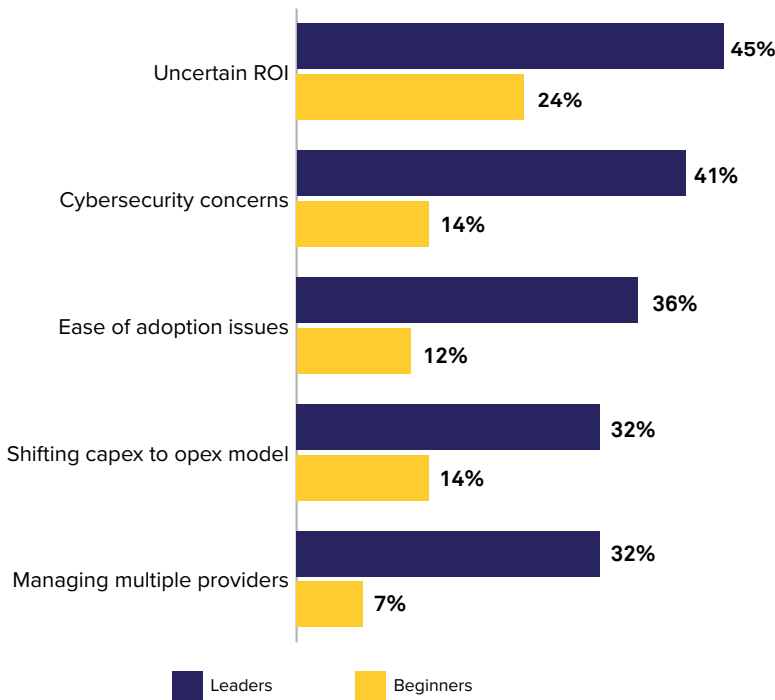
This breadth of factors leaders consider could help explain why they achieve an annualized ROI of 54%. In contrast, the initial investment that beginners make to get their cloud initiatives up and running results in a negative annualized ROI of 23%. Intermediate-level cloud users reap the benefits of those initial outlays, with the highest annualized ROI of all, at 102%. But as they expand cloud into more areas across the enterprise and reach the leader level of cloud maturity, it becomes harder to find quick and easy returns. Knowing which factors to include when determining ROI is one of this task’s biggest challenges, and by expanding the ROI scope as their cloud maturity develops, providers can create an effective way to calculate the return their cloud investments are delivering.

## Making Cybersecurity a Priority

The healthcare industry has been a prime target for ransomware and other cyberattacks, which is one reason leaders and other providers see cybersecurity as a critical part of effectively implementing cloud technologies and have invested accordingly.

Nearly two-thirds (63%) of all providers cite developing cybersecurity teams and skills as the top step they have taken to ensure effective cloud implementation. However, leaders are much likelier than beginners to cite cybersecurity as a challenge to their cloud efforts (41% vs. 14%), a sign that beginners need to reconsider how they perceive and manage cybersecurity risks.

### Top challenges for cloud leaders



Shifting some security functions to cloud helps reduce costs, especially for cloud leaders. Close to two-thirds (64%) of cloud leaders report cybersecurity cost savings from migrating to cloud, compared with 43% of healthcare providers overall.

Of all providers, half believe cloud use has been “most effective” for cybersecurity, and 49% expect to spend more on it in the near future. “Data security and safety has improved, along with better risk anticipation and management,” said the chief information officer of an Australian healthcare provider. Developing greater cloud maturity and devoting greater focus to cybersecurity should go hand in hand, and those new to cloud technologies should continue scaling up their security investments as their cloud operations progress.



# How to Take Cloud to the Next Level

To maximize their success, beginning or intermediate-level cloud users should consider the following tactics when implementing new strategies based on what the cloud leaders have achieved:

**Use cloud to improve the customer experience.** Half of all healthcare providers agree that the pandemic underscored the importance of using cloud to elevate the customer experience. Combining the security of the private cloud with the versatility of the public cloud makes it easier to offer health services, such as telemedicine, while continuing to comply with privacy regulations. As providers improve data management through cloud-based data centers and cloud-native apps, it will become easier to improve customer analysis, leading to better patient engagement and customer management.

**Reinvest savings in cloud.** Providers can use the cost savings from cloud-driven efficiencies to further expand investments in cloud applications. These would include critical functions they haven't funded to the same degree as other parts of their operations, such as clinical documentation, claims management, and payer or provider interoperability. Adding advanced technologies such as AI, workflow automation, and RPA can improve diagnoses, pattern spotting, clinical workflows, and predictive analytics for medical interactions. Using advanced technologies to make critical functions more efficient can also free up staff for more high-value work.

**Include strategic and operational benefits to gain a truer picture of ROI.** When budgets are tight, every dollar counts. To capture the full ROI of cloud investments, look not just at costs and financial benefits, but also at the strategic and operational gains that cloud provides. Cloud leaders are more apt than others in the industry to include benefits such as improved planning and decision-making, faster innovation, and better teamwork in their ROI calculations. Cloud beginners and intermediate users should follow suit.

**Close the perception gap about cybersecurity risks.** Leaders see security as one of the top challenges of moving to cloud, and providers at all levels believe cloud is effective for cybersecurity. Yet cloud beginners are more concerned with basics such as setting up a cloud strategy, evaluating tech options, and dealing with regulatory constraints and inadequate IT. To guard against attacks and ensure that sensitive data is protected, beginners need to ramp up their awareness of potential threats and take proactive steps to address them. A robust

cybersecurity management plan should include instituting multiple backup layers, installing AI- or machine learning-based end-point controls to detect threats, and, when necessary, identifying and applying security patches as quickly as possible.



**Work with a partner.** An expert cloud partner can help a healthcare provider assess its needs and identify the most beneficial architecture, technology, and applications to launch as pilots. A partner can help an organization analyze its existing systems to determine which functions could be migrated to a cloud-native software-as-a-service (SaaS) environment and which would be better off hosted in a hybrid cloud infrastructure. Ideally, a partner should share knowledge that propels a provider toward its goals and have experience working with IT teams as well as business units, since more business units are managing the apps they use. A cloud partner should also be certified in the cloud systems that a provider is considering and be able to explain the typical implementation roadmap and the changes needed to maximize the value of switching to a new system. One way to maximize results is to set up contracts so a partner is paid for reaching specific transformation milestones, rather than on the basis of time and materials.

Cloud technologies can potentially deliver a sought-after turning point in what's been a rough couple of years for the healthcare industry. Providers that moved ahead of the sector to adopt cloud used it to modernize data management and other key functions, leading to benefits throughout their operations. Following the cloud leaders' strategies can help beginners and intermediate cloud users accelerate their own cloud journeys and set themselves up for future success.

# Methodology

The insights shared in this report are based on a survey conducted for Wipro between June and September 2021 by [ThoughtLab Group](#) to analyze the current and future patterns of enterprise-level cloud adoption. Overall respondents included 1,400 executives from organizations ranging in size from less than \$5 billion in annual revenue to more than \$20 billion, with the largest share in the midsized category. The survey included 110 healthcare providers located in Australia, France, Germany, Switzerland, the U.K., and the U.S. All healthcare provider respondents are “knowledgeable” or “very knowledgeable” about the use of cloud technologies at their respective organizations. The largest portion of healthcare respondents (25%) reports directly to the C level, 14% are chief digital officers, 12% are business unit or division heads, and the remainder hold C-level positions such as CTO or CFO.

To calculate cloud maturity, we analyzed each healthcare provider to determine the cloud progress it is making, the percentage of applications it operates in cloud, and the number of advanced technologies it uses in conjunction with cloud. Based on those criteria, we classified the top 20% of healthcare provider respondents as cloud leaders, the middle 42% as intermediate users, and the remaining 38% as beginners.

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