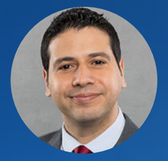
IDC InfoBrief

Cloud Enterprise Medical Imaging

Unlocking Accreditive Value through Cloud and SaaS Technologies — U.S. Perspective



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In This InfoBrief

This IDC InfoBrief offers insights into cloud enterprise medical imaging. Using data from the IDC US Healthcare Provider IT Survey and Worldwide Industry CloudPath Survey, it analyzes industry trends, challenges, and opportunities.

Cloud enterprise medical imaging, combining cloud, SaaS, and managed services, can address staffing shortages, optimize workflows, and improve system uptime.

This InfoBrief explores how these technologies benefit U.S. healthcare providers, helping them deliver better patient care, improve efficiency, and achieve a strong ROI.

Medical Imaging Faces Growing Challenges, Demanding Innovative Solutions

Medical imaging faces growing operational complexity and challenges, including:

Expanding ecosystems and managing an increasing volume of imaging exams.

More complex cases requiring higher levels of precision and collaboration.

Growing staff shortages coupled with the need to maximize staff efficiency.

Balancing tight budgets due to reimbursement pressures, inflation, and rising costs.

Enterprise Medical Imaging Enhances Efficiency, Data Access, and Care Collaboration, Improving Patient Outcomes

Enterprise medical imaging is pivotal in overcoming the challenges faced in medical imaging by:

Enhancing **operational efficiency** through unified medical image management.

Promoting **seamless integration and access to imaging data** across departments through a seamless network for accessing and exchanging medical images.

Supporting increased **care collaboration** and **clinical confidence.**

Enabling **intelligent, context-aware workflows** into the user experience.

Medical Imaging is Transitioning from a PACS Landscape to Integrated Enterprise Medical Imaging Platforms and Networks

PACS (Picture Archiving and Communication System):

Traditionally focused on radiology and specific imaging departments, often siloed, with limited interoperability.

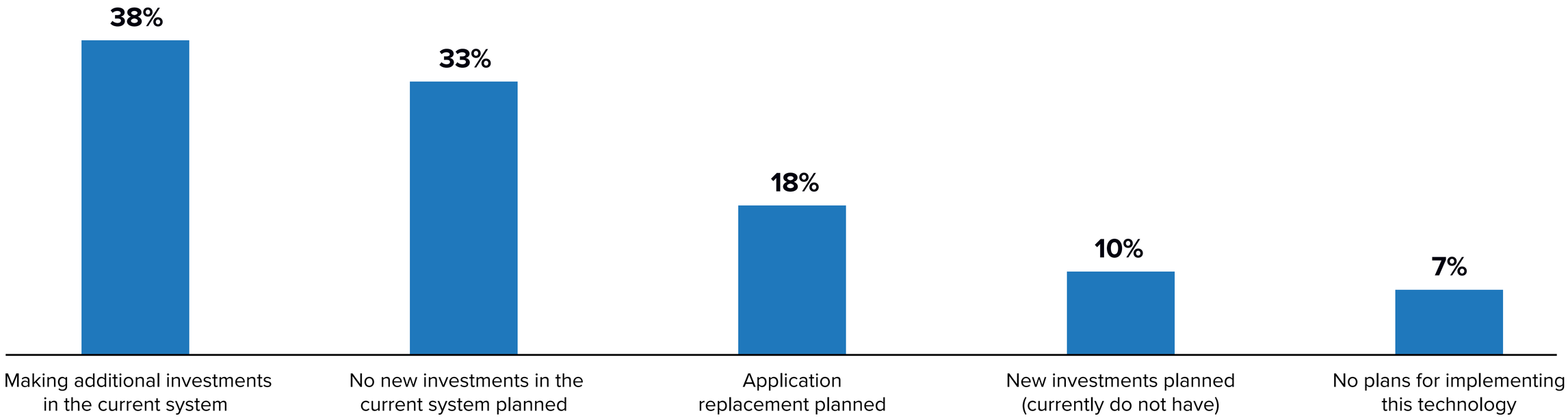
Enterprise Medical Imaging:

A holistic approach integrating imaging data across various departments (radiology, cardiology, pathology, etc.) into a unified platform and network, operating on one single database.

There Is A Divide Among Providers When It Comes To Their Enterprise Medical Imaging Maturity Levels

Enterprise medical imaging maturity is divided between healthcare providers optimizing existing systems and those starting from scratch. Cloud solutions offer scalability and cost-efficiency, making them ideal for accelerating adoption across all organizations.

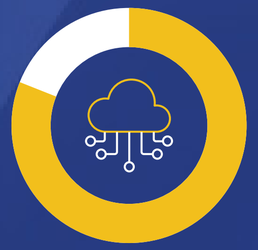
Figure: Current and planned investments in enterprise medical imaging from 2024 to 2025



(Source: US Healthcare Provider IT Survey, IDC)

The Shift to Cloud Adoption Is Not Just About Keeping Pace But Leading The Way

U.S. healthcare providers, facing rising operating costs and IT staffing shortages, are increasingly turning to cloud solutions for survival. Initially used for back-office tasks, cloud adoption is now expanding to critical areas like EHRs and medical imaging. This shift highlights the cloud's potential to reduce operational burdens and improve reliability, security, IT management, and costs.



As evidence of this shift,

81.5% of U.S. hospitals use cloud solutions to support production workloads and services.

(Source: WW Industry CloudPath Survey, IDC).

Given The Sensitive Nature And Criticality Of Medical Imaging Data, It Is A Prime Target For Malicious Actors

The heightened frequency and severity of cyberattacks targeting the healthcare industry, as evidenced by recent breaches at Change Healthcare and Ascension Health, underscore the imperative for robust cybersecurity measures. Cloud enterprise medical imaging offers substantial security to protect against these threats. Cloud service providers have advanced security and expertise. This helps prevent data breaches and ensure patient privacy.

Healthcare data breaches cost the industry an estimated

$10.5 billion

in 2023, according to the HHS HIPAA Journal 2023 Data Breach Report.

The Department of Health and Human Services (HHS) HIPAA Breach Trend Report recorded

294 individual

or large breaches affecting 500 or more people in the first half of 2024.

Top 10 Factors U.S. Hospitals Consider When Migrating Applications to the Cloud

Rank	Factor	Percentage
1	Importance of the workload	61.4
2	Security	56.8
3	Ease to migrate	54.4
4	Data sensitivity	50.0
5	Support of departments that utilize application	34.1
6	Workload usage pattern	36.4
7	Regulatory compliance	45.5
8	Latency (speed)	40.9
9	Ability to use cloud capabilities like analytics or AI/ML	43.2
10	Cost of running the workload in the cloud	27.3

(Source: WW Industry CloudPath Survey, IDC)

Cloud Enterprise Imaging Can Tame Complexity

Medical imaging data is proliferating, making cloud solutions essential for managing enterprise imaging. Cloud offers scalability, flexibility, and security to handle data management, integration, and advanced (or intelligent) workflow complexities. When delivered as a SaaS offering, cloud enterprise medical imaging provides scalability, predictable costs, accessibility, security, disaster recovery, maintenance, integration, and reliability, outperforming on-premises options.

The volume of medical imaging data in North America is expected to increase from 5 exabytes in 2024 to 7 exabytes in 2025, a **40%** growth rate over one year.

(Source: IDC Global DataSphere 2024).

The IT and Business Cases for Cloud Enterprise Imaging, When Converged, Lead to Success

The convergence of IT and business objectives is driving the growing adoption of cloud enterprise medical imaging. Both sides see cloud enterprise medical imaging as key to better patient care and financial health. Cloud agility and reduced TCO bridge the gap, letting healthcare organizations unify clinical and financial goals to future-proof operations and drive new value creation.

54.7% of IT and **60.3%** of Line of Business leaders at U.S. healthcare provider organizations plan to increase their organization-wide spending on enterprise medical imaging from 2024 to 2025, demonstrating a shared commitment across both departments to invest in enterprise imaging as a strategic priority, further reinforcing the importance of cloud adoption to achieve these goals.

(US Healthcare Provider IT Survey, IDC).

Enterprise Medical Imaging Investments are Accelerating Cloud Adoption

Cloud enterprise medical imaging offers a cost-effective alternative to on-premises solutions. While initial costs might be higher, long-term savings from dynamic resource allocation, automated updates, and subscription-based pricing often outweigh them. Cloud solutions also provide increased security, faster scalability, and reduced maintenance burdens. As more organizations transition to cloud infrastructure, the cost advantage will shift in favor of solutions such as cloud enterprise medical imaging.

60.2% of U.S. hospitals increasing their spending on medical imaging and archiving from 2024 to 2025 are allocating that increased spending to enterprise imaging.

(US Healthcare Provider IT Survey, IDC).

Cloud Enterprise Medical Imaging is Facilitating the Transformation of the Teleradiology Landscape

Integrated Delivery Networks (IDNs) are strategically positioning themselves as both consumers and providers of radiology services, leveraging cloud platforms to optimize operations. They outsource to independent practices and manage imaging volume. This lets them focus on core competencies and generate revenue by providing reading services to other hospitals. Private practices can specialize, partner, or offer "reading as a service." Cloud solutions, like workflow orchestration, support these relationships, enabling image sharing, remote reading, and data analytics.

22.2% of U.S. healthcare providers increasing their spending on medical imaging and archiving are allocating that spending to teleradiology, while

(US Healthcare Provider IT Survey, IDC, March 2024).

36.1% are increasing their spending on radiology workflow orchestration from 2024 to 2025.

Selecting the Right Cloud Deployment Model is a Critical Strategic Decision, as is Having the Right Partner Along the Journey

Cloud deployment offers superior scalability, cost-efficiency, and interoperability for enterprise medical imaging worldwide. It enables innovation, simplifies system convergence, and reduces operational overhead. While both cloud and on-premises options exist, the cloud's advantages make it a strong choice for modernizing enterprise medical imaging at scale. The key is to select a deployment model that aligns with your goals and the right partner to ensure a successful implementation with maximum benefits.

Feature	On-Premises (Traditional)	On-Premises (Managed Services)	Private Cloud	Hybrid Cloud	Public Cloud
Ownership	**Organization-owned hardware; can vary in managed services**	Provider-owned hardware typically	Organization or provider depending on setup	Combination	Third-party provider
Control	**Full control over hardware, software configurations, and data**	Provider manages hardware/software, organization controls data	High control over data; may share hardware/software management	Shared control over data and hardware/software configurations	Limited control; mainly over data and specific software settings
Scalability	**Limited**	Moderate to high	Moderate	High	High
Cost	**High upfront, ongoing**	Lower upfront, subscription-based	High upfront, lower ongoing	Variable	Pay-per-use
Security	**High control over security measures**	Security managed by provider, aligned with organization's policies	High control, provider-managed options	Shared responsibility, customizable	Shared responsibility, standardized by provider
Compliance	**Full control**	Compliance managed by provider within organizational requirements	High control, provider-managed options	Shared responsibility, customizable	Shared responsibility, standardized by provider
Accessibility	**Limited, network-dependent**	Enhanced, provider ensures uptime and accessibility	Internal access, enhanced through virtualization	Flexible access, dependent on network setup	Broad access, internet-dependent
Disaster Recovery	**On-site or off-site backups**	Provider-managed, often cloud-based backups	On-site or off-site managed	Combination, flexible to needs	Provider-managed, cloud-based
Maintenance	**In-house or managed by third parties**	Fully managed by provider, regular updates and upgrades	In-house or managed, depending on setup	Combination, less burden on organization	Provider-managed, minimal in-house effort

Weighing Between Managed and Non-Managed Options

Managed services offer a valuable option for enterprise medical imaging. By outsourcing infrastructure, security, and support, healthcare organizations can focus on core clinical and operational tasks. This accelerates time-to-value and reduces risks. Consumption-based pricing aligns resources with business needs, improving efficiency and cost predictability.

Feature	Non-Managed	Managed
Infrastructure Management	Client-managed	Provider-managed
Expertise	Client-supplied	Provider-supplied
Cost Model	Pay-as-you-go or upfront	Subscription-based
Time-to-Go-Live	Longer deployment	Faster deployment
Security	Shared responsibility	Robust security measures
Scalability	Manual scaling	Automatic scaling
Updates	Manual updates	Automatic updates
Support	Limited support	24/7 support
Customization	High flexibility in customization	Standardized customization options

Top 3 Factors: Cloud-SaaS Convergence as a Compelling Alternative to break free from Legacy Systems

On-premises medical imaging is becoming expensive and complex. Cloud and SaaS solutions offer better cost control and simplified operations by consolidating data and improving access. SaaS solutions also enable simpler growth through expansion and pave the way for easier adoption of new innovations. This leads to better collaboration, decision-making, and patient care.

Rank	Factor	In Cloud	Planning to Move Within 12 Months
1	Electronic Health Records (EHRs)	**55.2%**	**40.1%**
2	Medical Imaging	**50.9%**	**44.3%**
3	Revenue Cycle Management	**45.3%**	**45.7%**

SaaS Is Undeniably Emerging As The Preferred Cloud Deployment Model Within U.S. Healthcare

SaaS's popularity stems from its ability to leverage public cloud benefits without the operational overhead. By simplifying infrastructure, SaaS helps healthcare organizations speed up digital initiatives and reduce management burdens.

75.3% of U.S. hospitals use SaaS as a cloud deployment option.

(Source: WW Industry CloudPath Survey, IDC).

Key Considerations for Cloud Enterprise Medical Imaging

1

Prioritize the Cloud

Healthcare organizations must expedite the migration of medical imaging data and applications to cloud enterprise medical imaging networks.

This strategic move is essential for unlocking the full potential of advanced technologies like AI and analytics.

2

Optimize Workflows and User Experience

To maximize the value of cloud enterprise medical imaging, healthcare providers should focus on streamlining workflows and creating intuitive user interfaces.

This will enhance efficiency, reduce errors, and help reduce healthcare professional burnout, improving overall clinician satisfaction.

3

Integrate with Broader Technology and Digital Initiatives

Cloud enterprise medical imaging should be a cornerstone of larger health strategies, such as command centers and digital front doors.

By centralizing image management and facilitating real-time collaboration, cloud platforms can significantly enhance these initiatives.

4

Strengthen Data Security and Compliance

Protecting patient data is paramount. Healthcare organizations must invest in robust security measures and ensure adherence to regulations like HIPAA.

Cloud enterprise medical imaging platforms that prioritize data privacy and security are essential for mitigating risks.

5

Redefine Health Governance and Redesign Reading Operations

Healthcare provider organizations should focus on redefining health governance to support both organic and inorganic growth. This includes redesigning reading operations to enhance efficiency, collaboration, and scalability.

By aligning governance strategies with cloud enterprise medical imaging, organizations can better manage growth and optimize their imaging services.

About the Analysts

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Mutaz Shegewi leads the provider research practice at IDC Health Insights covering topics of most relevance to healthcare provider organizations looking to digitally transform and become more digitally native than their competition. Mutaz advises the executive, clinical, and technical leadership of the world's foremost health information technology supplier and buyer organizations by producing data-driven research and thought-leadership insights that help to navigate strategic challenges in health information technology and transform complexity to clarity in decision-making that would decrease costs, enhance quality, optimize access, improve patient safety, and champion patient experience.

More about Mutaz Shegewi

AGFA HealthCare Enterprise Imaging Cloud

Scale as you go. Experience carefree operations.

Enterprise Imaging Cloud is AGFA HealthCare's SaaS solution that provides seamless updates, effortless scalability, and enhanced security, all while having better cost control, so you can focus on what truly matters – **Patient Care.**

It provides you all the benefits, capabilities and opportunities of the Enterprise Imaging platform, combined with the advantages of a hands-free fully managed SaaS solution on the Cloud.

Experience a world where technology is not a bother, but a boost.

Learn more about AGFA HealthCare Enterprise Imaging Cloud

Enterprise Imaging Cloud offers to IT Leadership

We empower you and your IT team to spend less time on low-impact tasks, and more time on achieving your growth objectives. AGFA HealthCare EI Cloud utilizing our cloud-native architecture enables true SaaS and boosts managed services while delivering capabilities and confidence. Experience a world where technology is not a bother, but a boost.

- Scale on-demand
- Continuous delivery and deployment
- SaaS enabled, fully managed services
- Efficient IT resources management
- Better operating cost control
- Reliability, availability, and resilience
- Managed security
- Maximized performance
- Peace of mind, quick, easy upgrades for always up-to-date software means no risk of falling behind
- Happy, productive clinicians

That's life in flow.

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