



The Right Fit:

How Cloud and AI Are Redefining Imaging Operations for Imaging Centers, Teleradiology Groups, and Community Healthcare Providers

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FROST & SULLIVAN EXECUTIVE BRIEF

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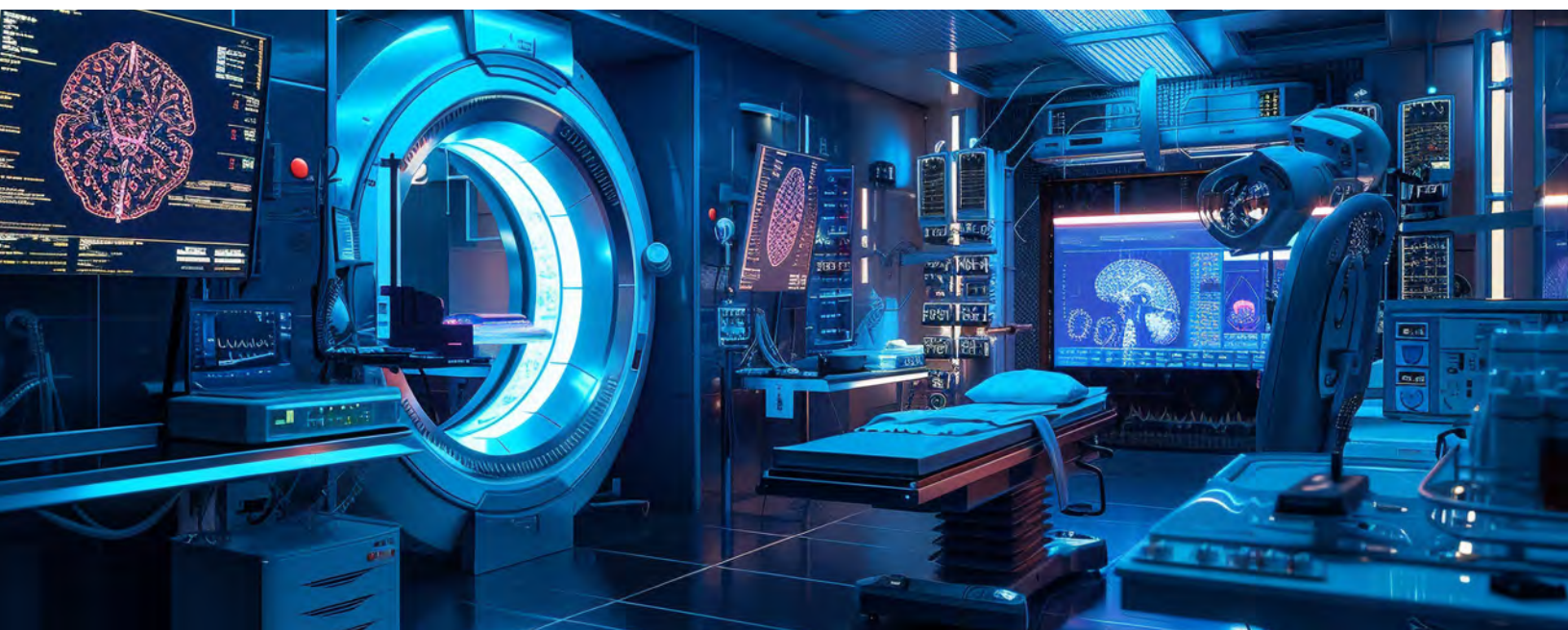
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Introduction

Diagnostic radiology is currently under pressure from multiple directions. Study volumes continue to climb, driven by aging populations, expanded imaging indications, and increased image volume per examination,¹ while the workforce is not expanding well to compensate. A 2023 survey found that **67% of radiologists and 75% of radiology technologists** reported feeling burned out and overworked,² and 81% of health systems are currently facing a radiology technologist shortage.³ The American College of Radiology (ACR) reported more than 1,400 open radiologist positions in early 2024,⁴ and projections from the Association of American Medical Colleges warn of a physician supply gap exceeding 124,000 across primary and specialty care by 2034.⁵ Further, the ACR identified declining reimbursement as one of the most significant systemic challenges facing practices today.⁶

These workforce challenges are compounded by rapid organizational change. Increasing hospital and health system merger and acquisition activity⁷ is expanding the geographic and operational complexity that radiology teams must navigate. Against this backdrop, the imaging IT vendor landscape has historically skewed toward large integrated delivery networks (IDNs), leaving sizeable and strategically distinct markets underserved: independent imaging centers, teleradiology and mobile imaging practices, mammography and specialty practices (including personal injury and legal services), and community hospitals. These organizations require platforms that match their scale, their pace, and their specific clinical and operational realities, not enterprise systems retrofitted for environments they were never designed to serve.





Healthcare Business Objectives and Technology Investment

Frost & Sullivan's Global Healthcare Cloud User Survey⁸ reveals that the foremost business priorities for healthcare leadership include: **improving customer/patient experience and satisfaction, growing revenue, improving operational efficiency, rapidly responding to market demand and disruption, boosting creativity and innovation, and hiring and retaining talent**—all of which relate to the complex macro environment in diagnostic radiology.

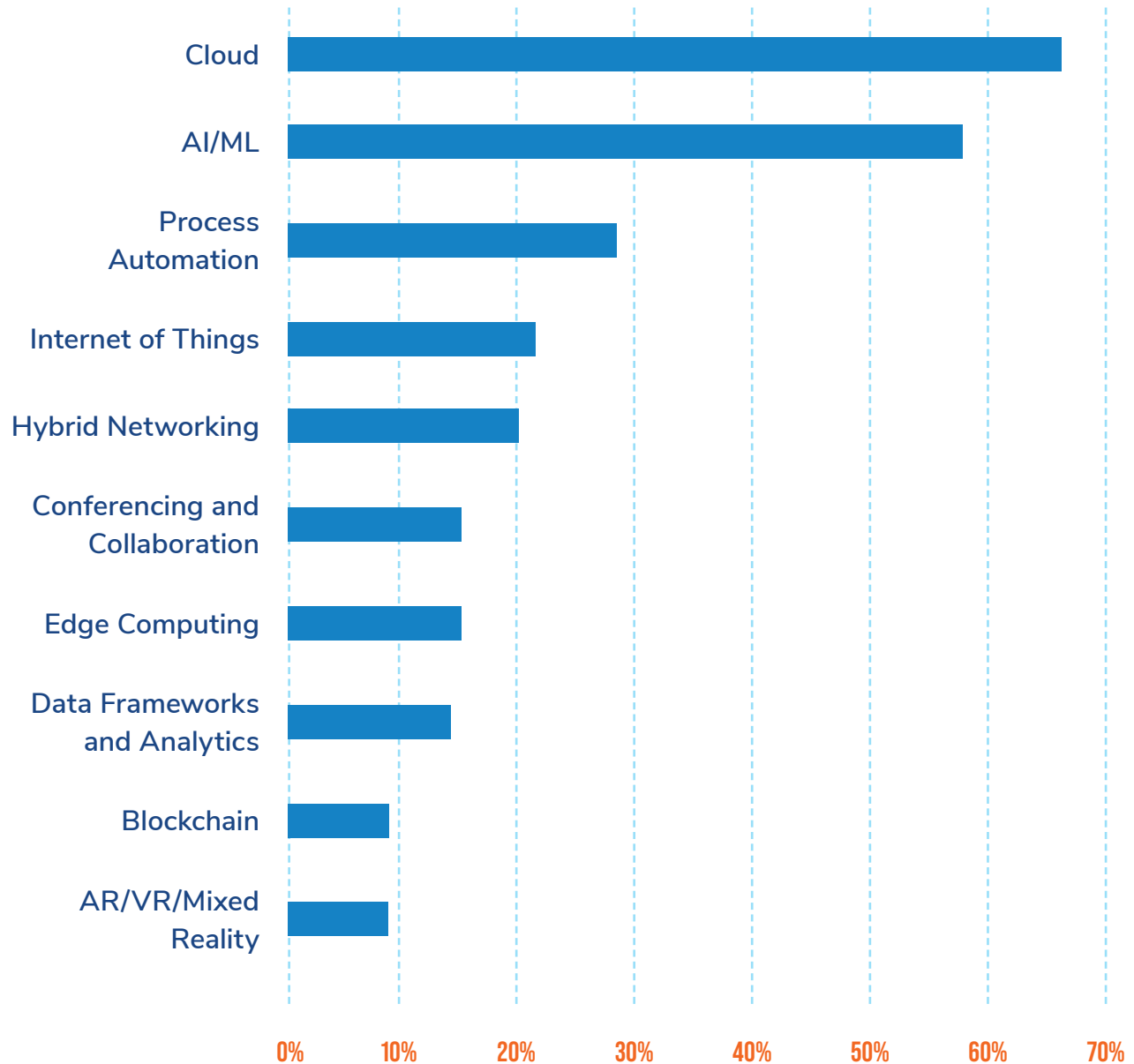
The research found that, among the technologies deployed to achieve healthcare organization business goals, **cloud and AI are the top two investment priorities** for provider organizations (Figure 1).⁹ Sixty-six percent of surveyed healthcare provider organizations stated that cloud-based technology investments would help them achieve or exceed their organizational goals,¹⁰ and 56% of respondents agree (at least in part) that cloud is the most critical driver of their digital transformation strategy.¹¹ More specifically, 70% believe that a successful, competitive business now requires a strategic, seamless hybrid or multi-cloud environment as a near-term priority.¹² The key reasons provider organizations tend to prefer on-premises deployments include a greater degree of customization, an operational familiarity, and the inability to modernize a legacy application for the cloud.¹³

In medical imaging, these macro-level investment themes translate into radiology IT decisions with clinical, operational, and financial consequences. Cloud-based investments in imaging informatics support a range of outcomes—from reducing IT infrastructure burden and enabling anywhere/anytime reading, to accelerating AI adoption across diagnostic and administrative workflows.¹⁴





Figure 1: Technology Importance to Achieving Business Priorities, Healthcare, Global, 2025



Base: Healthcare respondents (n=84)

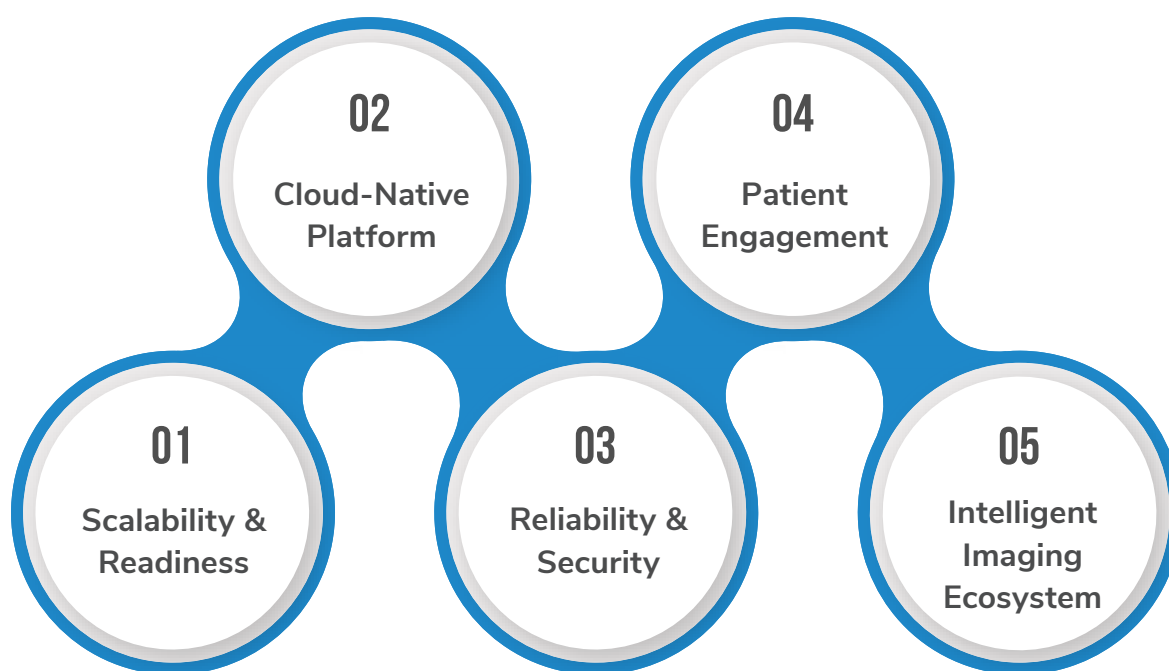
Q. In which technologies will your company invest the most over the next 12 months?
(multiple-answer response)



Strategic Imperative Priorities for Optimal Imaging Services Performance

In Frost & Sullivan's view, the following five strategic investment areas are central to building high-performing imaging operations and to ensuring that technology partners deliver measurable clinical, financial, and operational value.

FIGURE: The Five Strategic Imperatives for High-Performing Imaging Operations



Source: Frost & Sullivan

1. Scalability and Readiness

Imaging centers, teleradiology practices, and community providers share a common requirement: the ability to grow—by site, by volume, or by geography—without having to overhaul their technology foundation. An imaging provider expanding from one location to eleven across multiple states, a mobile mammography fleet scaling volume across a region, or a teleradiology group adding coverage in new time zones all face the same fundamental challenge of scaling their technology platform as fast as their business, with rapid implementation, configuration replicability, and support for organizational change built in. Vendors whose platforms were designed for large IDNs with dedicated IT departments and multi-year rollout timelines are poorly suited to this reality. Purpose-built platforms that enable fast onboarding, standardized multi-site configuration, and flexible growth models are the appropriate fit for these markets.



2. Cloud-Native Platform

Provider organizations vary widely in cloud readiness and strategy. Some are positioned for cloud-native deployments that maximize the benefits of public cloud infrastructure; others require hybrid or cloud-based approaches that accommodate existing on-premises investments. Frost & Sullivan's Global Healthcare Cloud User Survey found that cloud-based solutions are the **leading technology investment priority for provider organizations**,¹⁵ and that cloud-based enterprise imaging delivers tangible returns across multiple dimensions: lower capital expenditure, IT operational efficiency, improved data accessibility, scalability, enhanced security, and business continuity.¹⁶

The clinical and workflow benefits are equally significant, as anywhere/anytime reading enables teleradiology and hybrid staffing models that directly address radiologist burnout and turnaround time (TAT) performance. An ACR study found that the ability to perform remote readings has permanently changed workflow in some capacity for **84% of radiologists** in both academic and non-academic settings.¹⁷ Hybrid and teleradiology models have also directly demonstrated improved imaging TAT and helped address radiologist burnout.¹⁸ The right cloud platform for specialty imaging providers must accommodate the full spectrum of digital maturity without forcing premature migration or abandoning organizations at earlier stages of readiness.





3. Reliability and Security

Radiology operations run around the clock. System reliability is not a feature preference; it is a patient-safety requirement. Research has demonstrated that radiology IT system downtime events are more common than commonly assumed: one study of a large multi-site practice documented **117 downtime events over 12 consecutive months**, with half having a moderate impact on radiologist workflow,¹⁹ representing a significant operational and care-delivery cost. Cloud-based and cloud-native architectures reduce this risk through multi-tenancy, automated failover, and zero-downtime upgrade models.

Cybersecurity is an equally urgent operational reality, and imaging environments carry their own distinct vulnerabilities. Healthcare has ranked as the most-targeted sector for cyberattacks of any US critical infrastructure industry.²⁰ In 2025, 710 healthcare organizations reported data breaches affecting 500 or more individuals, with 57 million people impacted in total, and the average cost of a healthcare data breach reached **\$7.42 million, the highest of any of the 17 industries studied.**²¹ Imaging systems are not peripheral to this risk: radiology information systems are among the most vulnerable categories of healthcare IT, with hacking-related breaches increasing 239% between 2018 and 2023, and fewer than 1% of internet-exposed DICOM servers employing effective security measures.²² A technology partner's security posture—including HIPAA¹ compliance, cloud infrastructure redundancy, encryption, role-based access controls, continuous monitoring, and 24/7 support—is a foundational criterion, not a secondary consideration.



1 Health Insurance Portability and Accountability Act



4. Patient Engagement

In radiology, direct patient engagement opportunities have traditionally been limited, and operationalizing patient-centered care has lagged behind clinical and workflow priorities.²³ That dynamic has fundamentally shifted, and patient engagement is now an increasingly decisive competitive differentiator. It is also a compliance imperative under the 21st Century Cures Act, which mandates timely patient access to their health information, including images and reports, raising the bar for all provider organizations. Beyond compliance, digital engagement tools—such as patient portals that enable secure mobile access to imaging studies and results, self-scheduling, and automated communications—reduce administrative burden and improve patient satisfaction.²⁴

Image sharing also supports care coordination between referring clinicians and specialist networks, reinforcing referral relationships and reducing dependence on physical media, a known security risk for protected health information. Many patients are still required to effectively serve as the conduit for image exchange between members of their care team, physically carrying copies on disc or even in print. Provider organizations that invest in robust patient engagement capabilities position themselves as preferred imaging partners for both patients and referring providers.

5. Intelligent Imaging Ecosystem

AI is no longer an aspirational addition to imaging IT or an emerging trend; it is an active, deployed driver of clinical and operational performance. Frost & Sullivan survey research has shown that the healthcare vertical has now passed beyond the emerging stage of AI maturity.²⁵ Research confirms that AI for workflow applications and AI for image analysis are both critical and advancing areas for radiology innovation, with AI-assisted platforms demonstrated to reduce radiologist interpretation time for serial imaging by identifying relevant priors and improving case preparation.²⁶ The workflow efficiency opportunity is substantial: studies show that **43% of radiologist time is spent on non-interpretive tasks**—protocolling requisitions, supervising studies, consulting with clinicians, and other administrative functions²⁷—representing significant room for AI automation to reclaim clinical capacity and reduce burnout.

Provider organizations increasingly expect their imaging platform to serve as an orchestration hub: a system that can ingest, route, and coordinate AI tools from multiple vendors, without requiring custom integrations. This means access to capabilities for AI, prior authorization, structured reporting, and worklist prioritization, within a platform designed for practices that may not have dedicated teams to manage complex vendor AI and IT ecosystems. An open architecture and vetted AI partner network democratizes access to imaging AI for the entire market, not just enterprise health systems.



RamSoft: Purpose-Built for the Imaging Providers That Others Overlook

With three decades of continuous innovation and more than 800 customers in 30+ countries, RamSoft is a privately held company that combines a strong heritage with global scale. It exemplifies sustained market confidence in a sector characterized by vendor consolidation and transitions. Where much of the radiology IT industry has oriented its product roadmap and go-to-market strategy around large IDNs and hospital networks, RamSoft has deliberately built its platforms for the imaging centers, teleradiology groups, mobile imaging practices, mammography centers, community hospitals, and specialty practices that represent high-volume, yet underserved areas of the imaging market.

Unlike many competitors that are actively sunsetting standalone products in favor of cloud-only offerings, RamSoft maintains a full portfolio spanning standalone RIS², a cloud-based RIS/PACS³ solution, a cloud-native integrated platform, and a patient engagement and image sharing solution, reflecting the genuine diversity of digital maturity in the markets it serves. This is a deliberate strategic position to help the range of needs provider organizations have in the market, not a legacy constraint. In Frost & Sullivan's view, it is critical that the industry address the diverse technology needs of the provider market and enable meeting customers where they are in their digital roadmaps.

OmegaAI® is RamSoft's cloud-native platform, combining RIS, PACS, VNA⁴, and the Blume® patient engagement and image sharing solution into a single zero-footprint environment with enterprise-grade security and 99.9%+ uptime backed by Azure infrastructure. RamSoft's AI ecosystem enables imaging practices to deploy vetted AI tools within a coordinated workflow environment without managing multiple independent integrations.

PowerServer® is RamSoft's suite of cloud-based and hybrid PACS solutions, designed for imaging organizations across the full spectrum of digital maturity. The latest release, PowerServer 6.7, delivers measurable efficiency gains—including 283 hours saved per radiologist annually and 65 minutes of recovered daily reading time—through advances in system performance, workflow navigation, security controls, and backend scalability. Its single-database architecture eliminates redundancies while workflow automation and real-time analytics help teams improve throughput and reduce administrative burden.

2 Radiology Information System

3 Picture Archiving and Communication System

4 Vendor Neutral Archive



Blume is RamSoft's complete patient engagement and image sharing solution. It is available within PowerServer, OmegaAI, and as a stand-alone offering. Blume enables patients to self-schedule appointments, complete digital intake forms, and access images and reports instantly through a zero-footprint viewer, with AI-powered report summaries to support ease of understanding. By replacing manual communications and CD-based image sharing with secure, HIPAA-compliant digital delivery, Blume reduces administrative burden for staff while strengthening patient satisfaction and referral retention.

The following examples illustrate how RamSoft's platform delivers on the five imperatives identified by Frost & Sullivan.

1 SCALABILITY & READINESS

Arizona Advanced Imaging Center

A personal injury imaging provider that expanded from 1 to 11 centers across Texas and Arizona.

The organization required a scalable system capable of maintaining efficient, exceptional service, in a reliable and cost-effective manner.

KEY RESULTS

- 1,000% operational growth over six years
- Reports generated in under 30 seconds after image upload
- Zero delays in patient care across the full network²⁸

2 CLOUD-BASED PLATFORM

MammoLink®

A mobile mammography fleet operating 3D-mammography buses across Florida.

The organization required real-time image transmission and workflow integration from field units.

KEY RESULTS

- 50% more mammograms completed daily
- 4 hours/day saved in workflow efficiencies
- 20% business growth
- 90% increase in patient satisfaction²⁹



3 RELIABILITY & SECURITY

MammoLink Arizona Advanced Imaging

MammoLink supported a neighboring provider hit by ransomware while maintaining its own HIPAA/MQSA-compliant operations.

Arizona Advanced Imaging ran on 24/7 RamSoft support across 11 centers.

KEY RESULTS

- “We feel safe, and so do our patients.” —MammoLink
- Zero patient care delays for Arizona Advanced Imaging over six years of continuous multi-site operation³⁰

4 PATIENT ENGAGEMENT

Ultrasonido Diagnóstico

A multi-site imaging center in Puerto Rico

The organization serves a predominantly older patient demographic with limited prior digital engagement in healthcare.

KEY RESULTS

- 75% reduction in patient support calls related to results
- 100% of patients now receive instant digital access to images and reports
- Direct administrative efficiency gains for staff³¹

5 INTELLIGENT IMAGING ECOSYSTEM

Expert Radiology

A nationally recognized subspecialty teleradiology group serving more than 350 imaging facilities across all 50 states.

The organization required automated, intelligent case routing across a 26-radiologist network that manages nearly 200,000 annual studies.

KEY RESULTS

- ~50% reduction in case assignment turnaround time through automated AI-driven routing integrated with Expert Radiology’s credentialing database
- Studies load in 5 to 6 seconds, keeping radiologists focused on reading, not navigating software
- Scaled from 7,000 to 200,000 annual studies without disruption to radiologist workflow³²



The Last Word

“In this next-generation phase of enterprise imaging, selecting the right partner is more critical than ever. The shift to cloud-based and cloud-native solutions represents a long-term strategic commitment—not a short-term project.” — Frost & Sullivan



The rapidly evolving landscape of platforms, AI tools, and reimbursement models creates a complex decision environment for imaging leaders. The organizations most at risk of being left behind are not those lacking ambition, they are those matched with vendors whose roadmaps, business models, and target markets were designed for someone else.

Frost & Sullivan's Next-Generation Enterprise Imaging Framework defines the value proposition for high-performing imaging operations in this phase of the industry's evolution. The framework identifies six essential attributes: a **single vendor, unified platform** providing a comprehensive suite from VNA through workflow orchestration; a **patient-centric data foundation** that unifies and unlocks enterprise imaging and clinical data; **enhanced collaboration** supporting hybrid teams, teleradiology, and federated worklist management; **AI automation** embedded across diagnostic assistance and workflow functions; **analytics** providing clinical and performance intelligence for decision-making; and **cloud-ready, flexible deployment options** that accommodate organizations across the full spectrum of digital and imaging maturity.³³



RamSoft delivers on all six attributes. OmegaAI provides **a single vendor, unified platform** spanning RIS, PACS, and VNA in a zero-footprint environment, while Blume establishes the **patient-centric data foundation** that connects patients directly to their imaging records and care journey. OmegaAI's open architecture and PowerServer's multi-site configuration support **enhanced collaboration** across hybrid teams and teleradiology networks at any scale. An integrated ecosystem of vetted AI partners embeds **AI automation** across diagnostic, reporting, and administrative workflows. Real-time **analytics** within both platforms give clinical and operational leaders the performance intelligence to make faster, better-informed decisions. And with OmegaAI's cloud-native deployment alongside PowerServer's cloud-based and hybrid options, RamSoft offers the **flexible deployment spectrum** the framework identifies as essential—meeting organizations exactly where they are in their digital journey.

Imaging centers, teleradiology groups, mobile imaging practices, and community providers that invest in platforms that are purpose-built for their market segment and are aligned with partners with a demonstrated track record, a deep product roadmap, and a philosophy of meeting organizations where they are will be best positioned to grow, adapt, and thrive in the years ahead.

For further information about RamSoft visit www.ramsoft.com





Endnotes

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