MACH7

ENTERPRISE IMAGING

THOUGHT LEADERSHIP

The journey to enterprise imaging.

A transformation with independence and innovation in mind. Enterprise imaging isn't a product or a project — it's a journey that keeps revealing new value.

HEALTHCARE IS A JOURNEY

Why enterprise imaging is never “done.”

Once you embark on an enterprise imaging (EI) strategy and put your plan into action, new insights and opportunities for clinical efficiency, operational improvement, and cost savings keep surfacing. That's why it's a journey, not a destination.

The more you speak with healthcare organizations, the clearer it becomes that every enterprise imaging journey is different. Those who jump in with a narrow vision — seeing EI as a “product” or a one-time project — miss opportunities to add significant value.

If your goal is to consolidate all DICOM images into a centralized infrastructure, an EI solution will absolutely do that. But dig deeper, expand your view of the enterprise, and the opportunities multiply.

DICOM consolidation may be the quickest route to higher cost savings — potentially thousands or even millions of dollars per year. But evaluating other “ologies” delivers clinical and operational benefits too: retire a standalone endoscopy or ophthalmology archive, or rethink where dental images live.

Another entry point is standardizing on a zero-footprint enterprise viewer. Amalgamating data silos into a single viewing platform can be the best starting place — especially during mergers and acquisitions, where it federates images across multiple PACS while you migrate to a VNA.

> Mach7's eUnity viewer started as an integration platform to solve exactly this problem — something that can typically be rolled out in weeks, not years.

TRANSFORMATION WITH ACTION

Moving the elephant.

At 14,000 pounds, the elephant is one of the world's most striking creatures — and getting one that size to move is a serious feat. In many ways, healthcare resembles the elephant: a $3.6 trillion behemoth facing complex, persistent challenges and deeply resistant to change.

Rising costs, an aging population, new regulatory mandates, value-based care, physician shortages, and unequal access to care all strain the system. By 2026, healthcare costs are expected to make up **20% of US GDP** — an enormous load on the economy unless new solutions curb them.

Almost any facility has at least five departmental systems that aren't integrated into the greater enterprise. Look further and you'll find duplicative processes and workflows rooted in old, outdated habits.

Historically, imaging departments solved immediate problems by acquiring technology with little thought for the enterprise. It wasn't until a few years ago that experts began stressing the importance of an enterprise imaging strategy.

Many of these disparate solutions carry escalating maintenance costs, don't integrate easily, and store data in proprietary formats. Suddenly the “electronic” solution doesn't help the ED physician who needs patient data at 3 a.m. and can't reach it to support a time-sensitive decision.

THE COST OF STANDING STILL

Early imaging decisions were made without understanding why imaging belongs to the enterprise — not a siloed departmental IT strategy.

WHERE TO BEGIN

Not all VNAs are created equal.

Vendor Neutral Archives emerged early as the answer to the data management challenge. Because radiology produces the bulk of imaging data — likely around 60% within your organization — most VNAs simply grew from expanded PACS archives.

Today, virtually all VNAs are owned by PACS vendors. Mach7 is one of the few VNA providers that is a completely independent company with total control of its R&D and roadmap; supports component-level or end-to-end deployment; isn't driven solely by one specialty's needs; and was developed to solve enterprise challenges first.

Radiology has the highest volume of procedures, the largest revenue stream, high maintenance costs, and mission-critical image access — which is why most organizations target it first.

But shift your perception and radiology may not be the ideal place to start, for two reasons: migration costs and clinical buy-in. There's no right or wrong answer — every journey is different.

If your PACS is reaching end-of-life, it makes sense to start there. You can breathe new life into an outdated PACS by implementing a core VNA with a robust zero-footprint viewer — ideally a single-platform viewer like Mach7's eUnity for both diagnostic and enterprise viewing. The key is choosing a vendor that's flexible, adaptable, and has the technology to support your journey.

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> All but a few select “VNAs” are essentially expanded PACS archives with bolted-on interoperability enhancements — which is why so many are unsuited to the enterprise.
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> **The Journey to Enterprise Imaging** — Mach7 Technologies

THE VALUE OF A STRATEGY

What an EI strategy aligns you to do.

An enterprise imaging strategy moves you far beyond data storage — into workflow, resource utilization, interoperability, and ultimately improved clinical outcomes. It aligns your organization around five core moves.

Consolidate the silos

Bring disparate image silos into a standards-based, highly scalable infrastructure.

Decrease IT costs

Reduce hardware footprint, system dependency, service contracts, and future upgrade costs.

Go enterprise on access

Move from a departmental to an enterprise approach, with image integration into your EHR.

Solve the federation challenge

Amalgamate and federate disparate imaging sources across the enterprise — different PACS from acquisitions, or separate storage locations — into one unified view.

Standardize on one viewer

A single zero-footprint platform for diagnostic and enterprise viewing — better collaboration, streamlined costs, and robust PACS workstation tools.

An EI solution is as critical as an EHR. Have one without the other and you're missing part of the picture — which can impact patient outcomes and increase costs. One driver of the industry's continued growth is AI: an enterprise platform lets you adopt AI applications as plug-ins within a given workflow, rather than as disconnected standalone tools.

PROVING THE ROI

Where the savings actually come from.

Convincing executives to continue the journey despite the financial outlay comes down to proving ROI and impact on patient outcomes. One Mach7 customer found that modernizing their PACS would eliminate seven existing radiology PACS systems — a substantial cost reduction that also gave radiologists access to all studies across the health system.

Primary sources of cost reduction

- Reduced IT overhead through system consolidation
- Reduced annual service agreements — fewer systems to manage
- Reduced hardware costs via VM infrastructure and fewer departmental systems
- Reduction in repeat procedures, since data access is enterprise-wide and available in the EHR

Additional areas to consider

01 **Consolidated storage**
Ensure your vendor is storage-agnostic for the best cost.

02 **Lifecycle management**
Most sites overlook how much money is tied up in “forever” storage.

03 **Growth**
Consolidating service lines brings economies of scale.

04 **Fewer viewers**
One robust zero-footprint viewer cuts cost and IT load.

Quantitative savings matter — but identifying the clinical and operational value of an EI solution could be the key to differentiating your health system from competitors.

OUTCOME-BASED CARE COLLABORATION

When 40% of the data isn't enough.

Consider the multidisciplinary tumor board — a group of providers from across specialties who meet to discuss cancer cases and identify the best course of treatment. These open discussions can make the difference between life and death.

Participants include surgeons, pathologists, radiation oncologists, radiologists, gastroenterologists, and more. To plan effectively, the team needs to fully understand each patient's condition — yet radiology, radiation oncology, pathology, endoscopy, surgical modeling, and genetic data often live on separate systems, not integrated into the patient record.

Access to those systems during the conference may not be readily available, inhibiting discussion and potentially affecting outcomes.

The Journal of Global Oncology studied 503 tumor board cases and found that only **13.3%** had a plan prior to meeting — most multidisciplinary management plans were made at the board itself.

As former Cleveland Clinic Director of Enterprise Imaging Louis Lannum found, **60% of the data** clinicians need at the point of care was missing from the patient's record. Imagine making decisions with only 40% of what you need.

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> VNAs that integrate with electronic medical record systems are the most effective, and become image repositories for the EHR.
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> **Don Dennison** — Industry thought leader, on getting the most from your VNA

BUT WHAT ABOUT RADIOLOGY PACS?

PACS replacements are painful — done right, they pay.

No EI discussion is complete without radiology PACS. At some point you'll migrate radiology and cardiology images to the enterprise archive. The storage and service savings alone may offset the cost — but the challenge remains: what should you look for?

Your “pure” standards-based DICOM archive may hold more proprietary technology than you think, increasing switching costs and migration complexity. Look for vendors who provide a complete migration toolset, train your staff to perform the migration, and support your team through it. This can save hundreds of thousands — even millions — of dollars.

If you roll out other “ologies” first, start archiving a copy of your DICOM data in the enterprise archive now. Even if PACS replacement is 2–3 years away, you'll have years of comparison priors ready when radiology goes live.

Two critical questions for radiology

01 **Buy new or upgrade?**

Purchase a new PACS, or upgrade an existing departmental PACS?

02 **Or replace it entirely?**

Add a world-class viewer like Mach7's eUnity zero-footprint diagnostic and enterprise viewer to your VNA — and remove the departmental PACS altogether.

Implement IOCM (Image Object Change Management) so data stays in sync between PACS and your EI solution — and ensure your existing PACS supports it too.

A MODERN PLATFORM

Departmental PACS are archaic.

PACS were state-of-the-art decades ago. But healthcare has changed, organizational needs have evolved, and PACS have been too slow to adapt — plagued by interoperability, serviceability, cybersecurity, and web-service challenges. A vendor still running Windows Server 2008 against today's threats is a risk that's hard to imagine.

The typical PACS response is to “bolt on” new applications to aging infrastructure. They may demo as tightly integrated, but they ultimately raise ownership costs and limit future expandability.

A modern enterprise imaging platform — not one that evolved from a PACS archive — is designed for rapidly evolving technology. Because it's standards-based for both IT and interoperability, you can apply your preferred security protocols without impacting performance. A plug-in framework allows simple integrations and infinitely expandable, independent workflows.

WITHIN ONE RADIOLOGIST'S WORKLIST, MACH7'S EIS LAUNCHES:

- Images with appropriate relevant comparison studies
- Speech recognition solution in context
- Epic (or other EHR) in context
- Other relevant applications, including artificial intelligence

All performed in real time, automatically, and in context — the foundation of true workflow orchestration and clinical workflow management.

The right radiology viewer must be highly performant (3-second or less image display), support high-volume specialty workflows, embed 3D modeling and advanced visualization, and provide **100% diagnostic images, 100% of the time, to any user on any platform.** Mach7's eUnity supports thousands of users on minimal virtual machines — with no workstation hardware to support.

PLATFORMS & PARTNERSHIPS

Value the partnership over the technology.

You'll never find a complete end-to-end solution that meets 100% of every user's needs — it doesn't exist, regardless of what vendors claim. So one of your most significant considerations is who you choose to partner with on the journey.

A friend who's been on his enterprise imaging journey for 17 years put it plainly: you need the basics and a capable platform, but the partnership with your vendor is the most important thing.

Why? Leading EI initiatives makes you a master of negotiation and compromise. Some users feel their needs outrank others; some demand specific solutions. You must evaluate, recommend, and develop strategies that work for the enterprise in the long run — and never underestimate the time it takes to market your EI strategy internally.

Your enterprise solution should be the toolkit that lets you explore new ways of accomplishing outdated tasks — with around 80% of the capabilities your enterprise needs to adapt to change without significant additional investment.

Be thoughtful about the platform you choose, for both the viewer and the data management infrastructure, and ensure your vendor is committed to being your partner regardless of the roadblocks ahead — because you'll both be on this journey for the long haul.

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> Our unique approach and strategy allows our solutions, services, and expertise to drive higher quality of care and better outcomes across your enterprise.
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> **Doug Rufer** — BSBA, RT(R), Director of Sales, Mach7 Technologies

MACH7

LET'S TALK

Let's start your journey together.

Enterprise imaging is a journey best taken with a trusted partner. We're proud to offer differentiated value — solutions, services, and expertise that drive higher quality of care across your enterprise.

TALK TO US

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