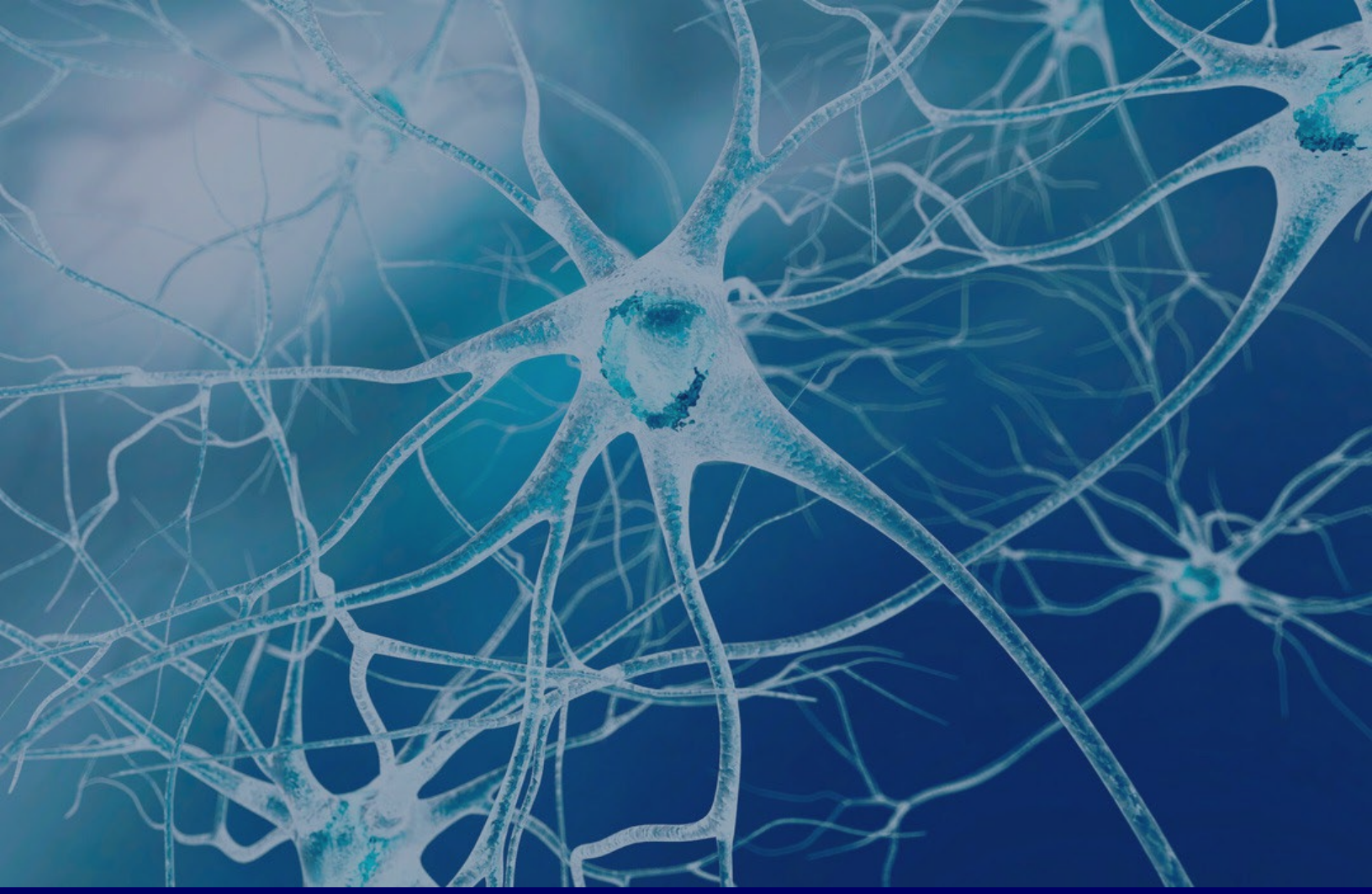


# The Power of Agentic AI

## in Transforming Enterprise Imaging Operations

STRINGS

# The Power of Agentic AI in Transforming Enterprise Imaging Operations

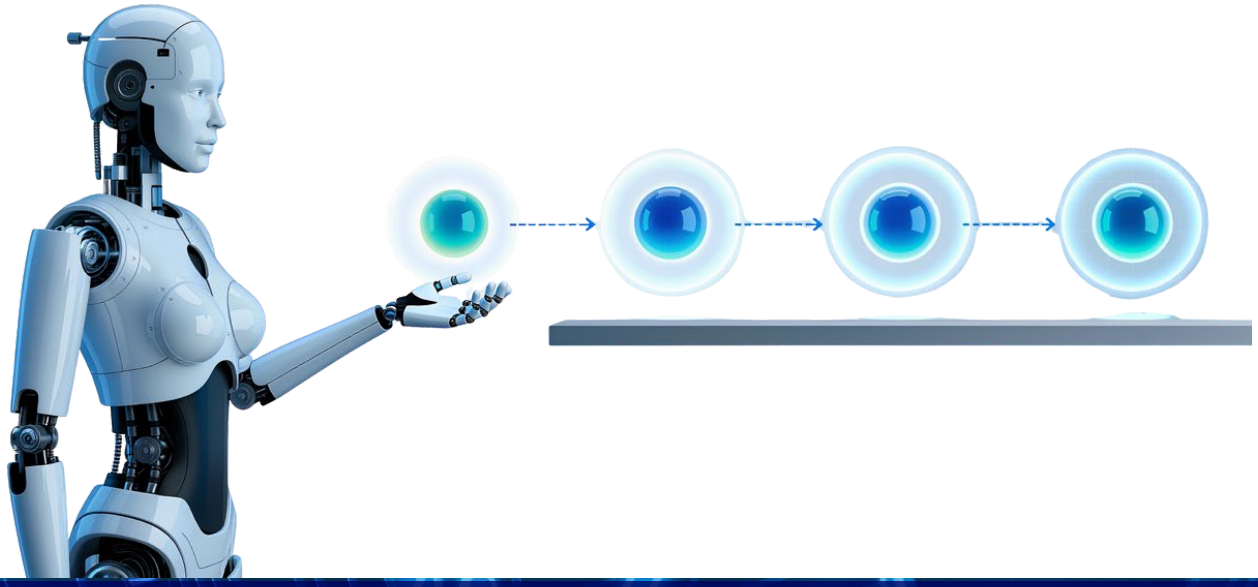
The healthcare industry has witnessed significant advancements driven by Artificial Intelligence (AI), particularly in clinical applications like image analysis, measurement, and language interpretation. These beneficial ("narrow AI") algorithms are designed to do one thing well, such as identifying bleeds in the brain, measuring lung nodules, and summarizing patient charts and reports into actionable data.

However, as the adoption of these specialized algorithms increases, so too does technical complexity and fragmentation across healthcare IT ecosystems and workflows. The sheer volume of narrow solutions, coupled with vendor-specific marketplaces, creates higher technical and management overhead for clinical and IT teams alike. This complicates the operational workflow, introducing manual steps when orchestrating the delivery of studies and results to and from the various algorithms. Examples of these "micro-workflows" include determining which thin-slice series to send to a specific algorithm and when, often depending on a clinical team member to initiate the action.

This environment highlights a critical, often underserviced area: Operational AI. Agentic AI, a form of operational AI, is essential for addressing the back-end, operational workflow that is critical for achieving organizational ROI and scalability. This type of intelligence extends beyond the image and into the entire operational and IT fabric of the health system, providing the necessary oversight, automation, and efficiency to manage complexity and enable a truly intelligent, scalable, and efficient enterprise.

## What is Agentic AI?

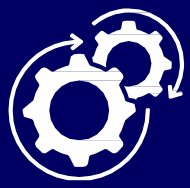
Agentic AI systems are fundamentally different from traditional AI tools. Where traditional AI is designed to analyze data based on a user prompt, Agentic AI is designed to perceive its environment, formulate goals, execute actions autonomously, and learn from the results, acting much more like an "intelligent assistant" rather than an individual tool. This level of contextual awareness and autonomy allows Agentic AI to recognize and execute micro-workflows that traditionally depend on manual intervention.



While much of the AI focus in healthcare organizations remains on clinical applications (Pixel AI and Natural Language AI), Agentic AI (Operational AI) offers a unique value proposition that benefits stakeholders across all layers of the organization - clinical, operational, and financial:

**Clinical Benefits:** Using information from imaging orders, encounter notes, and other EHR fields Agentic AI can glean the clinical intent behind an imaging study. This allows it to automate the delivery of studies, series, or individual images/objects to advanced imaging and AI algorithms, reducing manual effort, accelerating care, and improving quality.

**Operational Benefits:** One of the first solutions specifically designed for the IT professional, Agentic AI provides centralized intelligence into real-time infrastructure, application, and workflow performance across the continuum of care. By automatically triggering root-cause analysis and interventions when problems are anticipated it increases overall system reliability and efficiency.



**Financial Benefits:** By automating micro-workflows and ensuring system uptime, Agentic AI drives measurable operational efficiencies and a faster return on technology investment (ROI). This includes saving thousands of hours of valuable staff time, reducing IT firefighting, and strategically informing capacity planning.

This comprehensive, enterprise-wide approach positions Agentic AI as a critical enabler for organizations looking to optimize workflow, reduce manual effort, and accelerate the adoption of both clinical advanced imaging and AI.

# Agentic AI in Action

Agentic AI's ability to be contextually aware and self-activating allows it to proactively address critical pain points across the enterprise, offering a comprehensive and scalable solution to the complexities of modern medical imaging. By applying intelligence to both the clinical workflow and the underlying technical infrastructure, Agentic AI ensures continuity and reliability, delivering value to IT professionals, clinicians, and healthcare leaders alike.

## The IT Perspective: Proactive Desktop & System Oversight

From an IT perspective, Agentic AI provides a new level of intelligent automation by acting as a valuable team member. By offering proactive oversight of systems across the entire enterprise - from large core systems right down to individual desktops - it ensures systems and workflows are performing optimally, proactively identifying signals that could result in performance degradation or downtime, and automating responses to address issues before they impact end users.

Consider the early days of digital imaging adoption, when IT professionals were sometimes paired directly with clinicians to troubleshoot usability and technical issues in real-time. While effective for accelerating adoption and reducing immediate frustration, this model is highly inefficient and not scalable. Agentic AI re-introduces this concept in a scalable way, acting as an extra set of hands and eyes for IT.

For instance, image load times might be slowly increasing on a radiologist's workstation, resulting in care delays and user frustration ("my workstation is slow!"). These problems can be difficult to troubleshoot remotely, as there could be a number of underlying causes (network performance, workstation CPU or memory utilization, application issues, and more). In this scenario, Agentic AI

acts as a digital teammate by continuously monitoring workflows and their relationship to application and infrastructure health. When a slow load time or performance issue is identified on a user workstation, the system can automatically execute the most appropriate troubleshooting steps at the time of the event to identify root cause. This often happens completely transparently to the clinician, addressing the problem before it significantly impacts the workflow.

This capability extends beyond the individual desktop to core systems like PACS, VNA, and other enterprise systems. Instead of spending time triaging complex systems and integrations, IT professionals are alerted with critical root-cause information (e.g. why the CPU is spiking, not just that it's spiking), allowing them to take action immediately and resolve issues in minutes, instead of days or months. This proactively monitors and maintains critical systems to ensure emerging issues are identified and addressed before clinical workflow is impacted.

> *The implementation of strings has provided insight into backend portfolio management that is a blind spot in every organization. The Agentic AI for solution logs allow for correlation and automation of repetitive tasks improving uptime, visibility and monitoring across a multivendor complex portfolio. Monitoring beyond the infrastructure and into the application combines dashboards not present in imaging, until now. The consolidated audit repository also allows for complete auditing where solutions can only look within themselves thus providing a secure holistic view of all activities.*
>
> - Jonathan Shoemaker, Executive Director - Imaging Systems and Services, Stanford Health Care and School of Medicine

## The Clinical Perspective: Intelligent Workflow Orchestration

From a clinical perspective, because Agentic AI is contextually aware (meaning it actively understands the clinical intent behind a study) it can more intelligently automate the many manual steps involved in clinical workflows (often called micro-workflows) to significantly improve speed, efficiency, and accuracy at the point of care.
This is particularly beneficial in complex environments where multiple disparate devices, applications, and algorithms must interact seamlessly to deliver patient care.

Consider the current process involved in determining which studies (or parts of a study) need to be routed to specialized AI or post-processing applications. Clinical staff often have to manually review order details, encounter notes, and other EHR data to determine the true clinical context or intent behind the exam. For example, the optimal AI for diagnosing a potential stroke (which often prioritizes speed to treatment) is likely different from the AI or advanced visualization needed to assess a trauma case. This fragmented, manual process of interpreting intent and then sending specific series of a study to the correct system for processing is prone to error and delay.

Because Agentic AI is trained to anticipate the clinical intent behind a patient encounter it can orchestrate the appropriate study, series, or object to the correct

Case Example:

*At Advocate-Aurora Health, Strings accelerates critical stroke response by autonomously orchestrating the high-pressure "micro-workflows" that occur between the EHR and coordination apps. By instantly identifying a stroke event, Strings searches the EHR for the NIH Stroke Scale and pushes it directly to the response team's specialty tools - eliminating manual data entry when every second counts.*

specialized AI algorithm or advanced visualization system - and ensure the results are routed directly back to the point-of-care.
This automation cuts valuable minutes off the clinical workflow and accelerates time to diagnosis and treatment - a big difference maker in critical care cases.

Another advantage is automating micro-workflows, those many individual tasks needed to collect patient imaging and information at the point of care. For a visible light/wound care workflow, instead of a nurse manually taking a photo, looking up the patient, sending the photo to the EHR, and verifying its availability, Agentic AI automates these actions. It works behind the scenes to ensure image objects contain the appropriate metadata associated with the patient and encounter, and are sent to the required systems (EHR for access, VNA for storage, etc.) in a way that makes access and retrieval easy for clinicians in the future (no more Epic blob!). This saves thousands of clinician effort hours per year, freeing up more time for patient interactions and improving quality of care by ensuring data is collected, organized, and accessible when and where it's needed. These advantages can be realized across imaging specialties and beyond.

## Case Example:

*At Advocate-Aurora Health, Strings eliminated more than 467 hours per month of physician and nurse time by autonomously searching patient details and syncing metadata to reduce manual steps and eliminate "swivel chair" workflows between EHR and EpicCare mobile apps.*

## The Leadership Perspective

Healthcare leaders are driven by the need to ensure the highest standard of patient care (quality), while also guaranteeing operations run smoothly (efficiency) and realizing a measurable return on their significant technology investments (cost). Agentic AI provides a strategic solution that directly addresses this complex "triple aim" by bridging the gap between clinical excellence and operational reality. Some of the core problems faced by healthcare leaders today include:

**Complex IT Ecosystems & Workflows:** The complexity of managing enterprise imaging and AI is costly to implement and maintain, resulting in significant operational costs that strain budgets. Integrating multiple disparate systems and vendors demands heavy IT lift, often requiring complex, custom integrations.

**The Need for Scarce Expertise:** Even when budgets allow, finding skilled clinical and IT expertise is challenging. There is fierce competition for specialized IT professionals, and radiologist shortages mean leaders must find new ways to help existing teams do more, with less. Automation of manual tasks is key to reducing burnout and optimizing staff time.

**Lack of Transparency:** Without a robust, unified system, there is a lack of transparency into workflow and resource utilization. This makes it difficult to engage in evidence-based strategic growth planning, accurately measure ROI, identify priorities surrounding quality improvement, and address factors affecting staff satisfaction and retention.

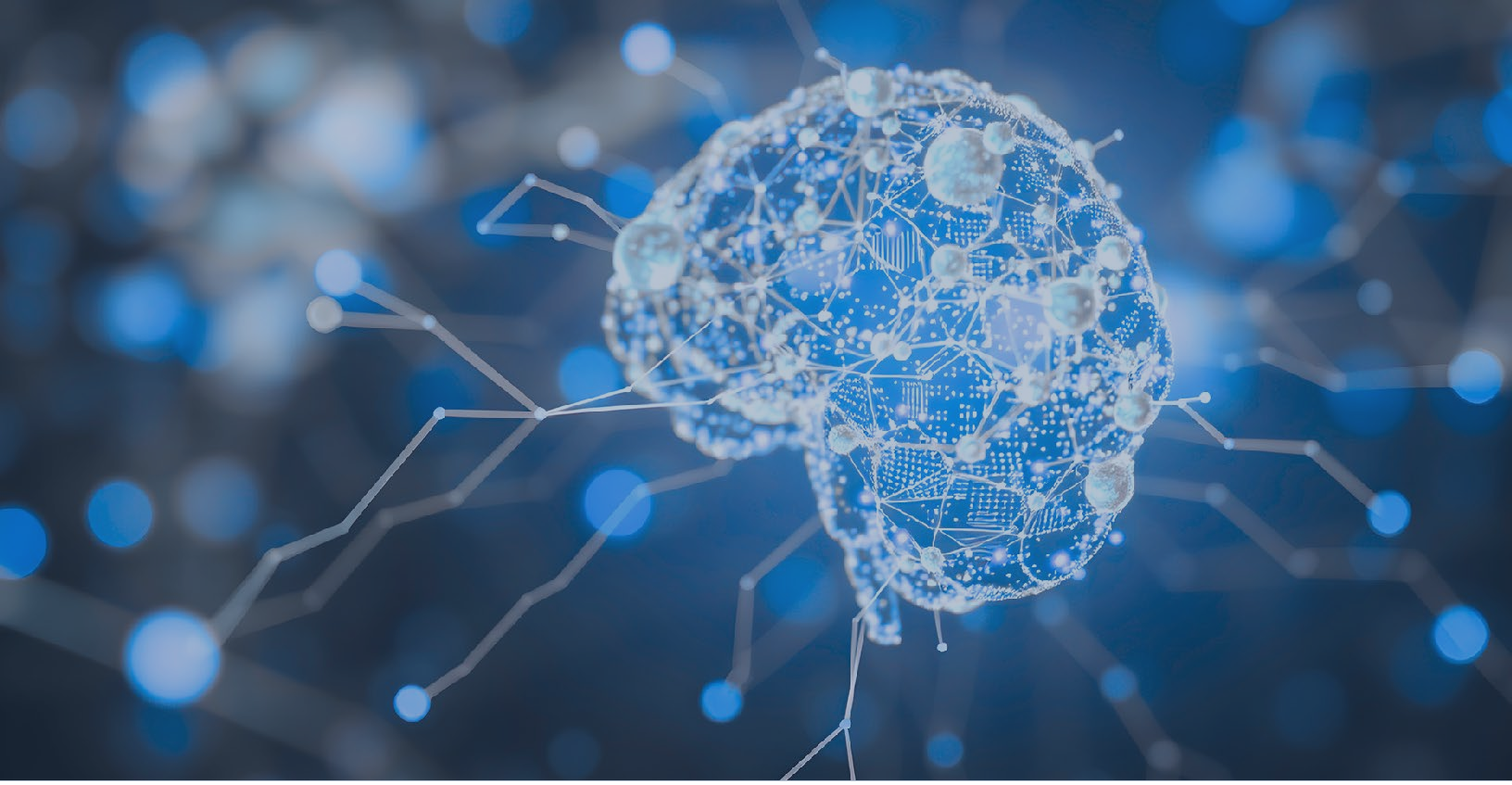
Agentic AI addresses these challenges by providing an enterprise-wide solution that unifies monitoring and management of complex, multi-vendor ecosystems, automates micro-workflows to reduce manual tasks for clinicians, and delivers rich insights into utilization trends, workflow performance, and ecosystem health that enable strategic growth planning, enterprise-wide resource optimization, and operational excellence.

> *Strings agentic AI replaces mundane work with value-driven efforts, permanently reducing support labor costs and allowing my team to focus on continuous quality improvement. These valuable workflows extend across multiple products within a complex, cybersecurity-driven technology stack. Strings provides visualization of diverse empirical data used to inform strategic investment of resources. This ensures that the workflows are managed to the highest quality, keeping resources free from long-term support burdens, ultimately reducing long-term costs and increasing clinical satisfaction. Moreover, Strings agentic AI unifies and structures what was once thought to be disparate data in ways that drive operational efficiency and effectiveness.*
>
> - Tim Heniadis, Director of Enterprise Imaging, Imaging Services, Health Informatics and Technology, Advocate Aurora Health

The following ROI table, modelled after a large health system generating 1 M studies annually, demonstrates that investing in Agentic AI moves the IT team from simply managing costs to becoming a strategic function that delivers measurable financial return and frees up valuable human capital.

## Agentic AI Return on Investment

| Agentic AI Agent | Calculation | Financial ROI |
|---|---|---|
| Clinical workstation agents | IT and PACS Admin time saved for end-user workstation management | 1 FTE, or $120K annually |
| Enterprise IT agents | IT hours saved for root-cause analysis and interventions | 3.5 FTEs, or $420K annually |
| EpicCare micro-workflow automation agents | Just 1 micro-workflow (executed 1,600 times per day) saved over 5,700 effort hours per year for front-line clinical staff. | 3 FTEs, or $980K annually |
| Stroke micro-workflow automation agents | By automating critical-care micro-workflows the health system was able to save an average of 19 minutes per stroke case across more than 5,500 cases in a year. | 0.8 FTEs, or $232K annually |



# The Path to an Intelligent Enterprise

The modern medical imaging enterprise has become incredibly complex, fragmented by the rapid adoption of digital systems, multiple vendors, and an increasing number of specialized AI algorithms to integrate and manage. The promise of these powerful technologies is clear: to improve workflow efficiency, speed up time to diagnosis and treatment, and enhance clinical quality.

Unfortunately, the inherent complexity and technical overhead of this ecosystem often erode these very benefits, leading to frustrating delays, unnecessary costs, and technical barriers that stifle widespread adoption. The challenge is no longer just finding clinically accurate AI, but orchestrating a reliable, scalable workflow around it.

Fortunately, 3DR Labs addresses this challenge with its Agentic AI solution - Strings.

Strings Agentic AI is designed to combine the best of artificial and human intelligence to deliver a unified, complete solution for managing infrastructure, systems, and workflows across the enterprise, to:

- **Simplify Complexity & Drive Operational Efficiency:** Agentic AI acts as an intelligent orchestrator, automating complex micro-workflows and eliminating manual steps that cause delay and error. For leaders, this translates directly to measurable ROI and accelerated growth planning.
- **Provide Proactive Oversight & Automation:** By focusing on operational AI, Strings acts as a valued IT team member, providing proactive monitoring and maintenance of core systems and individual clinician desktops. This shifts IT from a reactive "firefighting" role to a proactive function, identifying and resolving issues in minutes - before they impact clinical workflow.
- **Ensure Intelligent Workflow Orchestration:** The contextual awareness of Agentic AI ensures the right study (or part of a study) is automatically routed to the correct AI algorithm based on clinical intent, drastically cutting time to diagnosis in critical cases and streamlining complex tasks like point-of-care image management for clinical teams.

By unifying image post-processing expertise with intelligent workflow automation, 3DR Labs and Strings provide the crucial operational foundation required to build a platform you can truly trust and scale. This enables your organization to realize the full potential of an intelligent, efficient, and resilient healthcare enterprise.

# About 3DR Labs

*Harmonizing Human and Artificial Intelligence for Faster, More Precise Care*

3DR Labs transforms healthcare operations through a unified ecosystem of advanced medical imaging and intelligent automation. By integrating expert radiologic clinical services with a vendor-agnostic AI gateway and predictive workflow orchestration, 3DR harmonizes complex imaging and workflow analysis with human expertise. This end-to-end innovation empowers providers to augment clinical expertise, automate workflows, and accelerate diagnostic interpretation. The result is a more efficient imaging enterprise that optimizes performance and reduces costs—ultimately driving faster, more efficient care delivery and improved patient outcomes across the entire continuum of care.

STRINGS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