

Building an enterprise imaging ecosystem for healthcare providers across the Pacific Northwest

How MultiCare Health System aims to create an enterprise imaging foundation to secure its own future and the future of smaller clinics and rural hospitals that need support providing patient care



An enterprise imaging vision

MultiCare Health System is one of the oldest healthcare providers in Washington, primarily based out of Puget Sound and Inland Northwest. As the largest, community-based, locally governed health system in the state of Washington, comprising 14 hospitals, more than 300 clinics, and more than 22,000 employees, MultiCare aspires to be the highest value healthcare system in the Pacific Northwest.

This aspiration is well-placed. This region includes major urban centers, where the majority of the population lives, but is largely rural and facing significant challenges for rural communities to access healthcare services they need¹. Rising hospital closures, service cuts,² and physician shortages means patients have to travel farther to get care. Fortunately, medical centers are pursuing various strategies to continue providing quality healthcare their communities need, such as increasing telehealth and primary and preventive care services³. Some pursue quality improvement initiatives to do more with less⁴.

MultiCare has witnessed the challenges of smaller rural healthcare centers and has prioritized action to help them by providing access to systems and technology that they

simply don't have the resources to get on their own. MultiCare extended its Epic system to enable electronic health records and are looking to provide the infrastructure for reading and sharing medical images, point of care ultrasound (POCUS), and other patient care services.

But to provide those valuable services and level of outreach to rural healthcare providers, MultiCare needed to expand. And to do that, the MultiCare team needed to re-engineer their own imaging solutions infrastructure – to get out of an archaic, on-premise environment that limited their ability to achieve their goals and made them more vulnerable to cyberattacks. The move needed to be toward a cloud-based enterprise imaging model. Not only would this benefit MultiCare's own clinical operations, it would also allow the health system to offer imaging as a service to smaller, rural providers with whom they worked – supporting the clinics and critical access hospitals in their local ecosystem to make it easier and seamless to read and store images.

That vision required a migration of their imaging infrastructure to the cloud, a new PACS, and, in an unexpected development, a response to a ransomware attack.



How MultiCare's imaging plans pivoted following a ransomware attack

MultiCare's previous PACS was an on-premise system, built across multiple application services managed by an external vendor. Leonard Santos, MultiCare's director of IT application services, knew this was an archaic, patchwork solution. If a data breach or downtime occurred, it could take hours or days to go on-site and physically restart the servers. All the while clinicians would be knocked offline, care services would be seriously disrupted, and patients would need to be diverted to other hospitals.

These fears were born out during a ransomware attack on MultiCare's imaging applications in 2024. Hardware went down, patient care came to a halt, and patients had to be sent to other hospitals in order to receive the attention they needed. A slew of cascading backend

IT problems also emerged. Because of the opaque interdependencies between systems in their on-premise environment, everything had to be shut down all at once. They simply didn't have the visibility to pinpoint the specific afflicted dependencies.

But compounding the nightmare was when Leonard's team was told by their imaging applications vendor at the time, "We cannot help you if something happens." Although MultiCare was ultimately able to bring their systems back online and resume patient care, it required several 18-hour days of on-site remediation.

This was a situation that Leonard and his team knew they could never afford to get stuck in again.



Migrating to the cloud with Merge

At the time of the attack, MultiCare was in the middle of phase 1 of what would become a 3-phase implementation project with Merge. That first phase entailed migrating off another vendor's on-premise PACS and deploying Merge Imaging Suite for Enterprise Imaging, which included the capabilities of the cloud-based Merge Universal Viewer and Merge VNA (Vendor Neutral Archive). This was essential to Leonard's larger vision of creating an enterprise imaging foundation that would consolidate imaging data, provide a single source of truth for clinicians to read and share images, and make it possible to provide these services to rural practices and hospitals.

Then the ransomware attack happened. In the aftermath of that breach, and the organization's resolve to not get caught flat footed by on-prem PACS downtime again, MultiCare pivoted. The team took advantage of Merge Imaging Suite's modularity to include cloud PACS in this current phase. This allowed them to incorporate the Imaging Suite solution for Radiology together with the solution for Enterprise Imaging all as one cloud migration.

By moving to the cloud, MultiCare aims to double its redundancies, create more visibility to pinpoint potential breaches in its network, and create multiple new avenues for accessing its PACS in the event of a cyberattack. In other words, MultiCare is creating an enterprise imaging cloud environment that will effectively make its hospitals downtime-proof and practically infinitely scalable to support its expansion plans.

“What MultiCare needed was an enterprise imaging solution that could expand through all the ‘ologies, not just radiology. When we looked at what Merge was offering, the decision just made sense.”

Leonard Santos
Director of IT Application Services, MultiCare Health System

“Our team is moving as many critical systems to the cloud as possible. Cloud means less maintenance, more scalability. We want to get out of the data center business and move everything that we can into the cloud.”

Leonard Santos
Director of IT Application Services, MultiCare Health System

Creating an all-in-one imaging services package for the Pacific Northwest

Another goal of MultiCare's cloud investment is to create an all-in-one imaging services package that MultiCare can offer to healthcare providers in the region who need to supplement their patient care. Previously, such a package would have been limited by on-premise infrastructure. Now, MultiCare can provide these organizations with a suite of services that are easy to access from the cloud, allowing care physicians to share and read patient images anytime, anywhere, from any device.

This package includes PACS, VNA, and the universal viewer. It provides support for point-of-care ultrasound, oncology,

ophthalmology – all tailored to each provider's infrastructure, procurement, and workflow, without concern for whether or not the practice has the requisite technical resources or hardware.

In this 'as a service' model, MultiCare provides the software, hardware, and expertise. They propose to serve as a second and third pair of eyes on the imaging needs of their healthcare provider neighbors. This allows those organizations to free up their staff to do what they do best: provide care services to underserved patients who all too often don't get the attention they need simply because their local providers have not had the resources and infrastructure to do so.



“There are so many families, kids, retirees in our area that just can’t get the access to the healthcare they need. I visit these sites and hear stories of how some of our most vulnerable patients are not getting what they need. I want MultiCare to be able to provide these practices with the imaging tools and connectivity to make sure everyone is getting the positive patient care experience they deserve.”

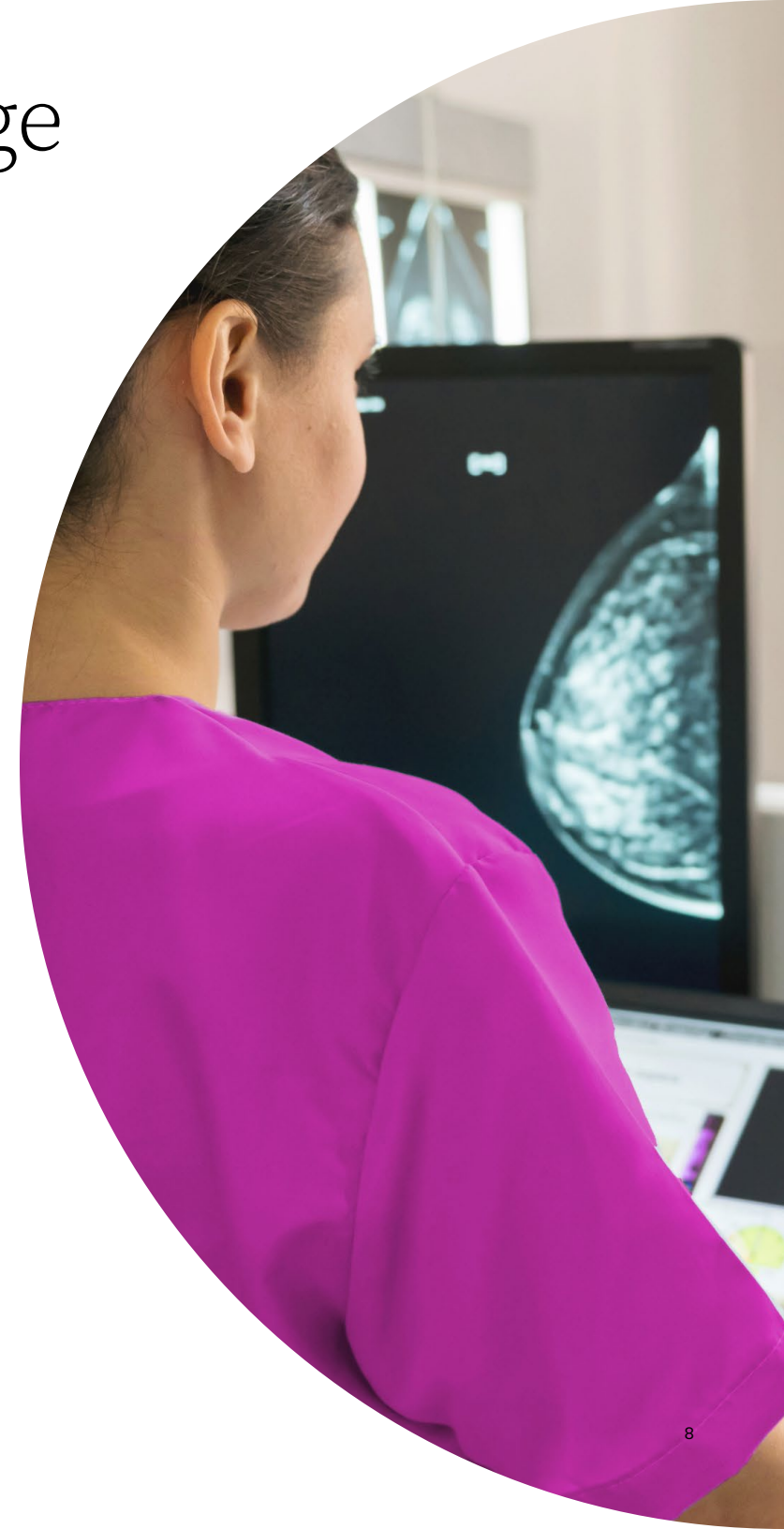
Leonard Santos
Director of IT Application Services, MultiCare Health System

Why MultiCare chose Merge

From the outset, the MultiCare team was looking for a long-term transformation partner that could help them build an enterprise imaging foundation, consolidate their multiple PACS systems, and facilitate a cloud migration that would support their goals for expansion. What started as a scalable enterprise imaging deployment quickly shifted into a larger scale, combined PACS implementation and hybrid cloud migration.

MultiCare laid out seven distinct challenges they needed their imaging solutions vendor to address, particularly in the wake of the ransomware attack. Merge cleared them all.

- 1. High availability** – Merge is the only solution with multiple layers of built-in high availability, while also leveraging application-level replication. Users report running Merge solutions for years without any unplanned downtime. Merge has successfully completed a third-party SOC 2® Type 2 audit for Merge Imaging Suite Solutions with no material findings, providing assurance to Merge clients regarding the effectiveness of the company's data protection measures. It is also ranked as a top vendor by Censinet, an industry association that evaluates cybersecurity credentials.
- 2. Proven scalability** – Testimony from other Merge clients, coupled with KLAS Enterprise Imaging Reports and year-over-year Best in KLAS accolades, attested to Merge's ability to support MultiCare's growth goals.
- 3. Cloud native foundation** – With the flexible Merge Imaging Suite built on a cloud native foundation, Merge proved it could support MultiCare's journey to modernize at their own pace, with the goal of cloud-hosted applications in mind. Merge is the only vendor that offers this flexibility today.
- 4. Consultative approach** – MultiCare appreciated the consultative approach that the Merge team took as industry advisor, which was further verified by speaking to other Merge clients and KLAS.



5. Revenue growth – MultiCare was able to purchase additional Enterprise VNA licenses in advance, so it can extend imaging services to partner hospitals in underserved communities, serving dual goals of bringing revenue into the organization and extending otherwise out-of-reach imaging solutions to smaller community hospitals. As a starting point, Merge demonstrated clear ROIs with a standard Point of Care Ultrasound (POCUS) solution supported by ImageMover, which allowed MultiCare to securely capture images across service lines (burn, dermatology, wound care, etc.), to mitigate compliance and security risks.

6. Cost reduction – Due to post-COVID financial constraints, MultiCare froze all purchases and entered a “financial recovery mode.” For a time, this made the imaging investment next to impossible. But the Merge team was able to show cost reduction on many fronts: eliminating downtimes, replacing a costly image sharing solution, providing cost-effective cloud storage with a pay-as-you-go model, managing security/compliance risk, and offering additional pricing incentives. All combined, these cost reduction measures created a business case that resulted in a final approval by MultiCare’s president and executive team.



7. Last but not least, MultiCare valued the customer support offered by Merge. Merge's track record of ranking Best in KLAS year after year, alongside multiple customer referrals, success stories, and product documentation were all cited as proof points for the value of partnership. Additionally, the level of customer support that was provided through procurement and implementation stood out as highlights for MultiCare, validating our work together.

“Knowing we have a good partner is more important than the technology. The caring that the Merge team displayed for our organization really stood out. Through the whole process, the people I worked with were only ever interested in helping me make a decision that was in MultiCare's interests, not Merge's. The customer support made it an easy call.”

Leonard Santos
Director of IT Application Services, MultiCare Health System

Building an enterprise imaging future across the Pacific Northwest

What does the future hold for MultiCare in the Pacific Northwest? Nothing short of being the first.

That means being the first in the area to offer services around digital pathology. Being the first to re-architect its imaging systems around AI in a way that automatically and rapidly recommends medications or procedures based on a patient's medical history.

Most of all, being the first to create an enterprise imaging ecosystem, on the cloud, that can provide a playbook of tools and infrastructure that smaller, rural, underserved hospitals and practices can take advantage of in a cost-effective way to benefit their communities and patients.

In partnering with Merge, MultiCare has kicked off a years-long, multi-phase project for accomplishing just that with Merge Imaging Suite in the cloud. MultiCare has plans to bring in more 'ologies to be supported by Merge solutions, including digital pathology. They have also invested in Merge Cardio to support their cardiology service line.

MultiCare is primed to launch a future-proofed enterprise imaging strategy to modernize its own imaging services, as well as patient care services of their partner healthcare providers across the Pacific Northwest.

“How does MultiCare become the next-level health system for the Pacific Northwest? We need Merge to help us develop and implement technologies that we currently don't have in this region. I believe we can get there together.”

Leonard Santos
Director of IT Application Services, MultiCare Health System



About MultiCare Health System

MultiCare is a locally governed, nonprofit health system dedicated to serving communities across the Pacific Northwest.

About Merge

Trusted by 6 of the 10 largest U.S. health systems, Merge by Merative empowers healthcare organizations with advanced medical imaging solutions to enhance workflows, optimize care delivery, and help improve patient outcomes. Merge's Imaging Suite, built on a cloud-native foundation, provides solutions for Vendor-Neutral Archive (VNA), PACS, Enterprise Image Viewing and Workflow Orchestration. Merge's portfolio also includes Best in KLAS Cardiology and Hemodynamic Monitoring, and Digital Pathology.

Learn more at merative.com/merge-imaging

About Merative

Merative provides data, analytics, and software for healthcare and government social services. With focused innovation and deep expertise, Merative works with providers, employers, health plans, governments, and life sciences companies to drive real progress. Merative helps clients orient information and insights around the people they serve to improve decision-making and performance.

Learn more at merative.com

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