6 STRATEGIC STEPS TO TRANSITION FROM PACS-ONLY TO INTEGRATED ENTERPRISE IMAGING

Shifting from PACS-only to enterprise imaging doesn't have to be overwhelming. Taking a strategic, incremental approach is the key to success.

Collaboration. It's the name of the game as healthcare shifts to patient-centered care and radiology teams strive to add strategic value by becoming a more integrated member of the clinical care team.

8 Reasons to Reinforce PACS with Enterprise Imaging highlights the importance of building a strong enterprise imaging (EI) strategy — one that makes use of existing PACS system investments and supports larger organizational patient-centered care initiatives.

Now let's take a look at specific ways to centralize and streamline image management across your organization using a vendor-neutral solution.

PREPARING TO MOVE AHEAD

Fortunately, evolving your EI plan doesn't need to happen across all facilities and departments at once. Choosing a starting point, then moving gradually and strategically to other departments can help drive steady progress — and ensure time and financial resources are best allocated for project success.

These six key steps will position your organization for long-term EI success. They include:

1. Building consensus on making the transition
2. Identifying key stakeholders
3. Mapping the decision process
4. Image discovery
5. Selecting a partner
6. Implementation followed by quick wins

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CHOOSE THE STARTING POINT: THE LAYERS OF TRANSITION

There are typically four layers involved in moving from PACS-only to EI. And while each layer is necessary, their order is flexible and designed to build on existing capabilities.

- **Acquisition:** With this layer, organizations need to aggregate images from proprietary source systems and index them to patient demographics. For orders-based DICOM that's a simple step. For non-DICOM images, tools that automatically link images to associated patient data will help save time and effort. Combining data and images also requires a quality control process that involves standardizing the data to the latest DICOM update, or other standard depending on image type, and matching them with the correct images.

- **Management:** Switching from a siloed PACS environment to an EI strategy requires a new imaging governance structure. That means aligning departments and creating common policies regarding images, including lifecycle management. Having a centralized repository of images in the VNA needs a matching centralized governance to ensure safe, consistent and effective management of images.

  In this layer, organizations may find contract language with existing PACS vendors that dictate how images can be managed. In some cases, legal action or fees may be required to release an organization's images from a proprietary PACS. The good news is that adding a truly neutral VNA to support various PACS vendors means organizations will own their images and can manage them according to their own policies and procedures.

- **Visualization:** Diversity of image types requires two criteria:
  1. Broad functional capabilities
  2. Access from anywhere and on multiple platform types

Viewer preferences likely already exist in several departments, most notably radiology or cardiology. That means organizations need to support the broadest set of options for those departments for referential as well as interpretive viewing on a cloud-based platform. This includes multiple viewing technology protocols including WADO-RS, QIDO-RS, STOW-RS, native web services, DICOM direction integration and MINT.

Thanks to the new, fully interoperable environment available with a VNA, radiologists and other clinicians have much easier image access and sharing capabilities regardless of their location. Zero-client enterprise viewers are available today that offer access to imaging studies across the care continuum and, in some cases, can be made available directly from the VNA.

- **Distribution:** Organizations also need to consider what new types of distribution options will be integrated with its EMR to access and exchange images. Since not all VNA technology offers the same capabilities to support numerous types of viewers distributed throughout the enterprise, organizations need to explore options with vendors that offer radiologists and other clinicians maximum control and efficiency.

STEP-BY-STEP TRANSITION

Regardless of which layer an organization starts with, the transition from PACS-only to EI typically follows these steps:

1 Building consensus on making the transition

While organizations typically update their PACS technology every five or six years, creating a new EI strategy and adopting a vendor-neutral imaging approach may initially raise eyebrows among radiologists who fear disruption of their established workflow will diminish their autonomy. These clinicians need to be assured that adopting a VNA can accommodate best-of-breed systems, including their PACS and viewer. Moreover, their workflow will be more efficient because, through vendor-neutral centralized image management, accessing and sharing images and videos from any department will be streamlined across the organization, even outside the four walls of the hospital.

2 Identify key stakeholders

By its very nature, EI requires the input of stakeholders across the entire organization. That begins with radiology leadership, extends to any of the 'ologies impacted by the shift, then moves to clinician leaders, the CIO, CMIO, HIM director and others. Doing so will ensure their processes and workflows are fully and accurately represented.

Choosing a starting point, then moving gradually and strategically to other departments can help drive steady progress — and ensure time and financial resources are best allocated for project success.

Selecting a vendor needs to be a strategic, collaborative decision, carefully evaluating the benefits of each technology platform and project plan.

This collaboration is one of the most important steps in identifying ways to maximize clinical effectiveness, patient experience and provider productivity.

Stakeholders must also align on the goals of the project, how it helps achieve broader enterprise-wide objectives, how success will be measured and steps that will be followed if goals are not reached.

3 Map the decision process

With these stakeholders involved, mapping the flow and timeline of the PACS-only to EI decision process will keep the project moving forward on time and on budget. This includes identifying which stakeholders will be involved in each key decision, such as vendor evaluations or site visits. Similar to an EMR implementation, these types of large-scale initiatives can be sidetracked if stakeholders are waiting for a decision from a leader when it is not necessary. This can add to costs and delay financial benefits.

4 Image discovery

It is not unusual for organizations undertaking a current-state image discovery process as part of their EI implementation to find important clinical imaging information in hundreds of locations. These images can exist on PACS, CDs, non-networked hard drives, flash drives and more — with the vast majority of these images living in radiology. Therefore, while taking inventory of all the DICOM and non-DICOM image types across the organization may feel overwhelming, the best place to begin is within the radiology department. Completing discovery here first will build the positive momentum needed to continue moving forward.

At this stage, organizations should also measure internal existing costs and plot those expenses against the cost of a VNA and associated technology to ensure they will achieve strong financial benefits with this transition.

5 Selecting a partner

Whether through an RFP process, trade shows, the help of a consultant or direct contact, organizations can begin working with the vendor community to review the technology associated with an EI strategy, such as a VNA, viewers and storage. Proposals should be validated by contacting existing customers and conducting site visits.

Selecting a vendor needs to be a strategic, collaborative decision, carefully evaluating the benefits of each technology platform and project plan. The bottom line: The vendor must clearly demonstrate that its solution is open enough to support the PACS within an enterprise and that image centralization using its technology removes medical imaging silos and enhances productive workflows.

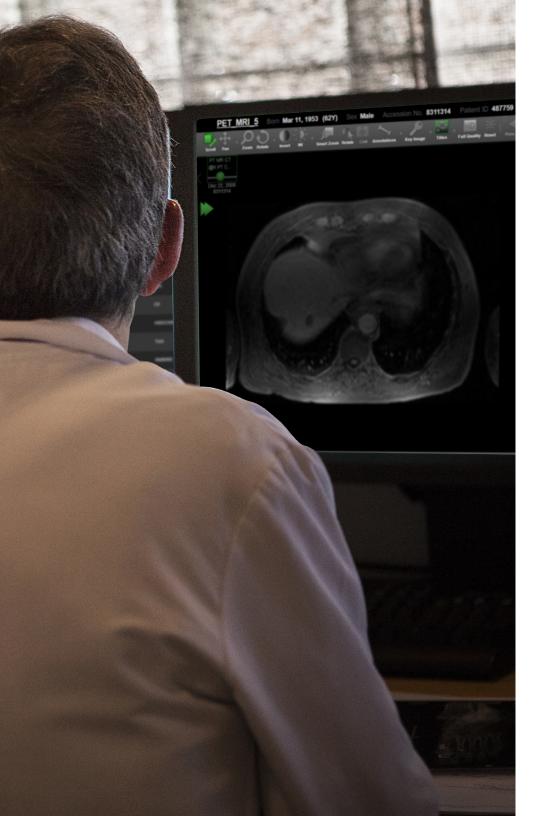### 6 Implementation followed by quick wins

Once you've chosen your solution and established a contract and project timeline, it's time to begin implementation. Early on, identifying and communicating "wins" as you transition to the VNA is helpful for sustaining momentum toward EI.

For example, eliminating antiquated servers associated with just one PACS can save an organization thousands of dollars a year in maintenance costs and time savings. It can improve security too. That's because outdated or neglected servers — such as an aging PACS server — are prime targets for cyber criminals into in an organization's network to gain control, which can lead to PHI breaches and ransomware threats.

Once the radiology department is initiated, earning quick wins with the new vendor-neutral imaging management environment will build momentum for continued EI migration. Specifically, being able to efficiently access and share centralized DICOM and non-DICOM images, videos and associated data across all facilities will help eliminate the complexity of the current PACS-driven environment. It will also pave the way for improved clinical and financial performance as the project moves forward.

IT'S ALL ABOUT DATA: ADDITIONAL EI PROJECT CONSIDERATIONS

As the EI implementation moves forward, organizations should make sure they allow adequate time to verify that data associated with images is accurate and standardized. Depending on the number of PACS vendors used and the age of images, some data may not conform to the most recent DICOM or other standards, making it difficult to unite those images with more recent studies. Workarounds may be necessary to ensure full access to a patient's complete library of images.

Considering the potential volume of images that organizations need to manage, the VNA should offer the ability to ingest and store data one time to minimize migration challenges going forward. Migrations from different PACS can be complex, so having a vendor that adequately supports migrations is critical to assuring initial VNA operations and continued use of this important asset. Advanced storage technology is also essential as PACS migration time is highly dependent on the storage technology's speed, reliability and functionality.

WHAT TO LOOK FOR IN A VNA

Numerous vendors offer VNA technology, some PACS vendors even offer PACS-based VNAs. Not all systems are the same. Organizations need to base technology acquisition decisions on departmental and enterprise-wide strategic goals.

The bottom line: Organizations should ensure their VNA can federate imaging systems to support image and information exchange between the VNA and deployed PACS environments throughout the organization. For example, dynamic DICOM tag morphing, pre-fetching and auto-routing capabilities are crucial to support efficient workflow management and allow existing PACS solutions to be leveraged as long as possible.

Because of this, choosing a VNA vendor with a successful track record with the Integrating the Health Enterprise (IHE) initiative is essential. Since VNAs are as much of an interoperability engine as they are a centralized storage solution, choosing an IHE-leading vendor will ensure continued interoperability as standards and technologies change.

The payoff? Better care continuity and reduced likelihood of duplicate studies, which can improve patient satisfaction.

For a closer look at VNA technology, see **The Definitive VNA Checklist**

Enterprise Imaging ROI

Apart from tracking the early wins, stakeholders should continually monitor ROI associated with the transition to justify pursuing EI throughout more of its facilities. For example, one California healthcare organization was able to quantify that by removing 11 PACS and decommissioning 90 servers within its organization, it was able to cut upwards of $15 million of costs while improving image accessibility across the enterprise.

TOWARD A SEAMLESS, INTEROPERABLE ENVIRONMENT

Perhaps one of the most significant modifications associated with a PACS-only to EI transition is a cultural one — changing the mindset of the organization when it comes to images.

Radiologists and other clinicians can move beyond a siloed, vendor-controlled environment and into a workflow with seamless image sharing and provider collaboration. By helping clinicians successfully navigate this transformation and choosing the right layer of transition as a starting point, organizations can build an EI strategy to meet their needs for years to come.

Achieving complete, centralized image ownership, control and visibility throughout the enterprise will foster clinician satisfaction across departments and drive continued project momentum.

With a true VNA, the organization takes ownership of its images, but also imaging policies and procedures to lead toward open, standards-based interoperability that will improve productivity, efficiency and clinical efficacy.

As a result, radiologists and other clinicians benefit from a scalable enterprise-wide solution that offers greater autonomy over image access, manipulation and sharing, while supporting collaboration with the cross-disciplinary care team that leads to higher-quality, patient-centered care.

Learn more at **Hyland.com/EnterpriseImaging**

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