Today's healthcare landscape is changing at an unprecedented pace. High-quality care demands that medical images are available across the enterprise and continuum-of-care in near real time as part of a comprehensive patient-centered record. Eliminating data silos, departmental barriers and imaging roadblocks is mission critical. Quality scores and value-based reimbursements often hang in the balance as health delivery organizations (HDOs) seek technology to help meet these goals. Whether for radiology DICOM data or specialty images from across the hospital, clearly the rules have changed:

- Patient-centered care requires accessible records with information in standard formats and compatible across multiple IT systems.
- In a business environment of ongoing mergers and acquisitions, information systems must be interoperable across multiple facilities that have different PACS solutions.
- Agile technology that supports change is crucial. Scalability and flexibility are more important than ever before.
- As imaging modalities rapidly advance, image management systems must accommodate them easily and quickly.
- Modern, fast-paced healthcare places greater demands on PACS speed, functionality and features. A legacy PACS system not equipped to handle this becomes a barrier to productivity.
- Financial considerations are important. PACS must keep system maintenance and storage costs in check by aggregating data and IT infrastructure.

PACS Redefined as an Enterprise Strategy from Hyland Healthcare is a powerful modular solution that helps every site meet these rapidly evolving imaging demands. The solution’s foundation is the Acuo Vendor Neutral Archive (VNA), a single enterprise-wide repository for images from across the enterprise and beyond. Acuo provides a powerful and versatile platform for enterprise-wide image storage and sharing. It benefits your organization today and, with the addition of advanced new components, will serve you long into the future.

**The problem with PACS: Siloed, costly, inflexible**

PACS, the IT system traditionally charged with managing DICOM — and increasingly non-DICOM — images, is 20-year-old technology that fails to meet many of today’s imaging objectives. It keeps information siloed in departments, often in proprietary formats inoperable with other PACS, electronic health records (EHRs) and downstream systems.

The technology fails at consolidation of disparate IT infrastructure and true data standardization. Costs escalate because each system must be individually maintained. PACS allows vendors control of data and the freedom to elevate prices and create roadblocks to change. Moreover, as PACS is increasingly called upon to manage non-DICOM images from departments beyond radiology, many systems are not up to the task or vendors simply refuse to help. But change is here. Hyland Healthcare delivers a modern approach to enterprise-wide image management that alters the role of your PACS.
Demystifying the power of PACS

Forget the mystique of the all-powerful departmental PACS. In reality, the technology is relatively straightforward, comprising three simple, functional layers:

Hyland Healthcare’s multi-tiered solution supports a straightforward one-to-many and many-to-one strategy. Images are transmitted from a single source to many users and from many users to a single integrated management and storage system based on a VNA, as departmental barriers continue to break down and healthcare systems consolidate.

1. Image storage and management
   - Associates images with appropriate patient identifiers, and indexing and archiving data

2. Visualization
   - Turns DICOM data into viewable images, with advanced features for physician preferences and for image manipulation

3. Workflow tools
   - Organize and communicate information to keep the wheels of radiology efficiently turning

Redefine your PACS with Enterprise Imaging

Like PACS, enterprise image management isn’t mysterious and complex either. In fact, it involves using the technologies you already know. The open, scalable technologies that underlie PACS have broad application throughout the healthcare enterprise. However, bundled together in a traditional PACS configuration, they have kept images tethered to vendors, radiology departments and restrictive user groups.

Hyland Healthcare’s enterprise imaging strategy begins by unbundling these components into the broad layers of IT infrastructure capable of sharing PACS-related functionalities across the entire enterprise — breaking the ties that bind.

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Redefining PACS is a journey

The paths to PACS Redefined as an Enterprise Strategy are diverse, catering to your needs and budget. Change can be evolutionary in well-planned stages that begin with a foundation for an enterprise imaging system and implement upgrades as required. For example, you can start in radiology by replacing a traditional PACS archive with the Acuo VNA to make DICOM images more accessible throughout the enterprise, while continuing to leverage your existing PACS and workflow tools within the radiology department. Or, you can start in a specialty department like gastroenterology or dermatology — creating an enterprise repository for centralized control and management of non-DICOM clinical images. Our solutions are open and friendly. They will seamlessly integrate with what is already in place.
Agile technologies backed by experience

Hyland Healthcare’s enterprise imaging solutions are state-of-the-art, proven in practice and optimized to work together to create seamless enterprise image management. At the same time our open, standards-based architecture will integrate with other components, such as standard PACS viewers and tools and workflow management systems, you may have in place.

Image management layer: Replace with Acuo VNA

The Acuo VNA is a single powerful, standards-based platform that consolidates imaging information throughout the enterprise. It facilitates seamless communications with the EHR and multiple IT systems as well as virtually unlimited image sharing to image-enable a patient-centric record. The VNA provides HDOs with true data ownership and the economies of central IT management. The Acuo VNA is recognized by IHS as the number one independent VNA and is used in hundreds of sites, managing hundreds of millions of images.

Key features:

- Consolidate, support, standardize and centralize image archiving across the enterprise, whatever the native image format (DICOM, TIFF, JPG, MPG, AVI, GIF, etc.) or originating application
- Eliminate underlying data silos and proprietary vendor formatting
- Maintain interoperability across disparate IT applications while continuing to support individual departmental workflows and preferences
- Image-enable a patient-centric EHR for enhanced care
- Cut costs with an economy-of-scale by consolidating hardware and software purchases and maintenance into a single imaging archive, making the most of capital equipment budgets and human resources
- Leverage built-in data migration tools for storage systems, apps and refreshing of meta-data content

Visualization layer: NilRead provides options that improve performance

Despite their image sharing and exchange shortcomings, many radiologists are comfortable with the viewing and workflow capabilities of their existing PACS. Hyland’s NilRead enterprise viewer provides options that give you the best of both worlds. Radiology can continue to leverage their existing PACS interface for departmental viewing and workflow. In addition, their user experience can be enhanced with NilRead Interpretation—an FDA-approved solution for diagnostic viewing on high-resolution displays. This zero-footprint viewer enables image interpretation to be performed anywhere throughout the enterprise and beyond, untethering radiologists from designated PACS workstations. Complementing this, NilRead Clinical is the choice for cost-effective enterprise non-diagnostic viewing from an EHR or VNA. These universal, web-based viewers run inside all major browsers and support viewing of images in any format with no software download or compromise on performance. They are compatible with PCs, Macs and most mobile devices.
Key features:

- Web-based and zero-footprint technology supports the widest set of specialties and modalities
- Industry-leading image visualization with protocols that support PET-CT and PET-MR fusion, digital breast tomosynthesis, ophthalmology, enhanced MR and other advanced segmentation
- Historical timelines of available relevant priors from any DICOM, XDS/XDSI, video and other non-DICOM image and related data archive in any location
- Fully diagnostic image viewing on any high-resolution display and resident support for multi-monitor viewing, while maintaining pure zero-footprint client architecture
- Enhanced functionality tools for other 'ologies, including virtual microscopy for pathology, laser blending and laterality segmentation for ophthalmology
- Comprehensive pixel-based image measurement including line, area and angular rules-based hanging protocols supporting physician viewing preferences and departmental structure
- Rich, native collaboration tools, including sending study links to peers/colleagues and a live, real-time, interactive collaborative tool that can be linked to Skype for Business
- Server-side rendering optimized for available bandwidth with no protected health information (PHI) locally cached on viewing device
- FDA 510K Class II Certification for diagnostic viewing including mammography and digital breast tomosynthesis for all licenses; Health Canada approval for diagnostic use on workstations and mobile devices; CE Mark for sale in the EU

Workflow/worklist layer: Replace with partner solution

Enhance efficiency, productivity and help radiology departments run like clockwork with sophisticated workflow tools that aggregate information from multiple systems to create intelligent worklists and automate a wide range of imaging processes and procedures.

LEVERAGE THE POWER OF HYLAND HEALTHCARE

Since 2001, the Acus VNA has been helping some of the largest U.S. health systems, as well as imaging centers and community hospitals, excel with advanced image management. All our applications are streamlined, state-of-the-art and optimized for high performance. With Hyland Healthcare you can take full control of your images, enjoy business and administrative advantages and enhance patient care. More than 3,000 hospitals worldwide benefit from Hyland’s deep experience in healthcare enterprise solutions.