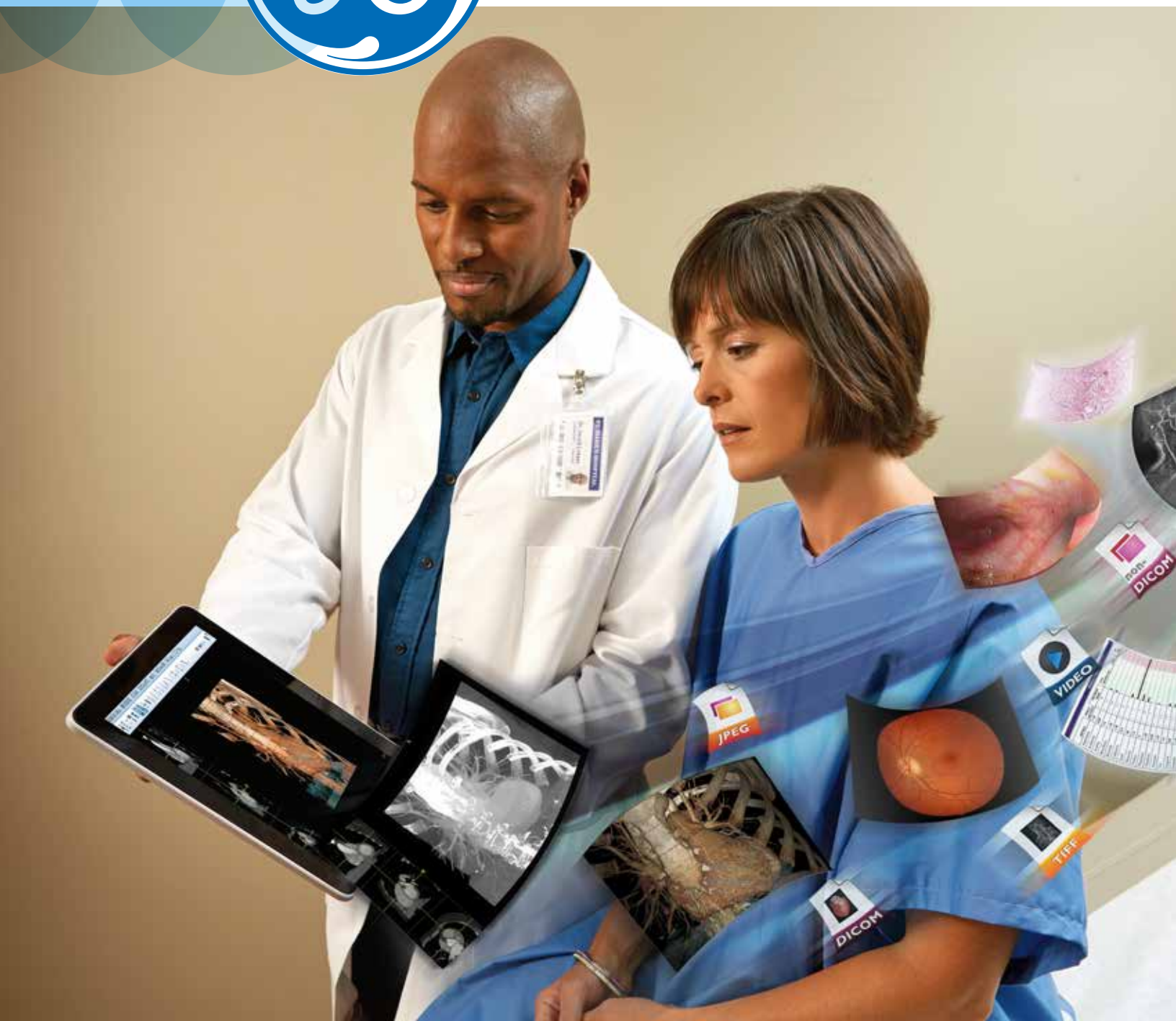
GE Healthcare

Centricity™ Clinical Archive[1] Resource Guide



Consolidate Siloes, Enhance Collaboration

Dave White
Product Management Director, Enterprise Imaging, GE Healthcare

Healthcare providers are challenged with managing the cost of growing patient data and making it easily accessible to their clinicians for speedy clinical outcomes. Centricity Clinical Archive helps you navigate these challenges and build a robust foundation for your sustainable enterprise IT strategy. By consolidating fragments of patient data scattered across multi-departmental siloes, we can help you deliver a unified patient record at the point of care to clinicians across the enterprise. With easy access to patients' priors, DICOM studies and contextual non-DICOM reports, your clinicians can make faster, more informed clinical decisions.

This interactive resource guide introduces the key components of a comprehensive Vendor Neutral Archive (VNA) solution. In addition, the guide features GE Healthcare's Centricity Clinical Archive, a VNA solution that is equipped with the tools and functionalities to help you consolidate, unify and share patient data across the enterprise. With Centricity Clinical Archive, your IT administrators gain peace of mind, as they no longer need to maintain multiple storage archives for structured and unstructured content across different departments. While consolidation of disparate archive systems helps alleviate the burden of costly maintenance and upgrades, it also helps reduce the total cost of managing data, while supporting efficient utilization of IT resources and personnel. With Information Lifecycle Management (ILM) tools, your IT department is empowered to move, purge or compress DICOM or non-DICOM data. With an XDS-compliant repository and registry, enterprise master patient index, a web-based diagnostic zero footprint viewer, a mobile application for image capture and documentation, and a clinical gateway for HL7 support—Centricity Clinical Archive truly supports your IT and clinical goals.

With a single GE Healthcare team of clinical and IT experts, we can help enable streamlined solution planning, implementation, service and management of feature enhancements. Read this guide to learn more about Centricity Clinical Archive—the world's # 1 VNA[2] solution deployed at more than 1,000 sites worldwide.[3]

Click here for more information on Centricity Clinical Archive

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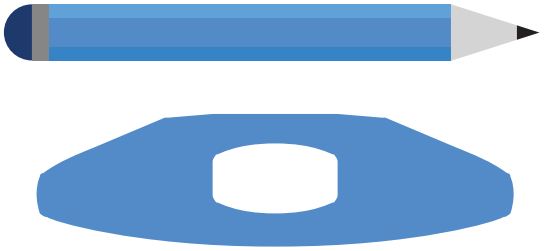
Enabling Information Sharing: The VNA Defined

Information sharing makes patient-centric, integrated care possible. And a VNA solution makes true information sharing possible.

More patient data and images are being created across hospital departments and throughout a patient's continuum of care than ever before. Operating with siloes of data produces workflow inefficiencies, which can result in duplicate test ordering and can put the quality of patient care at risk. A VNA solution weaves current and historical clinical information together for access to an image-enabled EMR. With access to a patient's comprehensive record from anywhere, clinicians are better equipped to make informed decisions with greater efficiency.

A VNA solution consolidates data from separate PACS, liberating healthcare systems from being limited to a single archiving vendor, and allows for smart data storage, management, distribution and visualization across the enterprise. With a master patient index that can link patient records across network boundaries, a VNA solution can build a foundation for advanced, analytics-based insights. Scalable and redundant infrastructure also ensures high availability and disaster recovery of important data. A VNA solution has built-in data management tools such as information lifecycle management (ILM), which allow purging, compression and movement of data to optimize long-term data storage costs.

While DICOM is the industry standard for images, a wide range of structured and unstructured information (such as JPEG, MPEG, PDF and WAV) requires support for data interchange standards that go beyond DICOM. A VNA solution leverages IHE standards such as XDS (cross-enterprise document sharing) to store non-DICOM information natively, in order to enable sharing across the enterprise.



Key Foundation Characteristics

- ☑ DICOM Support
- ☑ HL7 Support
- ☑ Non-DICOM Support (XDS)
- ☑ Multi-PACS support
- ☑ Information Lifecycle Management
- ☑ Query, Storage, Retrieval, Routing & Prefetching
- ☑ Open Standards, IHE profiles
- ☑ Scalability across departments and hospitals
- ☑ Security & Privacy, Audit Trails ATNA
- ☑ High availability
- ☑ Dynamic tag morphing
- ☑ Supports web-based viewing

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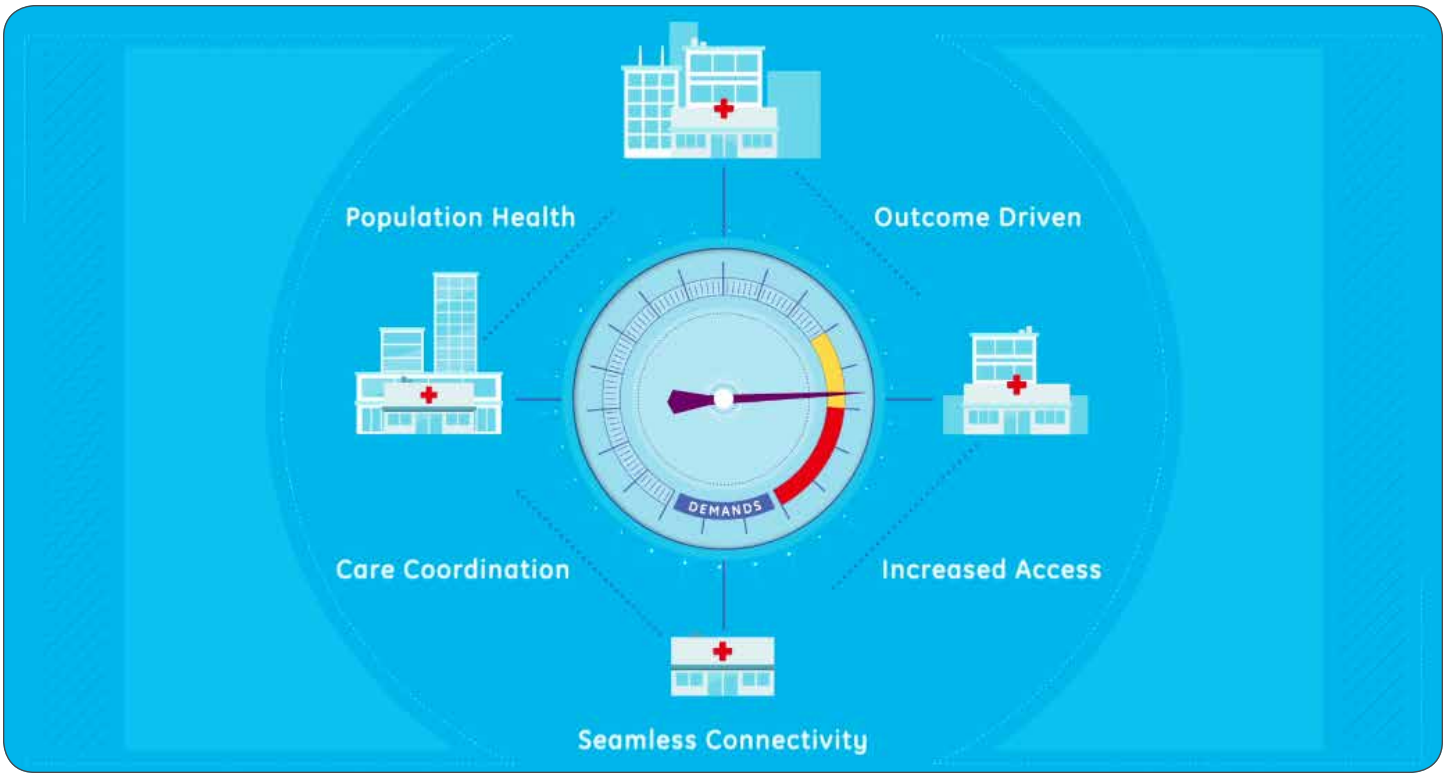
Building a Unified View with Centricity Clinical Archive



Centricity Clinical Archive (CCA) solution allows clinicians to consolidate siloes of data, building a unified view of patient images and documents to inform critical treatment decisions while saving time and lowering costs. It is a standards-based, vendor-neutral and cloud-ready solution that allows access to a longitudinal view of patient data from a clinician's choice of EMRs, physician portals or RIS systems. CCA helps clinicians streamline enterprise-level and community-wide collaboration through a breadth of interoperability standards, including IHE-XDS, HL7 and EMPI.

The solution offers consolidation and distribution at the departmental, multi-ology or community level, whether on site or in the cloud. With CCA, IT administrators no longer need to maintain multiple storage archives for structured and unstructured content across different departments. Consolidating disparate archive systems helps alleviate the burden of costly maintenance and upgrades and helps reduce the total cost of managing data while supporting efficient utilization of IT resources and personnel.

GE Healthcare drew on 16 years of experience[4] successfully archiving and managing patient data and workflows globally to create Centricity Clinical Archive solution. There have been more than 1,000 site installs of CCA in 29 countries, and it has showcased higher interoperability readiness than any other vendor.[13] The solution has proven scalability with its use in supporting a single hospital, to an organization with more than 50 sites.

A single GE Healthcare team of clinical and IT experts can help enable streamlined solution planning, implementation, service and management of feature enhancements.

Click here to learn more about CCA

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Using Vendor-Neutral Archiving for Seamless Sharing

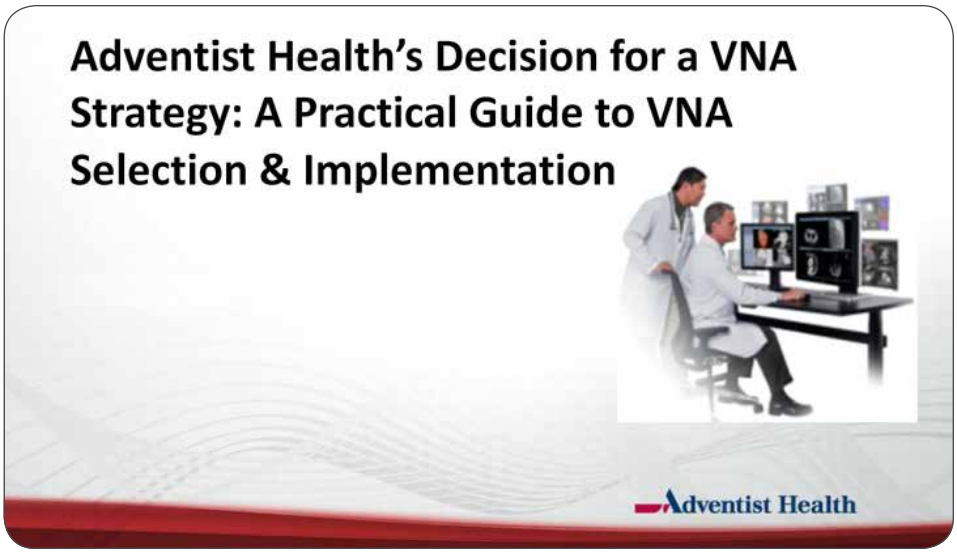
"With our patient records increasingly comprised of more and more images, accessibility by providers, both internal and external to Adventist Health, is essential."

Sheila Henriques, Executive Director of Clinical IT Projects
Adventist Health

The webinar "How did Adventist Health decide on a VNA strategy? A practical guide to VNA selection and implementation," presented by GE Healthcare and Imaging Technology News, explores the story of how Adventist Health wanted to lay a new foundation of infrastructure for sharing all types of images seamlessly across the organization.

The faith-based, nonprofit integrated health delivery system serves communities in California, Hawaii, Oregon and Washington, and includes 20 hospitals, more than 275 clinics, 15 home care agencies, seven hospice agencies and four joint-venture retirement centers.

In 2015 Adventist Health turned to GE Healthcare to provide PACS and VNA solutions. As part of a five-year agreement, Adventist Health will use Centricity Solutions for Enterprise Imaging in 18 of its community hospitals. With system-wide medical imaging and archiving systems, Adventist Health can provide its clinicians easier access to a patient's history and also benefit from economies of scale.



Using its new VNA platform, Adventist Health clinicians can store and view patients' images on a common core platform, allowing for easy access to a unified patient record and facilitating near real-time collaboration among the care teams.

"With our patient records increasingly comprised of more and more images, accessibility by providers, both internal and external to Adventist Health, is essential," said Sheila Henriques, executive director of clinical IT projects with Adventist Health. "Images play a vital role in the patient's medical journey, and it's exciting to take this next step in enhancing care for our patients."

Click here to watch the Adventist webinar

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XDS Standard Offers Interoperability and Efficiency

When clinical IT systems are interoperable and well-connected, seamless clinician collaboration results. This can be critical to enhancing patient outcomes and delivering a better quality of care across the enterprise. VNAs should integrate and unify disparate storage solutions so that the organization is not hostage to a single storage vendor. At the same time, VNAs must support different industry standards to ensure interoperability with disparate departmental systems, while preserving multiple native formats from the various modalities and devices. XDS (cross-enterprise document sharing) is one such standard that that has emerged to provide interoperability to consolidate non-DICOM information natively in a vendor-neutral way. Sharing information using IHE-XDS has two significant advantages:

Greater efficiency for the end user. XDS provides a common wrapper or metadata definition that functions as a standard format to identify the contents of the file, such as the originating institution, source information and patient information.

Ability to standardize on a viewer. With XDS the enterprise can use an interoperable, vendor-agnostic viewer to access and display non-DICOM and DICOM content.

The above video explains the importance of IHE-XDS standards in healthcare.

White Paper

In the IDC Health Insights white paper sponsored by GE Healthcare, next-generation VNA is defined as being able to support healthcare providers in implementing a new and more economically sustainable information management strategy. VNA solutions that comply with and leverage XDS address the challenges that come with the exponential growth of data in the industry, as well as the changing models of healthcare that focus more on evidence-based decision-making.

Click here to download XDS white paper

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Mobile Image Capture and Documentation with Media Manager

Nurses and clinicians at the University of Pittsburgh Medical Center (UPMC) wanted a way to easily share images of patients' wounds for both assessment and consistency of treatment. To better monitor wound progression and improve workflow, UPMC worked with GE Healthcare to pilot Media Manager, a mobile application that allows the acquisition and documentation of visible light images, videos and notes directly from mobile devices using a secure login.

As described in this featured webinar, the hospital's previous workflow required nurses to take a photo with a hospital camera that would then be printed and sent to Medical Records for scanning.

This process could take 24 to 48 hours, and clinicians could not view photos immediately to assess wounds. Instead, nurses would need to remove the dressing of the patient's wound for assessment and then redress the wound.

With Media Manager, once the nurse takes a photo on an iPhone, they can identify the patient by scanning a barcoded wristband and uploading the images to Centricity Clinical Archive as an XDS document. Clinicians and nurses can then view the images and data with Centricity Universal Viewer Zero Footprint* directly or via the hospital's EMR.

Media Manager now supports 6 different care area workflows allowing capture, ingestion and documentation of photos, notes, videos directly from the convenience of an iPhone or iPad. **Watch a demo here.**

"The ability to easily share images and easily track wound progression is inspiring nurses to find the most effective treatments for their wound and burn patients," said Debbie Balcik, RN, BSN, MS, director of clinical operational informatics at UPMC.

Click here to watch the Media Manager webinar

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Overcome Challenges with Centricity Clinical Archive

Your Challenges	Centricity™ Clinical Archive[1] Outcomes

35% **of clinicians' time wasted** due to lack of interoperable systems[5] >> **30% improvement** in clinicians' productivity[9]

After deploying an XDS-compliant solution, clinicians at the Antwerp University Hospital in Belgium reported approximately 30% improvement in productivity as a result of greater visibility to patient data produced across different departments. **Click here to learn more about this case study.**

32% **duplicate tests occur** due to lack of information sharing[6] >> Up to **$4.5 million saved** annually in duplicate exam reduction[10]

Southwestern Ontario Diagnostic Imaging Network relies on Centricity Clinical Archive to connect 62 hospitals with disparate PACS and RIS systems, resulting in reduced storage costs and data duplication, as well as increased productivity and enhanced quality of care. **Click here to learn more about this case study.**

80% **of medical errors** are from lack of clinician collaboration[7] >> Connected **7 PACS in 17** hospitals creating regional image exchange[11]

Västra Götaland Region partnered with GE to develop regional vendor-neutral image and document archiving, integrating 17 hospitals across western Sweden through a single information infrastructure. This improved information transparency, harmonizing patient history and increasing efficiency. **Click here to learn more about this case study.**

Up to $1.2 million spent a year in CD creation costs[8] >> Enhanced enterprise wide access to patient records by connecting departmental siloes[12]

Today's imaging departments manage studies from multiple modalities, simplifying and centralizing management across systems to broaden enterprise access and help exams get reimbursed. A large university medical center is using Centricity PACS and Centricity Clinical Archive for such optimization. **Click here to learn more about this case study.**

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Collaborate With a Proven Healthcare IT Partner

GE Healthcare created the Centricity Clinical Archive solution in collaboration with healthcare providers, administrators, and IT professionals to deliver a new information and infrastructure solution tailored to your needs. We have over 16 years of experience successfully deploying archiving solutions at healthcare systems of varying size, scale and complexity.

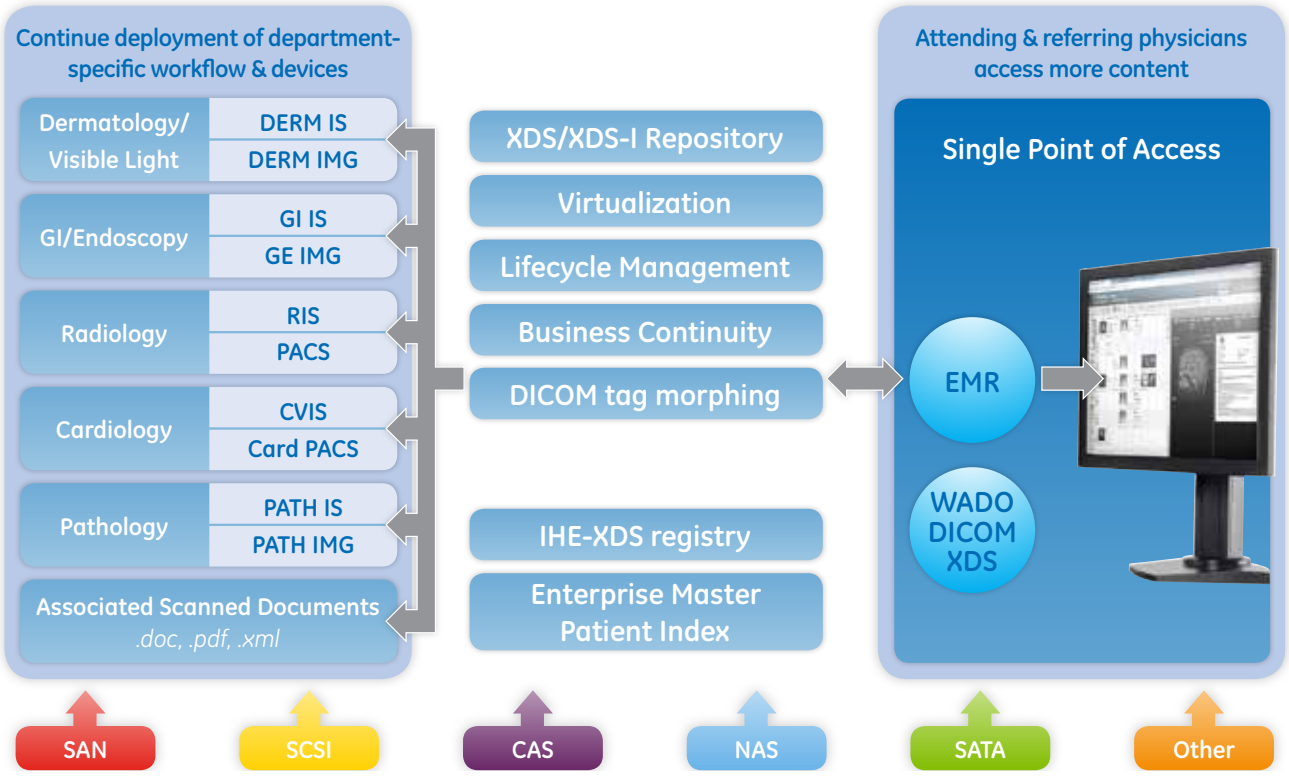
We also understand how workflows begin at the patient bedside and carry through the entire patient experience. Our extensive domain experience provides us with clinical insights you can leverage to help identify potential gaps in your own workflow, and apply technology to streamline processes for enhanced efficiency.

World's #1 VNA[2]
+ 1,000 sites in 29 countries[3]

16 years
of archiving leadership and innovation[4]

Demonstrated higher interoperability readiness than any other vendor[13]

Connected to most 3rd party PACS solutions



About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter – great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

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Media Manager requires the installation of Centricity Clinical Archive XDS compliant repository.

All other product names and logos are trademarks or registered trademarks of their respective companies.

[1] Centricity Clinical Archive includes the following product components: Centricity Enterprise Archive, Centricity Universal Viewer ZFP client, XDS Registry, Centricity Clinical Gateway, NextGate MatchMetrix EMPI, and Lexmark PACS Scan.™

* Centricity Universal Viewer ZFP client has been validated and cleared for diagnostic use by the US FDA on Microsoft® Windows® and Apple® Mac® products. ZFP has also received CE Mark for diagnostic use. As regulatory clearance requirements differ by country and region, GE Healthcare is working to obtain clearance in countries where local specific regulatory approvals are required. Your sales representative can provide information on the status in your area. ZFP can also be used on the Apple® iPad®, Samsung Galaxy Note 10.1 and Tab 4 in a review only mode and is not meant for primary diagnosis on these devices. Please refer to the product datasheet for a list of operating systems and browsers supported on these devices.

[2] Market share ranking published by IHS - Medical Enterprise Data Storage Market 2015.

[3] GE Healthcare's Centricity Clinical Archive regional site counts as of August 2015.

[4] First Archive install in 1998.

[5] Mar 2013, The value of medical device interoperability, Westhealth Institute

[6] Bridget A Stewart, Susan Fernandes, Elizabeth Rodriguez-Huertas, and Michael Landzberg : May-Jun 2010, JMIA 17(3): 341–344, "A preliminary look at duplicate testing associated with lack of electronic health record interoperability for transferred patients"

[7] Mar 2015, Harris Poll, Missed Connections : A nurses survey on interoperability and improving patient care

[8] GE CD cost calculations – reference available upon request (JB17002US), HIMSS 2013 Average Annual proc vol~71K2, Assumed 100% needing CDs

[9] Customer case studies for Centricity Clinical Archive -Southwestern Ontario Case Study (VNA), London Health Sciences, Canada, Case Study, September 2014

[10] University of Antwerp (UZA), Belgium,Case Study, September 2014

[11] Västra Götaland Region (VGR), Sweden, Case Study, September 2014

[12] Large Academic Medical Center, USA, Case Study, March 2015.

[13] 2015 global IHE Connectathons participation scores reveal that Centricity Clinical Archive has the highest number of profiles successfully tested.

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imagination at work

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