

The Power of One

Centricity[™] Universal Viewer

gehealthcare.com



one platform to optimize reading workflow

one workstation for all modalities

one viewer for the entire care team

one solution for the enterprise

one investment for the future



High-quality care today means expedited and coordinated care, delivered at a lower cost to deliver accountable patient outcomes.

As imaging is a gateway to care for most patients as well as a diagnostic touchpoint for downstream clinicians, rapid and precise image interpretation is especially integral to swift decision-making and ultimately to the quality of patient care. GE Healthcare's Centricity[™] Universal Viewer supports the transition to a value based care model by optimizing productivity. Through a unified, web-based diagnostic viewer designed to keep diagnosticians *in the workflow*, it gives radiologists and other diagnosticians the support they need to become a full and central member of the care team. This allows them to focus on contributing directly to improved patient outcomes, lowered costs of care, and quicker times to diagnosis and treatment. Centricity Universal Viewer is a next generation Picture Archiving and Communication System (PACS) delivering enhanced diagnostic speed and confidence. With intelligent tools, streamlined workflows, advanced visualization, 3D postprocessing, breast imaging tools, and enterprisewide access to medical images on a single desktop.





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Up to 40% Increase in reading efficiency ^{3, 9}

90% reduction

in time to access

archived (LTS) priors⁸



Up to 85% less time in context switching to manage Interuptions²



Save up to 19% of radiologist's time⁴





32% reduction of duplicated tests with anytime access to data¹

30% reduction in cost of archiving⁵

One Platform to optimize reading workflow

"Since implementation of Centricity Universal Viewer, our workflow efficiency has improved by 40% when compared to the previous processes and solutions that were in place."³

ARTUR GROCHOWSKI. Radiologist and Head of CT & MR, HELIMED Diagnostic Imaging

Centricity Universal Viewer Workflow Manager is an intuitive

workspace uniquely designed for radiologists and trained professionals to organize, prioritize, and manage exams for interpretation. It provides access to clinical information and images along with connectivity to third party information and reporting systems, presenting images and information in an intuitive format and supporting them with clinical relevance.



Centricity Universal Viewer

helps remove barriers to efficiency, while assisting radiologists achieve their goal of high quality patient care. With advanced efficiency tools, it ensures that valuable time is spent solving diagnostic challenges, instead of navigating menus. A customizable, intuitive user interface and optimized layout reduce the steps required to view and interpret studies and helps you focus on the images, rather than the software.

Modern, user-friendly interface provides an intuitive workflow for the full range of users, from occasional to power users.

"More clinical data allows a more precise diagnosis, because only the right diagnosis leads to the correct treatment and this in turn leads to a better recovery for the patient." -Prof. Dr. Martin Breitenseher, Landesklinikum Horn



01 INTELLIGENT WORKLIST WITH

AUTOSERVE Provides smart allocation of work, using rules to fit to diagnostician, business and patient care priorities, with the ability to redirect exams when a radiologist is not available. FILTERING and SORTING with full screen visuals and patient context for each exam allow easy and quick identification and prioritization of work.

O2 DIAGNOSTIC HUB Provides rapid access to patient's demographics and primary exam information, including order information and report text if available, along with comparison, imaging history and prior exam information with reports.

03 IMAGING RELATED CLINICAL CONTEXT

(IRCC) Relevant patient data such as EMR notes are embedded in the workflow, eliminating the need to open and search through multiple IT systems, and supporting a quicker and more confident diagnosis.^{1,10} 04 T. D h u tł

05 A ta d sy m



TABULAR INTERRUPTED WORKFLOW

DESIGN Manage interruptions with one click to hold one or more exams in mid review to address urgent cases. Another single click quickly reopens them later when ready to resume. If dictating, dictation system automatically saves dictation and image annotation and reopens where you left off.

AUTO ADVANCE EXAMS Automatically takes you to your next case after you save, dictate or finalize an exam on the dictation system. STAT exam priority takes the risk of missing an urgent exam out of the equation by automatically placing it at the top of the list. Streamlined workflow and easy access to modality analysis

and previous study comparison tools for assisting in more rapid and confident diagnostic decisions.

06 DEEP LEARNING BASED SMART READING

PROTOCOLS Optimize the radiology workflow productivity by learning each user's or group's reading preferences to automate image set-up including launching advanced visualization and other applications.

O7 ADAPTIVE STREAMING ENGINE WITH AUTOMATED INTELLIGENT PRE-FETCHING AND AUTO-FETCHING Centricity Universal Viewer doesn't keep you waiting— the first image is displayed within 2 seconds. It anticipates study content needed to prioritize fetches and adjusts for network conditions, device compute power, and image compression to provide the most efficient way to deliver images.

08 NATIVE CARDIOLOGY AND INTEGRATED MAMMOGRAPHY, ADVANCED VISUALIZATION OR OTHER 3RD PARTY APPLICATIONS Eliminates the

need to switch to separate workstations and automatically loads and hangs images to keep you in the workflow. **NATIVE MIP/MPR** saves time and allows for fusion reconstructions and manipulation on the fly to aid in diagnosis. **ONE CLICK CARDIO THORACIC RATIO** (CTR) provides all 3 measurements with just one click.

- **O9 SMART RELEVANCY** Smart Relevancy and imaging history quick filters allow you to easily locate priors with similar body parts and modalities.
- **10 AUTOMATED KEY IMAGE WORKFLOW** Easy to use and intuitive, providing drag and drop efficiency to both diagnosticians as well as referring physicians.



"Universal Viewer is impressively simple to use and works very quickly. Everything is easier than it was before, and the speed is such that we can diagnose patients much more rapidly." - Artur Grochowski, Radiologist and Head of CT & MR, Helimed Diagnostic Imaging



One workstation for all modalities

Find, review and analyze images from multiple modalities in one easy-to-use web-based streaming application, allowing diagnosticians to work from anywhere.⁶







Save up to 19% of radiologist's time

by utilizing one single workstation for all modalities⁴

Advanced visualization imaging **applications** provide a single source for post-processing applications for MIP/MPR, PET-CT, vessel analysis, automated bone removal, integrated registration, oncology quantification and more. For workflow efficiency, AV applications can be launched as part of the users hanging protocol.

Advanced Cardiology tools

provide advanced medical imaging and quantification tools for Cardiology, offering a single source for coronary and vascular analysis, volume analysis, echo measurement and analysis such as 2D strain, 3D and 4D visualization as well as advanced measurement tools for CATH procedures.

Centricity Universal Viewer helps to increase efficiency and simplify information access with a single application for 2D, 3D, 4D and advanced image analysis applications, supporting multiple specialties on a common viewer accessible from anywhere.⁶ DICOM, XDS and Clinical Data support across multiple archives and EHRs to access cross enterprise studies and documents to enable holistic radiology, cardiology, mammography, and other specialty work flows.¹¹



Advanced Breast Imaging tools

support display and diagnosis of multi-vendor images including mammography, tomosynthesis, breast MR, breast ultrasound, and Contrast Enhanced Spectral Mammography (CESM). Non-breast images available in the system can be displayed to help provide more clinical context on the patient.



One viewer for the patient care team



Increased diagnostic confidence supported by anywhere access to patient images to facilitate care team collaboration

Clinical insights within reach to streamline continuum of care efficiently with Centricity Universal Viewer Zero Footprint (ZFP)

Help improve communication and collaboration with Centricity Universal Viewer Zero Footprint (ZFP), a webbased, server side rendering viewer that provides clinicians enterprise-wide and community-wide access to patients' medical images and reports from anywhere⁶ on the user's device of choice.⁷

Centricity Universal Viewer Zero Footprint enables access to diagnostic 2-D viewing imaging tools from any Internet browser assisting with faster treatment planning, removing the barriers to care team collaboration. This supports the ability of the clinician in providing a timely and correct diagnosis and treatment while simultaneously helping in improving patient outcomes.

One solution for the Enterprise

30% Reduction in cost of archiving⁵

Enable seamless image and document consolidation and access with **Cross Enterprise Display**

In today's complex healthcare environment, patients often seek care at multiple points of service. This may result in a patient's imaging data being stored in different PACS or DICOM archives, possibly with different patient identifiers. Centricity Universal Viewer's optional Cross Enterprise Display (XDS) provides radiologists and cardiologists with seamless access to a patient's historical imaging data across affiliated institutions when those sites provide access.

Centricity Universal Viewer's XDS capability discovers patient information in the affiliated systems and presents

the information in the patient timeline just like it would for local exams. Comparison images selected for display are not copied to the local PACS system but rather streamed directly from the source to the client, reducing the need to transfer images, alleviating the creation of uncontrolled copies, and minimizing the challenges of data synchronization.

Cross Enterprise Display provides radiology departments with seamless access to a patient's historical imaging data across affiliated institutions, streaming in real time from a GE Healthcare or 3rd party PACS or VNA.



One investment for the future

GE Healthcare focuses on delivering innovation to Shape the Future of Radiology, Allowing you to Focus on what's most important... patient care delivery

"The key benefits for us are the time savings and enhanced collaboration. We're able to prepare images 50% faster than previously."³

Wojciech Rogala, Head of Diagnostic Centre in Żory, Helimed Diagnostic Imaging

Centricity Universal Viewer has intelligent productivity tools to enhance workflow efficiency

Smart Reading Protocols (SRP) represents a different way for radiologists to create robust and adaptive hanging protocols to improve image setup efficiency. SRP does not require the user to set-up hanging protocol rules that anticipate a multitude of scenarios, exam types, and procedure information. Using Artificial Intelligence based machine-learning algorithms, SRP makes inferences and hanging recommendations based on preferences it learns from the users.

Smart Relevancy for remote studies is determined by rulesbased ontology matching using the same technology as SRPs. This tool saves valuable read time in locating priors with similar body parts and modalities and supports a more thorough patient context and assists with providing a more confident diagnosis.

Rules-based AutoServe provides smart allocation of work, using rules to fit to diagnostician, business and patient care priorities, with the ability to redirect exams when the radiologist is not available. Rules can assign SLAs (service levels) and RVUs (relative value units) for procedures, route to subspecialties on modality, body part, location and more.

GE Healthcare partners with 3rd party AI organizations to support an open environment for incorporation of AI clinical applications into the reading workflow.

- Use AI results to order and triage exam lists
- Display AI results in the viewer as seconday capture and DICOM SR overlays.

- Univeral Viewer is "AI Ready" enabling it to:
- Show AI application reported results in the diagnostic hub along with the exam notes and EHR reports

One vendor for Enterprise Imaging

Centricity Solutions for Enterprise Imaging deliver a common viewing, analytics and vendor-neutral archiving experience across your Enterprise

"The integration went really well. The GE Healthcare

support staff and engineers were with us all the way, helping us get through any challenges. The transition was pretty seamless, and where it wasn't, they were right there with us. We have come to depend on GE Healthcare's expert support and highquality products."

CHAD MOSER, RT and PACS Administrator, Huron Regional Medical Center

Centricity Solutions for Enterprise Imaging

There are three main reasons why you should consider GE Healthcare as your Enterprise Imaging partner of choice:

- Experience GE Healthcare is uniquely able to deliver large cross-enterprise solutions.
- Breadth of solutions We cover each of the four elements necessary for enterprise imaging, spanning a robust modality businesses, advanced AW applications, enterprise imaging and vendor-neutral archives.
- Ability to deliver outcomes that matter - Our focus is to develop and deliver solutions that help to enhance diagnostic speed and confidence in measurable and meaningful ways.

One vendor for all your Enterprise Imaging needs

More than 3,000 organizations trust Centricity Solutions for Enterprise Imaging. GE Healthcare delivers high-quality service, reliability and technology innovation, helping providers reduce the cost of ownership today while preparing for the challenges of the future. Learn more about the role GE Healthcare plays in optimizing healthcare organizations' investment in imaging IT to help streamline healthcare costs, increase diagnostic confidence and enhance the quality of patient care by contacting your regional sales office today.

Scalable from small clinics to large regional deployments

Universal Viewer easily scales as your patient populations grow without the need to change software. This proven, scalable architecture allows you to connect multiple systems from different vendors across many different provider facilities to view patient images and data across a region or community. GE Healthcare's integrated and reliable end-to-end solutions, powered by Intel[®] technology, put innovative software and cuttingedge performance at your fingertips, for a powerful, responsive, secure and highly efficient connected healthcare environment



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, bio-pharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

Imagination at work

GE Healthcare works closely with Intel to ensure that our solutions support the latest industry standard hardware to deliver the computing flexibility and power healthcare solutions demand.

- ¹Am Med Inform Assoc. 2010 May-Jun; A preliminary look at duplicate testing associated with lack of electronic health record interoperability for transferred patients; Bridget A Stewart, Susan Fernandes, Elizabeth Rodriguez-Huertas, and Michael Landzberg.
- ² University of Pittsburg Medical Center, Customer reported outcome from interupted workflow design comparission study, 2018
- ³ Source: Case Study- Helimed Diagnostic Imaging Case study March 2014
- ⁴ Radiologists' Burden of Inefficiency Using Conventional Imaging Workstations, Dr. Bruce Hillman and Dr. Bhavik Pandya, Journal of the American College of Radiology. November 2013
- $^{\rm 5}$ 13 SNIA publications, Healthcare Data Growth Management, Gary L Woodruff
- ⁶Where an Internet connection and appropriate hardware inclusing diagnostic monitors are available.
- ⁷ 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 must obtain clearance in countries where local specific regulatory approvals are required. Your sales representative can provide information on the status of availability in your area. ZFP can also be used on the Apple[®] iPad,[®] Samsung Galaxy Note[®] 10.1 and Galaxy 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.
- ⁸ As compared with 200 slice CT exam prior via Centricity Web
- ⁹ 30% improvement in Clinician Productivity after deploying an XDS-compliant solution as reported by Antwerp University Hospital in Belgium.
- ¹⁰ At time of this writing, supports Allscripts only. Your sales representative can provide current information on systems supported. ¹¹ Cardio and Breast imaging sold as optional integrated applications.

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