



# Oracle and Agfa HealthCare

World Class EMR/EHR  
Medical Imaging Repository and  
Enterprise Visualization Technology

**AGFA**   
HealthCare

**ORACLE**<sup>®</sup>

## Healthcare's IT-driven transformation

Healthcare is transforming before our eyes. Across the country, healthcare organizations are investing in the latest information technologies (IT) with the clear goals of reducing operating costs, improving healthcare outcomes, and delivering seamless access to critical patient information through Electronic Medical Records (EMRs) and regional Electronic Health Records (EHRs).

One significant challenge is the consolidation of multimedia medical imaging information at enterprise and regional level – and the integration of this large and unwieldy information space into the EMR and EHR.

## Images dispersed across the healthcare network

A major issue is the fact that medical imaging today extends far beyond the radiology department. Patient images and associated data are created across dozens of departments, including cardiology, ophthalmology, surgery, dermatology, gastroenterology, pathology, surgery, dentistry, obstetrics, nursing, and others.

These images are created and stored in wide range of formats, including still images such as TIFF, BMP, GIF, and JPEG; moving or video data such as AVI, WMV, and MPEG; waveform data types such as ECG, EEG, and MP3, and a variety of report data types including PDF files.

To compound the problem further, this valuable clinical information is often isolated in disconnected departmental PACS, homegrown imaging systems, custom image catalogs, or within standalone and/or proprietary imaging devices located across a healthcare campus or multi-location healthcare network.

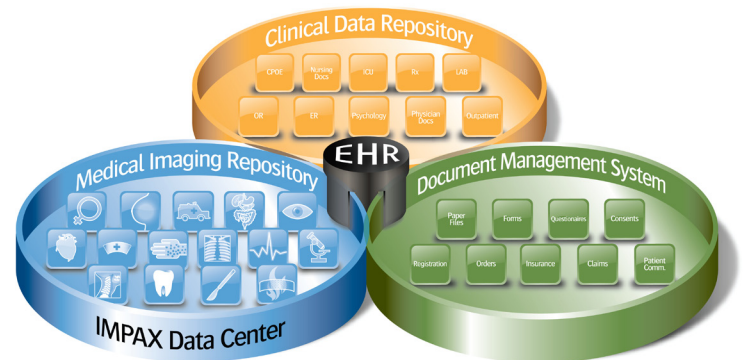
## Three steps to integrated image data

To regain control of image data, manage costs, and improve the quality and efficiency of patient care, healthcare organizations must introduce three technological advances:

- A single Medical Imaging Record
- A fully image-enabled EMR/EHR
- A universal web-based image viewer

## A world-class medical imaging repository from two technology leaders

Building on a long standing relationship, two global leaders in healthcare information and imaging technology, Agfa HealthCare and Oracle, are delivering a solution to the pressing challenge of integrating and sharing medical image data.



*IMPAX Data Center with XERO technology embeds images into the EHR to facilitate easy accessibility throughout the enterprise*

## Agfa IMPAX Data Center – Powered by Oracle

Agfa HealthCare's IMPAX® Data Center™, powered by Oracle® Database, is an EMR/EHR-class Enterprise Medical Imaging Repository and Visualization solution. It meaningfully captures, manages, and delivers a complete, longitudinal, multimedia patient imaging record to the clinician in a single interface at the point of care, directly through the EMR.

IMPAX Data Center plays a key role in bringing the last major information space - imaging - into the EMR and regional EHR. A fully standards-based, vendor-neutral, massively scalable Medical Imaging Repository, it is designed to manage multi-region, multi-facility, multi-departmental, and multi-specialty medical imaging and diagnostic results including diagnostic and clinical images, multi-frame, video, reports, waveforms, and PDFs for hospital groups, regional healthcare organizations, and military and national health systems.

## Key Benefits

Key benefits of IMPAX Data Center include:

**Reliable and Scalable:** Oracle technology drives many of the world's largest and most critical systems. Expect no less from IMPAX Data Center. Developed on Oracle Database and Java application technologies, IMPAX Data Center provides levels of reliability and scalability required by government and national health systems as well as the largest health networks. These networks generate millions to tens of millions of medical imaging studies annually, require management of multiple petabytes of medical imaging information and demand a high level of performance in a no-downtime, business

*“Oracle technology strengthens the delivery of security, scalability, and performance in Agfa HealthCare’s enterprise solutions.”*

- Volker Wetekam, Executive Vice President, IT, Agfa HealthCare

continuity-ready, active-active multi-data center environment. At the same time, IMPAX Data Center can scale smoothly down to support smaller regional hospital networks that may only create 50,000 imaging studies annually.

**Standards-Conformant:** IMPAX Data Center is highly standards-conformant for interoperability, data portability, data access, and health information exchange (HIE). Agfa HealthCare has rigorously implemented standards defined by Digital Imaging and Communications in Medicine (DICOM), Health Level 7 (HL7), and Integrating the Healthcare Enterprise (IHE).

**Highly Accessible Data:** IMPAX Data Center removes the proprietary nature of many imaging systems by storing data in readily distributable DICOM formats. The resulting single enterprise system can be accessed by any authorized DICOM-conformant system, thus providing the widest possible distribution of patient information without the need for proprietary viewers or applications.

### Conformance with IHE XDS/XDSi

In 2005, the Integrating the Healthcare Enterprise (IHE) initiative introduced a new profile to address regional health information exchange. The Cross-Enterprise Document Sharing Profile (XDS) provides a solution for sharing documents across a group of affiliated enterprises.

XDS provides a standards-based specification for managing the sharing of documents among healthcare enterprises. Based on XDS, more “content-oriented” IHE Integration Profiles have been developed to address the content of the documents that need to be shared (e.g., XDS for Imaging, or XDS-I).

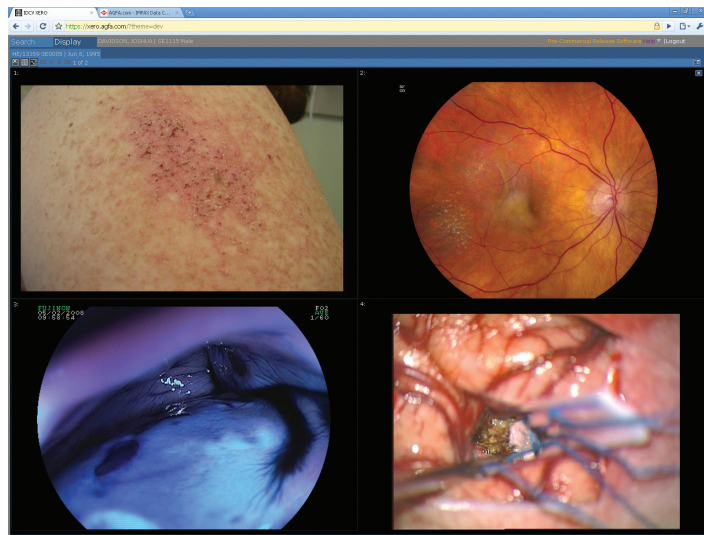
An advantage of an XDS-enabled system is that each site can continue to leverage its current investments in radiology, cardiology, lab, etc. Even if the clinical system is not XDS-capable, there are XDS “proxy” solutions that can be added to enable the current system to participate in an XDS infrastructure.

An XDS-enabled system contributes to the foundation of a shared EHR, providing facilities with a large, unified, and ubiquitous view of all patient encounters while maintaining the full autonomy on the local system. The IMPAX Data Center is an IHE XDS/XDSi-conformant application.

### XERO Technology Viewer – a single, web-enabled image viewer

Agfa HealthCare is leading the world with a revolutionary medical imaging and results viewer based on its innovative XERO technology.

CIOs and CMIOs face the significant challenge of extending the EMR and EHR to include support for all medical images and related information, providing physicians with point-of-care access to the longitudinal patient record.



Using XERO technology, Agfa HealthCare’s image viewer embeds image content directly into the EHR and makes it accessible to all who need it. Users ranging from in-hospital clinicians to referring physicians can view the images through a web browser on an office or home computer.

XERO allows fast, secure access to all images and reports with no client software to install. The AJAX-based technology works over low-bandwidth networks, inside or outside the hospital, and on any PC or Mac browser – virtually eliminating desktop maintenance costs while providing secure, efficient, and ubiquitous access to medical images and reports throughout the healthcare enterprise, even for infrequent users of images.

XERO’s innovative nature lies in the union of standards from healthcare IT (i.e., DICOM SR, C-Find, C-Move, WADO, and IHE actors for ATNA, CPI, SINR, KIN, and SWF) with standards from traditional Web IT (i.e., LDAP, SSO, HTTP/HTTPS, HTML, CSS, XML, JavaScript, JPEG and RESTful web services) to provide EMR/EHR embeddable visualization technology that does not sacrifice interoperability with the rest of the healthcare enterprise.

## Oracle: World-Leading Security, Scalability and Performance

Oracle is the world's #1 provider of relational database management systems, with worldwide market share of 48.9 percent in 2008, according to Gartner. Today, 70 percent of the top multi-hospital systems in the United States run Oracle technology.

"Oracle technology strengthens the delivery of security, scalability, and performance in Agfa HealthCare's enterprise solutions," said Volker Wetekam, Executive Vice President, IT, Agfa HealthCare. "Our new relationship with Oracle will enhance our go-to-market strategy for IMPAX Data Center and advance our commitment to a high return-on-investment for our customers."

## Supporting IHE

Oracle is proud to support Integrating the Healthcare Enterprise (IHE), an initiative by healthcare professionals and the health IT industry to improve the way computer systems in healthcare share information. IHE promotes the coordinated use of established standards, including DICOM and HL7, to address specific clinical needs in support of optimal patient care.

Systems developed in accordance with IHE communicate with one another better, are easier to implement, and enable care providers to use information more effectively.

## The right information to the right caregiver at the right time

Agfa HealthCare and Oracle are proud of their tradition and reputation in providing standards-based image and information solutions that enable healthcare professionals to improve the quality and delivery of patient care. These standards drive interoperability and are a key principle in the design of IMPAX Data Center with XERO technology. These innovative solutions enable healthcare stakeholders to deliver the right information to the right caregiver at the right time.

## Find out more

Contact Oracle or Agfa today to learn more about how Agfa IMPAX Data Center Enterprise Medical Imaging Repository with XERO technology can help you to build a more clinically meaningful EHR.

## Download a free white paper

A free white paper, *Top 10 Criteria for Evaluating and Selecting an Enterprise Medical Imaging Repository: A Checklist for Healthcare Organization*, is available from Agfa's website [www.enterprise-visualization.com](http://www.enterprise-visualization.com).

## About Oracle

Oracle (NASDAQ: ORCL) is the world's largest business software company.

For more information about Oracle, please visit [www.oracle.com](http://www.oracle.com).

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## About Agfa HealthCare

Agfa HealthCare, a member of the Agfa-Gevaert Group, is a leading provider of IT-enabled clinical work-flow and diagnostic image management solutions, and state-of-the-art systems for capturing and processing images in hospitals and healthcare facilities. Agfa HealthCare has over a century of healthcare experience related to diagnostic imaging and has been a pioneer on the healthcare IT market since the early 1990s. The business group has sales offices and agents in over 100 markets worldwide. More information is available at [www.agfahealthcare.com](http://www.agfahealthcare.com)

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