Kodak Carestream

Information Management Solutions

Managing the explosion
in patient information

Kodak Carestream

Information Management Solutions

The right information in the right place at the right time—from the right company

KODAK CARESTREAM Information Management Solutions go beyond conventional storage functions to effectively manage the exploding volumes of patient images and information, today and tomorrow.

These solutions combine software, non-proprietary hardware, and professional services as needed for consolidation, control, continuity, and access of *all* fixed content archived for healthcare. This enables you to provide the right information in the right place at the right time—across your healthcare enterprise or region. No matter where the images and data are stored, or where they originated.

Key to this performance is the KODAK Versatile Intelligent Patient Archive (VIParchive). This software platform virtualizes storage—to share and consolidate storage infrastructure—and dynamically applies rules-based storage plans to all data. The archive "understands" the data and can automatically provide intelligent information lifecycle management that is tailored to the needs of each department it serves. Meeting the needs of both short-term storage and long-term image and data preservation, this unique capability simplifies data management without impacting daily operations. Performance such as this has made Carestream Health the worldwide leader in intelligent, clinical information lifecycle management (CILM) for healthcare.

Easy universal access to images and information and flexible "open" storage architecture allow you to improve patient care and increase productivity—while reducing operating and capital costs, and keeping pace with escalating storage demands. Choose from a versatile portfolio of solutions including KODAK CARESTREAM Enterprise, Hosted, or Regional Information Management Solutions.

Revolutionary VIParchive is the driving force

Kodak's unique and revolutionary VIParchive software powers CARESTREAM Enterprise, Hosted, and Regional Information Management Solutions.

KODAK CARESTREAM Information Management Solutions Portfolio

Enterprise Information Management (EIM)
enterprise solutions

Hosted Information Management (HIM)
service solutions

Regional Information Management (RIM)
regional solutions

Carestream Health's Solution Delivery

VIParchive Software Platform
(Storage Virtualization and Clinical ILM)

Professional Services
(Project Management, Integration, Consulting)

Key Partners
(Storage, Network, Software, IT, etc.)

Enterprise information management

A unique concept, KODAK CARESTREAM Enterprise Information Management Solutions bridge the gap between existing archiving islands in healthcare environments. This top-down, holistic approach to storage and archiving enables you to consolidate and manage the needs of clinical systems such as radiology, cardiology, and laboratory—as well as back office functions including inventory and payroll. These solutions offer:
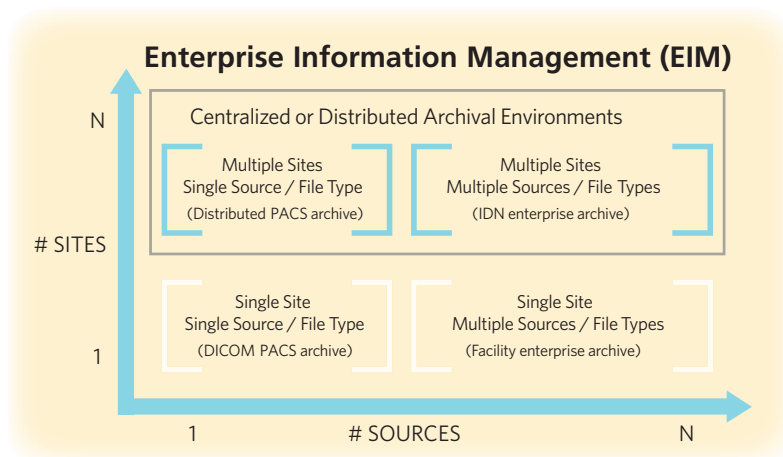
- ▶ Intelligent, clinical information lifecycle management using configurable storage plans that automatically move, copy, reformat, and/or delete data as needed—for online, near-line, or off-line storage

- ▶ Cost advantages by leveraging existing infrastructure and optimizing workflow and productivity

- ▶ Vendor neutrality, allowing a choice of storage equipment, technology, and media, today and tomorrow

- ▶ Multi-dimensional scalability that accommodates growing storage capacity, users, sites, data sources, and technologies

- ▶ Long-term information preservation—transparent information protection and simplified data migration support

- ▶ A foundation for a clinical data repository that allows a patient-centric view of fixed data content

- ▶ Flexible, versatile deployment for single or multiple sites and one or more data sources with distributed or centralized archiving

- ▶ Tight integration of digital and paper-based data

Document capture services

Trust Carestream Health's document service experts to handle any or all of your activities related to document management for paper-based files.

- • Carestream Health can perform document scanning, indexing—and more. Or you can do it yourself using KODAK scanners.

- • You minimize your capital investment in equipment, software, and resources.

Enterprise Information Management (EIM)

Centralized or Distributed Archival Environments

N		
	Multiple Sites Single Source / File Type (Distributed PACS archive)	Multiple Sites Multiple Sources / File Types (IDN enterprise archive)
# SITES		
1	Single Site Single Source / File Type (DICOM PACS archive)	Single Site Multiple Sources / File Types (Facility enterprise archive)

1   # SOURCES   N

Multidimensional scalability accommodates growth

CARESTREAM Enterprise Information Management Solutions scale to accommodate growing storage capacity, users, sites, data sources, and technologies.
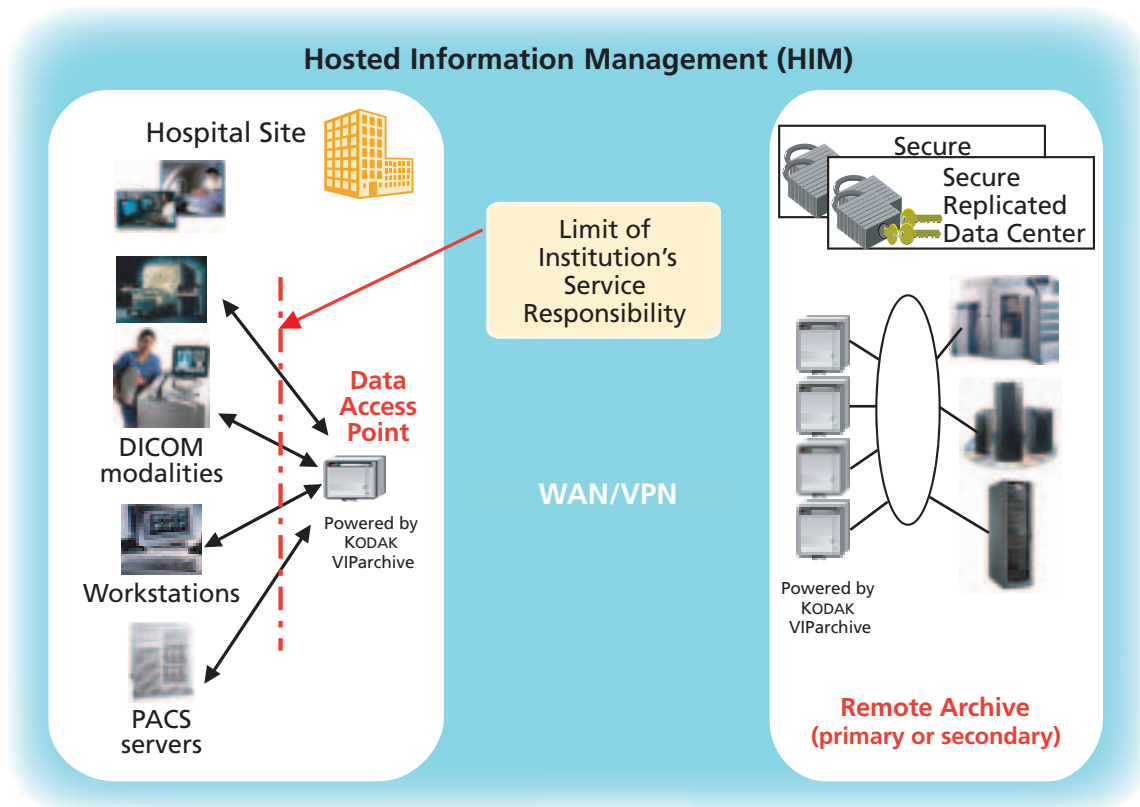
Hosted information management

KODAK CARESTREAM Hosted Information Management Solutions enable remote data management and storage. This provides all the capabilities of an onsite archive without the capital expense and responsibility of ownership. These solutions help you improve the storage, retrieval, and security of your digital images and information. Carestream Health serves as your storage service provider (SSP) with a choice of remote archive solutions.

Primary offsite archive—Dedicated Carestream Health offsite archive that integrates with your workflow.

► Secure, reliable bandwidth provides real-time storage and retrieval.

► Carestream Health maintains the integrity and availability of your data on this offsite archive.

► We update this archive to keep pace with advancing technologies—at no added cost to you.

Secondary offsite archive—Duplicate the data in your onsite archive at a secure offsite facility with Carestream Health's data backup service.

► Guard against irretrievable loss of images and information.

► Gain cost-effective support for your business continuity plan.

Hosted Information Management (HIM)

Hospital Site

DICOM modalities

Workstations

PACS servers

Data Access Point

Powered by KODAK VIParchive

Limit of Institution's Service Responsibility

WAN/VPN

Secure

Secure Replicated Data Center

Powered by KODAK VIParchive
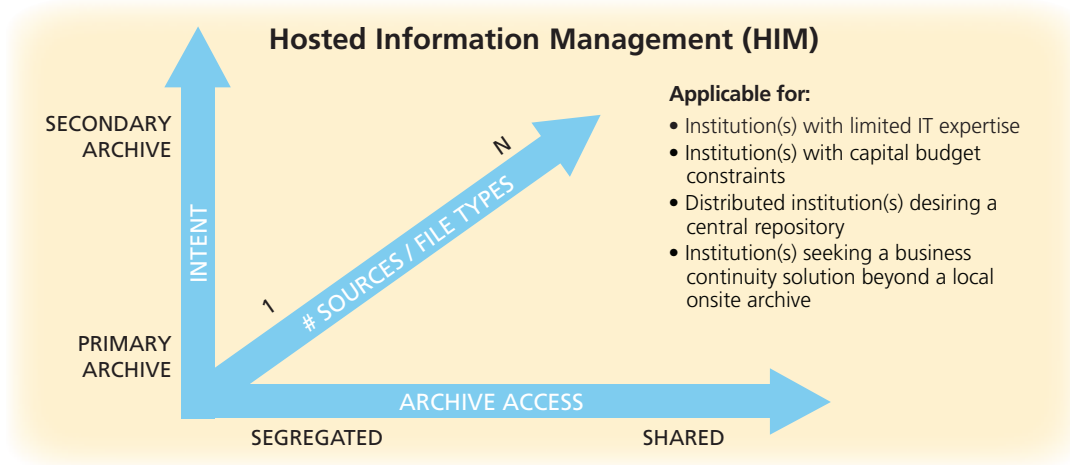
Remote Archive (primary or secondary)

Data migration and retrieval services—Maintain data access in the face of changing storage technologies and faulty media.

- Carestream Health's data migration service can transfer data from legacy storage systems to any other storage device.
- Physical migrations are possible without impacting your day-to-day operations.
- Carestream Health's data recovery specialists can reclaim your data from damaged, worn, or deteriorated tapes, disks, or other media.

Advantages of offsite archive solutions

► You pay as you go.

► Your costs are operating expenses— not capital costs.

► Carestream Health manages data availability and security—and prevents storage technology and media obsolescence.

► Data security is enhanced by remote, redundant storage—two copies of images and data are stored at all times.

► Your IT resources can be optimized.

Hosted Information Management (HIM)

Applicable for:
- Institution(s) with limited IT expertise
- Institution(s) with capital budget constraints
- Distributed institution(s) desiring a central repository
- Institution(s) seeking a business continuity solution beyond a local onsite archive

SECONDARY ARCHIVE

PRIMARY ARCHIVE

INTENT

N

1

SOURCES / FILE TYPES
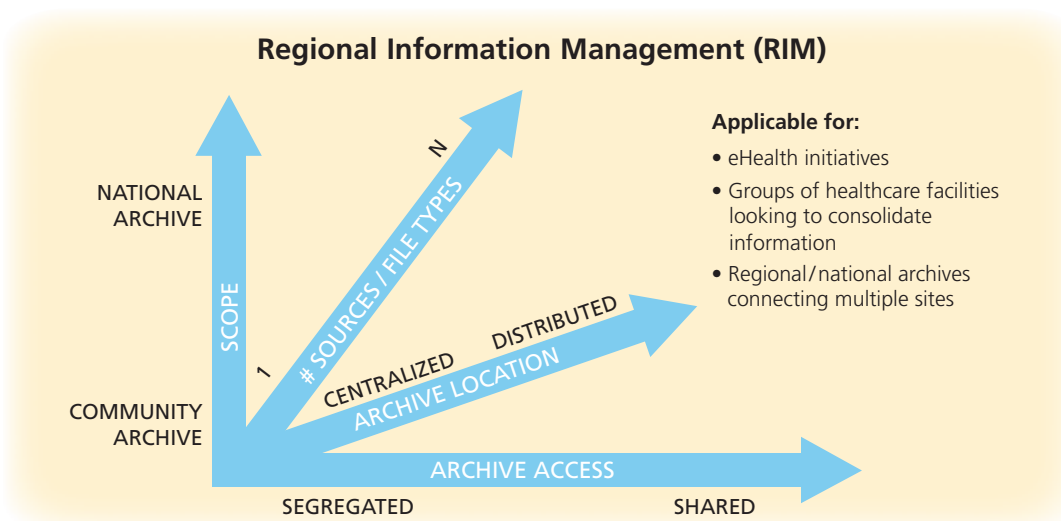
ARCHIVE ACCESS

SEGREGATED

SHARED

Configuration options provide customized solutions

CARESTREAM Hosted Information Management Solutions offer options that include primary or secondary offsite archiving with segregated or shared access. An unlimited number of data sources and file types can be accommodated.

Regional information management

KODAK CARESTREAM Regional Information Management Solutions support multiple institutions and vendor systems. Leveraging the grid computing architecture of the KODAK VIParchive software platform, these solutions can manage billions of images, petabytes of data, and thousands of data requests per second, providing industry-leading capabilities for worldwide eHealth initiatives:

▶ Multi-source, open archiving provides synchronized data and database protection with multiple levels of redundancy for remote disaster recovery. Information can be shared or kept private by each individual organization.

▶ Highly available and secure architecture supports regional eHealth solutions.

▶ Multi-dimensional scalability accommodates growth in storage capacity, users, sites, sources and technology. These solutions support extremely high volumes of information and access requests.

▶ Adherence to industry standards supports interoperability both today and tomorrow.

Regional Information Management (RIM)

Applicable for:
- eHealth initiatives
- Groups of healthcare facilities looking to consolidate information
- Regional/national archives connecting multiple sites

Regional solutions support eHealth initiatives

CARESTREAM Regional Information Management Solutions support multiple institutions and vendor systems. They can manage billions of images and documents, and thousands of data requests per second. The capability to manage, store, and access patient information across institutions supports eHealth initiatives.
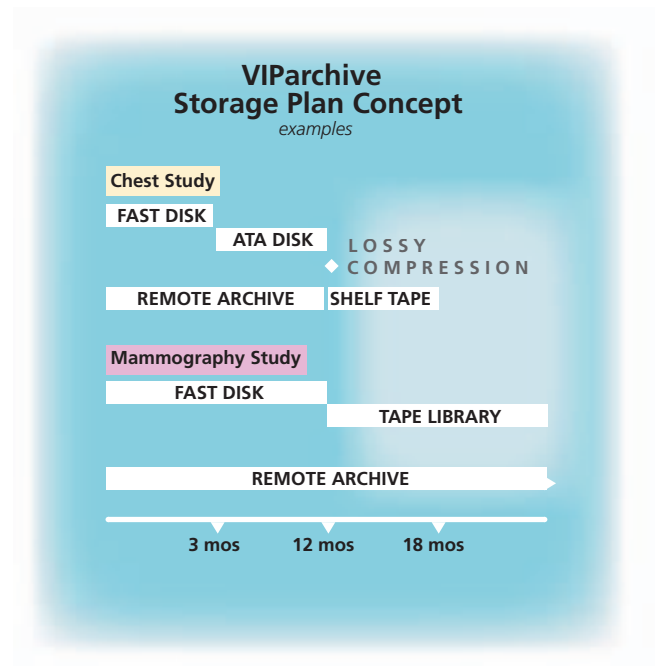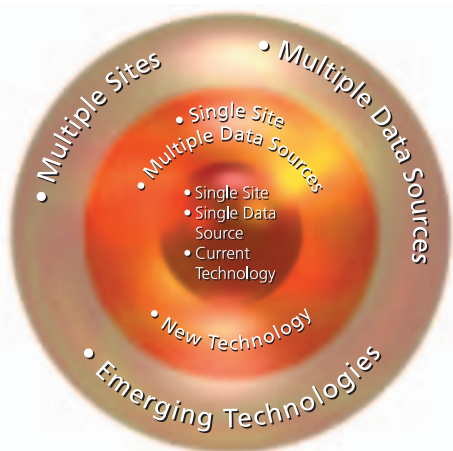
Consolidation, control, continuity, and access with VIParchive

Application-neutral and technology-independent, the innovative KODAK VIParchive storage management software platform enables consolidation, control, continuity, and access of all fixed content archived for healthcare across the enterprise.

- ► Clinical information lifecycle management defines policies to automatically manage data within your storage infrastructure.
- ► Unified enterprise storage strategy reduces operating expenses while supporting your legacy infrastructure.
- ► Storage virtualization simplifies the integration of new technologies without impacting applications.
- ► Patient-centric organization of care data increases efficiency and supports eHealth initiatives.
- ► Obsolescence proofing is provided by solutions that are media-, technology-, and vendor-neutral— with multi-dimensional scalability.
- ► Long-term information preservation is the result of automated information lifecycle management and support for future data migration.

Storage plans provide intelligent, clinical information lifecycle management

VIParchive allows you to create content-specific information lifecycle treatment profiles called storage plans that are based on available data attributes. This enables VIParchive to "understand" the data and to manage it over time through automated execution of these storage plans which can copy, move, compress, and/or even delete matching data within the storage infrastructure.

VIParchive Storage Plan Concept
examples

Chest Study
FAST DISK
ATA DISK
LOSSY COMPRESSION
REMOTE ARCHIVE   SHELF TAPE

Mammography Study
FAST DISK
TAPE LIBRARY

REMOTE ARCHIVE

3 mos   12 mos   18 mos

Why choose Carestream Health?

Beyond the remarkable capabilities of KODAK CARESTREAM Information Management Solutions, Carestream Health is the right company in which to place your trust for this important investment.

We know how to capture, move, store, and manage medical images and information—in ways that optimize patient care and produce successful, predictable business outcomes.

► The vast majority of archived images and information conform to the DICOM standard and Carestream Health is a DICOM market leader.

► Carestream Health is the worldwide leader in intelligent, clinical information lifecycle management for healthcare.

► Images are the most challenging facet of data management. Carestream Health is an undisputed leader in image science, holding more than 20,000 patents.

► More than a century of service has taught us the critical workflow issues, challenges, and requirements of medical imaging.

► Our portfolio of expert service and support is designed to maximize your return on investment.

► While providing the technologies and solutions best for you, Carestream Health will also provide the assurance of strength and stability. We'll be here for you tomorrow.

Kodak

Licensed Product

Carestream Health, Inc.
150 Verona Street
Rochester, NY 14608

A Unified Enterprise Storage Strategy

BUSINESS IMPACT	FINANCIAL AND OPERATIONAL SAVINGS
Greater Platform ROI—Maximize Utilization and Extend Longevity	X
Application Independent, Enterprise-Centric Platform Migrations (Not When, How)	X
Best-of-Breed Platform Deployment—No Vendor Lock-in	X
Streamlined Service Management, System Management, and Capacity Planning Improve Personnel Efficiency	X
Immediate Responsiveness to Your User's Next Application Requirements or Regulatory Changes Like HIPAA Business Continuity Planning	X
Improve Access to Patient Data Continuously	X
Flexible Deployment—Include Capital Investments vs. Pay-as-You-Go Options	X

Storage virtualization streamlines information management

The KODAK VIParchive consolidates your storage infrastructure, providing seamless access to multiple storage devices, systems, and media. This enables scalability, data migration, storage obsolescence proofing, and support for business continuity planning.

More information

For more about KODAK CARESTREAM Information Management Solutions, and Carestream Health's broad digital portfolio, contact your Carestream Health representative, or call 1-877-865-6325, ext. 655.

➜ **www.carestreamhealth.com**

Carestream
HEALTH

The Innovation Powering **Kodak** Health Products

Carestream is a trademark of Carestream Health, Inc.
The Kodak trademark and trade dress are used under license from Kodak.
M8-658   Printed in U.S.A.   8/07   © Carestream Health, Inc., 2007   CAT No. 842 8823