

Information Management software

Enterprise Data Management: OPTIM

Strategies to Increase Business Effectiveness

WHITE PAPER 2009

Mrityunjay Kumar
IBM Software Lab Services, India



Table of Contents

1. MANAGING ENTERPRISE APPLICATION DATA	3
2. DEPLOY STRATEGIES FOR INFORMATION GOVERNANCE	4
3. SIMPLIFY YOUR IT INFRASTRUCTURE.....	6
4. ENSURE BUSINESS CONTINUITY	7
5. FOCUS ON BUSINESS VALUE.....	8
6. MAXIMIZE BUSINESS VALUE ACROSS THE ENTERPRISE.....	9
7. OPTIM SOLUTIONS AND ENTERPRISE ARCHITECTURE	10
8. OUR ENTERPRISE CLIENTS INCLUDE.....	13

1. MANAGING ENTERPRISE APPLICATION DATA

Among your company's most valuable assets, enterprise applications and databases represent major corporate investments that support your business objectives. Like any other capital investment, you must manage your enterprise application data effectively to achieve your goals and realize maximum gain

Applications Drive Your Business

Enterprise applications not only help you run your business, they are your business. Every day, you rely on these applications to drive your operations, avoid delays, and achieve your goals. In a competitive environment, when your business is moving at high speed, you need the agility to respond quickly to changing conditions. Your ability to manage application data and optimize performance is critical.

You set goals to build customer loyalty through communication, sales and service, while integrating and automating all facets of your business operations. and, you rely on a variety of ERP, CRM and other critical applications to keep you on course to generate more revenue. You also want to ensure that your applications deliver maximum benefit, safeguarding business continuity and providing the right information to decision makers at the right time.

With a constant focus on achieving these goals, transaction-intensive, customer-facing business applications are collecting and storing more data than ever before. In addition, mergers and acquisitions, disaster recovery, data retention and security initiatives increase the complexity. Everything that touches your application data becomes more costly and more complicated to manage.

Some may say that if your application databases are growing, it is a sure sign your business is growing — and that is a good thing. But for many organizations, meeting performance service levels and increasing storage requirements are putting a strain on enterprise IT system capacity.

Companies are striving to achieve optimum value from enterprise applications by increasing spending on software, servers, databases and storage. This common response may resolve constraints temporarily. However, even frequent performance tuning and upgrades do not address the underlying problems of an overburdened IT infrastructure.

How Can You Capitalize on Your Investment?

Your enterprise applications simply must deliver measurable business value. So how can you capitalize on your investment? The answer rests in your ability to align continuous control of your application data with your business objectives through the power of enterprise data management



Figure 1. Enterprise Data Management

Effective enterprise data management helps you set appropriate levels of performance and availability leading to customer satisfaction. You can deploy IT resources fluidly as your business and industry evolve, while mitigating risk and taking control of your IT budgets. And most importantly, you can add more business value to your enterprise bottom line.

2. DEPLOY STRATEGIES FOR INFORMATION GOVERNANCE

The burdens and costs of regulatory compliance may at first appear overwhelming. But as companies apply a consistent approach to govern their information assets, they can achieve significant benefits. Enterprise data management strategies enable you to satisfy requirements for data privacy, security and retention, while safeguarding customer loyalty and preserving brand equity.

Protect Data Privacy

Whenever personal data is fraudulently accessed and disclosed, the results can be catastrophic. Protecting data privacy is becoming an important competitive advantage that reinforces sound business practices. More companies are realizing that compliance with regulations, such as HIPAA, DDP, NPP and others, not only protects confidential information from misuse, but also helps maintain customer confidence.

Corporations must protect all sensitive information, whether it resides in a production system, a development database, or anywhere else within organizational boundaries. Production systems are usually subject to the strongest security measures.

However, when your production systems are locked down, there is always the risk that hackers will set their sights on vulnerable test and development environments. But replicating the same measures that provide a high degree of protection in production may not necessarily be the best approach for testing.

Industry analysts recognize that data de-identification provides a viable alternative for protecting data privacy in test environments. For example, masking alphanumeric characters provides one of the most basic examples of substituting confidential data with fictionalized data that is still meaningful in the context of the application test. Similarly, capabilities for generating random or sequential numbers could be used to de-identify customer bank accounts, telephone numbers and more.

By implementing capabilities that allow you to mask or transform sensitive information, you have the data management strategies you need to protect data privacy and preserve the integrity of your data.

Establish Effective Compliance and Retention Policies

Faced with a wide range of data retention regulations, such as the Sarbanes-Oxley Act, SEC-17a, Basel II and others, companies must preserve and retain historical data for specified periods of time to meet compliance requirements. This enterprise data must remain easily accessible so that companies can respond to audit or discovery requests. Although much of the historical data retained for compliance reasons may never be needed again, non-compliance carries the risk of severe penalties.

Enterprise data management strategies offer a proactive approach for analyzing the different types of data within your organization and defining the value of each set of data at various points in the lifecycle. Communication between IT and business users is essential for defining business policies that determine what and when data can be archived, where it should be stored, how long it should be retained, and who can have access.

By automating business processes that segregate current active data from historical transactions, you have more control for implementing retention policies based on the business value of the data and your access requirements. Archived reporting and reference data is preserved in its original business context and can be managed on a variety of storage media in an immutable format, ensuring compliance and easy access on demand. Your IT staff can implement database archiving and storage strategies that allow you to meet accessibility requirements for compliance, while lowering costs.

Maintain Information Security

Any breach of information security that jeopardizes sensitive or proprietary information can ruin your company's reputation, your customer relationships and ultimately your business. Your data security strategy must address risk of breaches both internal and external to your organization. You must also consider both technical and organizational measures for safeguarding enterprise application data.

For example, the databases that manage your application data provide built-in security and authorization schemes that allow database administrators to control and limit access. Similarly, your enterprise applications provide role-based permissions that limit access to application functions, options and information. At a higher level, enterprise data management strategies enable you to define organizational security policies for managing, safeguarding and protecting your data no matter where it lives.

Communication between your functional business users and IT is essential for defining authorization levels and permissions that limit access to enterprise data at various tiered storage levels. Storage alternatives guarantee to keep data secure and in an immutable format. Enterprise data management strategies enable you to continually monitor, update and improve security measures for all your information storage and retrieval systems.

3. SIMPLIFY YOUR IT INFRASTRUCTURE

With emphasis on controlling costs and mitigating risk, IT organizations are striving to leverage existing investments and reduce infrastructure complexity. Enterprise data management can help you manage continued data growth, reclaim underutilized capacity, and optimize your application portfolio to make the best use of your IT resources.

Control and Manage Continued Data Growth

The rapid growth of application data in production systems is replicated across all “cloned” environments, such as development, quality assurance and staging environments. Adding to the complexity, it is not uncommon for organizations to maintain several backup copies of critical data or to implement mirrored databases that provide assurance against data loss.

As data is duplicated, storage and maintenance costs increase proportionally. The “multiplier effect” increases capacity requirements and limits the amount of space available for further database growth or emergencies. Unless companies can find ways to streamline the source copy of the data, the expense will quickly become prohibitive.

Enterprise data management allows you to take a proactive approach that addresses the challenges of the multiplier effect, without diverting additional resources from IT business initiatives. By implementing archiving to segregate current from historical transactions and moving the data to a secure archive, you can effectively maintain application databases at a manageable size. Using subsetting capabilities creates “right-sized” test and development databases, reducing the multiplier effect even further.

Once you establish the data management policies for your production and testing environments, much of the required processing is automated. Routine archiving provides consistent results for managing the impact of the multiplier effect across your enterprise.

Implement Lifecycle Storage Strategies

In an effort to optimize storage usage and lower the long-term costs, IT organizations are focused on improving the way enterprise data is managed throughout its lifecycle. Typically, an effective approach for managing and storing application data is to compare its business value against the cost to access it in a timely manner, and then select the appropriate storage medium to meet your business objectives.

Increasing your data management options lowers costs and minimizes risk. Enterprise data management strategies offer a variety of options that help you get the most value from the storage resources you have. By segregating active data from historical data, based on its business value, you can optimize utilization and defer the cost of high-speed maintained in an immutable format on a secure WORM (Write Once, Read Many) device, where defined policies govern its access and ultimate resources and still satisfy access requirements.

For instance, it makes sense to manage active data in a high-performance storage environment for rapid transaction throughput. Reporting data can be relocated to mid-tier storage, so you control costs while still meeting service requirements. Finally, reference data can be disposal. The flexibility of enterprise data management allows IT organizations to leverage the best price/performance platform for storing enterprise data throughout its lifecycle.

Optimize Your Application Portfolio

Periodically reviewing your application portfolio helps you balance the cost of operating and maintaining your applications against the business value they provide. Your objectives may be to eliminate redundancy, migrate applications to more cost-effective platforms, or reduce dependence on systems that are no longer supported by the vendor. In all cases, you must

preserve access to enterprise data, even after systems and applications have been retired from service.

The first step is to gain an understanding of the business value that each application contributes to your company's bottom line, as well as the relative importance of the application data. Communication and cooperation between your business functional users and IT is essential. Next, estimate your operating costs, considering the degree of interoperability or redundancy with other systems and applications.

Finally, analyze and quantify your findings. Where the business value is greater than cost, applications should be maintained, upgraded or extended. Where costs are disproportionately high, look for ways to reduce costs or increase business value. Where redundancy exists, or cost cannot be eliminated, the applications may be good candidates for consolidation or decommissioning.

You can deploy effective enterprise data management strategies to decommission or remove an application, database or platform from service, while retaining access to business-critical data for reporting or audit requests. Decommissioning redundant, unnecessary or technologically obsolete systems helps you reduce infrastructure costs and complexity. Reclaimed and underutilized IT assets and resources can be redirected to other business purposes that offer more business value.

4. ENSURE BUSINESS CONTINUITY

Many businesses routinely operate on a 24/7 basis. In this environment, any extended downtime, even for routine application and database maintenance, is unacceptable. Enterprise data management strategies allow you to minimize risks during upgrades and migrations and complete backup and recovery operations well within service level requirements.

Minimize Risks during Upgrades and Migrations

Upgrading your mission-critical ERP and CRM applications is an inevitable part of the application lifecycle. Your objective is to provide internal users and customers with the advantages of new features and functionality. However, upgrading databases that are overburdened with large volumes of historical data can be risky because there is much more data to convert. The upgrade process may even take your applications out of service for extended periods of time until the installation of the upgrade or new release is complete. Extended downtime can cost millions, and lost business cannot be recovered.

Enterprise data management helps you future-proof your upgrade strategy, providing a proactive approach for faster, safer upgrades and data migrations. By segregating historical from current application data before upgrading to a major new application release, there is far less data to migrate during production cutover. You can effectively reduce the transition time and minimize the risk of unnecessary downtime. Implementing new upgrades and software releases can be accomplished much faster, ensuring rapid deployment of new releases and functionality to your business users and customers.

Speed Backup and Recovery

Maintaining business continuity is a day-to-day objective. Your IT organization must have backup and recovery procedures in place to ensure the availability and access to your enterprise application data. However, the corporate data explosion has stretched backup processes to the point where processing can run over into open-for-business hours. Similarly, increasing data replication requirements coupled with escalating data growth, can negatively impact disaster recovery processes and recovery times.

With overloaded application databases, all the data (including years of historical information) must be backed up or recovered, just to get current business-critical data back online. Without a proactive approach for safely removing historical data from production databases, these problems only worsen over time.

Implementing enterprise data management strategies to classify and segregate historical data from current activity provides a proactive approach that streamlines application databases and simplifies your IT infrastructure. When your primary production

databases contain only current transactions, you can count on faster backups and smaller databases at a “fail-over hot site” for faster recovery.

Many disaster recovery plans have service level agreements (SLAs) requiring that recovery be completed within a specified timeframe. Enterprise data management helps IT organizations meet these requirements by making it possible to recover operational data and rebuild alternate databases in much less time. After the critical systems are operational, you can use a phased recovery plan to restore archived data. Efficient backup and recovery operations ensure business continuity, enabling you to resume critical operations, as quickly as possible.

Increase Application Availability

Your objective is to ensure that your enterprise applications and databases are operational during open-for-business hours, across geographic boundaries and time zones. Maintaining availability, while completing planned application and database maintenance and handling emergency fixes, can strain your limited resources. Managing large application databases can increase the amount of time required for routine maintenance tasks and in some cases require downtime that can impact service levels.

Enterprise data management strategies can help you take a proactive approach for maintaining application databases at a manageable size. Including routine database archiving as part of your scheduled application and database maintenance procedures provides ongoing control for managing data growth. You meet performance targets consistently, while providing superior customer service.

5. FOCUS ON BUSINESS VALUE

Enterprise applications deliver business value when they provide the transaction processing and reporting capabilities you need to optimize daily operations and to make prompt, accurate decisions. Enterprise data management strategies empower you to manage, retain and control mission critical application data so you can derive the greatest business value from your application portfolio.

Align Application Data Management with Business Objectives

With the growth of eBusiness and reliance on the Internet, faster application performance is more critical than ever, requiring more frequent and larger increases in capacity to satisfy the demand. As the amount of information increases, so do maintenance burdens. Response time slows. Service levels decline and access to decision-making information becomes more difficult. Traditional approaches for maintaining service levels, like capacity upgrades and intensive tuning, provide only temporary benefits.

Effective enterprise data management enables you to align application data management with your business processes to consistently achieve performance targets. You define business policies that segregate current from historical transactions. You can also implement tiered storage strategies that manage and store application data intelligently, based on its business value and access requirements.

For example, high-speed access is reserved for current, active data. Reporting data may reside on less expensive mid-tier storage, so you control costs while still meeting business needs. To further reduce costs, you can store historical or reference data offline to tape or other long-term storage devices. Maintaining reference data in an immutable format on a secure WORM (Write Once, Read Many) device enables you to protect historical data for regulatory compliance.

No matter how you define the desired balance between performance and cost, your data remains accessible. You can provide superior service and ensure customer satisfaction.

Improve Business Intelligence and Content Management

Business intelligence expands the efficiency and effectiveness of your operations by improving the accessibility and flow of data within your organization. Content management is the process of ensuring accessibility of information that is vital to your organization.

Your business objective is to control access to information and get the right information to the right people at the right time, so they can make better and faster decisions. However, increasing volumes of current and historical enterprise application data make it more difficult for decision makers and business users to access the information and respond appropriately.

Enterprise data management can help you organize and manage your enterprise application data to provide timely accessibility. Improving the flow of information directly improves decision making and business processes. As a result, you can mobilize your resources quickly to meet evolving conditions and ultimately achieve your business objectives.

6. MAXIMIZE BUSINESS VALUE ACROSS THE ENTERPRISE

You invest millions in your enterprise applications and the supporting infrastructure to ensure optimal operating performance, improve decision-making and gain a competitive advantage. IBM OPTIM™ provides the power of enterprise data management, so you can derive the most business value across your enterprise.

Implement a Consistent Data Management Methodology

IBM OPTIM provides a single solution for managing enterprise application data throughout every stage of the information lifecycle. Now you can assess and classify application data by age and status. You can apply business rules to archive, subset, access, store, retain and protect your enterprise data. Optim capabilities are based on a consistent and proven data management methodology that aligns with your business objectives and scales across applications, databases, operating systems and hardware platforms.

IBM OPTIM supports all major enterprise databases and operating systems, including Oracle, UDB, Sybase, SQL Server, Informix, DB2, IMS, VSAM, Windows, Unix, Linux and z/OS. And it supports the key ERP and CRM applications in use today — Oracle E-Business Suite, PeopleSoft Enterprise, JD Edwards EnterpriseOne, Siebel and Amdocs CRM, as well as your custom and packaged applications.

Optimize Performance, Mitigate Risks, Control Costs

Exploit the power of Enterprise Data Management to realize measurable business value across your enterprise:

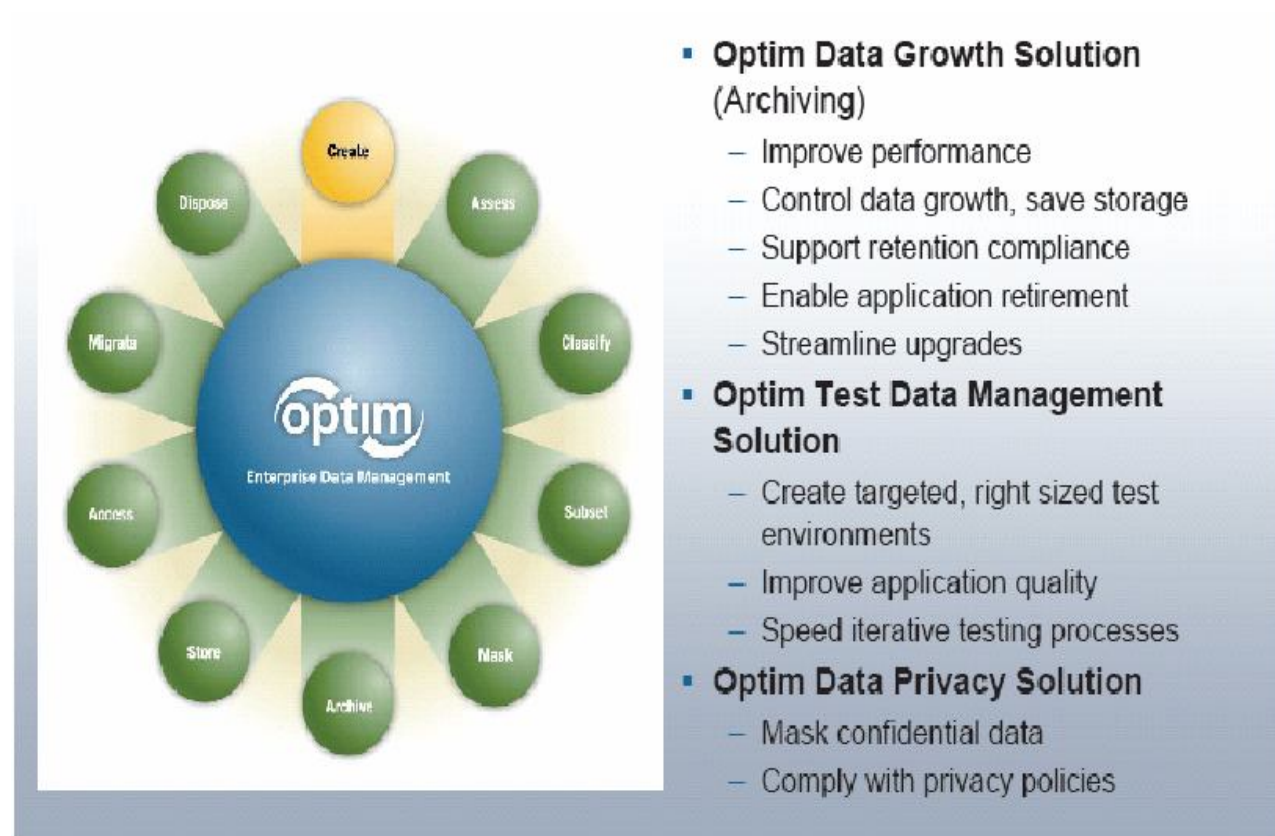
- Align application performance to business processes and profit from superior performance and availability
- Simplify database administration, ensure business continuity and speed disaster recovery
- Streamline application and database upgrades and reduce resource requirements for key IT operations
- Automate data retention to support compliance initiatives and respond quickly and accurately to audit and discovery requests
- Leverage existing investments in applications, databases and storage and eliminate IT budget variances

IBM OPTIM is designed to ensure successful implementation. IBM Enterprise Data Management experts work with your project team to define business objectives and processes for managing enterprise application data in your environment. After implementation, you can count on IBM for ongoing optimization and technical support.

IBM: The Proven Leader in Enterprise Data Management

IBM provides enterprise solutions which align application data management with business objectives. Our industry leading OPTIM solution enables organizations to optimize performance, mitigate risks and control costs. Partnered with the market leaders in business technology, we deliver capabilities that scale and support your enterprise – applications, databases and platforms. More than 2,200 companies worldwide – including nearly half of the Fortune 500 – rely on IBM's proven solutions to maximize the business value of their enterprise applications and databases.

7. OPTIM SOLUTIONS AND ENTERPRISE ARCHITECTURE



“ [Optim] customers spoke highly of the reliability and high performance of its archiving solution, which sets it apart from other vendors in this space.

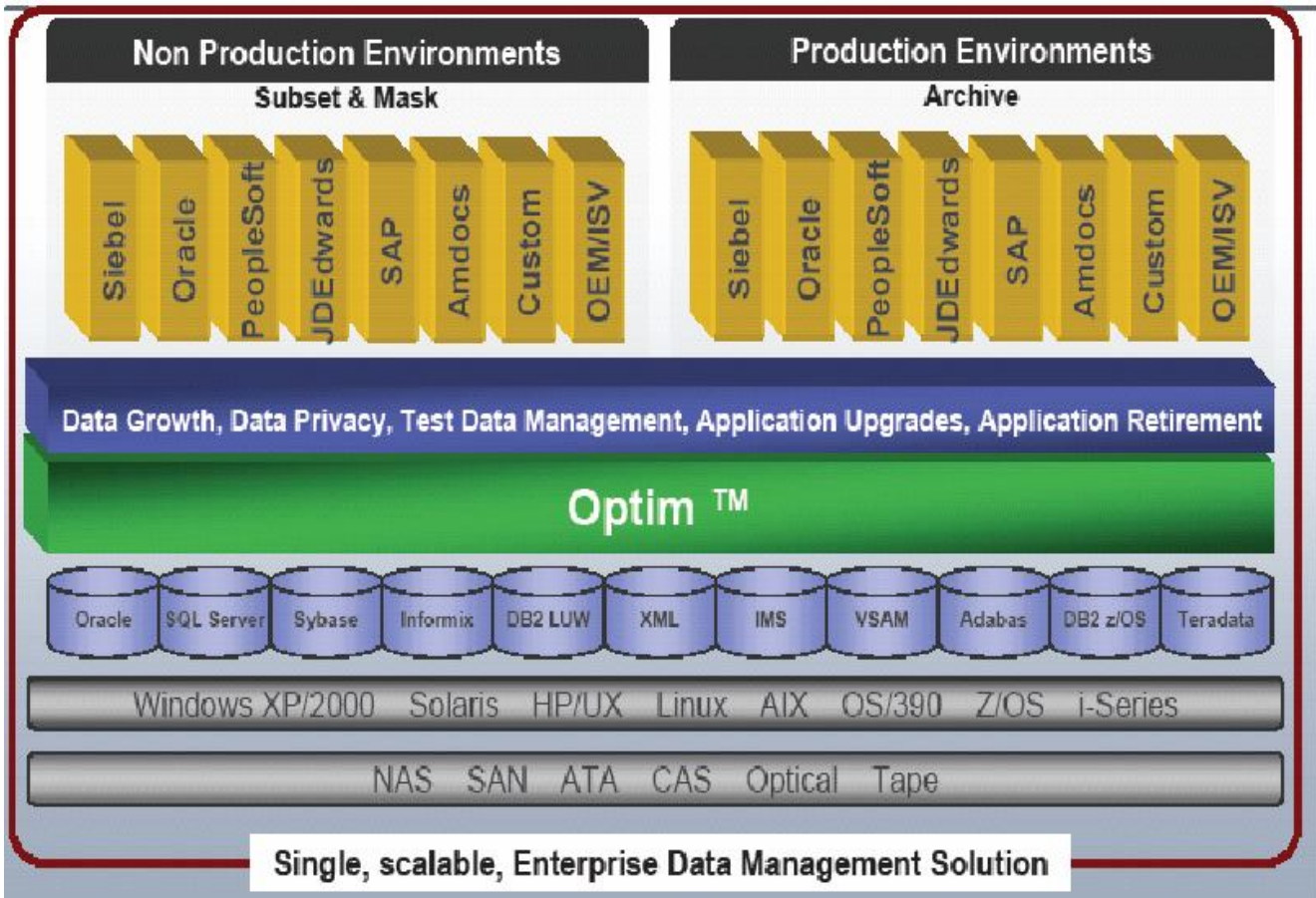
-- Forrester Research

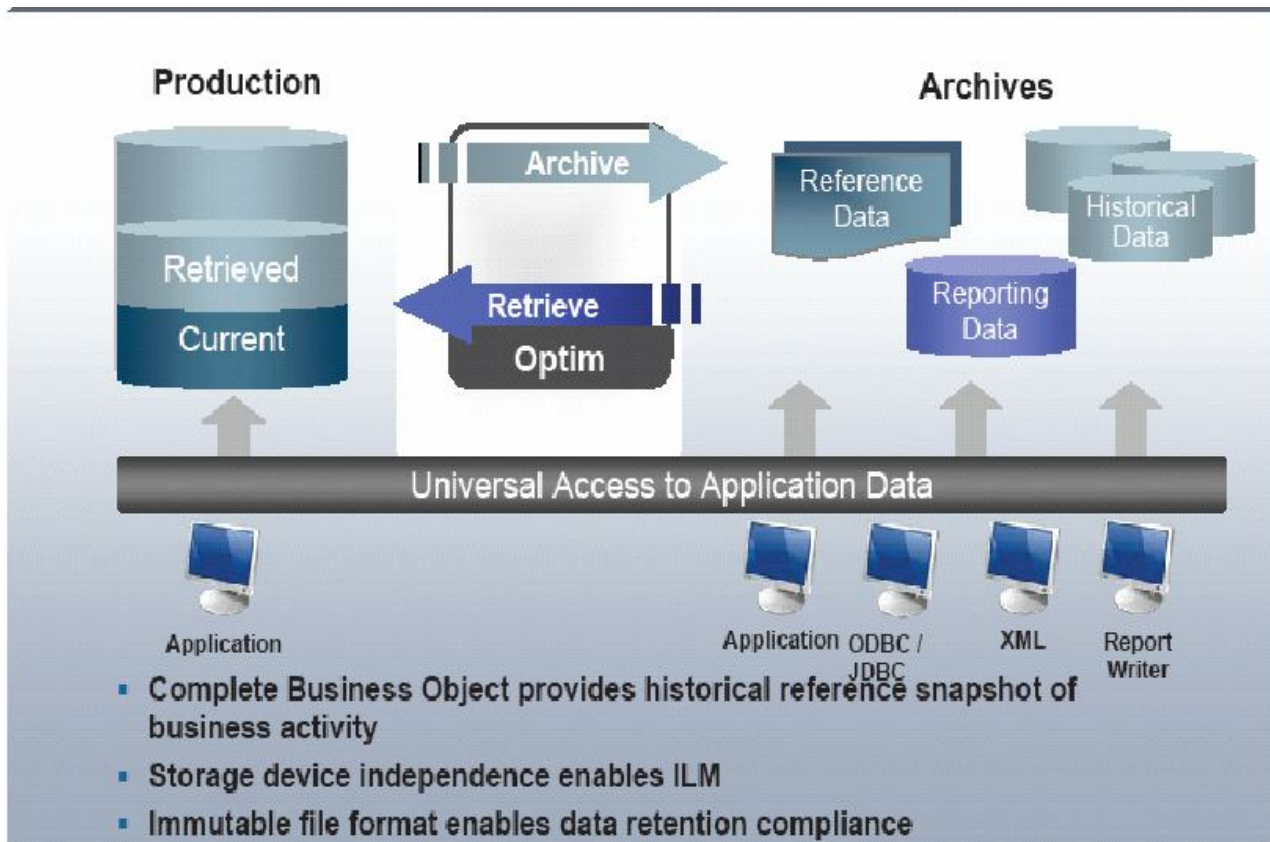
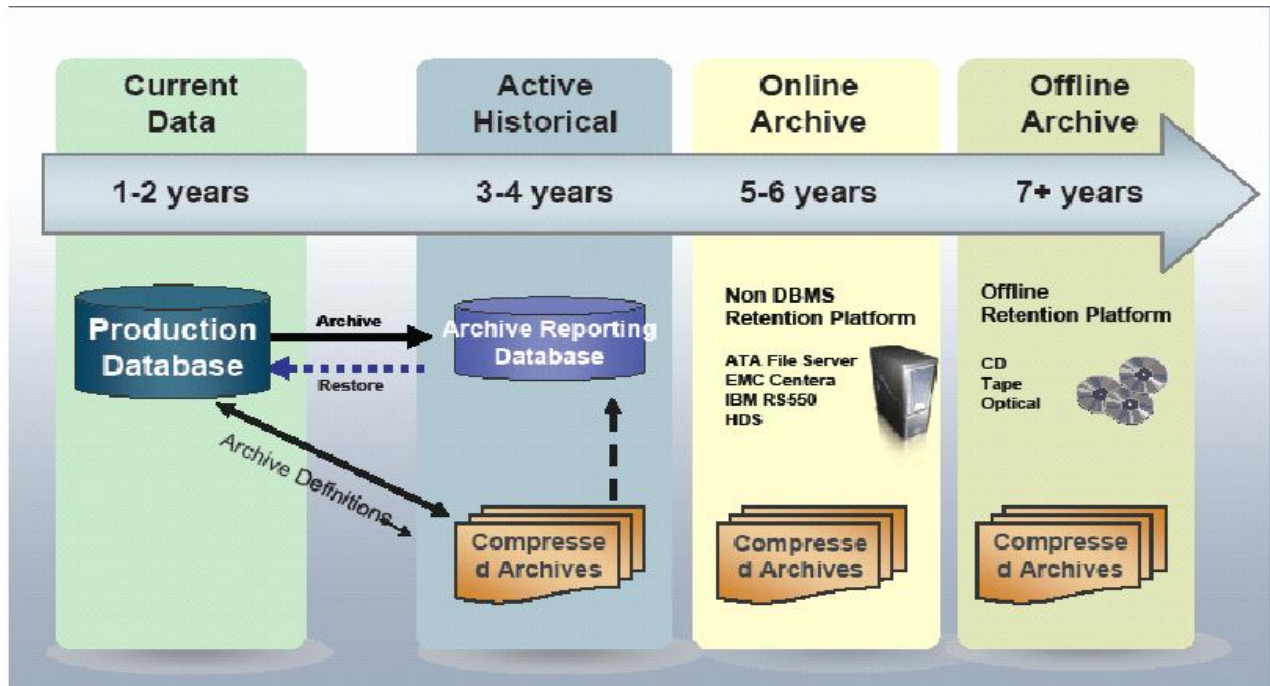


Gartner predicts 38% CAGR

- IBM
- HP/Outer Bay
- Applimation
- Others

Sources: Gartner, "Archiving Software Market to Experience Strong Growth Through 2010," 2006; Forrester Research, "Database Archiving Remains An Important Part Of Enterprise DBMS Strategy," 2007





8. OUR ENTERPRISE CLIENTS INCLUDE.....

Our Enterprise Clients include...



For More Information: To learn about IBM Software Services for Information Management (Including IBM OPTIM), please contact your local IBM sales representatives. You can also visit ibm.com/software/data/services