InfoSphere Optim:
Information Lifecycle Management Solutions
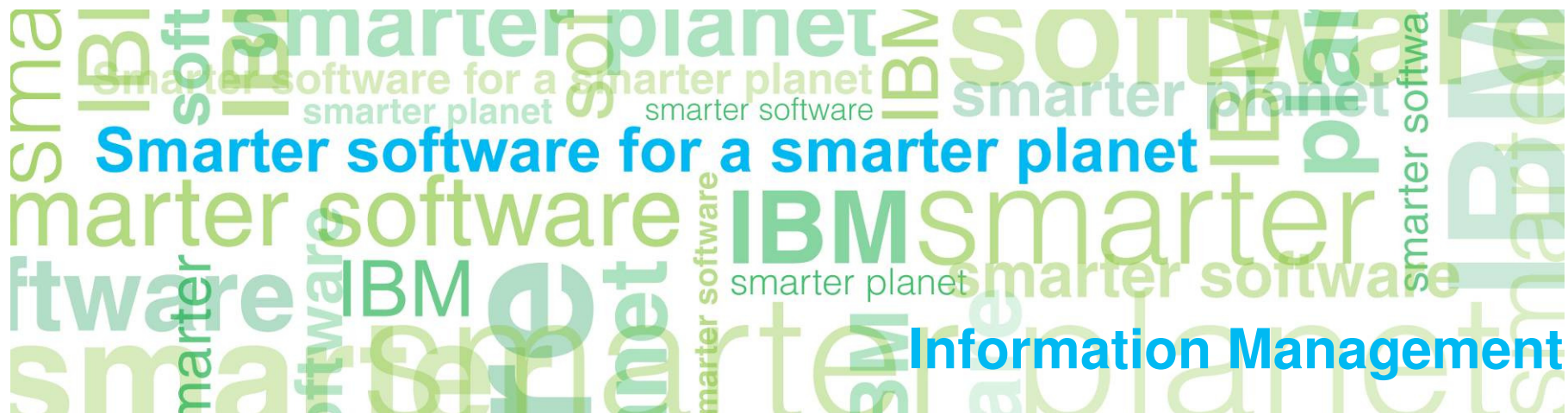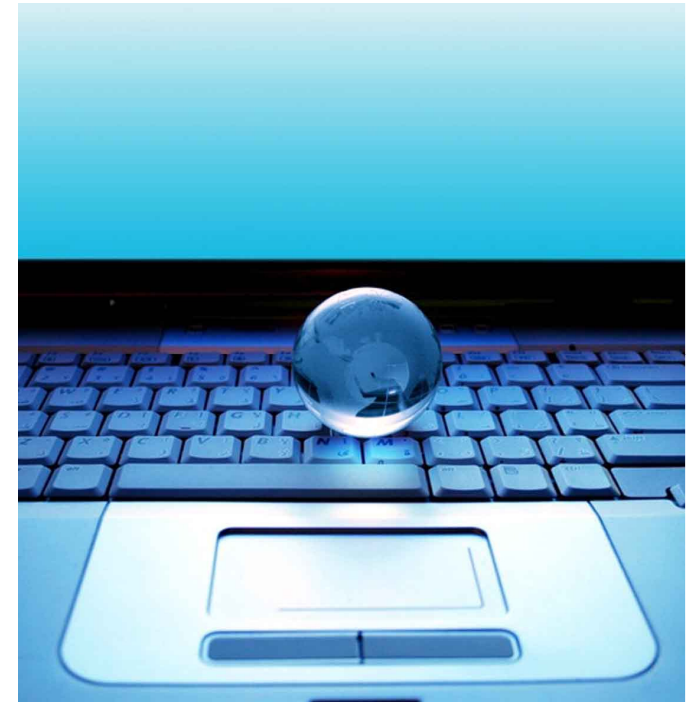
Information Management

Agenda

- Challenges of Data Management in application development

- Lifecycle Optimization with InfoSphere Optim Solutions
  - *Understand and Define*
  - *Develop and Test*
  - *Optimize, Archive and Access*
  - *Consolidate and Retire*

- Backup slides:
  - Optim Solutions for SAP® Applications
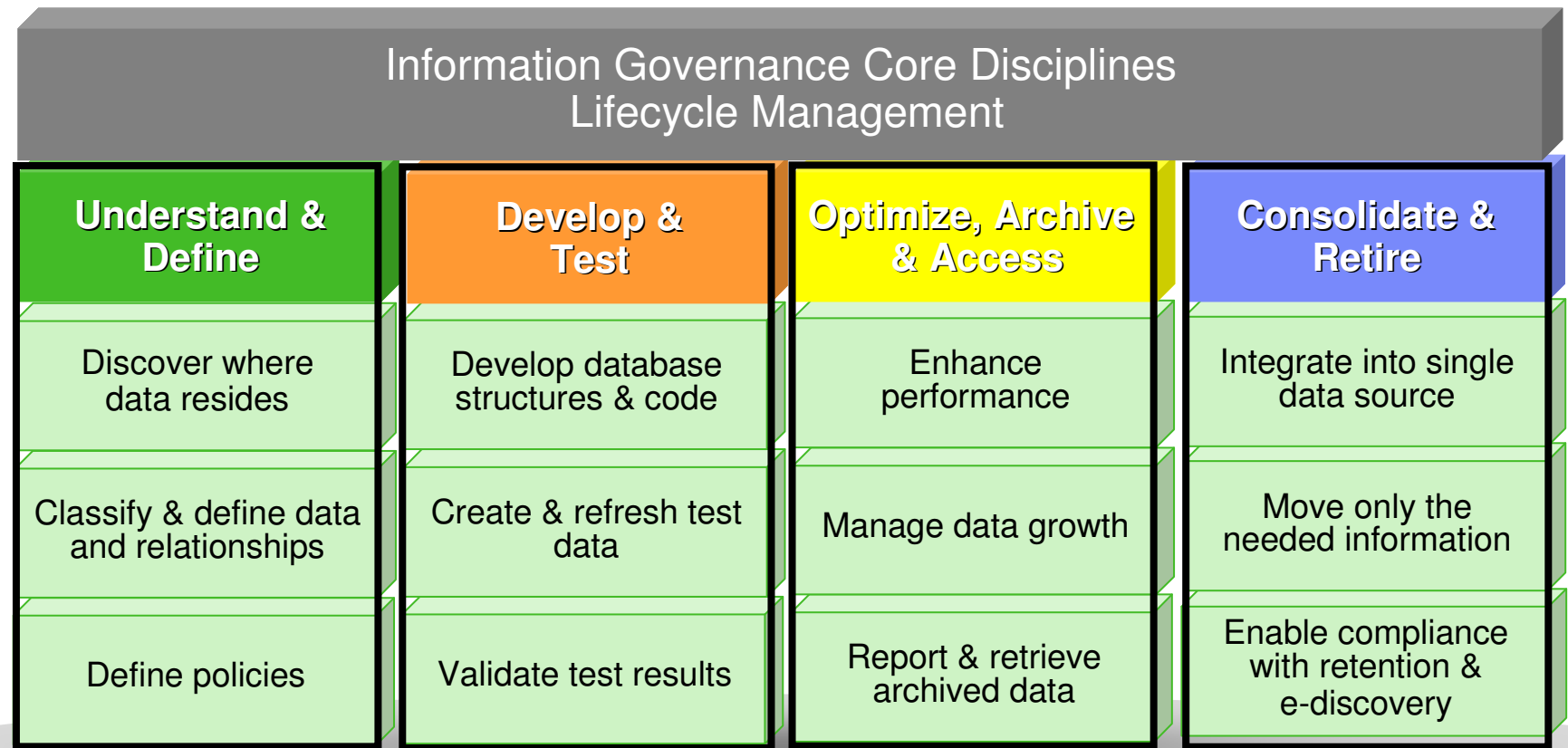 - Common features of InfoSphere Optim Solutions

Challenges of poor data management in enterprise applications

- **New application functionality to meet business needs is not deployed on schedule**
  - No understanding of relationships between data objects repeatedly delays projects
  - Greater data volumes take longer to clone, test, validate and deploy which results in longer test cycles
- **Unintentional disclosure of confidential data kept in test/development environments**
- **Application defects are discovered after deployment**
  - Costs to resolve defects in production can be 10 – 100 times greater than those caught in the development environment
- **Increased operational and infrastructure costs impact IT budget**
  - Cloning databases requires more storage hardware
  - Larger databases impact staff productivity and could mean additional license costs

Forrester estimates that 75% of data stored in large OLTP applications is typically inactive.

Source: Noel Yuhanna, Forrester Research Inc.,
Your Enterprise Data Archiving Strategy, February 2011

Requirements for managing data across its lifecycle

Information Governance Core Disciplines
Lifecycle Management

Understand & Define	Develop & Test	Optimize, Archive & Access	Consolidate & Retire
Discover where data resides	Develop database structures & code	Enhance performance	Integrate into single data source
Classify & define data and relationships	Create & refresh test data	Manage data growth	Move only the needed information
Define policies	Validate test results	Report & retrieve archived data	Enable compliance with retention & e-discovery

Developers Team
Operations Team
Application Owners
& Data Stewards
DBAs
DBA & QA Teams

"I need to consolidate & integrate data across multiple systems."
"I need to identify bottlenecks in system performance."
"I need to understand what data exists and how its related in order to define the policies and standards to manage that information as it ages. "
"I need to rapidly move test data and refresh test databases quickly"
"I need a method to tune application performance and archive aged data."
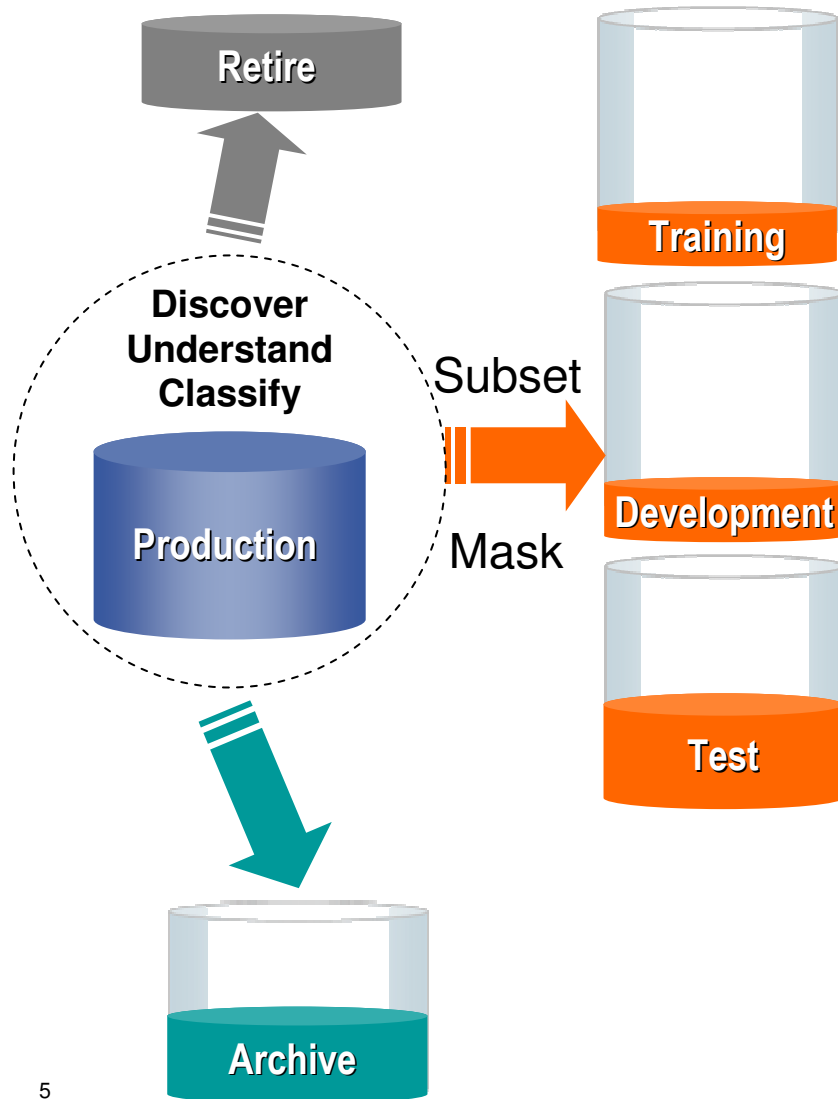*"applications in order access to it on-demand."*

A2   Remove Access
               Author; 23/11/2010

IBM InfoSphere Optim solutions
Managing data throughout its lifecycle in heterogeneous environments

Retire

Discover Understand Classify

Production

Subset

Mask

Training

Development

Test

Archive

Discover
- Speed understanding and project time through relationship discovery within and across data sources
- Understand sensitive data to protect and secure it

Test Data Management
- Easily refresh & maintain right sized non-production environments, while reducing storage costs
- Improve application quality and deploy new functionality more quickly

Data Privacy
- Protect sensitive information from misuse & fraud
- Prevent data breaches and associated fines

Data Growth Management
- Reduce hardware, storage & maintenance costs
- Streamline application upgrades and improve application performance

Application Retirement
- Safely retire legacy & redundant applications while retaining the data
- Ensure application-independent access to archive data

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You can't govern what you don't understand

Understand & Define

Distributed Data Landscape
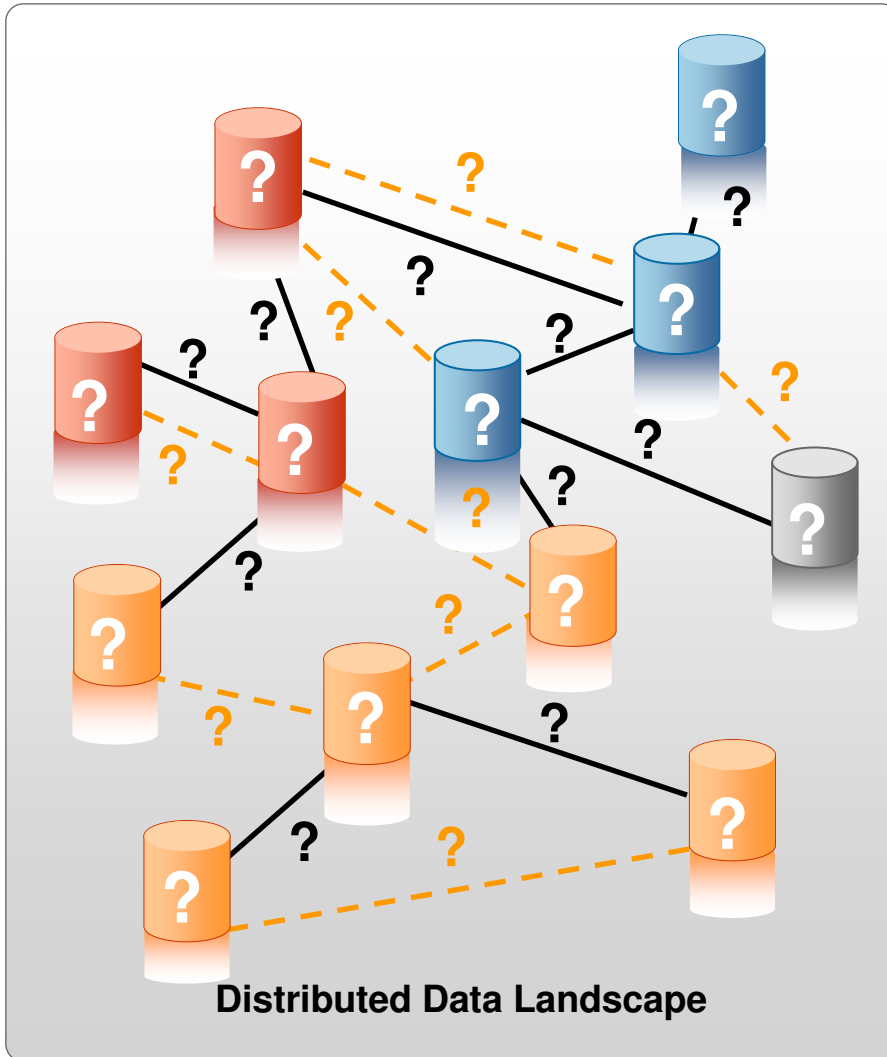
- **Data can be distributed over multiple applications, databases and platforms**
  - Where are those databases located?

- **Complex, poorly documented data relationships**
  - Which data is sensitive, and which can be shared?
  - Whole and partial sensitive data elements can be found in hundreds of tables and fields

- **Data relationships not understood because**:
  - Corporate memory is poor
  - Documentation is poor or nonexistent
  - Logical relationships (enforced through application logic or business rules) are hidden
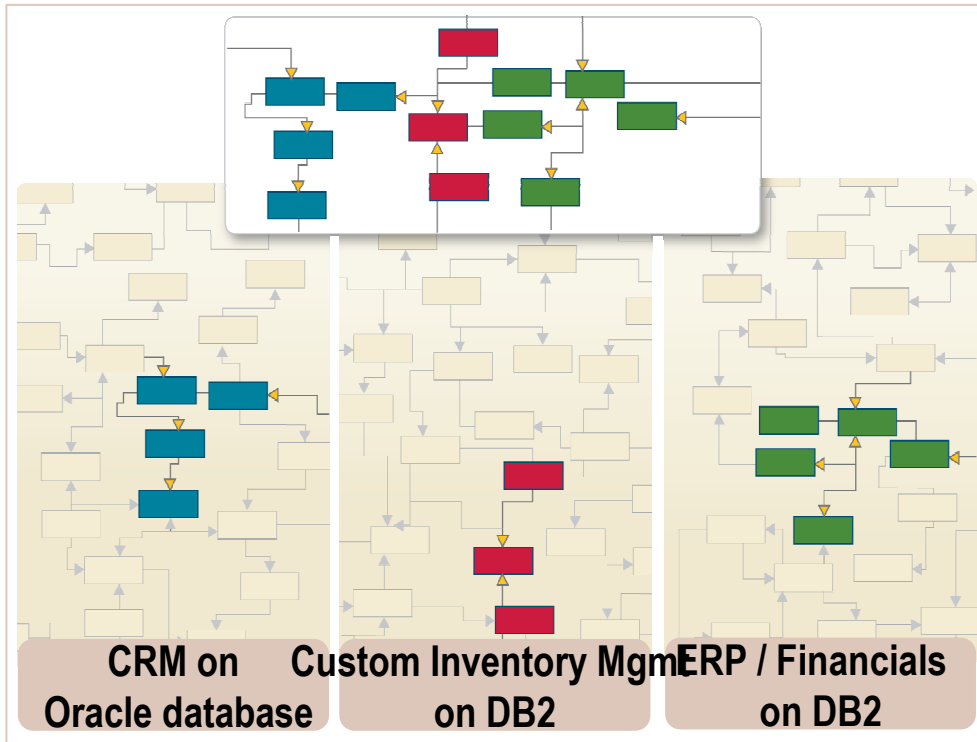
IBM InfoSphere Discovery

Discovery

Accelerate project deployment by automating discovery of your distributed data landscape

CRM on Oracle database   Custom Inventory Mgmt on DB2   ERP / Financials on DB2

Requirements

- Define business objects for archival and test data applications

- Discover data transformation rules and heterogeneous relationships

- Identify hidden sensitive data for privacy

Benefits

- Automation of manual activities accelerates time to value

- Business insight into data relationships reduces project risk

- Provides consistency across information agenda projects

The impact of inefficient test practices
Challenges in Test Data Management

"We did not want to create 'fake' or unrealistic test data. All test data had to be created and set up manually. So it would take us a month to setup test data for 30 or more accounts."

-- Large US Healthcare Insurer

"We needed to improve efficiencies in development and testing environments, as well as our production environments. We can create realistic test environments that use much less disk space than we would by cloning the production database."
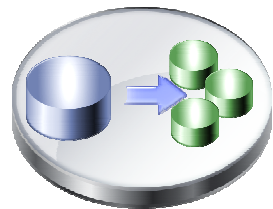
-- Allianz Seguros

"Our staff wanted to implement more efficient and cost-effective testing processes that would shorten the time for creating and managing multiple test environments."
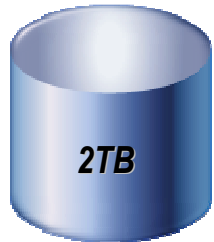
-- Cetelem

IBM InfoSphere Optim Test Data Management
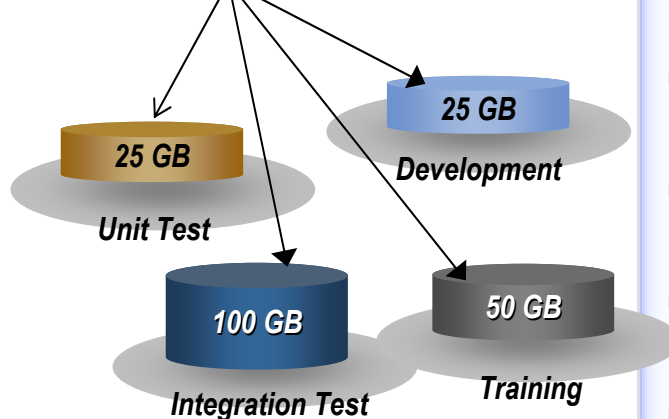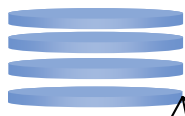
Develop & Test

Test Data Management

Create "right-size" production-like environments for application testing

Subset & Mask

2TB

Production or Production Clone

25 GB

Unit Test

25 GB

Development

100 GB

Integration Test

50 GB

Training

Requirements

- Create referentially intact, "right-sized" test databases

- Automate test result comparisons to identify hidden errors

- Protect confidential data used in test, training & development

- Shorten iterative testing cycles and accelerate time to market

Benefits

- Deploy new functionality more quickly and with improved quality

- Easily refresh & maintain test environments

- Protect sensitive information from misuse & fraud with data masking

- Reduce storage and operational costs

InfoSphere Optim TDM supports data on distributed platforms (LUW) and z/OS.

Out-of-the-box subset support for packaged applications ERP/CRM solutions as well as :

ORACLE e-businesssuite   **PeopleSoft.**   **SIEBEL**   **JDEdwards** Enterprise Software   **SAP**   **Other**

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IBM InfoSphere Optim Data Privacy Solution

Develop & Test

Mask data on demand

De-identify sensitive information with realistic *but fictional* data

Sensitive information is masked with realistic but fictional data

Requirements

- Protect confidential data used in test, training & development systems

- Mask data in applications and reports

- Implement proven data masking techniques

- Support compliance with privacy regulations

- Solution supports custom & packaged ERP applications

Benefits

- Protect sensitive information from misuse and fraud

- Prevent data breaches and associated fines
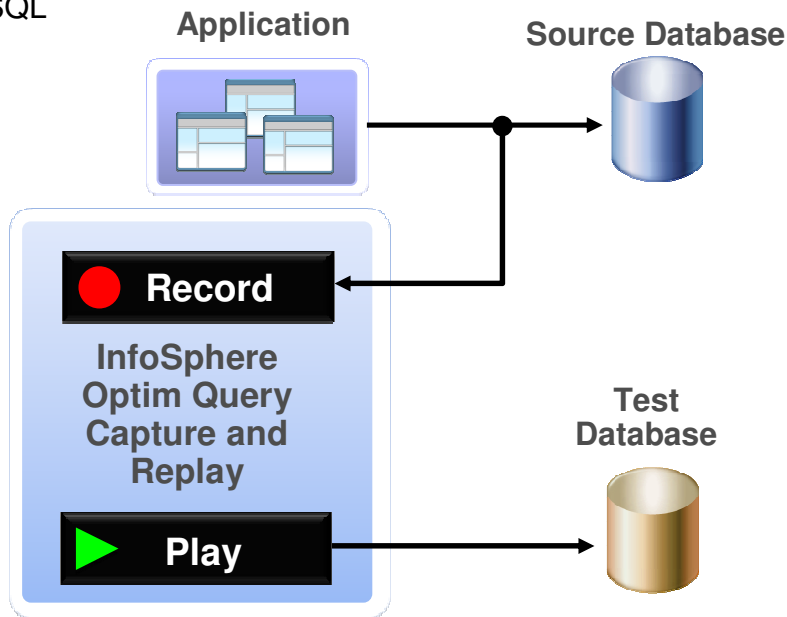
- Achieve better data governance

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IBM InfoSphere Optim Query Capture and Replay

Develop & Test

Record and replay SQL

Capture production workloads and replay them in testing environments

Application

Source Database

● **Record**

InfoSphere Optim Query Capture and Replay

Test Database

▶ **Play**

IBM DB2

IBM Informix

NETEZZA

MySQL

Microsoft SQL Server

ORACLE

TERADATA

SYBASE

Requirements

- Minimize unexpected production problems
- Shorten testing cycles
- Develop more realistic database testing scenarios

Benefits

- Identify database problems sooner with validation reports and performance tuning
- Use actual production workloads for testing rather than fabricated scenarios
- Extend quality testing efforts to include the data layer

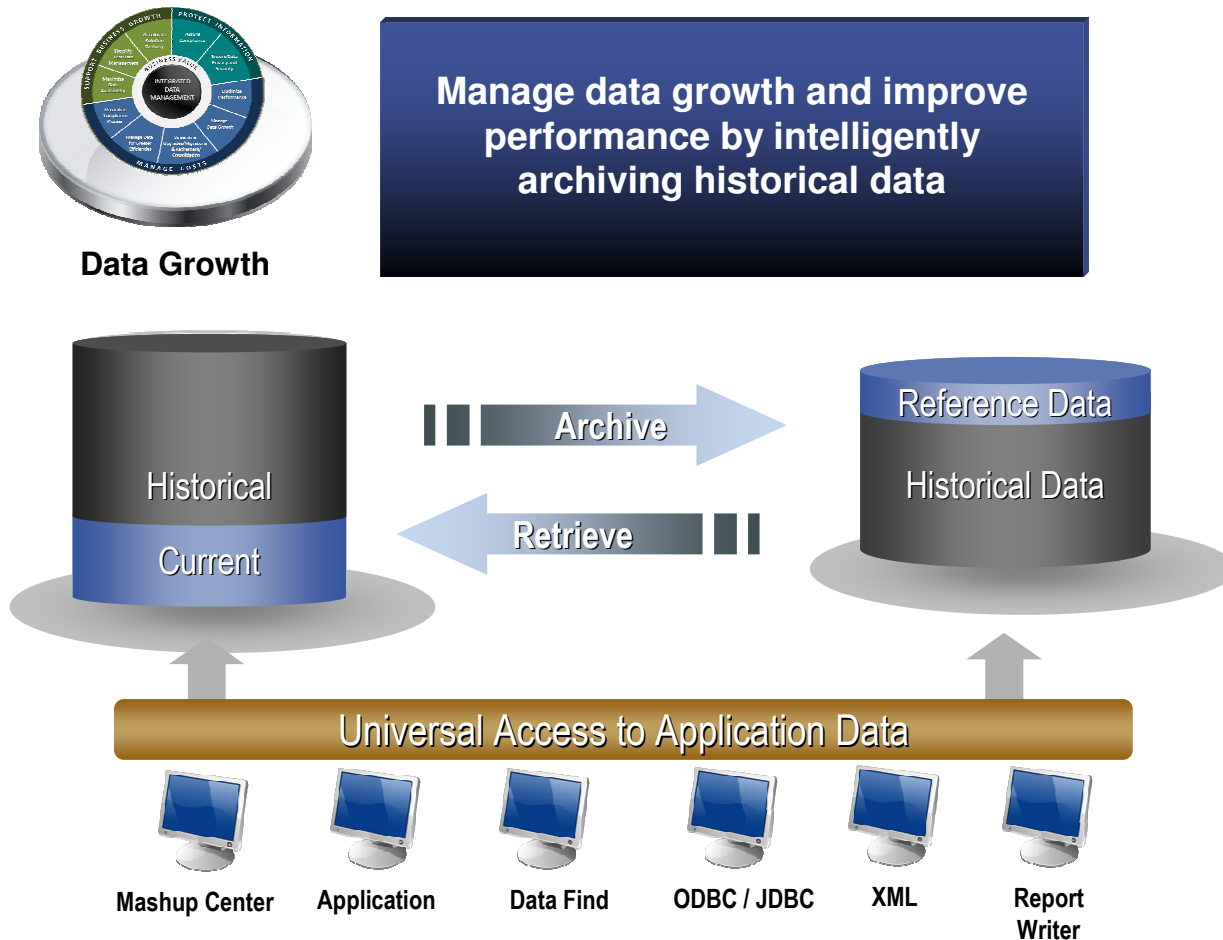# Challenges of exponential data growth

Optimize, Archive & Access

- Missed SLAs and declining customer satisfaction due to eroding or unpredictable application performance

- Transaction & data volume growth drive up infrastructure costs

- Multiple instances of production data – back-up, training, testing – can compound data growth

- Layered applications stack obscures visibility for problem isolation

- Archival processes are complex requiring full business context for e-discovery

Are you controlling your data, or is it controlling you?

IBM InfoSphere Optim Data Growth Solution

Optimize, Archive & Access

Data Growth

Manage data growth and improve performance by intelligently archiving historical data

Historical

Current

Archive →

← Retrieve

Reference Data

Historical Data

Universal Access to Application Data

Mashup Center | Application | Data Find | ODBC / JDBC | XML | Report Writer

InfoSphere Optim Data Growth supports data on distributed platforms (LUW) and z/OS.
Out-of-the-box archiving support for packaged applications available for ERP/CRM solutions:

ORACLE e-businesssuite | PeopleSoft | SIEBEL | JDEdwards Enterprise Software | amdocs | *Other*

Requirements

- Archive, manage and retain application data according to business policies
- Minimize downtime during application upgrades
- Consolidate application portfolio and retire legacy applications

Benefits

- Reduce hardware, storage and maintenance costs
- Streamline application upgrades and improve application performance
- Safely retire legacy & redundant applications while retaining the data

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# When it's time to retire or consolidate applications

Consolidate & Retire

- Application portfolio has redundant systems acquired via mergers and acquisitions

- Line of business divested; application is no longer needed

- Legacy technologies not compatible with current IT direction
  - Old database and/or application versions no longer supported by manufacturer

- Required technical skills or application knowledge no longer available

- Budget pressures – do more with less

In almost ALL cases, access to legacy data MUST be retained while the application and database are eliminated

IBM InfoSphere Optim Solution for Application Retirement

Consolidate & Retire
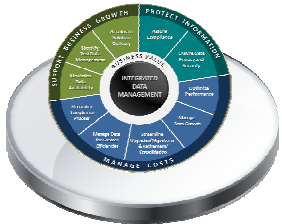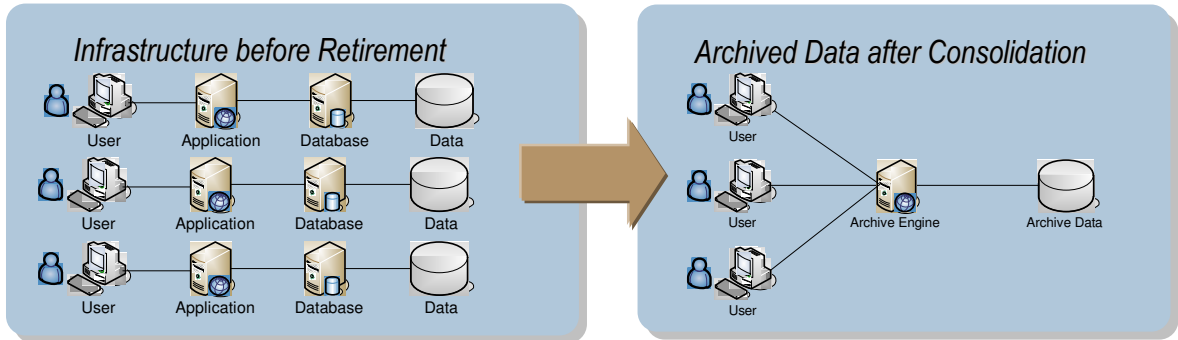
Application Retirement

Manage and provide access to application data as part of an application retirement project

Requirements

- Archive, manage and retain application data according to data retention policies

- Provide application independent access to archived data

- Consolidate application portfolio and retire legacy applications

Benefits

- Ensure compliance and access to valuable data

- Safely retire legacy & redundant applications while retaining the data

- Reduce hardware, storage and maintenance costs

Infrastructure before Retirement

User   Application   Database   Data
User   Application   Database   Data
User   Application   Database   Data

Archived Data after Consolidation

User
User   Archive Engine   Archive Data
User

Optim for SAP
Challenges Across SAP Application Lifecycle

Manage Lifecycle Events

- Support the complexities of SAP upgrades, support packs & enhancement packs
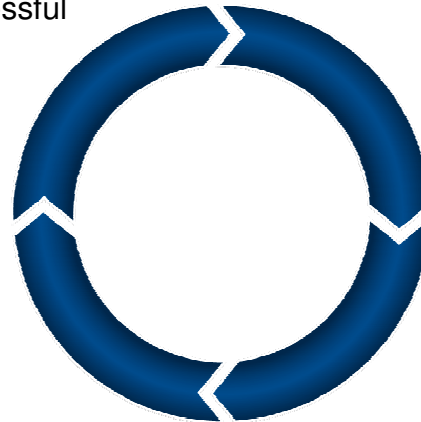- Avoiding errors and ensuring successful deployment

Sustain & Maintain

- Keep up with changing business processes & continuous improvements
- Struggle to manage life cycle project support better

Secure Data

- Ensure SAP data is secure
- Maintain on-going management & governance requirements

Reduce Infrastructure Costs

- Organizations need to reduce storage overhead
- Huge costs put into implementing ERP projects
- Costs associated with both production & non-production environments

Consolidate & Synchronize

- Consolidate SAP systems effectively
- Streamline landscape synchronizations

InfoSphere Optim System Analyzer for SAP® Applications
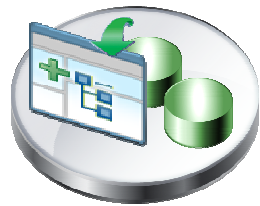
OSA for SAP

SAP Certified

Automatically identify SAP system changes & understand their impact to minimize risk

Requirements

- Automation to help solve on-going SAP lifecycle activities
- Detailed impact analysis, precise diagnostics & advanced reporting
- Pre-built templates to support major SAP lifecycle events and maintenance

Benefits

- Reduce time, cost, complexity & risk for SAP problem solving
- Eliminate manual effort of retrieving, comparing & reporting on SAP data
- Provide sophisticated real-time data to help solve any SAP lifecycle initiative
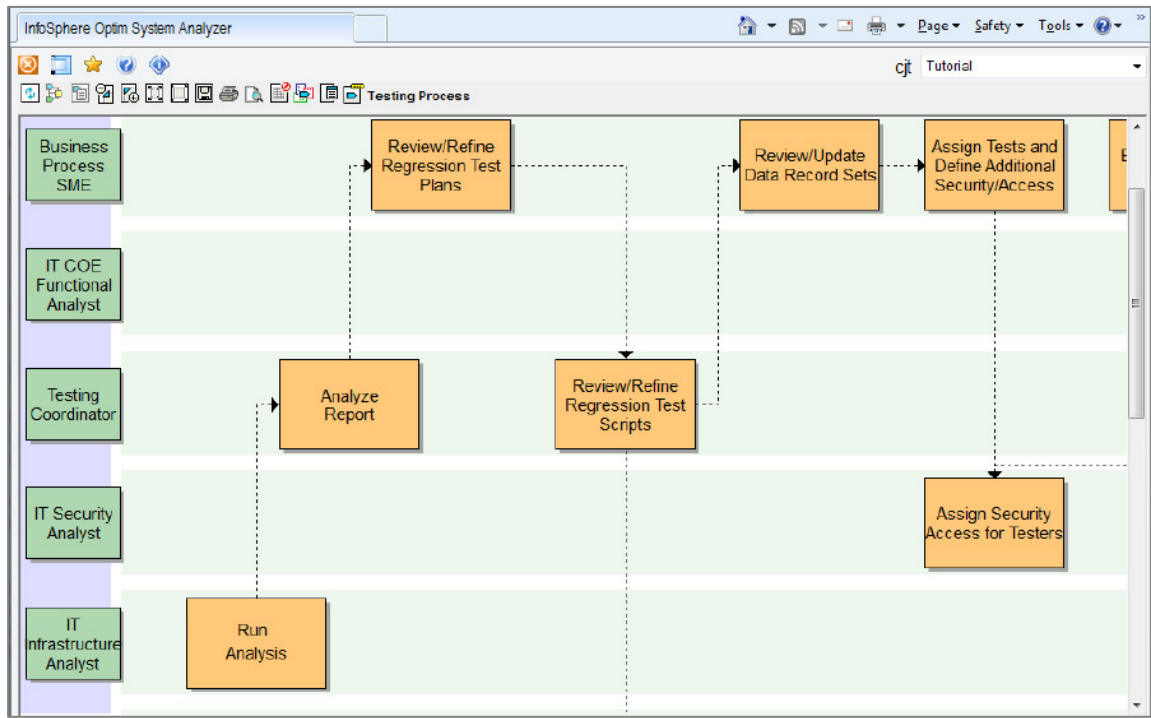
InfoSphere Optim Business Process Analyzer for SAP®

BPA for SAP

SAP Certified

> **Establish traceability between your SAP business processes and data structures**
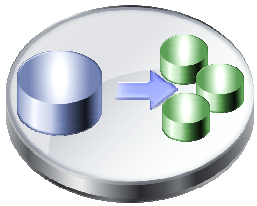

Requirements

- Automatically capture business process from your SAP data structures

- Visualize how changes will impact the business process

- Manage business processes in single- and multi-instance SAP landscapes

Benefits

- Improve collaboration between business user and technical user

- Ensure better visibility of the impact of changes to the SAP business process

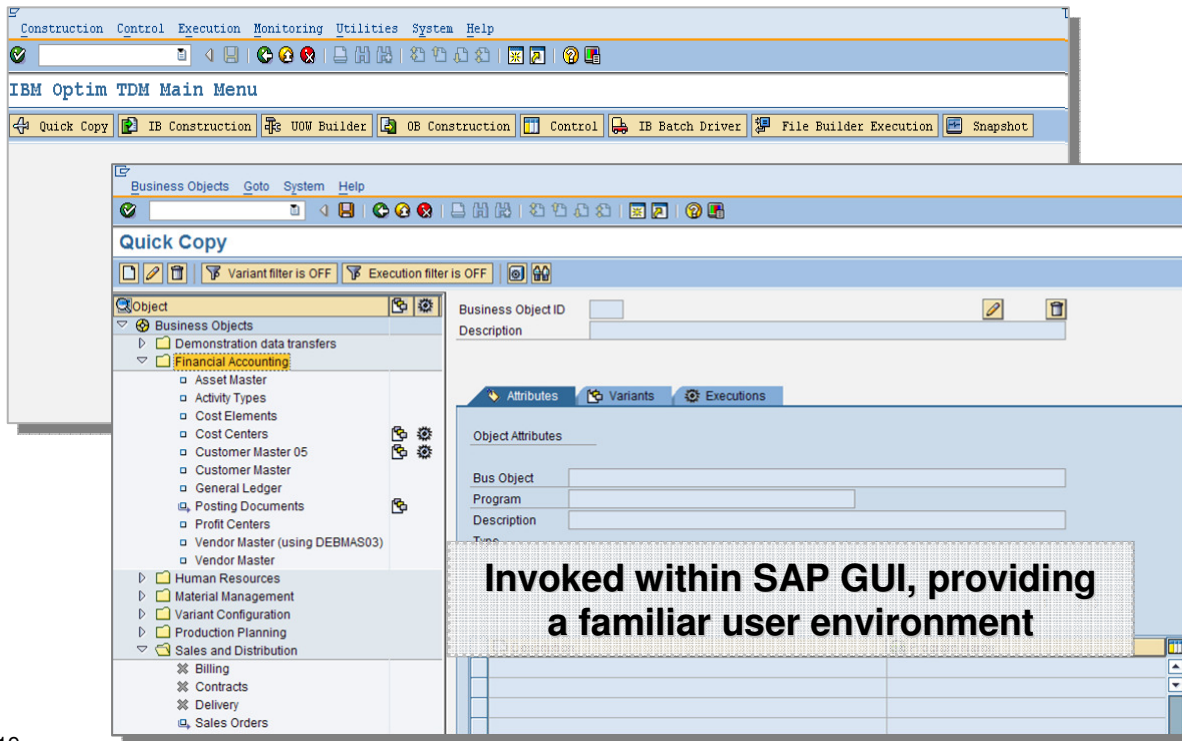- Mitigate risk early in the SAP application lifecycle

InfoSphere Optim Test Data Management for SAP®

TDM for SAP

SAP Certified

Create secure, "right-sized", real-world SAP data scenarios to improve the quality of development, testing & training

Invoked within SAP GUI, providing a familiar user environment

Requirements

- Creation of targeted subsets for test, development & training environments

- Pre-built business objects & user-defined criteria for extracting & masking data

- De-identify sensitive data leveraging predefined or custom data masking techniques

Benefits

- Improve operational efficiencies by shortening iterative testing cycles, reducing time, cost & risk

- Extract data & effectively mask with no client copy downtime or performance degradation

- Prevent data misuse or breaches without impacting testing cycles

SAP and IBM - Partnership That Makes a Difference

SAP AG Campus, Walldorf, Germany

- IBM: SAP's #1 Business Partner

- IBM: SAP's #1 Global Systems Integrator

- IBM: SAP's #1 Partner for Software Integration

- IBM: One of SAP's Largest Customers

- IBM: SAP's #1 Preferred Database is DB2

- IBM has many SAP global centers of excellence

- Extremely close development cooperation with joint long term planning

- Best integrated services & support

The relationship between IBM and SAP dates back 30 years and continues to be a strong, well-established partnership

IBM InfoSphere Optim supports the heterogeneous enterprise

IBM InfoSphere Optim

| Discover | Test Data Management | Data Masking | Manage Data Growth | Application Retirement |

Enterprise Environments

Custom · SIEBEL · ORACLE · PeopleSoft. · JDEdwards · amdocs · SAP · maximo · *Partner-delivered Solutions*

Oracle · SQLServer · Sybase · Informix · DB2 · IMS · Teradata · VSAM · Adabas · XML · More...

Windows · Solaris · HP/UX · Linux · AIX · z/OS · IBM i

NAS · SAN · ATA · CAS · Optical · Tape

Single, scalable, interoperable information lifecycle management solution provides a central point to deploy policies to extract, archive, subset, and protect application data records from creation to deletion

Why IBM InfoSphere Optim?

- **Most comprehensive, robust, solution in market**
  - Comprehensive discovery and Complete Business Object provides relationally intact data set that can be accessed independent of application and serves as audit ready snap shot of data in time
  - Comprehensive data restore capabilities including selective restore and restore directly from compresses archive files
  - Comprehensive test data management solution, allowing DBAs, testers and developers to access test data for testing
  - Wide array of access methods for archive data - Native application access as well as application independent methods

- **Efficient Archive Data Storage for reduced overall TCO**
  - Pioneered compressed archive file format; 7th generation of product using this format
  - Also supports XML and database formats

- **Single, Scalable, Enterprise Solution**
  - Widest support in terms of databases, operating systems, applications (custom/legacy and packaged), and storage system interfaces
  - Addressing mainframe data sources for over 20 years

Why IBM InfoSphere Optim?

- **Leading Market position**
  - Market leader as defined by IDC (56%) *
  - Over 2500+ customers worldwide

- **Strong Oracle partnership**
  - Oracle Certified Advantage Partner with a strong alliance with Oracle
  - Optim is the only solution in market that provides validated solutions for all major Oracle applications – Siebel, E-Business, PeopleSoft and JD Edwards
  - IBM GBS is world's largest provider of services for Oracle applications

- **Power of IBM behind the solution**
  - InfoSphere Optim is key component of IBM strategy for Information Governance
  - World-class software support
  - Integrations/synergies with other IBM products for data relationship discovery, archiving, content management, data transformation, data viewing, etc.

* Source: IDC - Worldwide Database Development & Management Tools 2009 Vendor & Segment Analysis, December 2010