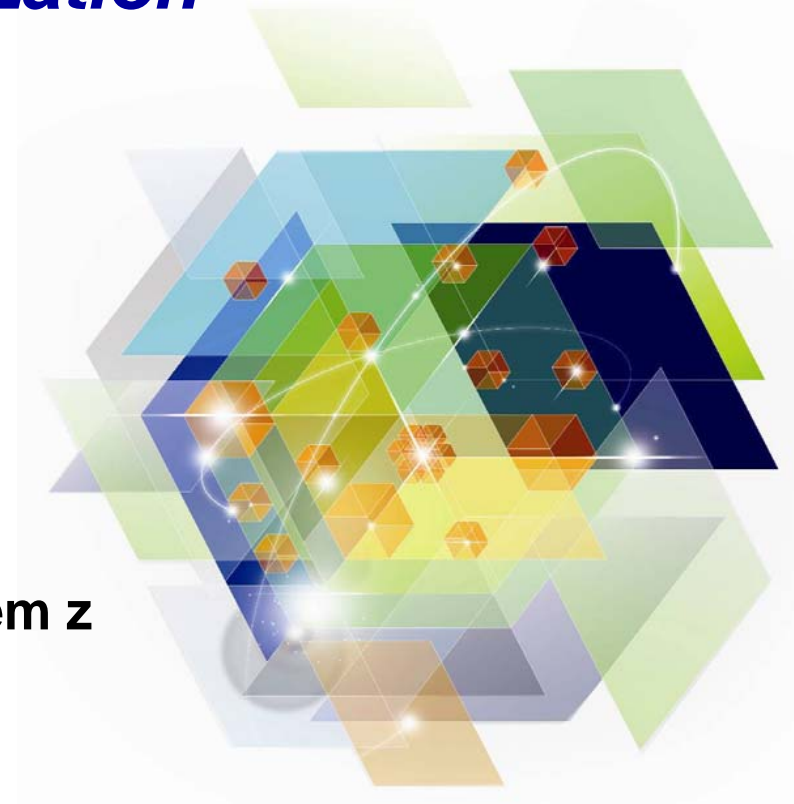




Information Governance and System z Your key to Business Optimization

Mark Simmonds

**Senior Product Marketing Manager System z
IBM Information Management Division**



Agenda

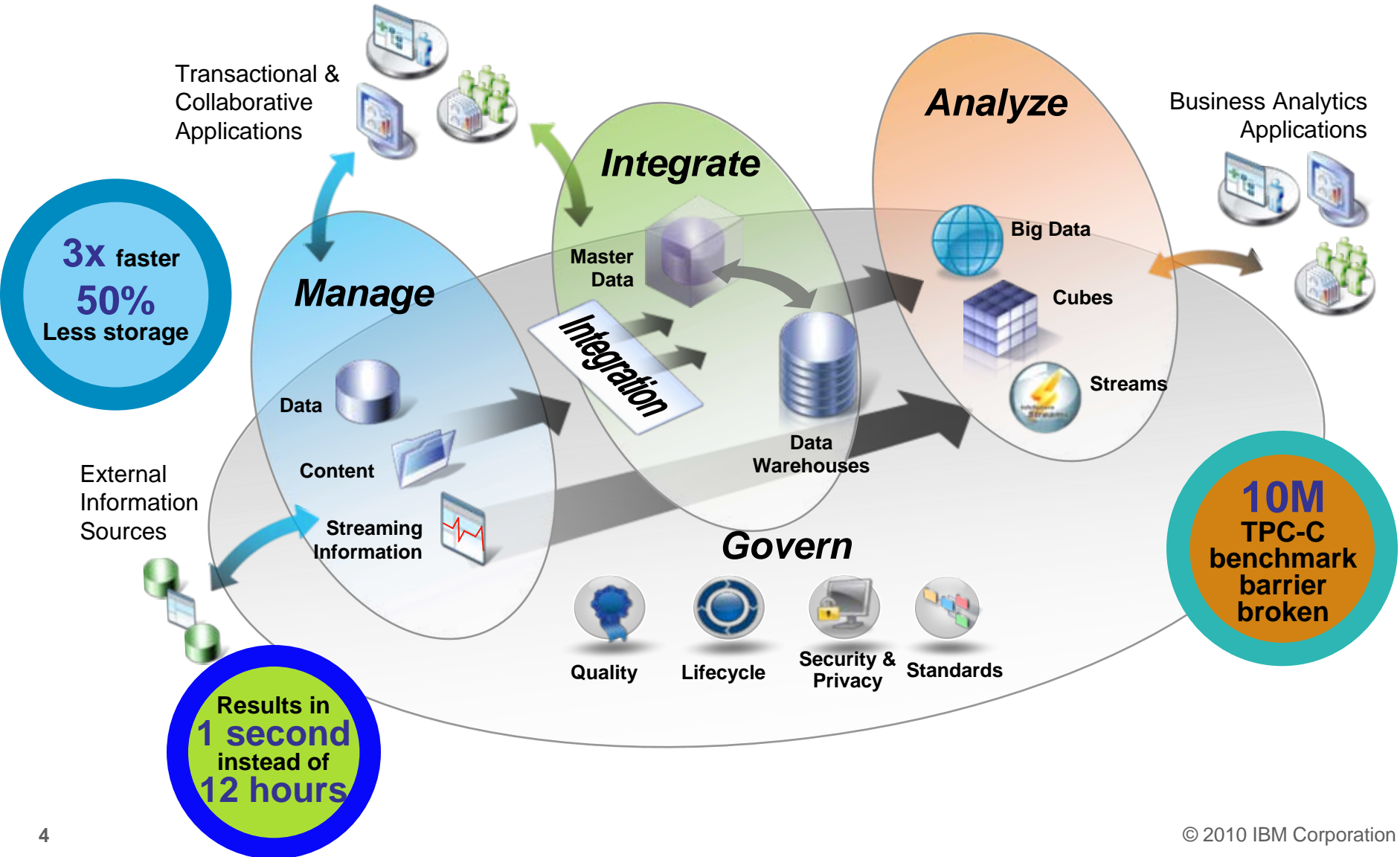
- The challenges and pressure on business data today
- **Information Governance and the Market place**
- **Entry points to address your most pressing Information Governance needs**
- **Call to action Summary**

Living in the Information Age – we are swamped with information



Your challenge : make sense of it – manage and control the data you are responsible for

IBM Offers a Complete Information Ecosystem



What happens when you're NOT in control of your business data...

Healthcare – “Dozens of women were told wrongly that their smear test had revealed a separate infection after a hospital error, an independent inquiry has found....”

Confusion arose because the hospital decided to use a code number to signify “no infections”, not realizing that it was already in use at the health authority where it meant “multiple infections”....

Retail – “Hackers have stolen 4.2 million credit and debit card details from a US supermarket chain by swiping the data during payment authorization transmissions in stores..”

Banking – “A major US bank has lost computer data tapes containing personal information on up to 1.2 million federal employees, including some members of the U.S. Senate....”

The lost data includes Social Security numbers and account information that could make customers of a federal government charge card program vulnerable to identity theft....”



Banking – “A rogue trader accused of the world’s biggest banking fraud was on the run last night after fake accounts with losses of £3.7 billion were uncovered....”

The trader used his inside knowledge of the bank’s control procedures to hack into its computers and erase all traces of his alleged fraud. Mr Leeson said “Rogue trading is probably a daily occurrence within the financial markets. What shocked me was the size. I never believed it would get to this degree of loss.”

Public Sector – “Two computer discs holding the personal details of all families in the UK with a child under 16 have gone missing....”

The Child Benefit data on then includes name, address, date of birth, National Insurance number and, where relevant, bank details of 25million people...”

WASHINGTON – “The FINRA announced today it has censured and fined a financial services company \$370,000 for making hundreds of late disclosure to FINRA’s Central Registration Depository (CRD) of information about its brokers, including customer complaints, regulatory actions and criminal disclosures. Investors, regulators and others rely heavily on the accuracy and completeness of the information in the CRD public reporting system – and, in turn, the integrity of that system depends on timely and accurate reporting by firms.”

.... Resulting in a broad range of potentially life threatening consequences

Healthcare – Dozens of women were told wrongly that their smear test had revealed a separate infection

Incorrect classification..
Life threatening consequences

infections”....

Ineffective Security..
Brand damage
Financial loss

Banking – A major US bank has lost computer data tapes containing personal information on 4.2 million federal employees. The number of affected employees could make the bank's charge card program vulnerable to identity theft....”

Physical Data Loss..
Identity Theft

Banking – Rogue trader accused of the world's biggest banking fraud was on the run last night after fake accounts with losses of £3.7 billion were uncovered....

Poor Internal Controls..
Bankruptcy,
Financial ruin,
penalties



Physical unprotected Data Loss..
Fraud on a massive scale

WASHINGTON – The FINRA announced today it has censured and fined a financial services company \$370,000 for making hundreds of late disclosure to FINRA's Central Registration Depository (CRD)....

Late Disclosures..
Heavy Fines,
Legal implications and
resignations

bank details of 25million people...

Usage, sharing and processing of electronic data continues to rapidly increase

Increasing Requirements

- Retention of data for auditing purposes
- Growing compliance and data privacy requirements
- High growth data warehouses

Increasing Complexity

- Disparate applications and infrastructure – “virtual enterprise”
- Auditing of both “live” and “historical” data
- Aligned IT and business compliance is required

Increasing Cost

- Data maintenance and storage costs
- Inactive data degrades data server performance
- Security breaches or compliance failures can have enormous costs to the business



The top challenge for 43% of CFOs is improving governance, controls, and risk management

*CFO Survey:
Current state & future direction,
IBM Business Consulting Services*



Agenda

- **The challenges and pressure on business data today**
- Information Governance and the Market place
- **Entry points to address your most pressing Information Governance needs**
- **Call to action Summary**

Information Governance – holistic management of data.

Information governance is the orchestration of **people, process and technology** to enable an organization to leverage information as an enterprise asset.

Information Governance safeguards information, keeps auditors and regulators satisfied, uses improved data quality to improve customer satisfaction, lower business risk retain customers and constituents and drive new opportunities

IBM Information Governance Council

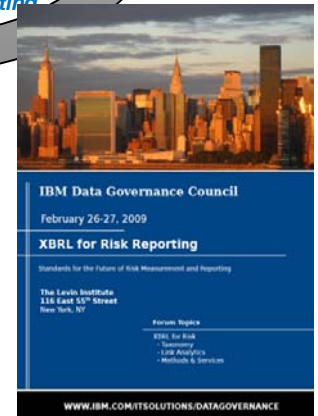
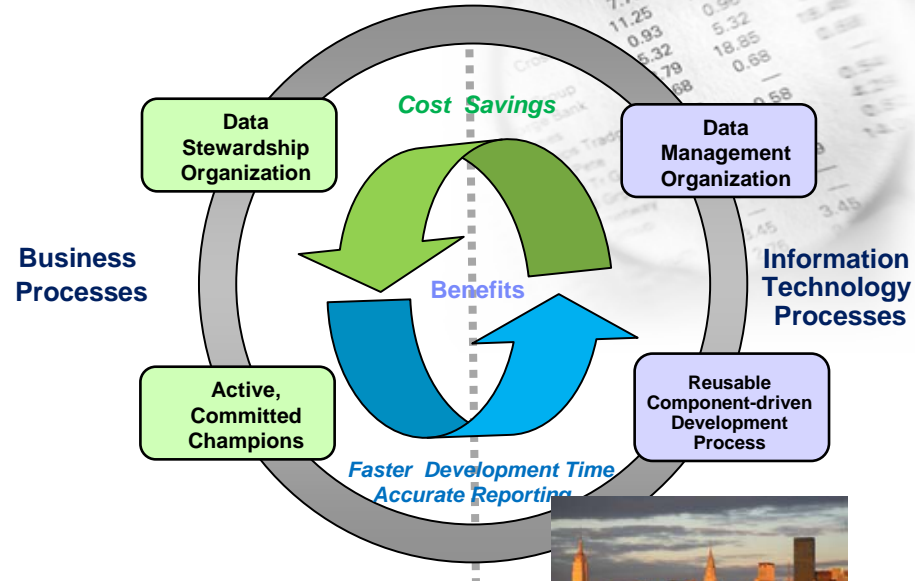
Formed in 2004 with 50 Global Companies Including:

Abbott Labs, American Express, Bank of America, Bank of Tokyo-Mitsubishi UFJ, Ltd, Bank of Montreal, Bell Canada, BMO Financial Group, Citibank, Deutsche Bank, Discover Financial, Kasikornbank, MasterCard, Nordea Bank, Wachovia, Washington Mutual, the World Bank and others...

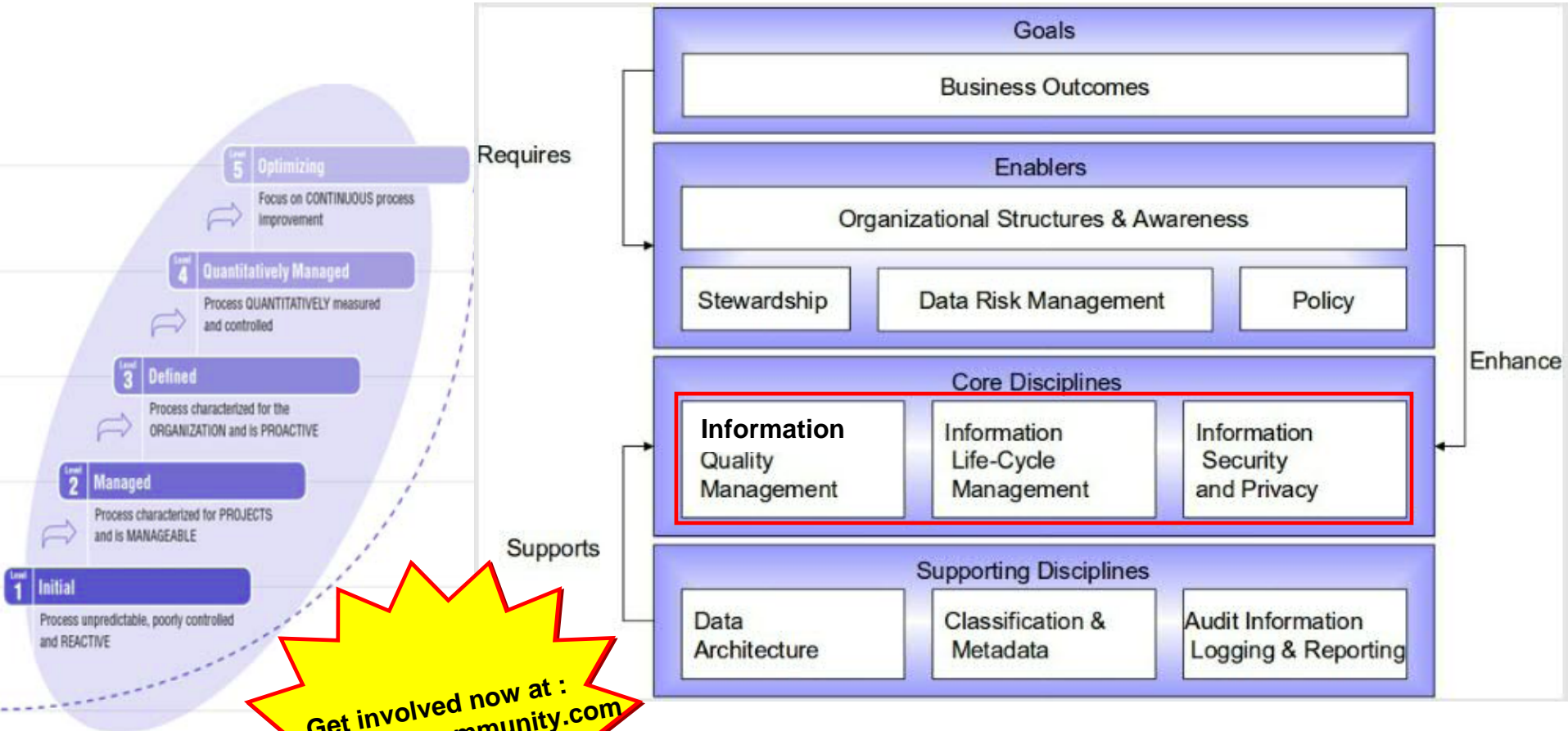
....and many rely on IBM System z

Information Governance embraces People, Process AND Technology– Puts information at the top of the Agenda...spans both Business and Information Technology in order to successfully manage data

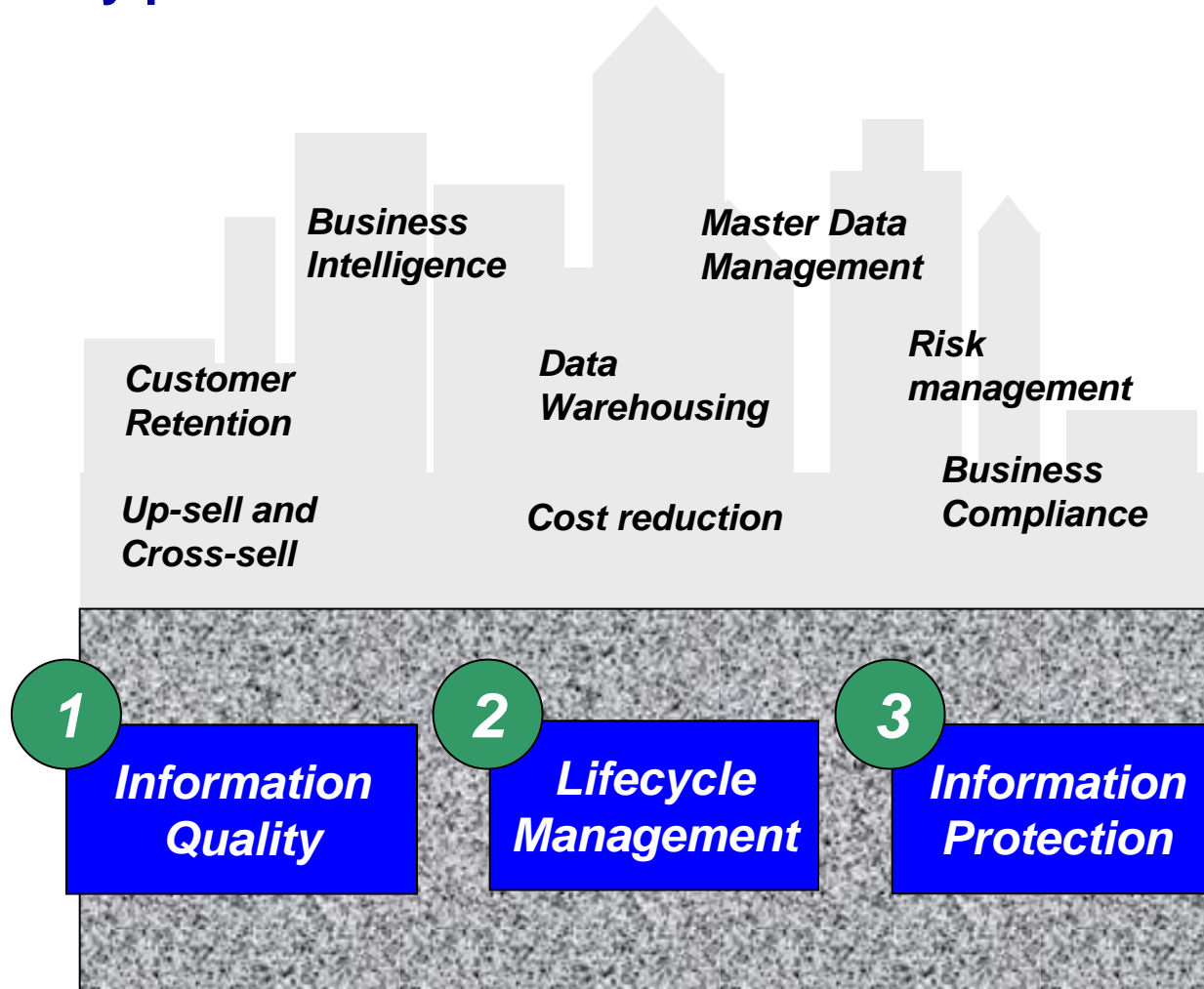
Information Governance



Core disciplines need to be in place to achieve benefits



Start to address your most pressing Information Governance needs with the 3 “Entry points”



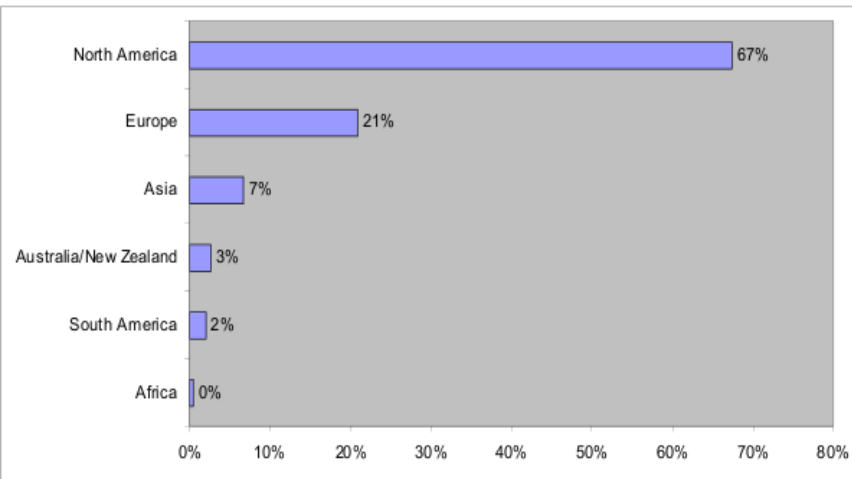
Information Governance underpins and is foundational to your Information Management projects

What is the Market Doing?

- **Market intelligence survey :**
 - Understand / validate :
 - market perceptions around information governance
 - customer priorities
 - business and IT value of Information Governance
 - where customers are investing through 2010 and 2011
 - Information Protection, Information Quality, Information Lifecycle
 - barriers to adoption
 - plans to implement and more...
- **Contracted with 3rd party vendor**
 - Hosted the survey between March and May 2010
 - Performed the analysis and produced the market report

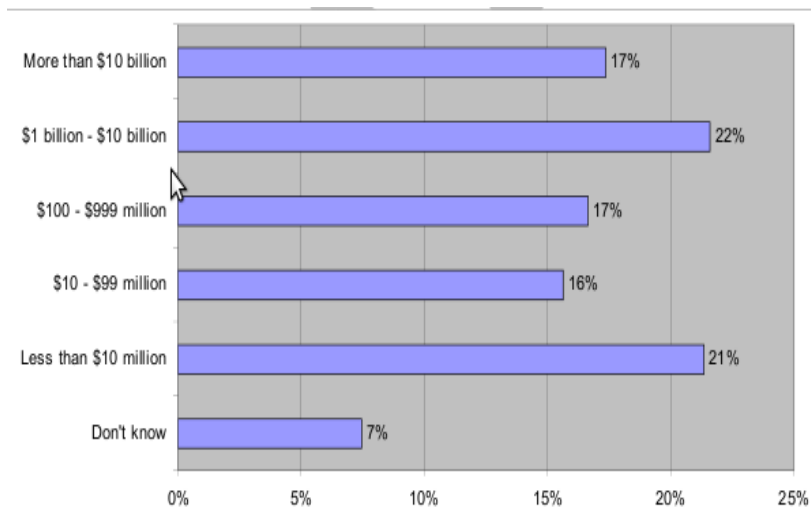
IBM 2010 Information Governance Study

407 Organizations Surveyed Worldwide



Regional break down

- North America 67% (92% of those from the U.S. = 62% of total)
- Europe 21%, Asia 7%
- 3% each from AUS/NZ, South America, and Africa

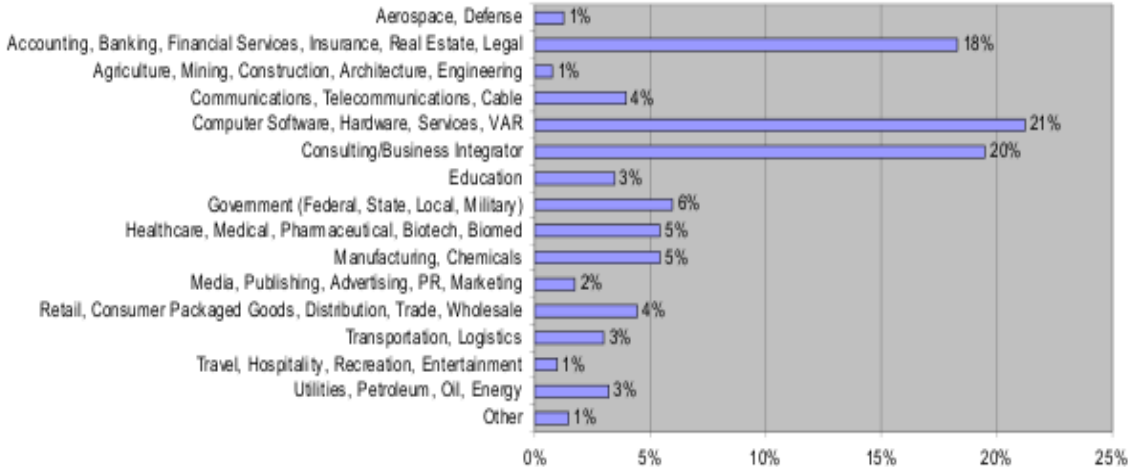


Organization Size (revenue)

- Equal participation of companies
- Information Governance relevant to all

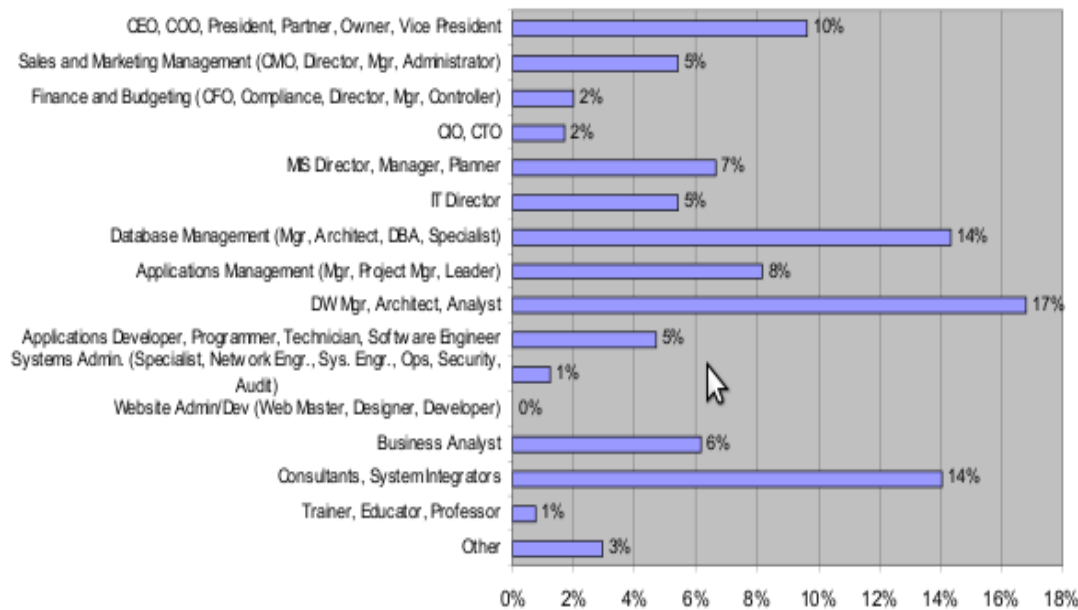
IBM 2010 Information Governance Study

Industries and Roles



Primary industries

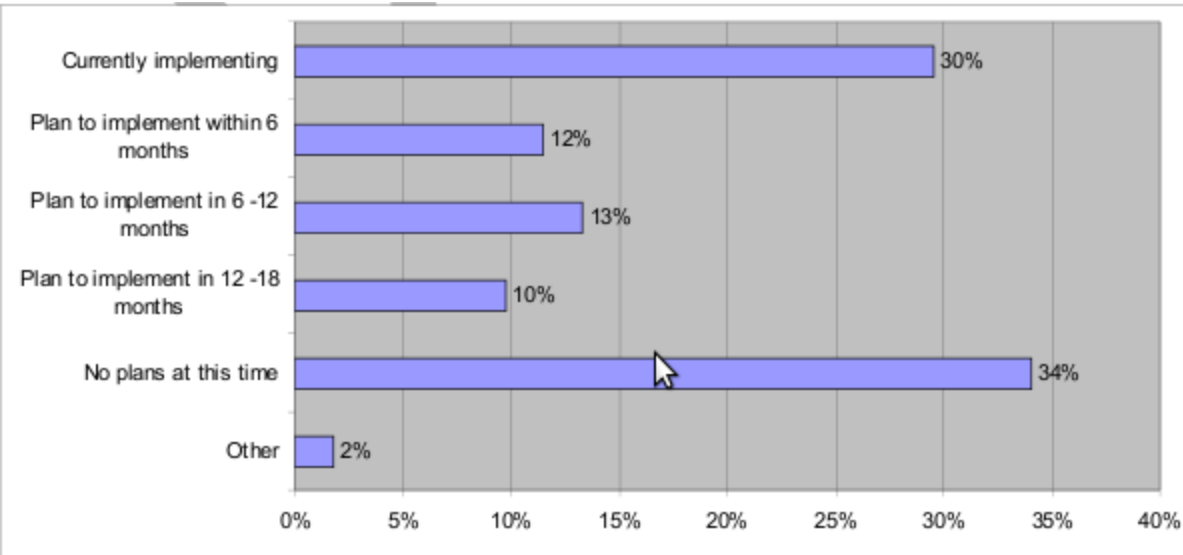
- Computer SW, HW, services/VAR 21%
- Consulting/business integrator 20%
- Accounting, banking, financial services, 18%
- Government, healthcare, mfg, others 6% or less each



Most popular job titles

- Over 60% are in four job areas
 - Top management (Pres, C*, Dir, etc.) >17%
 - Data warehouse positions 17%
 - Database mgt 14%
 - Consultant/integrator 14%

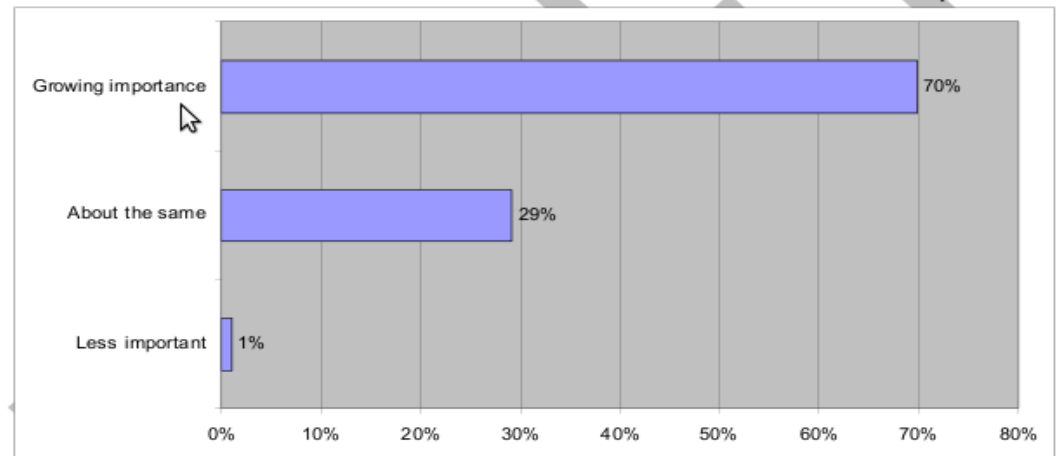
Planning to Implement an Information Governance Program



>66% currently implementing or planning to do so in next 18mths

24. How you see the importance of information governance changing over the next 3 to 5 years in relation to business success within your organization?

291 respondents



99% IG will grow in importance or remain the same

Enterprise Information is on System z

Information on Demand for System z Delivers Competitive Advantages

DB2: Top 66 banks in the world *DB2: 9 of the top 10 global life/health insurance providers*

DB2: 24 of the top 25 US retailers

UPS runs DB2 for z/OS to support the world's largest known peak database workload - 1.1 Billion SQL statements per hour!

*24x7 ATM
Deposits
& Withdrawals*

*Reserves
airline seats*



*Runs the world's
stock exchanges
& banking networks*

*Tracks the world's
packages*

8 of every 10 of the largest retail banks in Australia, Germany, Japan, and the United States use IMS for their core banking

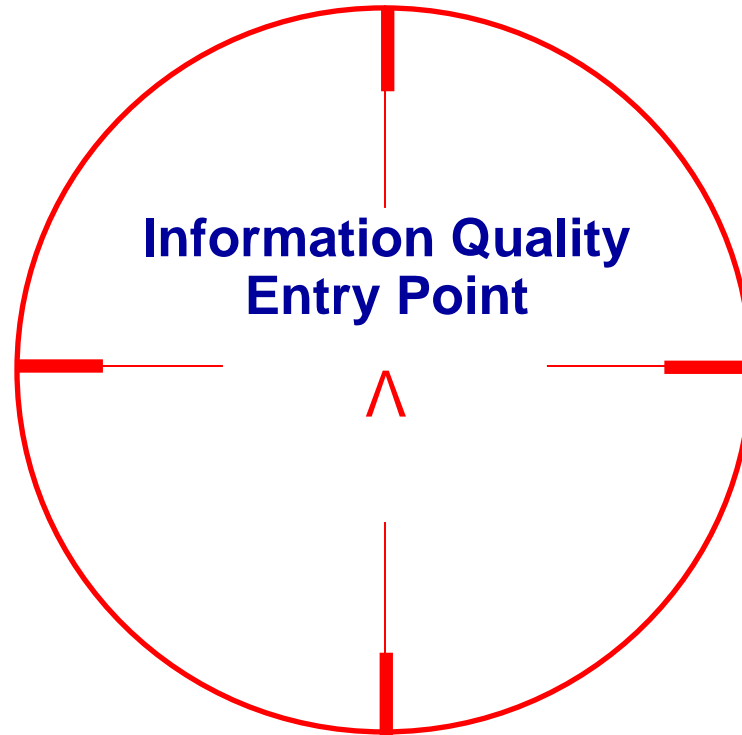
*\$3 trillion/day transferred
through IMS by one customer*

*95% of top Fortune
1000 companies use IMS*

*Over 15 billion GBs of
production data in IMS...*

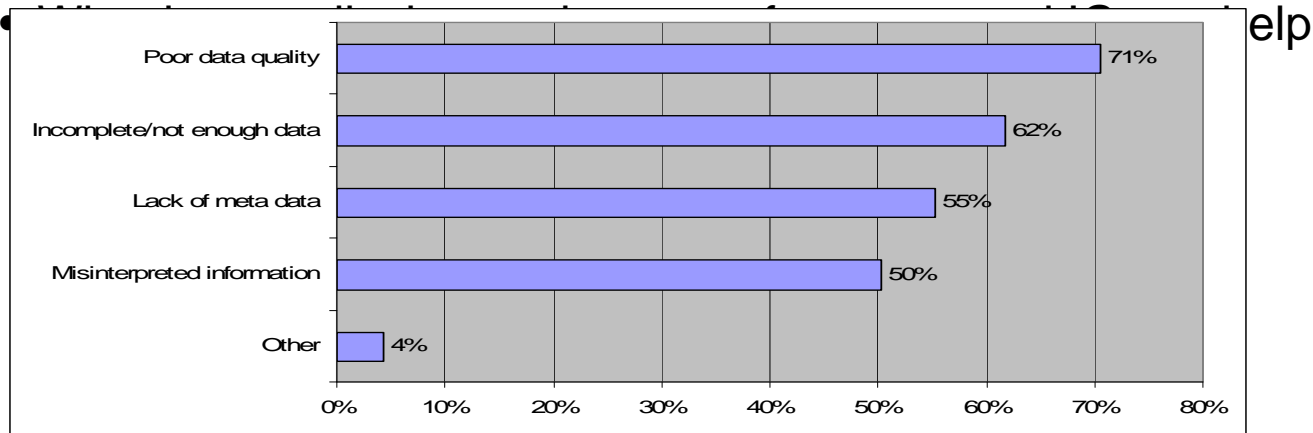
Agenda

- **The challenges and pressure on business data today**
- **Information Governance and the Market place**
- Entry points to address your most pressing Information Governance needs
 - *Information Quality*
 - *Information Lifecycle Management*
 - *Information Protection*
- **Call to action Summary**



Survey: Business Drivers for IG

- **Specific business problems experienced over past 3 years**
 - **Data quality** issues (69% of all respondents)
 - Poor data quality (71%)
 - All listed problems were over 50%

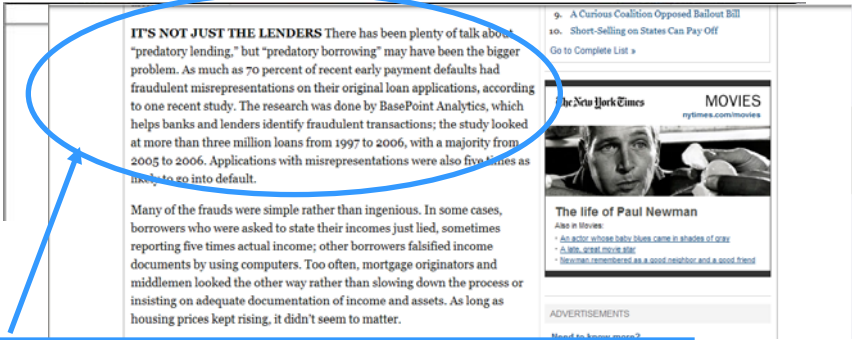


Information Management: It can't be just for the IT staff any more

Bad data is like a 'virus' for the business



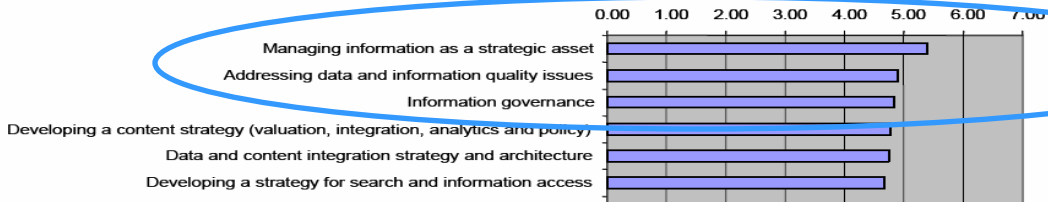
Product prices clearly out of range contribute to lost profits



Missing and invalid data and a lack of oversight contributed to subprime mortgage debacle

84% of large businesses believe that poor data governance can reduce the accuracy of business decisions*

Figure 1. Enterprise Information Management Topics

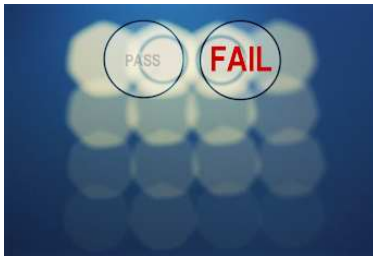


Info governance and data quality go hand in hand

Sources: 2006 IBM Survey – 50 Large Companies and Mar 2007 Gartner Report

Other facts about the impact of data quality.....

83% of data integration projects either overrun or fail



Scrap and rework
Increased costs



Lack of consumer confidence

Lost up-sell and cross-sell opportunities

Low data quality costs companies \$611 billion annually

Inaccurate or incomplete data is a leading cause of failure in business-intelligence and CRM projects



25% of time is spent clarifying bad data

Undetected defects will cost 10 to 100 times as much to fix upstream

The IBM Solution: IBM InfoSphere Information Server on System z

Delivering information you can trust

■ Understand

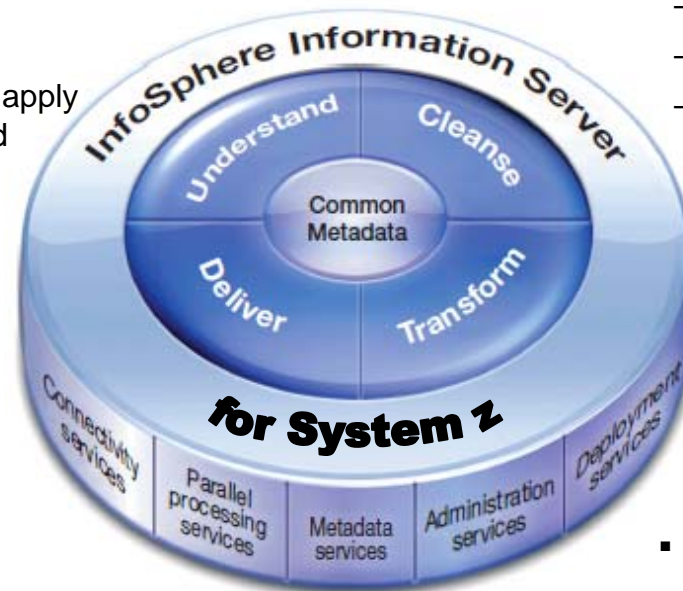
- Discover what data exists
- Understand and profile sources of information, relationships and dependencies
- Analyze usage, lineage, begin to apply governance rules to structure and content

■ Deliver

- Provides connectivity to almost any data or content source
- Package as reusable services
- Ability to deliver information through a variety of mechanisms. SQL, Java, ODBC...

■ Cleanse

- Apply data quality standards
- Certify and enrich
- Identify false positives / false negatives
- Matching rules
- Apply DQ rules as batch operations or as real-time SOA services, event driven



■ Transform

- Design data integration data flows that extract, transform, load (ETL) information from heterogeneous source systems
- Transform and combine data to make it more valuable
- Deliver to one or more target databases or applications in a batch, real-time, or event-based triggers

InfoSphere Information Server - components

▪ InfoSphere DataStage

- Integrates data across multiple and high volumes of data sources and target applications.

▪ InfoSphere QualityStage

- Ensures systems deliver accurate, complete information to business users across the enterprise.

▪ InfoSphere Change Data Capture

- Integrates information across heterogeneous data stores in real time.

▪ InfoSphere Business Glossary

- Enables users to create, manage and share an enterprise vocabulary and classification system

▪ InfoSphere Information Analyzer

- Derives more information from enterprise data to accelerate information-centric projects

▪ InfoSphere FastTrack

- Accelerates the translation of business requirements into data integration projects

▪ InfoSphere Information Services Director

- Allows tasks to be published as reusable services in a SOA

▪ InfoSphere Metadata Workbench

- Helps you gain visibility and trust in your information

▪ InfoSphere Federation Server

- Creates a consolidated view of your data to support key business processes and

Information Quality Customer example – Irish Life

Challenge

- Customer information stored across many different systems; policy administration, sales and marketing, customer account mortgage systems following merger.
- Challenging for staff to gain a complete picture of clients' interactions with the company.
- Unable to detect client service problems
- Difficult to determine cross-sell opportunities.
- Customers requiring multiple PIN number per policy when logging on to web site

Solution

- IBM InfoSphere Information Server, Developed a Customer Centric hub built around SOA principles
- Single source of the "Truth"
- Developed the right data governance policies to validate information when it is first captured."

Benefits

- Strengthened customer satisfaction
- increased use of self-service options resulting in reduced costs.
- Staff able to quickly identify opportunities to cross-sell products
- Improved the value and service resulting in better customers retention.

*"We've standardized our customer name and address data using IBM InfoSphere QualityStage. This allows us to identify, match and merge duplicate records so we have a single view of our customers....It also enables us to develop the **right data governance policies** to validate information when it is first captured."* Noel Garry, Executive Manager, Irish Life & Permanent

Industry Data Models

- Industry best practices
- “Fast start” accelerators
- Help comply with industry regulations
- Helps with interchange of information

What we offer

First, comprehensive data models containing data warehouse design models, business terminology model and analysis templates to accelerate the development of business intelligence applications. Second, best practice business process models with supportive service definitions for development of a service-oriented architecture (SOA). The result is acceleration of projects and also reduced risk.

IBM Banking Data Warehouse

Data models that focus on solving challenges such as enterprise risk management, single view of customer, product and channel profitability visibility and more.

IBM Banking Process and Service Models

Business process models that focus on solving challenges such as KYC/account opening, lending and syndicated lending, payments, risk and compliance and more.

IBM Insurance Information Warehouse

Data models that focus solving challenges such as claims, intermediary performance, compliance, risk management, customer centricity visibility and more.

IBM Insurance Process and Service Models

Business process models that focus on solving challenges such as claim management, product portfolio management, underwriting and financial transactions and more.

IBM Health Plan Data Model

Data models that focus on solving challenges such as claims management, disbursement analysis, medical utilization, member and provider management visibility and more.

IBM Retail Data Warehouse

Data models that focus on solving challenges such as supply chain, multi-channel, regulatory compliance, Customer management visibility and more.

IBM Telecommunications Data Warehouse

Data models that focus on solving challenges such as network/wireless/wireline usage, customer churn, campaign performance visibility and more.

IBM Financial Markets Data Warehouse

Data models that focus on solving challenges such as risk reviews and task compliance, growth in hedge funds/buy-side firms, regulatory and compliance visibility and more.

IBM Financial Markets Process and Service Models

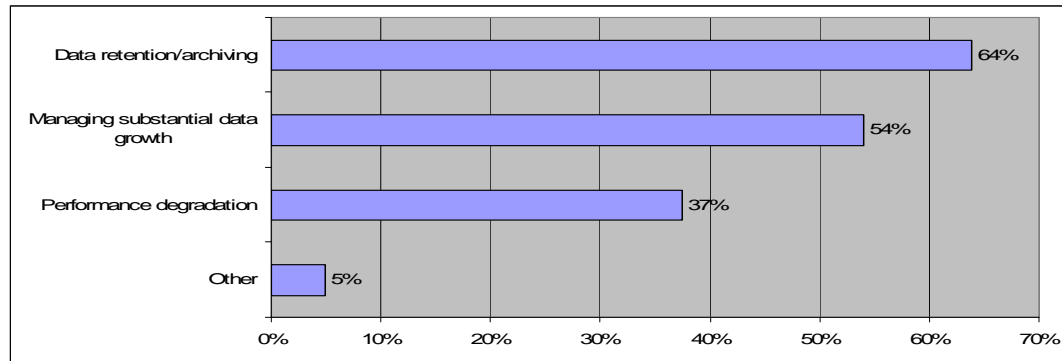
Business process models that focus on solving challenges such as trade processing, best execution (including MiFID), sales and relationship management and more.

Lifecycle Management Entry Point



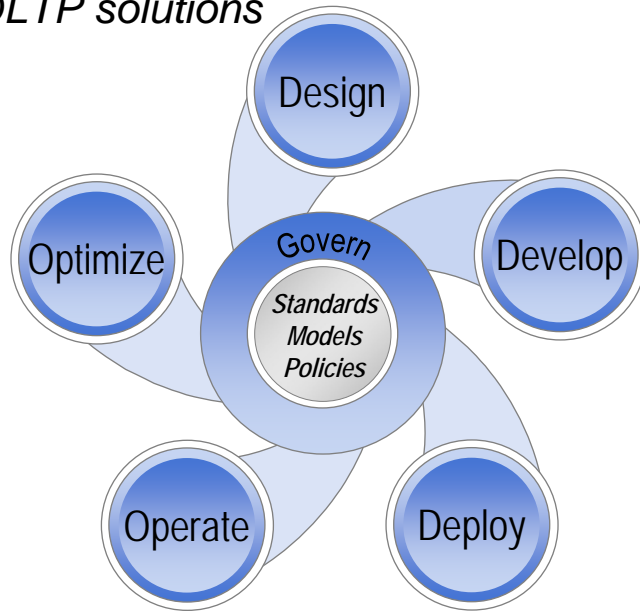
Survey: Business Drivers for IG

- **Specific business problems experienced over past 3 years**
 - **Information life cycle** issues (60% of all respondents)
 - Data retention/archiving problems (almost two-thirds)
 - Managing substantial data growth (over half)



Manage structured data across the lifespan – design to delete

- A set of run times and integrated tools to store, manage and process structured data and unstructured content across its lifecycle with powerful performance management and optimization tools as part of your data management, records management, data warehouse and OLTP solutions



- **The depth and breadth for virtually every business requirement**
 - For information on System z and nearly every other platform
- **Exceed business requirements for the toughest IT challenges such as Compliance, Data Warehousing, Performance Management and more**
- **Deliver increased information availability with improved manageability**

IBM Data management Tools for System z

Database Administration
Utilities Management
Performance Management
Archiving....

 **BANCA MARCH**

 **CAIXA**

 **MayoClinic.com**


AMERICAN FAMILY INSURANCE
All your protection under one roof®

Administer and Optimize: DB2 and IMS Tools

Database Administration

- DB2 Administration Tool
- DB2 Object Comparison Tool

- Simplifies complex tasks associated with DB2 objects and schema throughout the lifecycle

- Compare and synchronize different DB2 object while maintaining system availability and object integrity.

- Pulls object definitions from the catalog into a
- Comprehensive set of tools for managing all DB2

- High-speed sort processing for data stored in DB2

- Quickly automates cloning of DB2 subsystems,

- Self-managing backup and recovery solution that protects mission-critical data

- Recommends options and method to match current situation when time is of the essence.

- Helps disaster recovery - builds assets that can

- Evaluates efficiency of and optimizes

- Manage and monitor performance of SQL queries and workloads / optimize physical database design and improve performance

- Solve query performance problems by enabling faster and deeper analysis of queries

- Recommendations to maximize application performance, reduce specialized skills, reduce the TCO of DB2 for z/OS® servers

Utilities Management

- DB2 Utilities Suite
- DB2 Sort
- DB2 Cloning Tool
- DB2 Recovery Expert

Performance Management

- OMEGAMON for DB2
- Performance Expert (OMPE)
- Query Workload Tuner

Administration

Administration Pack
Administration Pack
Administration Pack

Management

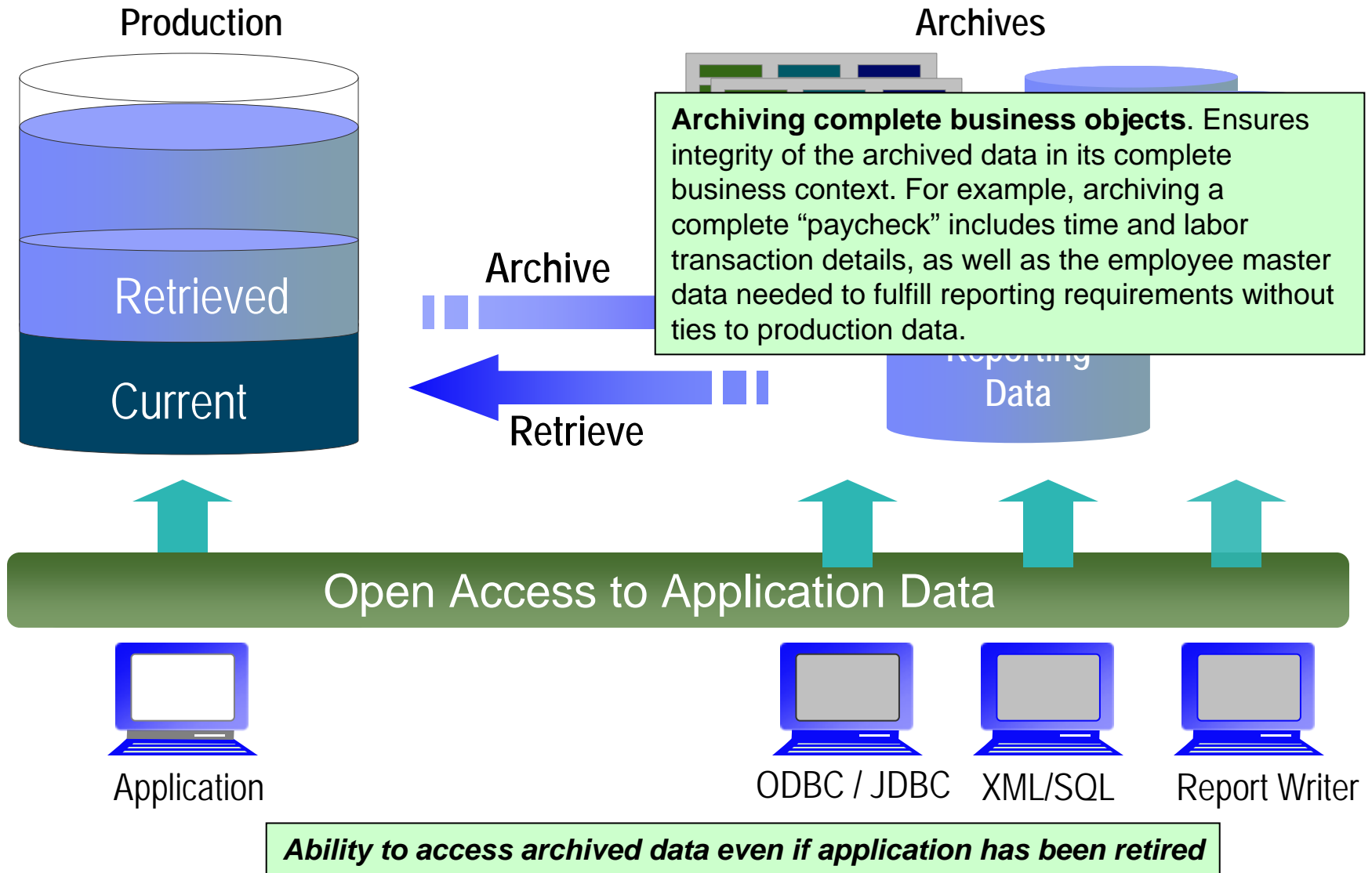
Tool Expert

Performance Management

Resolution

Analysis

How does Archiving Work?



UGF Assicurazioni

Database query tuning slashes costs and improves performance

The need:

To improve service levels, UGF Assicurazioni wanted to develop best practices for optimizing database queries and workloads. Designing efficient queries and workloads helps deliver high-performance applications, while reducing costs. Query tuning helps to promote new database objects, improve online and batch performance, and validate performance after an application upgrade or extensive modifications.

The solution:

IBM® InfoSphere Optim™ Query Workload Tuner helps reduce costs by automatically targeting problem application queries and recommending ways to address performance issues. UGF Assicurazioni makes extended use of the Workload and the Query Environment Capture functions; the Query, Statistics and Index Advisors; the Dynamic Statements Trace; the Access Plan Graph; Query Annotations; and What-if Analysis.

The benefits:

- Improves online response times and shortens batch processing windows
- Saved 400 processing minutes per hour for one dynamic program and reduced mainframe CPU consumption by 38 percent for a highly used transaction processing (TP) program, resulting in significant cost savings
- Provides a robust repeatable process and expert guidance for tuning database SQL queries and workloads to reduce reliance on special technical skills

“With IBM Optim Query Workload Tuner, we were able to reduce mainframe CPU consumption by 38 percent for a highly used transaction processing (TP) program, resulting in significant cost savings.”

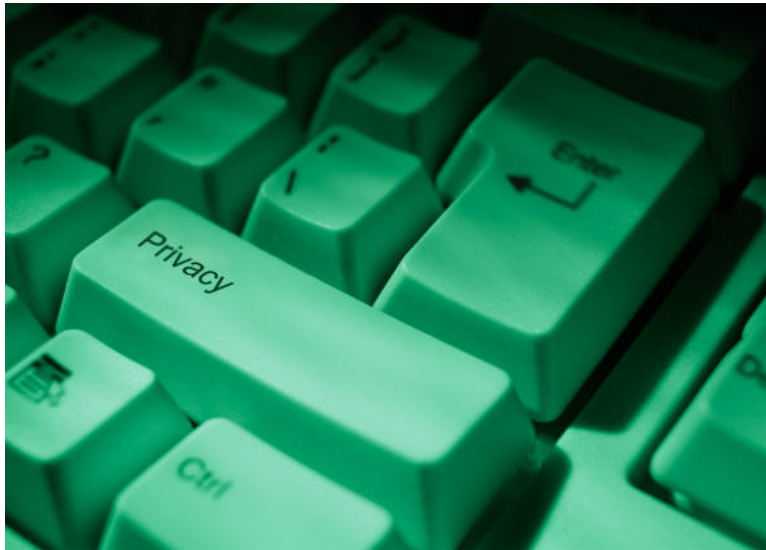
*—Roberta Barnabè,
DB2 Specialist, UGF Assicurazioni*

Solution components:

- IBM InfoSphere Optim Query Workload Tuner for DB2 for z/OS

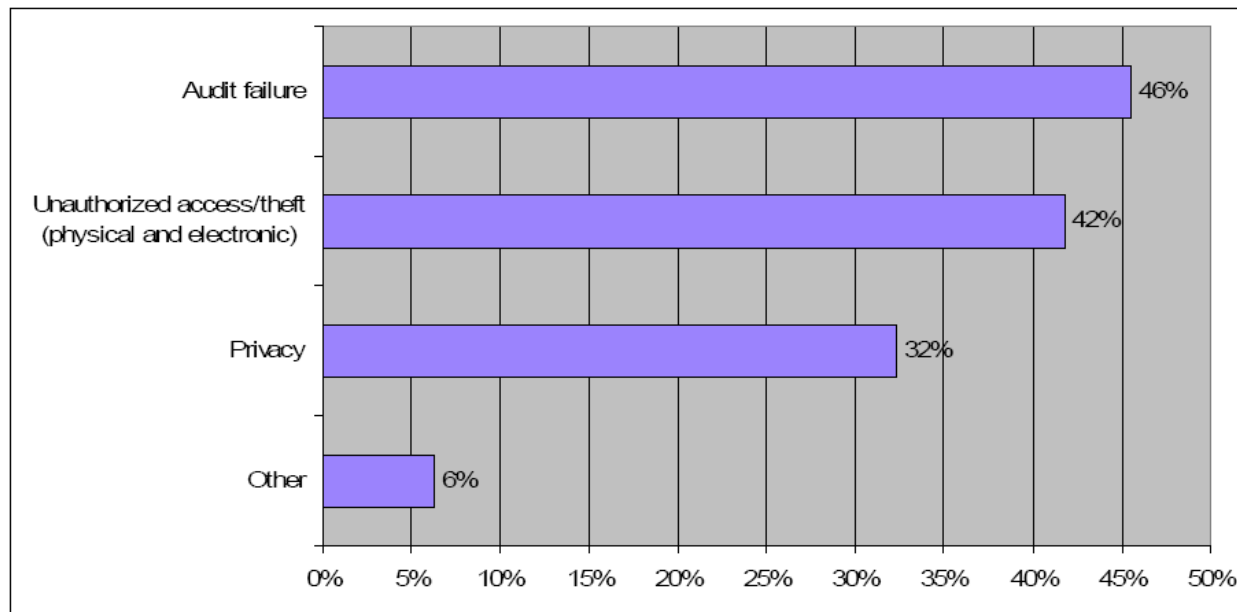


Information Protection Entry Point



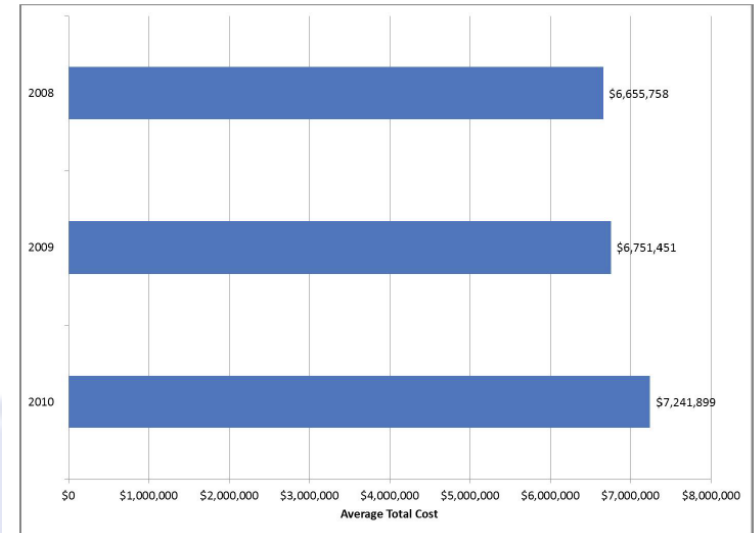
2010 Information Governance Survey

- Specific business problems experienced over past 3 years
 - **Information breaches** (40% of all respondents)
 - Audit failure (almost half)
 - Unauthorized access/theft (42%)
 - Privacy issues (almost one-third)



Data Breaches continuing to increase

- Most expensive data breach event from 2010 study cost a company US\$35.3 million to resolve - least expensive was US\$780,000
- Breach costs avg of \$214 per compromised record - \$141 pertains to indirect cost including abnormal turnover or churn of existing and future customers. Direct costs continue to rise.
- 39% of all cases involved 3rd party mistakes / flubs. Outsourced data to 3rd parties, particularly when offshore were most costly.
- Malicious attacks most expensive \$318 per compromised record a rise for 40% in 2010
- Recommendation : “Organizations should consider a *holistic approach to protecting data* wherever it is - at rest, in motion and in use. Manual and policy approaches may come to mind first but are not as effective as a multi-pronged approach that includes *automated IT security solutions.*”



Average cost of a data breach in 2010 rises to US\$7.2M

59% increase in cost from 2005 - 2010

Source Ponemon Institute: Sixth Annual US Cost of Data Breach Study - 2010

“Today, database security is a lot more challenging than it was a decade ago largely because compliance requirements are more pressing and more complex. Enterprises are dealing with tougher regulatory compliance requirements such as the Health Insurance Portability and Accountability Act (HIPAA), the Gramm-Leach-Bliley Act (GLBA), the Sarbanes-Oxley (SOX) Act, and the Payment Card Industry Data Security Standard (PCI DSS). In addition, since compliance requirements do not offer guidelines, confusion exists around what needs to be done to make databases more secure in order to comply.”

- Forrester Research, “A New Role Is Emerging Within IT: Database Security Analyst (DSA)”, Noel Yuhanna, 4 April 2008

Information Protection

- **A set of tools for Information Protection that secure access, provide encryption of your data, ensure privacy controls are in place, combining powerful but flexible analysis and reporting tools.**



Secure Data

- Prevent Access
- Restrict Access
- Monitor Access

Ensures that data is secure, available to only those that are authorized and all access monitored



Protect Data Privacy

- Mask Data
- Encrypt Data

De-identification that enables organizations to substitute sensitive data with realistic and fully functional masked data and encryption of online and off line data sources



Audit Data

- Audit Access
- Audit Privileges
- Audit Users

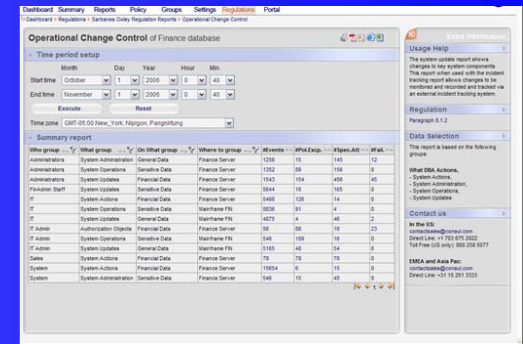
Timely data and flexible reporting for use in internal and external auditing activities – The “who, what, when where, how.”

"A company with at least 10,000 accounts to protect can spend, in the first year, as little as \$6 per customer account for just data encryption, or as much as \$16 per customer account for data encryption, host-based intrusion prevention, and strong security audits combined. Compare [that] with an expenditure of at least \$90 per customer account when data is compromised or exposed during a breach,"

Key System z products for Information Protection

Tivoli Security Management for z/OS

- Facilitate compliance with security requirements and policies
- Reducing administration time, complexity, implementation efforts, and costs
- Monitor and audit for threat incidents,
- Comprehensive enterprise-wide view and sophisticated analysis of audit
- Integrate RACF, mainframe security capabilities for comprehensive identity management, access control, data protection, audit and compliance reporting



IBM Optim Data Privacy for z/OS

- Protects sensitive data as it is used for other purposes:
- Removes, masks or transforms elements that could identify an individual
- Masked or transformed data must be appropriate to the context



InfoSphere Guardium for System z

Helps auditors answer Who, What, Where, Why, When, How

- Centralizes audit data
- Automates auditing process
- Creates segregation of duties
- Flexible reporting and analysis
- Real time alerts



Information Protection Customer Examples



Security - needed improve its system security management and monitoring capabilities.

Benefits - robust audit and compliance reporting that can adapt to evolving requests

from auditors and compliance officers - Respond quickly to security events, such as breaches or

misconfigurations – Improved efficiencies by replacing home grown solutions with off-the-shelf solution

"IBM Tivoli zSecure software gives us a simple, powerful way to comply with identity and access management initiatives, and to assure auditors that preventative, detective and corrective controls are installed." - —Phil Secker, Security Support Manager, Norwich Union



Privacy - protect its confidential employee salary and pension information in non-

production (development, testing and training) environments to satisfy data privacy and

meet TyEL compliance requirements. Benefit -able to protect confidential data to strengthen public confidence

and adhere to TyEL compliance requirements as well.

"Optim's data masking capabilities ensure that we can protect privacy in our development and testing environments," Katri Savolainen, Arek Oy.



Audit and Compliance - Needed to guard against compliance failures

Benefits - Details on who made changes to the data, as well as where and when the

changes were made - Let auditors participate in data auditing activities with less database administrator

involvement - Free up valuable IT staff resources - Eliminate manual auditing processes that can be time-

consuming and error-prone

American Family Insurance leveraged IBM's integrated System z solutions to surpass internal and external audit and compliance requirements – while decreasing IT costs 20%.

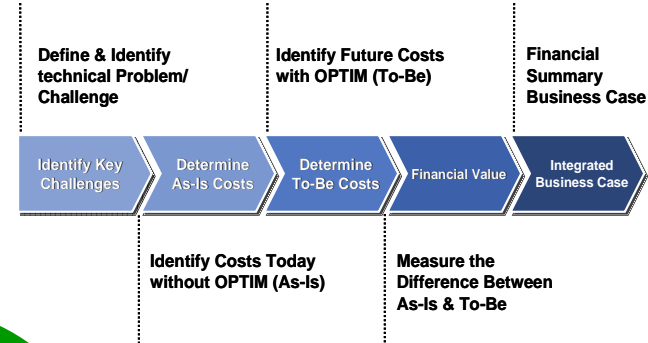
IBM Information Governance Business Value tools

Data Governance backed by proven business cases

– IBM Data Governance Maturity Model Assessment Workshop

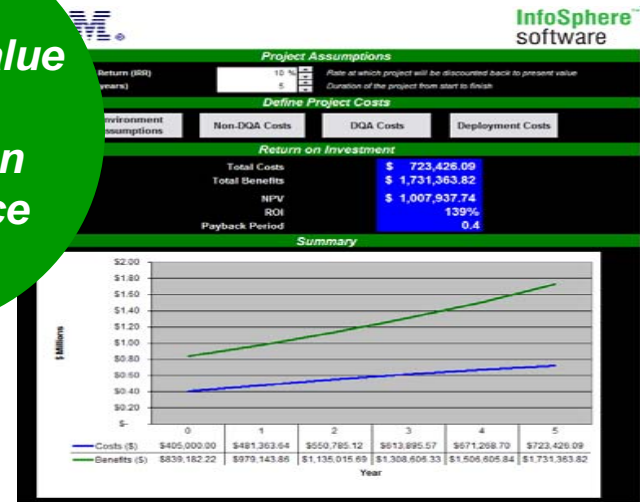


– Business Value Assessment (Optim)



**Business Value
Driven
Information
Governance**

COST SAVINGS SUMMARY		
CPU Savings		\$2,000,000.00
Labor Cost Savings		\$29,000,000.00
TOTAL COST SAVINGS in year 1		\$534,000.00
ROI SUMMARY		
Total Savings with product purchase Year 1		\$76,991.87
Total Savings Year 2		\$465,798.87
Total Savings Year 3		\$465,798.87
TOTAL SAVINGS OVER 3 YEARS		\$1,008,589.62
Annual SAVINGS OVER 3 YEARS*		\$336,196.54



– ROI calculators (DM Tools)

– Data Quality Assessment (InfoSphere Information Server)

Agenda

- **The challenges and pressure on business data today**
- **Information Governance and the Market place**
- **Entry points to address your most pressing Information Governance needs**
- **Call to action Summary**

Summary

- **Take Back Control with IBM Information Governance solutions on System z:**
 - Transform your information from a Liability into your most strategic, valuable Asset
 - Help manage business risk by enforcing security, audit, privacy and policy controls
 - Lower operational costs by optimising data management, retention and archiving
 - Increase profitability by enabling more accurate business intelligence
 - Increase management's confidence in making more informed decisions based on quality and more complete data
 - Increase customer satisfaction and retention through targeted advertising and up/cross selling
- **Software, Hardware and Expertise.**
 - Information Management - the comprehensive end-to-end Information Governance software solutions
 - System z - the ultimate platform to govern your enterprise data
 - IBM Industry Data Models as a fast-start, best practice and help with industry compliance
 - Business value driven ROI and assessment tools to build strong business case
 - GBS - Expertise and skills from IG readiness assessments to solution implementation

Useful urls

- **The 2010 Information Governance Market report**

- ftp://public.dhe.ibm.com/software/os/systemz/IBM_Information_Governance_Survey_Report.pdf

- **The 2010 Information Governance Market report webcast highlights**

- www-01.ibm.com/software/os/systemz/webcast/infogov/

- **Information Governance Community**

- www.infogovcommunity.com

- **Ponemon Institute reports**

- <http://www.ponemon.org/data-security>

- **Information Governance Webpage – products, webcasts and papers**

- www.ibm.com/software/data/db2imstools/solutions/data-governance.html

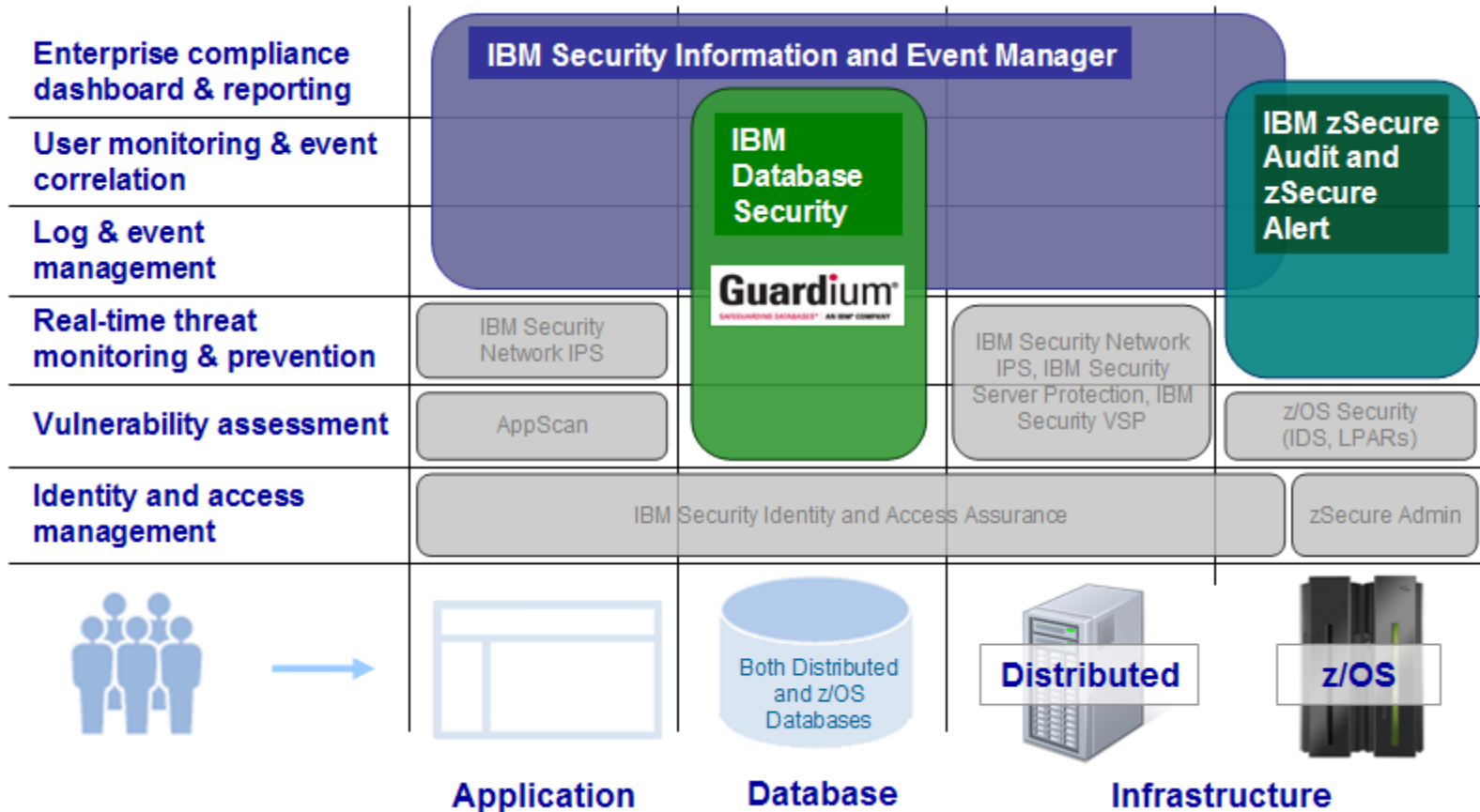


Thank
YOU

■ US Laws

- Financial data → Fair and Accurate Credit Transactions Act (FACTA), Federal Financial Institutions Examination Council (FFIEC) standards for online banking
- Data relating to minors → Children's Online Privacy Protection Act (COPPA),
- Health information → the Health Insurance Portability and Accountability Act (HIPAA)
- Health Information Technology for Economic and Clinical Health Act (HITECH)
- State-by-state regulation, e.g., breach disclosure laws

TSIEM, Guardium and zSecure are Complementary Products



Enforce Policy, Demonstrate Compliance, Manage Threats

TSIEM, Guardium and zSecure are Complementary Products

Enterprise compliance dashboard & reporting

IBM Security Information and Event Manager

IBM Database Security

Guardium
SURROUNDING DATABASES™ AN IBM COMPANY

IBM zSecure Audit and zSecure Alert

TSIEM

- Integrates the audit picture for the entire enterprise (mainframes and distributed systems)
- For databases, it only monitors the database logs
- Integration between TSIEM and Guardium enables TSIEM to provide a single dashboard to monitor the complete enterprise
- Does have some mainframe support, but it doesn't go as deep and is not as detailed as zSecure Audit and zSecure Alert
- Also, there is integration with zSecure to provide support for the event source on z/OS

Guardium

- Addresses the compliance issues with traditional approaches to database security
- Guardium enforces separation of duties to provide privileged user monitoring that is compliant with regulations such as PCI & SOX
- Provides continuous, real-time database access and activity monitoring
- Has granular auditing and policy enforcement capabilities (such as real-time blocking)
- Removes the need for native database logging

zSecure Audit and zSecure Alert

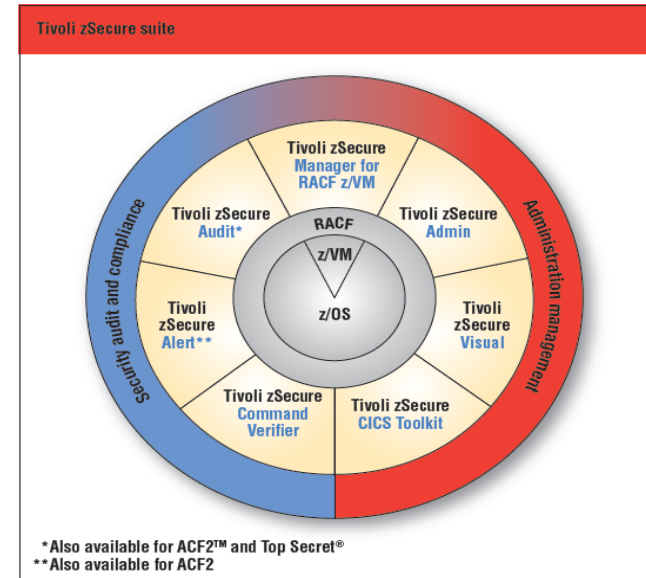
- Provides alerting, audit and compliance capabilities on z/OS, zVM, Linux on System z and USS for users, resources and attributes
- zSecure Alert provides real-time threat monitoring capabilities
- For DB2, zSecure relies on the DB2 auditing capabilities and does not provide all of the granular database auditing and alerting capabilities that are available in Guardium

Tivoli zSecure Suite

The zSecure Suite adds a user-friendly layer onto the mainframe that enables superior administration coupled with audit, alert and monitoring capabilities for z/OS Resource Access Control Facility (RACF)

Key Features

- The zSecure suite improves mainframe security, improves the efficiency of administration and enhances the ability for the mainframe to be the hub of enterprise security.
- Administration and provisioning:
 - **Admin** enhances security administration and user management for RACF
 - **Visual** offers a Windows GUI to RACF
 - **CICS Toolkit** for Extensibility with CICS support
- Audit, monitoring and compliance:
 - **Command Verifier** offers automated security monitoring, protection
 - **Alert** provides intrusion detection and alerting.
 - **Audit** provides event detection, analysis & reporting and system integrity audit & analysis



Benefits Summary

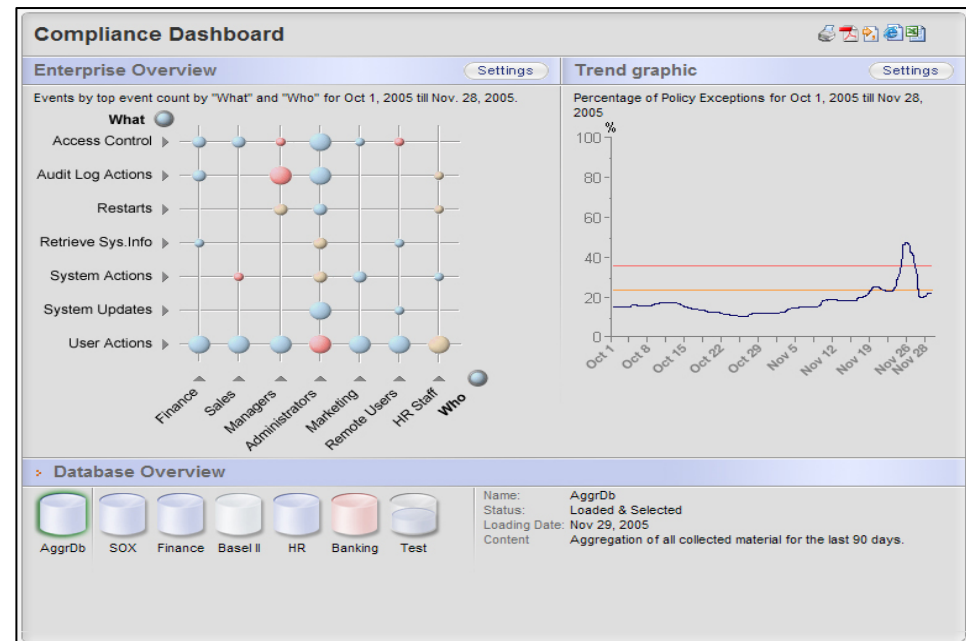
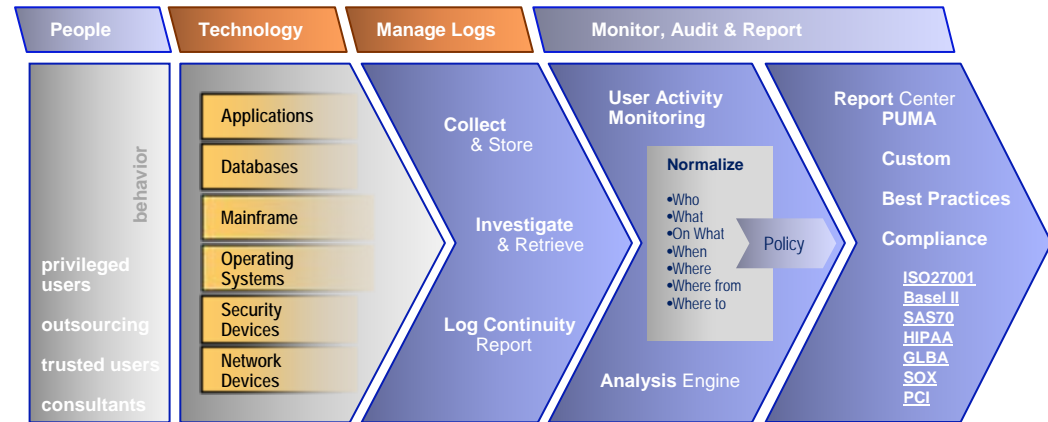
- Administration and provisioning:
 - Reduce administration time, effort and cost
 - Enable de-central administration
 - Quick response time, enabling business
 - Reduce training time needed for new administrators
- Audit, monitoring and compliance:
 - Pass audits more easily, improve security posture
 - Save time and costs through improved security and incident handling
 - Increase operational effectiveness

Tivoli Security Information and Event Manager

Tivoli Security Information and Event Manager provides a single, integrated product that delivers insider threat, audit and compliance.

Key Features

- Single, integrated product
- Log Management Reporting
- Unique ability to monitor user behavior
- Enterprise compliance dashboard
- Compliance management modules and regulation-specific reports
- Broadest, most complete log and audit trail capture capability
- W7 log normalization translates your logs into business terms
- Easy ability to compare behavior to regulatory and company policies
- Multi-tenancy support through scoping



IBM Guardium – Real-Time Database Security & Compliance



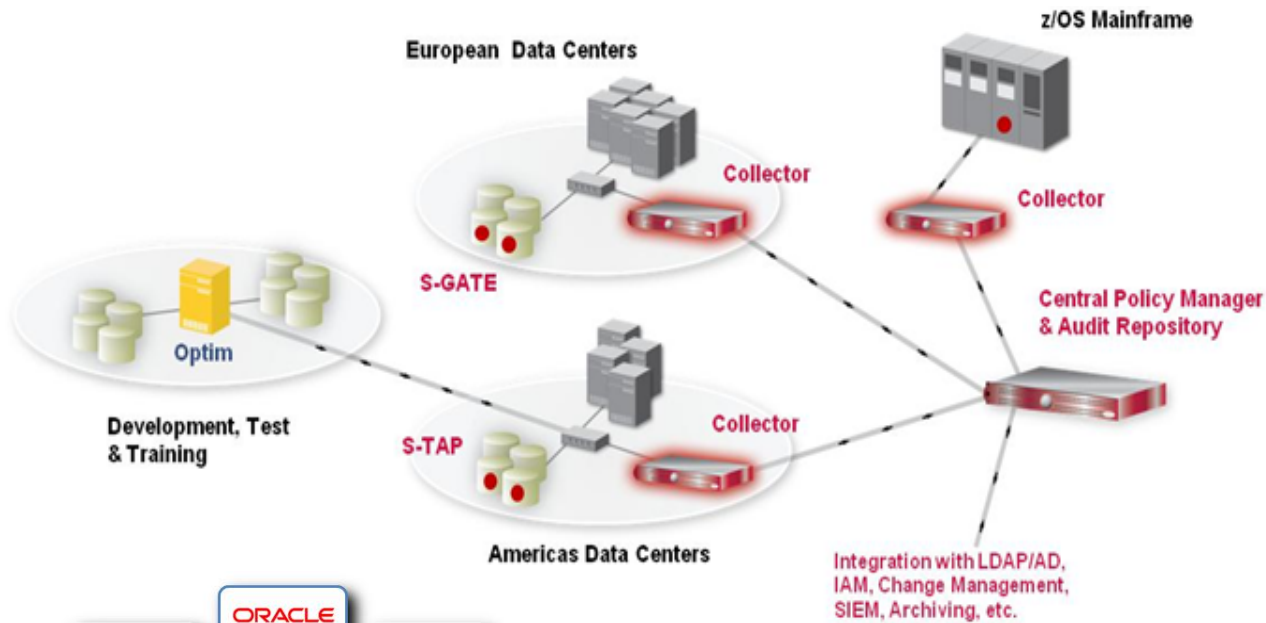
Guardium provides continuous, real-time monitoring of all database activities, including actions by privileged users such as DBAs, developers & outsourced personnel

Key Features

- Non-invasive, cross-platform architecture
- Continuous, real-time monitoring & auditing
- Detect or block unauthorized & suspicious activity
- Identify database vulnerabilities such as misconfigured privileges
- Granular, real-time policies
 - *Who, what, when, how*

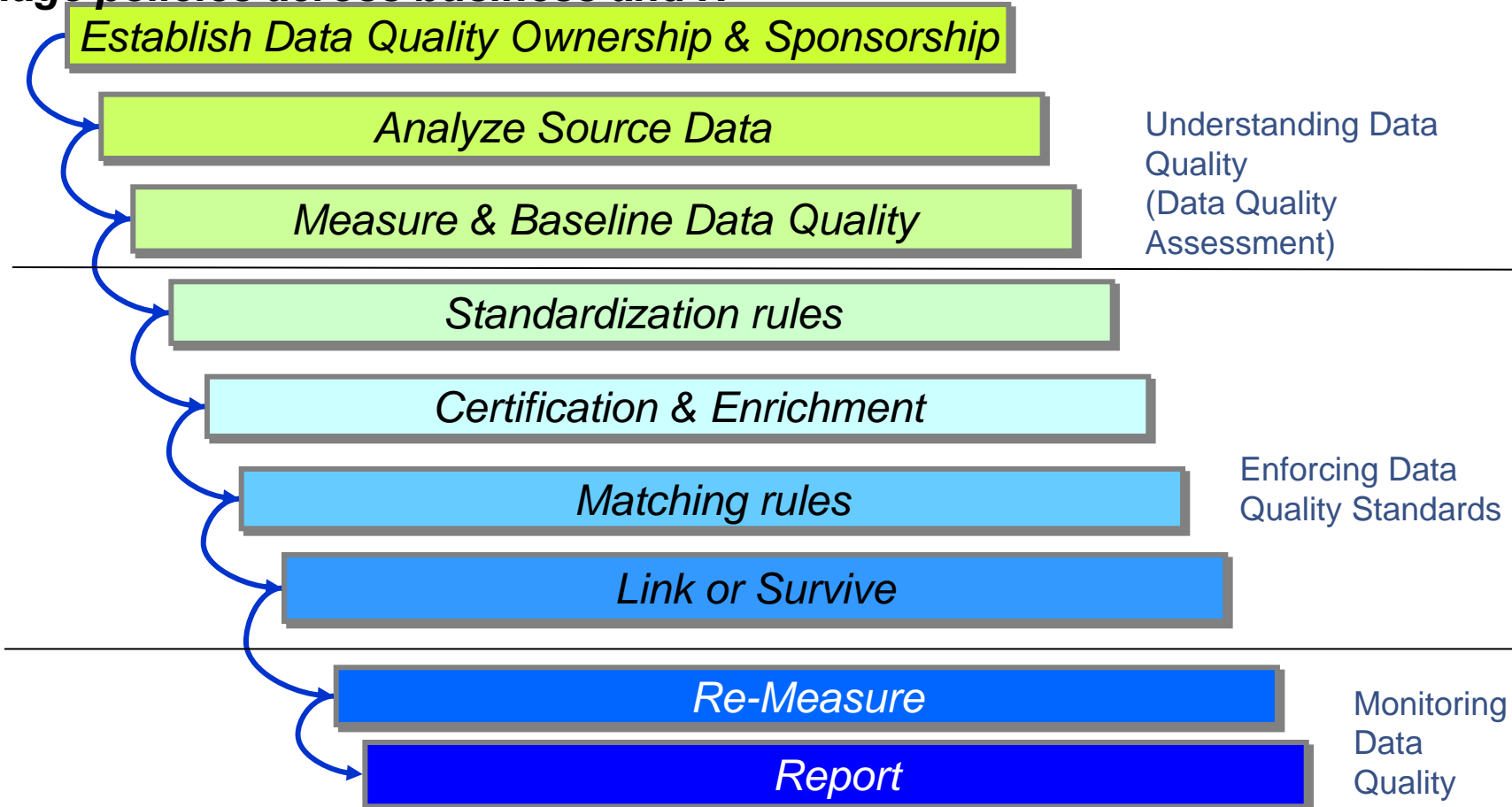
Benefits Summary

- Protect against data breaches & fraud; mitigate both insider & external threats
- Assure data governance by preventing unauthorized changes to critical enterprise data (SAP, PeopleSoft, etc.)
- Reduce compliance costs through automated, centralized & standardized controls



Process For Information Quality Management and Stewardship

- **An integrated platform to understand, cleanse, transform and deliver information in a consistent and consumable way across all your business applications. Enables data Stewards to drive and manage policies across business and IT**



Closer to home again..... April 4 2011



Dear Customer:

We were notified by our database marketing vendor, Epsilon, that we are among a group of companies affected by a data breach. How will this affect you? The company was advised by Epsilon that the files accessed did not include any customer financial information, and Epsilon has stressed that the only information accessed was names and e-mail addresses. The most likely impact, if any, would be receipt of unwanted e-mails. We are not aware at this time of any unsolicited e-mails (spam) that are related, but as a precaution, we want to remind you of a couple of tips that should always be followed:

- Do not open e-mails from senders you do not know
- Do not share personal information via e-mail

Hilton Worldwide, its brands and loyalty program will never ask you to e-mail personal information such as credit card numbers or social security numbers. You should be cautious of "phishing" e-mails, where the sender tries to trick the recipient into disclosing confidential or personal information. If you receive such a request, it did not come from Hilton Worldwide, its brands or its loyalty program. If you receive this type of request you should not respond to it but rather notify us at fraud_alert@hilton.com.

As always, we greatly value your business and loyalty, and take this matter very seriously. Data privacy is a critical focus for us, and we will continue to work to ensure that all appropriate measures are taken to protect your personal information from unauthorized access.

Sincerely,

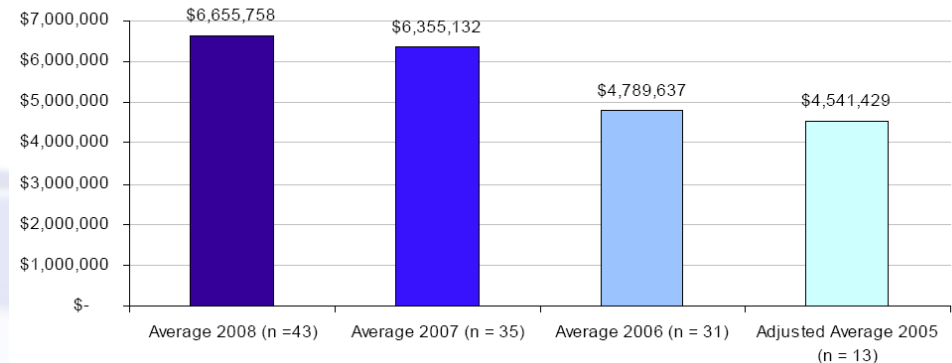
Jeffrey Diskin
Senior Vice President, Customer Marketing
Hilton Worldwide



Data Breaches continuing to increase

- **2008 recent survey reveals :**
- **62% of respondents at some time had their data lost or stolen**
- **84% of these expressed increased concern or anxiety due to the data loss.**
- **Breach costs avg of \$202 per compromised record - \$152 pertains to indirect cost including abnormal turnover or churn of existing and future customers.**
- **Cost per victim has risen by 38% over the last 4 years.**

Average organizational cost of data breach cost over four years



Average cost of a data breach in 2008 rises to US\$6.65M
46% increase in cost from 2005 - 2008

Source Ponemon Institute: Fourth Annual US Cost of Data Breach Study - Benchmark Study of Companies 2009

“Today, database security is a lot more challenging than it was a decade ago largely because compliance requirements are more pressing and more complex. Enterprises are dealing with tougher regulatory compliance requirements such as the Health Insurance Portability and Accountability Act (HIPAA), the Gramm-Leach-Bliley Act (GLBA), the Sarbanes-Oxley (SOX) Act, and the Payment Card Industry Data Security Standard (PCI DSS). In addition, since compliance requirements do not offer guidelines, confusion exists around what needs to be done to make databases more secure in order to comply.”

- Forrester Research, “A New Role Is Emerging Within IT: Database Security Analyst (DSA)”, Noel Yuhanna, 4 April 2008

Enterprise Information is on System z

Information on Demand for System z Delivers Competitive Advantages

DB2: 59 out of the top 60 banks in the world

DB2: 9 of the top 10 global life/health insurance providers

DB2: 23 of the top 25 US retailers

UPS runs DB2 for z/OS to support the world's largest known peak database workload

1.1 Billion SQL statements per hour!

24x7 ATM Deposits & Withdrawals

Runs the world's stock exchanges & banking networks



Reserves airline seats

Tracks the world's packages

8 of every 10 of the largest retail banks in Australia, Germany, Japan, and the United States use IMS for their core banking

\$3 trillion/day transferred through IMS by one customer

95% of Fortune 1000 companies store their data on System z

Over 15 billion GBs of production data in IMS...

Challenges around governing the usage, sharing and processing of massive amounts of electronic data

- **Growing infrastructure and resource management costs**
 - No policies for management of data growth – performance degradation
 - Redundancy of data
 - Disparate, complex applications and more users

- **Lack of common security and privacy requirements**
 - Risk of security breaches, compliance, audit failures
 - No ability to assess areas of vulnerability and prevent unauthorized intrusion
 - Lack of an overall protection strategy (relational / non-relational data and access controls)

- **Lack of trusted information**
 - No alignment of definitions across business and IT
 - No clear understanding of data sources & relationships
 - No standardized quality rules or threshold metrics
 - Lack of control over test data environments

"[A]n [information management] strategy should incorporate life-cycle information governance practices [to ensure] consistent execution of ... business optimization, agility, and transformation [initiatives]."

– *Forrester Research, Inc., "Refresh Your Information Management Strategy to Deliver Business Results"*
Rob Karel & James G. Kobielus, August 2009

"If you are going to protect your company's most valuable asset—your data—you will begin to view data security as a component of a more comprehensive information governance strategy."

– *Hurwitz & Associates,*
"Why you need an information governance strategy for 2010"

Marcia Kaufman, December 2009

"By 2013, 25% of the companies in highly regulated industries will create and staff positions in accounting, human resources, compliance and audit and law that deal explicitly with the management of information via technology."

– *Gartner, Inc., "Organizing for Information Governance"*

Debra Logan, November 2009