Four business trends driving demand for an integrated information infrastructure

Today's global marketplace is increasingly information oriented—with far-reaching implications for businesses. The ability to securely leverage information can create a competitive advantage. Conversely, the inability to securely leverage information creates business risk.

Four information-related business trends, described in the following section, are causing an explosion of information and complexity in data centers, stressing already overtaxed infrastructures and staffs. Information growth means more business opportunities and also more risks. Businesses that are able to take advantage of information-related opportunities and manage information risk outperform those that don't, according to IBM's 2008 Global CEO Survey.[1]

IBM can help. IBM offers comprehensive hardware, software, and services to help clients exploit the explosion of information. IBM can help clients deploy more resilient infrastructures for securely storing information and mitigating business risks.

An Information Infrastructure comprises the storage, software, servers and networks, integrated and optimized to deliver information from the storage media to the business applications. Information infrastructure includes technology assets that must be:

1) protected from misuse, and
2) immediately replaced if destroyed.

Four business trends and the explosion of information

Trend #1: Information availability requirements are increasing.

Businesses providing real-time access to information can make decisions better and faster. Yet 47 percent of users surveyed said they still don't have confidence in their information.[2] Another survey reveals that 42 percent of managers use wrong information at least once a week.[3] CEOs and CIOs will continue working to fill this information gap.

Information-based products and services continue to compete to deliver faster access to more information, with a better overall user experience. The ability to successfully leverage information can help drive competitive advantage.

Trend #2: Information privacy regulations and security threats are increasing.

Over 100 million consumer records were reported lost or stolen in 2007.[4] The number and scope of security breaches has been rising steadily every year, and the trend is expected to continue. Theft of intellectual property and other information assets becomes a bigger risk as more information is made available online.

Trend #3: Information compliance is more complex and penalties are more severe.

Compliance regulations and discovery requirements vary by country. Companies operating in multiple countries quickly find themselves bound by multiple compliance rules and retention periods. Fines have been levied for failure to retain records, failure to communicate legal hold orders, and failure to produce records in a timely manner. The trend indicates that, as technology improves over time, judges will be quicker to impose stiffer penalties.[5]

Trend #4: Information retention periods are longer, often exceeding the life of storage media.

A recent survey of archive requirements found 83 percent of respondents keep some data 50 years or more.[6] Long-term data retention policies require that data be migrated to new technology platforms within its useful life. These policies justify investments in tiered (or blended) storage, which can significantly reduce power requirements and total cost of ownership.

The result of these trends is that information volumes are exploding, forcing business leaders to consider changing the way their data centers provide information services. IBM recognizes this challenge and is responding with a vision and strategy called the new enterprise data center. This strategy describes how data centers can implement solution blueprints for key topics: information infrastructure, service management, business resilience, security, energy efficiency, consolidation, and virtualization. It includes game-changing technology and services that can dramatically improve the cost/benefit picture for your data center's infrastructure. This brochure highlights one of the key attributes: IBM Information Infrastructure solutions.

Organizational, operational and process silos degrade the manageability of information

Many IT organizations face additional challenges when information is segregated by application, platform, geography, or business unit. Segregated environments provide a measure of control to the business units they serve, but tend to create pockets of unused resources and inconsistent implementation of risk management policies. For example, the 2007 Open Compliance and Ethics Group (OCEG) GRC Strategy Survey found that 84 percent of executives reported fragmentation of their governance, risk, and compliance activities and processes. Segregated information is also more difficult to share. Another 65 percent of executives surveyed in the study claimed that fragmentation caused serious business problems including duplication of effort, redundant solutions, higher costs and increased risk.

Improved resource and secure information sharing allows businesses to be more responsive to change. IT is key to making this happen. By pooling available capacity and replicating risk management policies, businesses can deliver faster information services while controlling costs, improving the overall value of IT.

Adopting an information infrastructure strategy

Organizations can maximize the benefits of the information explosion by developing and implementing an information infrastructure strategy that aligns with business goals. A comprehensive strategy not only addresses governance, risk and compliance concerns, but also helps streamline operations to deliver new levels of economics and improved capacity planning.

Organizations can benefit from an overarching policy definition that will steward the management of data throughout its life cycle, as well as help protect data from exposure or damage. The OCEG GRC Strategy Survey found that 71 percent of respondents who took advantage of opportunities to integrate these activities realized benefits that met or exceeded their expectations.

An information infrastructure strategy identifies the current and desired state for four core capabilities that impact service levels and business risk:

- **Information availability**–*Plan and deliver continuous and reliable access to information, in any form, at any time, to any device.*
- **Information retention**–*Retain and maintain access to business records for legal, regulatory or business needs.*
- **Information security**–*Protect and securely share information across the enterprise, partners and customers.*
- **Information compliance**–*Reduce regulatory, operational and reputation risks, audit costs and audit deficiencies.*

Developing an information infrastructure strategy is often the right next step for creating a more flexible and resilient infrastructure that better integrates information, systems and processes. Implementing an information infrastructure strategy can help IT organizations become more energy efficient. Enterprises can also expect to achieve more rapid levels of service delivery by utilizing automation to drive efficiency and operational agility. When this highly efficient and shared infrastructure aligns with business goals, it also allows for more dynamic response to changing business needs.

Prioritize governance, risk and compliance activities against business requirements

A well-implemented information infrastructure strategy assesses and analyzes information risk to determine ways it can potentially affect the enterprise and its value chain, such as impacts on information accessibility, communication flow, ongoing operations and workflow interactions. Understanding the scope and impact of a risk helps teams better determine where they should place their attention.

Organizations then come to realize that they need not protect against every conceivable threat, but instead should understand the risks and prioritize efforts according to what makes the most sense for the business. Businesses cannot completely remove the risks but can work to better manage them. This can put an organization in a better position to balance the needs and resources of the business with its needs for information security, information compliance, information retention, and information availability.

Information availability

An organization's ability to access information correlates directly with its business resiliency. Disasters can destroy vast amounts of work and data with devastating effects on business viability. However, information availability means more than just having effective disaster recovery measures in place. Five hours of downtime can be just as debilitating—and is far more likely to occur—as the effects of a hurricane or fire. Organizations must take steps to ensure users have continual access to critical information. Disruptions to availability can impede productivity, result in lost revenues, and damage customer loyalty, partner relationships, brand, and reputation.

IBM Information Infrastructure

Information Availability

IBM Information Infrastructure assists organizations in identifying the information that is most critical to their business, prioritizing information, and leveraging best practices to create and implement a comprehensive strategy for achieving the desired level of information resiliency.

Information Retention

IBM Information Infrastructure can help organizations facilitate management of the competing demands of cost and availability; and to help them respond effectively to legal, regulatory, and investigatory inquiries. IBM can help organizations proactively reduce the risks associated with information discovery.

Information Security

IBM Information Infrastructure helps clients assess information security priorities and risks, determine where sensitive information resides, and provide a means to assess and prioritize vulnerabilities and security gaps.

Information Compliance

IBM Information Infrastructure helps organizations reduce the complexity and costs of security audits and regulatory compliance, while enabling them to protect against potential financial penalties and damage to their reputation.

Information availability planning assists organizations in identifying the information that is most critical to their business, prioritizing areas such as intellectual property, financial information, human resource data, and customer records. It then leverages best-practice frameworks to create and implement a comprehensive strategy for achieving the desired level of information resiliency, which can include the ability to deliver continuous and secure access to information, optimize employee productivity and stakeholder satisfaction, meet service level agreement requirements, help meet internal or external regulations regarding access to data, and reduce management costs.

Information retention

Larger organizations may have to manage hundreds of disclosure requests every year, often with the requirement to satisfy those requests in very short timeframes. Lack of responsiveness can result in serious repercussions, including significant fines and penalties. Additionally, industry and government regulatory bodies often require lengthy retention periods for business records. Organizations have to maintain information according to company and regulatory retention policies in order to maintain compliance.

Information infrastructure can help create environments that facilitate management of these competing demands and help organizations respond more effectively to legal, regulatory and business inquiries. This infrastructure can enable early analysis and diagnosis of e-discovery readiness, e-mail and records management, development of chronological and event-based retention policies, enterprise-wide search and discovery analytics capabilities, and information risk management.

Information compliance

Regulatory, industry and legal mandates for maintaining the integrity and privacy of information are continually on the rise. Unfortunately, complex audit and compliance requirements can hamper an organization's effectiveness. Information infrastructure can help organizations reduce the complexity and costs of security audits and regulatory compliance, while enabling them to better protect against potential financial penalties and damage to their reputation.

Information infrastructure facilitates a sustainable compliance strategy that includes defining and implementing policies, processes and procedures for data encryption, records and content management, storage and archiving, retention management, change and configuration management, identity and access management, Web site auditing, and in-depth network defense and system protection. For an organization to declare itself compliant, it needs to be able to provide sufficient evidence to substantiate that claim. All business records must be managed and available for inspection, as legally required. The foundation of an information compliance approach includes the ability to document and enforce policies (security, retention, and authentication) while simultaneously prove (collect evidence) that the business is following those controls and policies.

An effective information infrastructure leverages automated policy enforcement mechanisms and standardized compliance discovery and reporting. It provides a means for organizations to monitor user activities in relation to misuse or noncompliance, then to manage incidents using standardized, traceable procedures.

Information security

Organizations must be able to protect and securely share information across the enterprise, as well as with their partners and customers. This includes enabling secure business collaboration with effective controls that protect intellectual property and the privacy of information while not slowing down business processes. It means providing anytime-anywhere access to secure information while helping to ensure the integrity, confidentiality and availability of that information.

An information infrastructure strategy can help customers understand information security priorities and risks, determine where sensitive information resides, and provide a means to assess and prioritize vulnerabilities and security gaps. Based on those assessments, an organization can create a threat profile to assess its current security stance and facilitate plans to improve that stance.

A key part of the design process is to develop an enterprise security roadmap that defines policies, processes and procedures needed to obtain the desired security stance, as well as the enterprise security architecture needed to support it.

This architecture requires shared solutions and services that go beyond traditional security, privacy, compliance and operational risk solutions to offer proven technologies and collaborative methods to build consistency and quality control.

Maximize the business benefits of your information infrastructure

By taking a holistic approach to protecting and managing information, organizations can leverage their technology investments across the entire enterprise in multiple governance, risk and compliance areas. Information infrastructure empowers organizations to create models for comprehensive security and compliance infrastructures that can be easily overlaid on other segments of the business, such as new operations, branches or franchises. Information infrastructure can enable an organization to more deftly manage risk so that it can move forward, innovate and thrive competitively as a business.

Why IBM for information infrastructure?

IBM brings a strategic, end-to-end approach to analyzing an organization's information infrastructure. Together, we develop a customized strategy that leverages IBM expertise with data center operations, including virtualization, energy efficiency, business-driven service management, security, and business resiliency, to help meet the goals of your IT organization and your business.

A vast portfolio of software, hardware, services, integrated solutions, and financing puts IBM in a unique position to help organizations through any or all of their information infrastructure challenges. IBM combines deep consultative expertise and education with software, hardware and tools that have broad platform, application and resource support to protect and strengthen the resiliency of an organization's valuable information assets.

Turning to IBM as a trusted partner can enable an organization to create a more flexible, robust and resilient information infrastructure that translates into a more flexible, robust and resilient business.

For more information

To learn more about IBM's strategy for the new enterprise data center, including Information Infrastructure, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/information_infrastructure

About IBM Information Infrastructure

IBM Information Infrastructure enables IT organizations to better align IT policies, processes and projects with business goals. Organizations can leverage IBM services, software and hardware to plan, execute and manage information infrastructure initiatives.

IBM Information Infrastructure can help clients improve core competencies (information availability, information retention, information security, and information compliance) across the enterprise. Organizations of every size can benefit from flexible, modular IBM solutions that draw on extensive customer experience, best practices and open standards-based technology. IBM can help clients quickly implement the right information infrastructure solutions to achieve rapid business results.

IBM Systems and Technology Group
Route 100
Somers, NY 10589
U.S.A.

Produced in the United States of America
July 2008

This document could include technical inaccuracies or typographical errors. IBM may make changes, improvements or alterations to the products, programs and services described in this document, including termination of such products, programs and services, at any time and without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. The information contained in this document is current as of the initial date of publication only and is subject to change without notice. IBM shall have no responsibility to update such information.

IBM is not responsible for the performance or interoperability of any non-IBM products discussed herein. Performance data for IBM and non-IBM products and services contained in this document was derived under specific operating and environmental conditions. The actual results obtained by any party implementing such products or services will depend on a large number of factors specific to such party's operating environment and may vary significantly. IBM makes no representation that these results can be expected or obtained in any implementation of any such products or services.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY, EITHER EXPRESSED OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements (e.g., IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided.

References in this document to IBM products, programs or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM program or product in this document is not intended to state or imply that only that program may be used. Any functionally equivalent program or product that does not infringe IBM's intellectual property rights may be used instead. It is the user's responsibility to evaluate and verify the operation of any non-IBM product, program or service.

Disclaimer: The customer is responsible for ensuring compliance with legal requirements. It is the customer's sole responsibility to obtain advice of competent legal counsel as to the identification and interpretation of any relevant laws and regulatory requirements that may affect the customer's business and any actions the reader may have to take to comply with such laws. IBM does not provide legal advice or represent or warrant that its services or products will ensure that the customer is in compliance with any law or regulation.

[1] IBM, "The 2008 Global CEO Study: Implications for the CIO." http://www-935.ibm.com/services/us/cio/implications/index.html

[2] Association for Information and Image Management (AIIM), "The State of the Industry—2007: Put the ECM Multiplier to Work for You," July/August 2007. http://www.aiim.org/Edoc/ArticleView.aspx?ID=33445

[3] "Managers Say the Majority of Information Obtained for Their Work Is Useless, Accenture Survey Finds," January 4, 2007. http://accenture.tekgroup.com/article_display.cfm?article_id=4484

[4] Identity Theft Resource Center, "2007 Breach List," February 26, 2008. http://www.idtheftcenter.org/ITRC%20Breach%20Report%202007.pdf

[5] Cohasset Associates, Inc. "IBM FileNet Records Manager: Cost Effective Electronic Records Management," November 2007. http://www.cohasset.com/pdf/ibm-filenetrm-wp2.0.pdf

[6] Storage Networking Industry Association (SNIA), 100 Year Archive Task Force, "100 Year Archive Requirements Survey," January 2007. http://www.snia.org/forums/dmf/programs/ltacsi/100_year

Recyclable, please recycle

TSB03004-USEN-00