

A CommVault® White Paper

Journey to the Center of Corporate Information Ecosystems: The Crucial Realignment of IT and Business Priorities

*How the Power of Singular Information
Management® Provides the Catalyst for
Delivering Corporate Change and Shared
Ownership of Valuable Data Assets*

Contents

Abstract.....	3
Executive Summary.....	4
Yesterday - Roots of Data Fragmentation.....	4
Today - Crossing the Great Divide.....	5
The Future - It's as Simple as Connecting the Information Dots.....	6
Six Degrees of Data Separation.....	8
Flexible Frameworks for the Future.....	9
CommVault Simpana® Suite = Singular Information Management® Capabilities.....	10



Abstract

Faced with the constant need to manage diverse channels of business information, IT leaders often are forced to respond reactively without the benefit of an overarching business perspective. Likewise, busy business executives tend to be so focused on daily operations that they don't provide IT with sufficient insight into how information could better support the bottom-line business. As a result, technology departments have operated autonomously, applying lots of quick fixes to daunting data management problems. Unfortunately, this approach has led to a proliferation of separate solutions, which are costly, difficult to manage and ultimately restrict "big picture" information sharing and collaboration.

There is a better way—if technology and business stakeholders join forces to identify and assess the value of their corporate information from a common point of reference. That reference point is a flexible information framework that addresses current corporate data requirements, yet can anticipate and adapt to future needs. Together, they can create a blueprint of how information flows throughout the organization, as well as develop data strategies that blend best-of-class technologies with business practices to reduce costs, complexity and risk. This strategic paper from CommVault offers guidance and a simple methodology on how to address information management strategy in a way that is more meaningful to both technology and business leaders. Additionally, pragmatic steps are delineated that will help organizations nurture flourishing information ecosystems that propel long-term business success.

September 2008

Executive Summary

In the world of science, an ecosystem is a geographical area where plants, animals, the landscape and the climate all interact together. This complete community of living organisms, as well as non-living materials, functions as a cohesive unit, regardless of whether the ecosystem is a rain forest covering an area larger than many nations or a simple puddle in a backyard garden. All of the ecosystem elements operate in a balanced fashion, constantly adapting to environmental changes in order to thrive.

A similar concept can apply to the business world, where an information ecosystem embodies the people, processes, technologies and data that exist within the confines of a corporation. As such, interlocking bits and bytes of data travel throughout the organization, as well as to customers, partners, suppliers, regulators and other key external audiences. Unlike the rain forest or backyard puddle, however, the elements of most information ecosystems today are completely out of balance, due to a rapidly spreading and increasingly complex web of files, e-mails, documents and applications that are growing wildly out of control.

Fortunately, much-needed relief can be found without over-investing in hardware and software or re-inventing the entire organization. What it takes is a re-alignment of IT and business strategies and a crucial meeting of the corporate minds to get everyone focused on regaining the company's information equilibrium with unified data strategies that support both current and future business needs.

The keyword for this re-alignment is change. Change embodies ecosystems. Put simply, to change, a transition needs to occur from one state to another. Information and data management are no different. To gain the sort of integration that companies require in terms of cohesive data and information strategies, change is required. The alternative is insanity, defined by performing the same processes over and over again, whilst expecting a different result.

Yesterday - Roots of Data Fragmentation

In most organizations, data growth now has reached an all-time high, with 60 percent or higher year-over-year increases becoming the norm.

Generally speaking, our recent computing past is characterized by company IT initiatives to move off legacy computing platforms in favor of more flexible and open systems. In doing so, countless opportunities are gained to access, manipulate and share data in innovative ways. All this newfound "openness," however, gave way to a host of fragmented solutions for managing, storing and protecting what was expected to be steady data growth, but quickly became a never-ending explosion of data. In most organizations, data growth now has reached an all-time high, with 60 percent or higher year-over-year increases becoming the norm.

Unfortunately, these legacy quick fixes led to disparate, point solutions aimed at specific problem areas, such as application scalability, content-specific data management and protection, departmental compliance, ad-hoc security and silo-ed, long-term records retention. While these isolated solutions provided some short-term relief, they also exacerbate a problematic, recurring cost “virus” in terms of the exponential challenges of adding—and often duplicating—storage, infrastructure, power, reporting and policy management.

Meanwhile, coping with external factors, including regulatory mandates, green IT initiatives and eDiscovery requirements, cause additional reactive pressures on IT departments, which lead to further fragmentation of data. The result: failed attempts to save storage, power and data center resources. Making matters worse is the time-consuming, costly and tedious task of “hunting” for specific pieces of data in order to comply with regulatory or legal discovery demands.

The real root of the problem stems from an age-old disconnect between IT and business leadership when it comes to identifying, assessing and classifying information based on its intrinsic merit to the organization. IT historically has worked in a vacuum since business executives have been remiss in taking ownership of the underlying information ecosystem. As a result, IT has focused on what IT does best—delivering leading-edge applications and tools to users. But, this has all been done without broader insight into the impact these applications, tools and data proliferation has had on the overall business.

Most companies don’t need to look much further than their e-mail systems for a prime example of the division between IT and business. In an effort to support emerging green IT initiatives, many IT teams are working diligently on conserving power and reducing storage space, including deleting volumes of old e-mails instead of archiving and migrating them to alternative media. In doing so, they may inadvertently expose the company to unnecessary future risks if reproducing those e-mails becomes part of an eDiscovery request. In other cases, IT teams are investing heavily in archiving 10-year-old e-mails, regardless of its relevance or future liability—and more importantly, without clear direction from the business side on whether that information is worthy of retention in the first place.

Today – Crossing the Great Divide

Clearly, technology and business teams need to close the gap between them and together focus on developing proactive information strategies that maximize the value of information to the organization. Simplification and unification are required to provide improved data control and streamlined access to vital corporate information assets.

Simplification and unification are required to provide improved data control and streamlined access to vital corporate information assets.

To accomplish this, IT must change its pattern of technology investments currently characterized by knee-jerk reactions to skyrocketing data growth, backup and recovery bottlenecks, as well as other stopgap measures to address isolated data management problems. Conversely, the business side of the house needs to step to the plate and get involved in determining information workflow for the entire organization so there's greater insight into evolving corporate direction and the role technology can play in bolstering the bottom line.

How can this be accomplished? In short, IT and business must work together proactively to develop a holistic approach to information management. Not convinced? Then consider how data transforms itself into information. Is it not the introduction of an application or a user that provides the spark for this transformation? This isn't something IT can deliver; it's something IT enables. Consequently, it is in fact business users and their context that provide the essential underpinning of an overarching information management framework. Never is this more obvious than in the way information risk manifests itself in organizations through user and information interaction. How else does information disperse, duplicate and evolve into multiple revisions?

**IT and business
must work together
proactively to develop a
holistic approach to
information management.**

To kickoff the re-alignment process, IT and business leadership need to get in the same room to assess, analyze and create a blueprint of how their information assets flow throughout the organization.

The Future – It's as Simple as Connecting the Information Dots

All information profiling starts with good data analysis. Therefore, the first "dot" is an audit of existing corporate data that needs to connect with the business context that creates value and transforms it into information. To determine the value, the unified technology and business team must embrace a singular focus and mission in assessing business requirements as they relate to the following essential elements:

- Asset type
- Risk
- Retention
- Accessibility
- Protection
- Security
- Destruction

As the diagram to the right depicts, these elements interact with one another to form the nucleus of an organization's information ecosystem. This holistic depiction of information connects assets to key decision-making criteria and is much more aligned with the way businesses run today.

This framework also enables organizations to embrace a more compliance and architectural approach to information management as it provides greater clarity into all the ways assets are interrelated. While risks can be determined in different ways, it's imperative that business and IT view risk as an ever-evolving area that requires constant monitoring. By doing this, they then can accommodate changes over time, particularly in relation to the way information is classified and data is stored.



While risks can be determined in different ways, it's imperative that business and IT view risk as an ever-evolving area that requires constant monitoring.

For example, today certain types of data may have little risk to exposure, so there's no requirement for special storage or retention policies. Yet, even a minor legislation or organizational change can alter the risk profile dramatically and elevate once-insignificant information to the highest risk-alert status. Companies must be agile enough to make incremental modifications to their information frameworks and adapt to change. This process will include the reclassification of information assets, comprising both live and long-term data, as they suddenly become more critical from a risk management perspective.

Risk profiling is broader than compliance and typically relates to the additional topics of security and accessibility, including:

- Who needs access to this information and how often?
- Which security measures (e.g., encryption) need to be deployed?
- How long must this information be retained and does a third-party archive it offsite?
- What is the ultimate lifecycle of this information and then how is it destroyed?

Retention policies also play a part. The growing requirement in today's organizations is to facilitate different retention policies across similar information assets, based on business access and risk requirements (e.g., regulatory retention vs. civil evidence preservation). In carrying out the overall audit, the business side must be fully engaged with IT, establishing sponsors to aid in information assessment and analysis.

Once the information blueprint is in place, the technology team can then initiate development of unified data strategies that blend best-of-class technologies with best practices to reduce costs, management complexity and risk. In doing so, each information asset must be reviewed as it traverses through its workflow in the organization. Developing a thorough understanding of these phases will prove pivotal in determining which data management strategies will be most effective in meeting both short- and long-term objectives.

Six Degrees of Data Separation

Information typically is managed in six distinct, separate phases that aren't necessarily sequential. Since information will have varying degrees of importance to technology and business stakeholders, it's critical to consider both points-of-view when answering the following questions for each step.

The six phases are:

- **Conception**—What is the origin and nature of the information? For example, is it an e-mail, file document or image?
- **Proliferation**—Is the information meant for internal and/or external use? Will it be sent or was it received?
- **Exploitation**—How accessible must this information be? Will it be used for any legal or regulatory filings? Will it need to be searched or used in a discovery process?
- **Revision**—How is version control managed? Will different iterations of this information need to be available for auditing purposes?
- **Retention**—How is the information protected? What are the most appropriate storage technologies and security measures that need to be taken to ensure long-term information authenticity?
- **Disposition**—How will this information be deleted or purged?

How a piece of information is created and the context of its origin often have a major impact on its overall value to users and business. For that reason, it's important to group low- and high-value information to determine the appropriate level of data management. Once value has been assigned, it's much easier to determine appropriate strategies and policies for managing data workflow, processes, storage and protection.

High-priority items, for instance, will require the most stringent data protection and security. Most likely, these mission-critical pieces of information also will be retained for the longest periods of time, yet need to be accessible for eDiscovery. By aligning, dissecting and classifying data based on information asset type and underlying business value, it's possible to reduce duplication, storage costs and administrative overhead. Also, a cohesive information management strategy, supported by unified data management solutions, will deliver dramatic improvements in operational efficiencies, scalability and agility, in turn, providing greater business value.

By aligning, dissecting and classifying data based on information asset types and underlying business value, it's possible to reduce duplication, storage cost and administrative overhead.

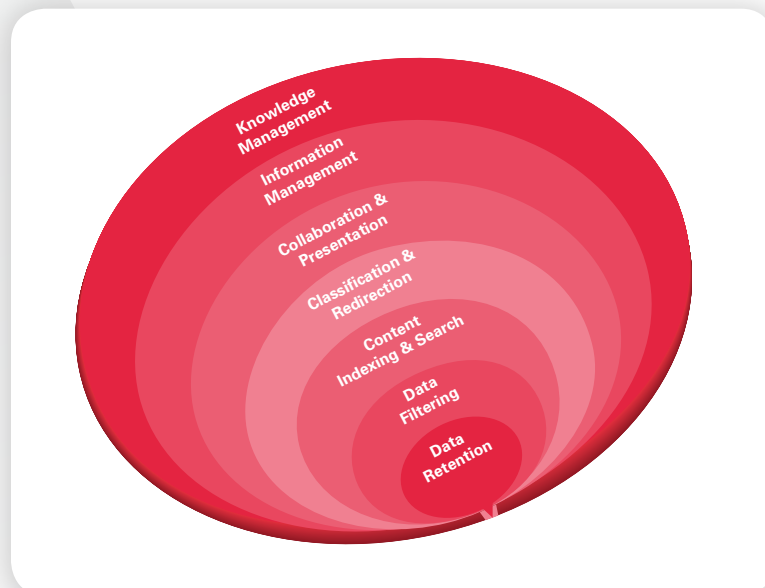
Flexible Frameworks for the Future

All ecosystems are living, breathing entities that change frequently to adapt to fluctuating environmental conditions. The same holds true for information ecosystems, which need to accommodate shifting business directions, changing economic conditions, ever-evolving customer requirements and the ongoing introduction of new business processes and technologies.

What's missing in an overwhelming majority of today's data management solutions is ample flexibility to keep pace with mutations and transformations in the ecosystem. In fact, most data protection vendors provide only loose integration between different point products and limited collaboration between storage and document management.

The inflexibility of existing data management solutions severely limits a company's ability to repurpose information and modify the way it's managed, exploited, accessed and retained. Consider the journey that most organizations

now need to take in order to exploit the greater value of their data. The diagram to the left highlights this journey from effective data management, through levels of classification and collaboration to improved information management and ultimate knowledge exploitation.



The shortcomings of existing products as enabling technologies in this journey and the difficulties and frustrations of managing ad-hoc, disjointed solutions has inspired a completely different and better way—a single-platform approach to information management with solution modules sharing a common code and function set designed to work together from the ground up. With its Simpana® software foundation, CommVault has created a single-platform architecture with centralized information management to ease data management through an entire lifecycle, while providing unprecedented control over data growth, costs and risks.

Simpana® software makes it possible to manage disparate data from multiple sources simultaneously with the same underlying data management foundation.

For the first time, companies can move away from disparate products for data protection, replication, archive and resource management, as well as avoid the time-consuming and costly challenges of managing separate infrastructures. Simpana software makes it possible to manage disparate data from multiple sources simultaneously with the same underlying data management foundation.

This singular approach also makes it much easier to move data and archive it offline until needed. For many companies, having a single platform also liberates information that has been trapped inside backups and archives or other applications in order to create more compelling business value.

CommVault Simpana Suite = Singular Information Management® Capabilities

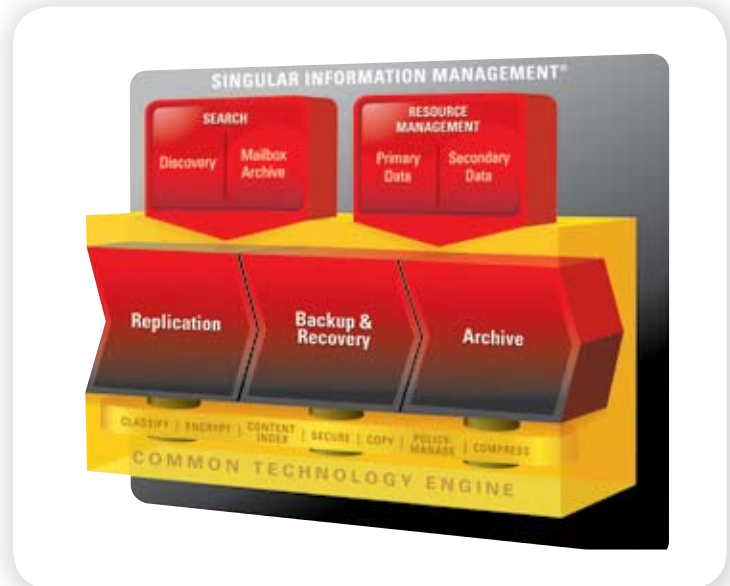
CommVault is redefining information management in a way that is meaningful to both technology and business leaders, while setting the standard for information consolidation, corporate collaboration and unified data management. As a result, Simpana software alleviates myriad pain points and produces the following benefits:

- Eliminates separate point products or infrastructure
- Removes constitutional duplication of data
- No more exponential storage growth
- Does away with separate applications to manage and integrate together
- No multiple policies and skill set requirements
- No more wasted time and excessive costs of trying to find a specific file or document for eDiscovery

As the diagram below illustrates, CommVault's Singular Information Management architecture supports a common technology engine that delivers optimized data movement and easy expansion to accommodate ever-evolving business needs. All of CommVault's Simpana software modules rely on this engine to share data management services, including indexing, media management, encryption and reporting. Simpana software offers greater information access to all corporate users across all tiers of storage, which ultimately raises the value of a company's data.

To ensure proper alignment with business processes, CommVault's Simpana software exposes information in a way that makes the most sense while providing highly flexible indexing and searching technologies that simplify reclassification of information. As trends increase toward a more forensics approach to data gathering, Simpana software customers will be able to respond in a much proactive fashion. Additionally, they will be well-positioned to leverage the following benefits:

- Better control over storage growth and costs
- Improved collaboration across operational silos
- Minimized capital expenditures
- Accelerated backups and recoveries
- Streamlined data migration and archival
- More efficient use of storage devices and networking
- Improved proactive planning for storage growth
- Increased compliance capabilities
- More granular view of corporate resources and offices through integrated reporting
- Boosted user and administrator productivity
- Closer alignment between technology and business stakeholders





CommVault developed its Simpana software suite with equal focus on business and technology requirements—and companies today need to follow suit with a shared vision and dual ownership over their adaptable, agile information ecosystems. To nurture and protect a vital, vibrant information community, a single view across the enterprise is needed, along with a common point of business reference.

Long-term business success will hinge on how effectively organizations can unleash the power of their information while collaborating within and between groups to extract information value from their data assets. CommVault's unifying strategy is a welcome catalyst for corporate change that effectively and economically handles today's tough problems, yet is agile enough to grow and change in supporting the needs of tomorrow.



www.commvault.com ■ 888.746.3849 ■ E-mail: info@commvault.com

CommVault Worldwide Headquarters ■ 2 Crescent Place ■ Oceanport, NJ 07757 ■ 888-746-3849 ■ Fax: 732-870-4525

CommVault Regional Offices: United States ■ Europe ■ Middle East & Africa ■ Asia-Pacific ■ Mexico & Latin America ■ Canada ■ India ■ Oceania

©1999-2008 CommVault Systems, Inc. All rights reserved. CommVault, CommVault and logo, the "CV" logo, CommVault Systems, Solving Forward, SIM, Singular Information Management, Simpana, CommVault Galaxy, Unified Data Management, QiiNetix, Quick Recovery, QR, CommNet, GridStor, Vault Tracker, InnerVault, QuickSnap, QSnap, Recovery Director, CommServe, CommCell and ROMS are trademarks or registered trademarks of CommVault Systems, Inc. All other third party brands, products, service names, trademarks, or registered service marks are the property of and used to identify the products or services of their respective owners. All specifications are subject to change without notice.