

STORAGETEK'S INFORMATION LIFECYCLE MANAGEMENT™ STRATEGY

WHITE
PAPER

1 INTRODUCTION 3

2 THE FLOOD OF INFORMATION 3

2.1 INFORMATION LIFECYCLE MANAGEMENT 3

3 ILM IS RIGHT AND TIMELY 4

3.1 ILM OFFERS A LOGICAL WAY TO VIEW STORAGE 4

4 DEVELOPING IDEAS TO DELIVER VALUE 5

4.1 SOLVING CUSTOMERS' BUSINESS ISSUES 5

1 INTRODUCTION

Companies today save practically all of their data. With government regulations, litigation, disaster recovery/business continuance planning pressures and generally higher levels of business scrutiny, our customers just can't know what information might be important in the future.

2 THE FLOOD OF INFORMATION

Industry experts agree that an average company's information is growing between 50 and 70 percent per year. Companies require an enormous amount of storage capacity to save every e-mail, letter, sales report, proposal, medical record, telephone bill, bank statement, stock transaction, price list, inventory summary, shipping report and so on. Video surveillance images are collected nearly everywhere we go—gas stations, parking lots, elevators, major highway intersections—and they must be stored. Satellite images provide information for climate studies, geological research and urban planning. Storage opportunities abound.

2.1 INFORMATION LIFECYCLE MANAGEMENT

That's where StorageTek's Information Lifecycle Management™ (ILM) strategy comes in. It's our way of helping our customers solve one of their most pressing strategic business issues: how to manage the flood of information, yet lower cost and improve the efficiency of their storage operations. ILM should be a solid foundation on which to build their growth. ILM is based on two concepts: the business decisions that customers need to make about their information and the changing value of information over time. There's no good reason to store less valuable, aging information on the same storage device as more valuable, new information—especially when a range of devices exists, and that range provides secure data storage, acceptable data recall times and different price points. The actual implementation of an Information Lifecycle Management strategy is relatively straightforward. Where we believe we have the greatest opportunity initially with ILM is to help our customers begin to assign value to their data. Then, various kinds of data can be stored on different but appropriate devices throughout the lifecycle. For example, video surveillance images are useful for a short period of time. If no crime, accident or injury occurs, the images can be deleted. E-mail, however, is generally stored for a long time and managed carefully. Some industries are required by law to maintain their e-mail records. Telephone records must be stored for seven years. Healthcare records, at least in the U.S., must be stored for patients' lifetimes.

Many companies choose to store everything on conventional disk. Although disk provides nearly instantaneous recall of information, it is the most expensive form of storage. Does all information need to be recalled instantly? No. Storing and managing aging information on conventional disk wastes capital, time and natural resources. Conventional disk is also an inefficient storage medium, with as much as 60 percent not used, based on “write to disk” practices. Therefore, companies that store everything on disk are forced to buy more and more disk for day-to-day use, for backup copies, for disaster recovery copies and so on. It's a vicious cycle.

With StorageTek's Information Lifecycle Management strategy, we seek to help our customers design solutions that move information from one device to another. This approach ensures that all information is stored at the appropriate price point, taking into consideration the preferred service level, or recall time. It makes sense. It helps our customers achieve their business objectives.

StorageTek® offers online, inline, Nearline® and archival storage options to help our customers store information efficiently and cost effectively throughout its lifecycle.

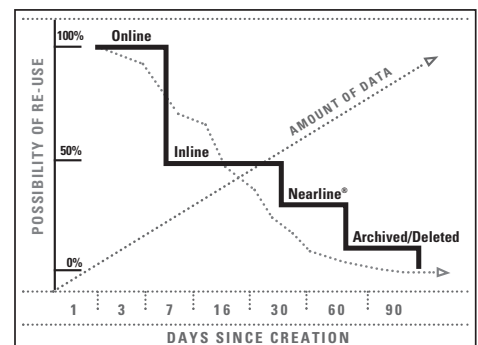


Figure 1. Lifecycle of information.

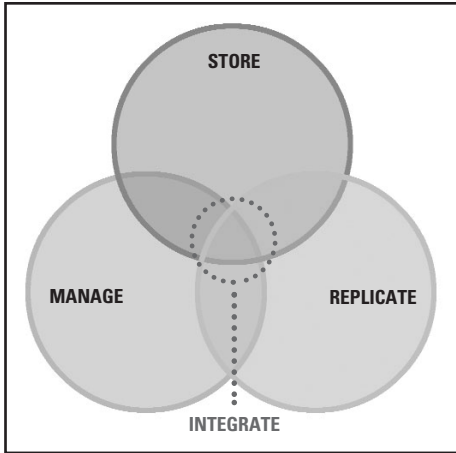


Figure 2. Information Lifecycle Management.

3 ILM IS RIGHT AND TIMELY

Why is StorageTek uniquely positioned to be successful with its Information Lifecycle Management strategy? We're one of only a few companies that can offer solutions covering the entire spectrum of storage choices. We recommend the right solution for the right data. Our competitors recommend the storage devices they have to sell.

Why is the timing right for ILM? Market conditions are forcing companies to reconsider the ways in which they manage and store their information. Companies must act now or drown in the flood of information.

Budgets are flat or declining. Our customers must use their assets more effectively. Our solutions should help them do that by moving aging data to less expensive devices and freeing up existing capacity.

Skilled human resources are scarce. Companies can no longer hire the storage professionals they need. Our solutions, which include a high level of automation, make it easier to manage more and more data with fewer people.

Conventional storage architecture is highly inefficient, with as much as 60 percent of storage capacity unused. Our virtual tape and disk solutions can increase the amount of usable storage space on a given device to nearly 100 percent.

Backup windows—the amount of time allotted to backing up the day's data—are growing smaller. Data centers are under mounting pressure to back up everything, yet maintain around-the-clock operation. Our storage networking solutions and products such as our BladeStore (B-Series™) disk array accelerate backup without modification of existing software programs.

3.1 ILM OFFERS A LOGICAL WAY TO VIEW STORAGE

The building blocks of StorageTek's Information Lifecycle Management strategy are store, manage, replicate and integrate. These four elements, we believe, help us organize storage-related activities logically, give us a way to talk to our customers about ILM and assure our customers of a proper cost-benefit balance in managing their storage.

An easy way to think of the value that StorageTek's Information Lifecycle Management strategy delivers is “the right data on the right device at the right time in its lifecycle at the right price at the right service level.”

4 DEVELOPING IDEAS TO DELIVER VALUE

As ILM storage architecture and solutions mature, we expect to offer customers more ways to simplify storage management, lower cost and reduce the visibility of storage in their operations. Here are some ideas we are working on:

> Store

Consolidate multiple storage devices into one. Consolidation occurs by integrating disk and tape capabilities to deliver more function in a single device, increasing disk and tape cartridge capacity, and virtualizing tape and disk. For example, the current standard for tape cartridge capacity is 200 GB. In our laboratory, we have succeeded in placing one terabyte, or five times more data, on a single cartridge—a direction that may ultimately reduce overall cartridge count and cost. By consolidating multiple devices into one, we would help our customers save money, space and time by giving them the ability to store more information in the same footprint.

> Manage

Automate so storage devices act like one versus many. Automation extends the number of devices and the amount of storage that can be managed by one person. We are developing software and leveraging partner technology that, if developed successfully, should help our customers manage data more efficiently and move it from one device to another based on policies, usage and time. Multiple storage devices acting like one reduces complexity and makes storage management easier for our customers.

> Replicate

Unify disparate systems/allow seamless movement between media. Seamless backup and data protection result from technology that allows diverse systems to work together behind the scenes. “Open” technology, supported by extensive testing with our partners and in our interoperability laboratories, has been one of our strengths and specialties for years. Open storage systems, compared to proprietary systems, provide our customers with much more flexibility and investment protection.

> Integrate

Add services that support the growing complexity of data centers. Complexity drives up cost and management time. Our objective is to simplify the lives of our customers by offering ways to manage and monitor storage systems, manage multivendor systems and tailor data protection solutions. The result? Greater efficiency and lower cost of operation.

4.1 SOLVING CUSTOMERS' BUSINESS ISSUES

We're putting our best minds to work on StorageTek's Information Lifecycle Management strategy. It makes sense as a way to prioritize our significant research and development budget, define our products and services portfolio and execute a customer-focused strategy. We're educating our employees about our ILM strategy. Our sales force, our front line to introduce ILM to the market, is receiving intensive training. Customers are responding positively to ILM. By helping our customers make decisions about their information and maximize its value, we help them solve pressing business issues related to efficiency and cost. The market is receptive. The time is right. We're inspired and united by the momentum of Information Lifecycle Management.

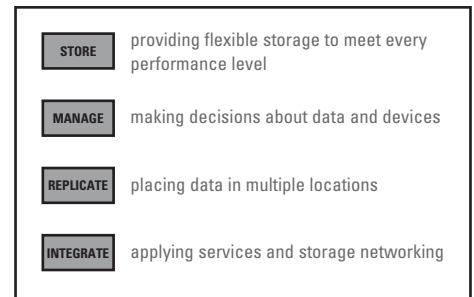


Figure 3. ILM building blocks.

World Headquarters

Storage Technology Corporation
One StorageTek Drive
Louisville, Colorado 80028 USA

Phone: 1.800.877.9220

About StorageTek®

Storage Technology Corporation (NYSE: STK), a \$2 billion worldwide company with headquarters in Louisville, CO, has been delivering a broad range of storage management solutions designed for IT professionals for over 30 years. StorageTek offers solutions that are easy to manage, integrate well with existing infrastructures, and allow universal access to data across servers, media types and storage networks. StorageTek's practical and safe storage solutions for tape automation, disk storage systems and storage integration, coupled with a global services network, provide IT professionals with confidence and know-how to manage their entire storage management ecosystem today and in the future.

StorageTek products are available through a worldwide network. For more information, visit www.storagetek.com, or call 800.786.7835.

International Offices

Australia: 61.2.9438.4844	Chile: 56.2.201.0490	Hong Kong: 852.8200.0791	Malaysia: 603.772.41125	Singapore: 65.6774.9248	United Arab Emirates: 971.4.3900162
Austria: 0800.20.16.31	China: 86.10.8251.1911	India: 91.80.226.7272	Mexico: 52.55.9177.1800	South Africa: 0800.99.5820	United Kingdom: 0800.731.8852
Belgium: 0800.75.327	Denmark: 44836111	Ireland: 1800.55.33.54	The Netherlands: 0800.022.8496	Spain: 900.99.33.66	
Brazil: 55.11.3044.4599	Finland: 08001.13361	Italy: 167.790.852	Norway: 800.11.220	Sweden: 020.798.711	
Canada: 905.602.5586	France: 0800.82.83.57	Japan: 81.3.3746.9711	Poland: 48.22.5757.157	Switzerland: 0800.83.87.65	
	Germany: 0800.181.6238	Korea: 82.2.191.1100		Taiwan: 886.2.6600.9840	

Specifications/features may change without notice.

© 2003 Storage Technology Corporation, Louisville, CO. All rights reserved. Printed in USA. StorageTek and the logo are trademarks of Storage Technology Corporation. Other product names mentioned may be trademarks of Storage Technology Corporation or other vendors/manufacturers.

StorageTek equipment is manufactured from new parts, or new and used parts. In some cases, StorageTek equipment may not be new and may have been previously installed. Regardless, StorageTek's standard warranty terms (as set forth at www.storagetek.com/warranties/) apply, unless the equipment is specifically identified by StorageTek as "used" or "refurbished." Replacement parts provided under warranty or any service offering may be either new or equivalent-to-new, at StorageTek's option.