

# Strategic consolidation white paper

Thinking beyond silos to consolidate systems for maximum simplicity, agility, value



Executive summary.....	2
Introduction: A new view of consolidation .....	2
Consolidation drivers .....	3
Strategic consolidation .....	3
Benefits of consolidation .....	4
The consolidation process.....	4
Consolidation payoff.....	5
Conclusion: HP has the products and services to achieve strategic consolidation.....	6
For more information.....	7

## Executive summary

While any storage consolidation activity can deliver benefits, adopting a strategic view of consolidation that looks beyond storage silos can bring significantly greater outcomes by maximizing simplicity, agility, and value. For example, by consolidating not just devices or arrays but storage management tools as well, organizations can boost the return from their consolidation efforts.

A strategic consolidation effort starts with an inventory of all storage assets and a thorough understanding of the particular business drivers—cost reduction, reduction in storage proliferation, streamlined management and efficiency—behind the consolidation effort. From there, managers can define the desired outcome from the consolidation activity and build the business case. Although initial resistance to consolidation is common, through effective communications of the goals and expected outcomes and a phased approach that delivers benefits quickly, IT can overcome such resistance.

Leading organizations like CBE Technologies, CitiStreet, and Lucasfilm have turned to HP for help with their storage consolidation effort and have achieved impressive results in terms of efficiency, cost savings, and performance.

## Introduction: A new view of consolidation

Managers readily understand the problems inherent in business silos. They would immediately question new initiatives that set up separate systems for common functions or used different tools for what amounts to common operations. The inefficiencies and redundancies that result from a silo-based business approach are widely recognized.

Yet organizations still routinely think in terms of silos when it comes to storage, management of storage, and storage consolidation. Yet silo thinking here is equally counterproductive. In this case, the organization may have separate Linux storage and Windows storage and Oracle® or Microsoft® Exchange storage. When it comes time to consolidate storage for greater efficiency or to achieve cost savings, they bump into the same problems caused by silos in general.

To maximize the gains from storage consolidation and achieve its full benefits, organizations need to adopt a strategic approach to storage consolidation. The strategic approach leads managers to think beyond the individual “fiefdoms” that silos produce and consider the broader business implications and impact of their storage consolidation efforts.

This paper presents a strategic approach to storage consolidation that aims to achieve maximum simplicity, agility, and value from consolidation efforts by breaking silo-based thinking. It is intended for senior IT managers, infrastructure designers, IT architects, and others who are responsible for delivering efficient enterprise storage. It will:

- Describe the forces driving storage consolidation in the enterprise
- Introduce a strategic approach to consolidation
- Identify the benefits of strategic storage consolidation
- Describe the strategic storage consolidation process
- Review the challenges managers will face
- Document the payoff from strategic storage consolidation

## Consolidation drivers

It should be no surprise that managers face the same pressures when it comes to storage as they do in other areas of IT.

- **Constant proliferation of data**—There is so much data to store and it is increasing daily. All this data has to be made readily accessible to a growing number of users and protected.
- **New storage requirements**—Regulatory mandates represent just one of a number of new storage requirements. Other new requirements address new types of data, high availability, archiving, and performance.
- **Inefficient storage topologies**—Direct attached storage may be the most common inefficient storage topology and one that clearly begs for consolidation, but it is not the only one. Storage area network (SAN) islands, in which the organization builds and maintains multiple discrete SANs, represent yet another inefficient topology.
- **Budget pressure**—Most storage budgets are not increasing nearly as fast as the demand for storage. To the contrary, many storage budgets are being reduced relative to latest demand for storage services. The call for managers to do more with less is all too common.

All these forces are driving managers to turn to storage consolidation. It represents a proven way for managers to address the proliferation of data, the growing list of storage requirements, the inefficiencies of common storage topologies, and the incessant pressure to cut costs in the face of tight budgets.

## Strategic consolidation

Storage consolidation is the process of replacing older, less efficient storage with fewer more efficient, more easily managed storage platforms. Consolidation is a proven management strategy in the face of pressures like those previously noted. What makes a storage consolidation strategic is the effort to look beyond silo thinking and device counts at a broader range of possibilities.

For example, organizations often consolidate within a storage silo. They may have 50 Microsoft Exchange servers, each with attached storage. Consolidation might reduce that number to five servers with storage. While such consolidation represents an improvement and will result in some savings and efficiencies, the benefits are limited to the Exchange silo.

Similarly, the organization may focus consolidation on reducing the number of storage devices by substituting a few larger arrays for many smaller storage arrays. Again, it will achieve some measure of improved efficiency and savings but will miss other savings beyond the devices themselves.

Instead, by thinking strategically the organization may be able to consolidate different applications—Exchange, databases, Web content—each with its associated storage on a large shared SAN. The efficiencies and savings are greater than what can be achieved within the application silo.

In the same way, by thinking beyond the consolidation of devices to the consolidation of management tools, the organization can further increase the benefits of consolidation. By consolidating storage management at the same time, not only does the organization reduce the number of devices or arrays or SANs, but it reduces the number of different management tools that it must license and deploy and that its administrators have to learn.

And the savings and efficiencies that come from consolidating tools as well as consolidating devices are just one piece of a larger benefit. In addition, the organization will gain the efficiency and productivity inherent in managing the storage environment through a single point of control.

Strategic storage consolidation like this looks across devices, application silos, management tools, networks, and more. As such, it lets organizations leverage the gains from any narrow consolidation effort and maximize the benefits across the broader organization.

## Benefits of consolidation

HP sees the benefits of strategic consolidation as simplicity, agility, and value:

- Simplicity—Fewer devices to manage means organizations can eliminate complexity and streamline and simplify administration.
- Greater agility—Improved performance and efficiency and streamlined administration translate into enhanced service levels and the ability to respond more quickly to changes and to rapidly scale storage to accommodate growth.
- Increased value—Optimized asset utilization lowers costs and ultimately speeds the ROI.

The financial benefits alone can be considerable. Organizations reduce hardware maintenance costs, software licensing costs, and labor expenses as fewer administrators manage more storage on fewer arrays. These are tangible savings that go directly to the bottom line.

## The consolidation process

Before initiating a strategic consolidation effort, managers need to step back and think through the process. Start with a thorough analysis and inventory of your existing information, storage, and systems infrastructure. You must understand what you have, before you can figure out where you want to go and how to get there.

Next, look at the business drivers behind your consolidation effort. This will help you identify what exactly should be consolidated. Some organizations may be driven by the sheer proliferation of storage hardware. Others may be concerned about increased complexity and the time and labor required to make any storage changes. Identify the business driver first and it will lead to the right strategic consolidation option.

Finally, define the outcome you want to achieve from the consolidation effort. This analysis is central to developing the business case for the effort.

From there, organizations typically start their consolidation efforts with one of three key components: the physical devices, application data, and management tools:

- Physical devices—Servers, arrays, SANs, NAS, any and all can be the starting point for strategic storage consolidation
- Application data—Exchange, databases, Web content, file data, archive and compliance data, production applications, any system requiring the storage of data
- Management tools—Myriad tools manage different arrays and servers, each with its own interface and learning curve

Despite the benefits from storage consolidation, managers should expect resistance. The key challenges are organizational rather than technical or operational. Organizational silos are entrenched. Corporate politics certainly will play a role—whose systems are getting consolidated, who will be in charge, who will pay, and who will benefit. Managers will need to balance competing priorities and establish a process for pursuing strategic consolidation projects.

Overcoming such resistance will require effectively communicating the goals and expected results of the consolidation efforts. A phased approach lets the organization initiate the consolidation in pieces. As the organization experiences the benefits of each phase, resistance to the subsequent phases diminishes.

## Consolidation payoff

The storage consolidation payoff comes by reducing the number of storage devices required to deliver the same storage capacity, reducing the number of licenses required, achieving higher utilization of existing capacity, and enabling few administrators to handle more storage through a single management tool accessed from any point on the network. For example, a consolidation effort by the UK Department of Culture, Media, and Sport delivered a 62% overall ROI and a three-fold increase in storage utilization.

HP storage customers are finding storage consolidation pays off in many ways (see Consolidation Payoff table).

**Table: Consolidation payoff**

Organization	Results	Comment
<b>CBE Technologies</b> consolidated its decentralized infrastructure using HP StorageWorks SAN.	Improved reliability and service, improved data protection and security, and reduced TCO	<p>“To reduce total cost of ownership, it is important to consolidate IT around a single provider and centralize data centers to a single shared location.”</p> <p>Randy Becker Chief Information Officer</p>
<b>CitiStreet</b> turned to the HP Enterprise Virtual Array (EVA) for consolidated high-performance, high-capacity, and high-availability virtualized storage and HP StorageWorks Storage Essentials management software.	Reduced the cost of adding new storage by 75%, improved performance through storage consolidation, increased staff productivity for a projected cumulative 5-yr. benefit of \$275,000 in productivity gains	<p>“Not only did the EVA8000 systems save us money, but after we installed them, performance on our systems improved as well.”</p> <p>Jeff Machols Systems Integration Manager</p>
<b>Lucasfilm Ltd</b> implemented a highly reliable, scalable new storage solution to support a new data center intended to store and manage digital content and other mission-critical information.	Saved time in its move to the new data center by replicating data across WAN, while 100% uptime protects critical digital content and other mission-critical data through consolidated management of 35 TB of SAN storage	<p>“Uptime has been 100 percent. We did many months of testing and lab work with HP and it beat all our performance expectations hands down. It’s very simple to administer.”</p> <p>Peter Hricak Senior Manager, Network Operations</p>

## Conclusion: HP has the products and services to achieve strategic consolidation

Storage consolidation sounds great in theory. Overcoming silo-thinking and implementing a strategic consolidation, however, can be a challenge. To enable organizations to execute their storage consolidation plans, HP brings a full range of storage and server products and services to ensure a successful storage consolidation. These include:

- HP StorageWorks XP12000 storage array for highly scalable, bullet proof storage
- HP StorageWorks EVA File Services to consolidate block, file, and backup data
- HP StorageWorks 1500cs Modular Smart Array for flexible, low-cost, high-capacity storage
- HP Storage Essentials Enterprise Edition to give better visibility and control of heterogeneous storage environments

By combining these and other HP products and services, organizations are able to achieve simplicity in their storage infrastructure; greater agility through improved performance, efficiency, and scalability; and increased business value through optimum asset utilization. These three benefits of HP storage consolidation—simplicity, agility, and value—combine to deliver the highest customer storage experience.

## For more information

For more information on HP StorageWorks consolidation solutions visit:  
[www.hp.com/go/storageconsolidation](http://www.hp.com/go/storageconsolidation)

© 2007 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft is a U.S. registered trademark of Microsoft Corporation. Oracle is a registered US trademark of Oracle Corporation, Redwood City, California.

4AA1-0421ENW, February 2007

