

A smarter approach to data storage

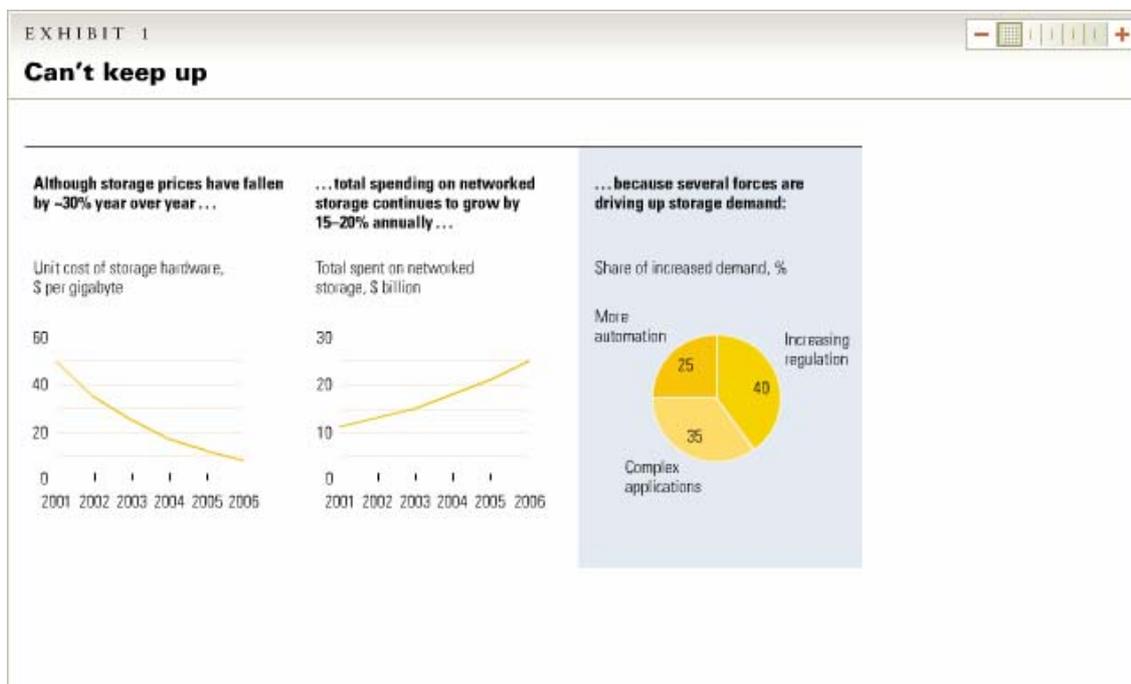
Kishore Kanakamedala, James M. Kaplan, and Rajesh Srinivasaraghavan

Companies are wasting money on data storage because IT managers haven't taught them about their choices.

Total corporate spending on networked data storage—that is, the wide array of disk drives, tape systems, specialized network gear, and the people and software to manage them—grows by 15 to 20 percent every year, even though the unit cost of storage drops by about 30 percent annually (Exhibit 1). Clearly, companies are struggling to keep up with an explosion in the amount of the data they must store and manage as a result of the increased use of data-intensive business applications (including attachment-heavy e-mail and multimedia files), automation, and regulatory requirements. These companies could do a better job of containing their storage costs if they had better policies for data storage.¹ Many companies, in their well-intentioned efforts to save information, are storing it too many times in too many places—and paying dearly for it. Consider the following examples:

At one pharmaceutical company, the legal department asked IT to preserve critical data on clinical trials in case the data were needed in future lawsuits. IT misinterpreted this request as an instruction to store a number of copies of trial data in high-performance storage systems indefinitely. Eventually, the system was storing ten copies of the data, although four would have been sufficient for compliance.

A manufacturing company's IT department, continually seeking to improve the information systems that helped it run the production and distribution network, stored as many as 20 different versions of the company's enterprise resource planning (ERP) environment for development and testing, each with a separate copy of the data. In fact, the company didn't need such high-quality storage. It could have managed with lower levels of redundancy (fewer copies available), higher latency (the speed at which the system could access them), and a higher level of risk (the amount of data it was willing to lose and the time it would take to recover data that had been archived).

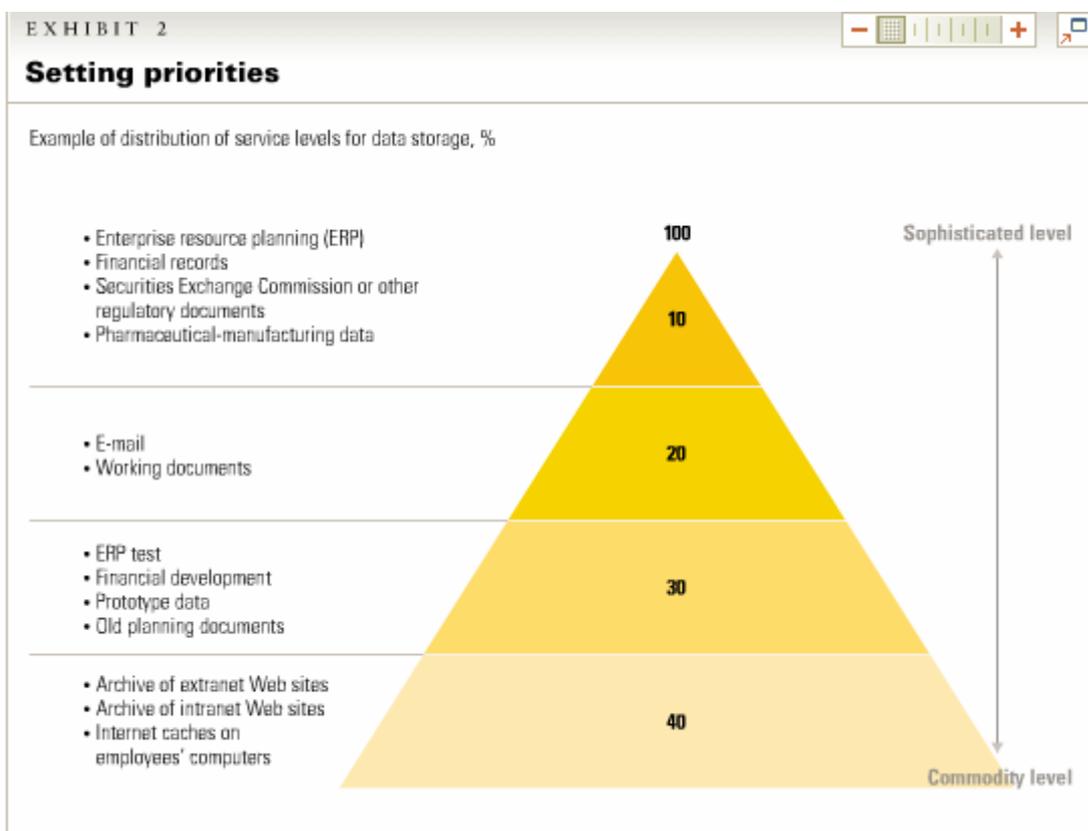


In both of these cases—and in many more like them—the missing ingredient is a well-informed dialogue between the business and IT about the real needs, costs, and capabilities of data storage. The business knows it has to store information but often lets IT work out the details.

The IT department often doesn't know the limits of the business's data storage needs (how critical the data really are and how long critical data will remain so), and the business is often unaware of the true cost-benefit trade-offs of various storage choices.

To reduce data storage costs, companies should make a few changes in their storage practices. First, the IT department should create a menu of storage service offerings—a menu that clearly explains the various options, including trade-offs between costs and capabilities. Four to six options typically will be enough to offer a wide spectrum of choices, from less expensive solutions that may not offer very rapid backup or recovery to more expensive storage with more convenient and comprehensive capabilities. From one end of the spectrum to the other, costs may vary by a factor of ten.

IT should use this menu as a starting point for ongoing discussions about the company's data storage needs with executives in other units. Discussions about service offerings should include the total cost of support (hardware, software, labor, and maintenance) to deliver specific service levels. Business leaders and IT can then make good decisions about the trade-offs between cost and performance, and the company can avoid spending more on data storage than it should. Companies that have followed these guidelines have cut storage costs by as much as 40 percent without reducing the quality of service.



As part of this ongoing discussion, IT should help the business to assign appropriate levels of storage service to each application. Storage managers within the IT department can categorize applications by the amount of storage required, the performance demands (that is, how quick and easy it is to back up data), and risk levels. They should then work with the business to match the most critical applications to the most sophisticated service offerings. Ultimately, there should be fewer applications at the high end of the spectrum and more down in the commodity range (Exhibit 2).

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