



Investing in data storage in the age of cloud & compliance

A guide for business executives

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WHY STORAGE MATTERS

Businesses large and small are making ever-broader use of digital technology, and the new ways of working that it enables are changing almost everything. One of the areas most heavily affected by these changes is data storage. Data is fundamental to almost everything we do in business these days, whether it's storing employee, customer and transaction records, using our smartphones, working with documents and videos, or planning projects and workflows. So what do you need to know to discuss storage requirements and investments with your IT team and/or your technology supplier/partner in an informed and objective manner? Let's start with a look at how the pursuit of business objectives creates data-related challenges that ultimately translate to storage system requirements.

THREE ESSENTIALS OF BUSINESS DATA

The fact that data is fundamental to much of modern business activity means we must plan how we save, maintain and govern that data – and that means paying attention to storage systems, because they are how we deal with all that. Let's look at how our business needs for data map onto our requirements for storage technology.

1. STORE

BUSINESS OBJECTIVES



Quick and easy access to business data, to support the modern digital business and its transformed practices and workplace cultures.

CHALLENGE



Information flows that continue to grow faster, busier, larger, and more complex and diverse, require new approaches to information storage.

STORAGE REQUIREMENT



Versatile and expandable storage that offers a variety of service levels to cater for the varying needs of applications and of different classes of data.

2. MANAGE



Ensuring that data is always available where and when it is needed, but only to those authorized to access and use it.



More data means more IT admin costs, more space and energy, and a greater potential impact from legal and regulatory infractions.



A central point for auditing and managing your storage, with the ability to define and apply rules and policies.

3. PROTECT



Keeping data safe from loss, theft or damage is typically both a business imperative and a regulatory requirement.



As digitalization proceeds, we have far more data to protect, yet we must still be able to restore it promptly when needed.



Fast recovery and multiple layers of protection for your data, including encryption* to protect against data theft or loss.

* Encryption refers to the scrambling of data so that anyone trying to access it through unauthorized means will get nothing but a meaningless stream of ones and zeros. It's essentially a way of closing at least one type of 'back door' access to valuable and/or sensitive information.

GROWTH, GOVERNANCE AND THE CLOUD

The big developments facing storage today are massive and unpredictable data growth, the increasing need for data governance to gain business advantage and meet regulatory requirements such as GDPR, and the evolution of cloud-based services and storage. These are of course interlinked - for example, the elasticity of the cloud model allows for data growth, but may complicate the tasks of data governance and data sovereignty (where data must reside in a specific geography). Conversely, data growth may lead to public cloud storage costs running out of control.

1. CLOUD: THERE'S MORE THAN JUST THE PUBLIC PROVIDERS

Although when people hear the word 'cloud', they often think first of the huge public cloud service providers (CSPs), there are several other ways to deliver cloud-based services. It is possible to have your own private cloud, built for example on **HCI** (hyperconverged infrastructure), or to operate a hybrid cloud of public and private resources.

2. GOVERNANCE: SUPPORTING BUSINESS DEVELOPMENT

THE OPPORTUNITY



Leveraging data governance to obtain extra business value from your information



THE ROLE OF DATA STORAGE SOLUTIONS

As well as access controls, auditing and enhanced data protection, modern storage software can include classification and other tools to help with data analysis.



Use the class of storage that best suits the application and its data governance needs



Some data is best kept in affordable storage that you own; for other data a public cloud makes more sense. Modern software-defined and/or hybrid storage can bridge the two, e.g. backing up from on-site storage to cloud or vice versa.

3. DATA GROWTH, SAFETY AND SECURITY



Faster access to data, whether for line-of-business software or to recover from errors



As data volumes grow, adding a layer of Flash storage, or even an all-Flash storage appliance, is an increasingly affordable way of boosting performance.



Protecting your growing data and restoring it quickly in case of loss or disaster



Expandable yet reliable systems that recover quickly from errors or disasters with no loss of business data, by using a combination of safe-keeping techniques such as 'snapshots', replication, mirroring, 'failover' and traditional backup.



Protecting data that you store on a public cloud or within online services



Most cloud providers and online applications (such as popular CRM tools) expect you to do your own backups. Modern storage systems can pull cloud data down for protection locally, or even copy it to a second cloud.

WHEN IS A BACKUP NOT A BACKUP?

There are many ways to protect data against theft, disasters or equipment failures, human or software errors, etc. However, they do not all protect against the same things. For example, encryption can protect against theft but not human error, snapshots can provide fast rollback from an error but may not be enough for a full system restore, and synchronous replication (mirroring) can protect against equipment failure but not application errors or malware. Lastly, anything stored on the same site or infrastructure cannot truly protect against site-wide disasters - that requires a degree of physical separation.

WHEN SUPPLIERS MATTER, AND WHY

As organizations grow and digitally-transform their operations, their need for effective data storage, management and protection becomes ever stronger. This healthy demand means there are multiple suppliers pitching ‘solutions’ here, so in theory there is plenty of choice. In reality however, the growing complexity actually makes it harder to pick the combination of products and services that best fits your needs. That’s especially true for smaller and mid-sized organizations that lack the in-depth expertise necessary to fully scope the requirements and explore the options. Yet at the same time, you are the best judge of your organization’s needs, so simply handing it all over for a third-party to decide may not be the best decision. A better option might be to engage a reputable supplier who can help you crystallize your needs and select the solution or solutions that will work best in your environment. If that sounds like a sensible and practical approach for your business, here are a few considerations to help you decide who to work with.

SUPPLIER FUNDAMENTALS



Scale, heritage and track record in SMB



Some new technologies are first sold into large enterprises, so beware of startups that focus in this way. Look for suppliers who demonstrably understand the needs of SMBs.



Breadth of portfolio (unbiased perspective)



Single-product vendors may try to re-map your needs to match their own capabilities. Suppliers with a broader portfolio, for example including cloud services, physical storage and partner products, can be more objective.

DELIVERY AND SUPPORT



Availability and capability of local partners



A big brand name might look reassuring, but far more important is whether the supplier has an established partner network providing local support to businesses like yours.



Ability to help assess your needs and provide advice



Knowing the technology is essential, but by itself it is not enough. Effective advice also requires a knowledge of good practice and an ability to empathize with your situation.

CONTRACT AND COMMERCIAL



Warranties and guarantees



A modern storage solution should be extremely future-proof, as you’ll be using it for many years to come. The vendor must therefore contractually stand by its claims and promises.



Clear and flexible commercial options



A good vendor will offer financing, licensing, subscription, pay-as-you-use or grow, and other options to spread costs. Transparency is critical, however, whichever model is used.

That completes our whirlwind tour of the business of data storage. As a final thought, you’re going to be busy enough over the next few years, so it’s worth getting your storage onto a firm, future-proof footing now. You and your IT team will then have one less thing to distract you as you drive towards your business goals and aspirations. We hope this guide has given you a feel for the things that really matter in this increasingly important area.

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