

How to avoid information loss in the digital age:

10 strategies for managing digital business information

Digital information is a vital business resource, critical for business activity and efficient operations. The volumes of digital information in business systems are dramatically increasing and any loss of this information could put business operations at risk.

Easy to create, share and use, digital information is also vulnerable. System change, technology change, format change and the passage of time can lead to business information becoming inaccessible. It is vital that organisations put in place strategies to ensure that critical information is available and usable for as long as it is needed.

IF YOU DO NOTHING, DATA LOSS WILL HAPPEN.

Here are 10 strategies for managing digital business information and preventing data loss.

1. Know your information

Know what business systems you have and the technological dependencies, software licence and support costs that apply to each system.

Know what information is created and kept in each system, Know how old the information is, the format it is in, how it is described, its content and how much of it you have.

Know how information relates to business processes, how it can be reused and how long it needs to be kept, to meet business and legal requirements.

2. Design your systems so that they can support your business information

Many business systems are not designed to maintain long term stable access to information. It is critical that design criteria for systems include long term information use, management and reuse. When designing systems, make sure they have the ability to inherit data and export data, as well as the functionality to manage and use data from legacy systems.

3. Limit the number of file formats you use

File formats are the mechanisms by which different types of digital information are encoded and stored. The average Australian business uses between 20 and 50 different file formats. This is too many, as each file format will, in the short to medium term, need its own preservation strategy. This scenario is too hard and too costly, so restrict the number of file formats you use.

4. Use open formats

Open formats are not owned by any software companies and are supported by a wide range of software and hardware. Open formats are less at risk of becoming inaccessible because they are generally very stable and easier to migrate. Using these formats, wherever possible, for record creation or migrating records to these formats can save money and effort over time. Examples of open formats include PDF, HTML, XHTML, ODF, JPEG and FLAC.

5. Dispose of digital information when it is appropriate to do so

Keeping digital information indefinitely is expensive and potentially very complex. Digital storage, despite the popular myth, is becoming an increasingly significant cost. In 2008 Diane Bryant, the CIO of Intel predicted that her company would double its storage costs by 2012 and said this was unsustainable.

Organisations can save money and mitigate risk by destroying information when it is appropriate to do so. You need to know how long information should be kept to meet business and legal requirements before you dispose of it.

6. Know where all your information is

Many businesses store digital information in centralised databases, on removable storage media, on back up tapes, in personal folders or have it managed by contractors or service providers on their behalf (e.g. in 'the cloud').

This profusion of environments means that many businesses don't know exactly what digital information they have or where it is. This can put business information at risk of loss. Know what you have and where it is stored so you can effectively use, control and manage your information.

7. Describe your information well

Digital information needs to be described well so that it can be found, used and managed. Put in place strategies that will enable systems and staff to easily or automatically apply necessary descriptions (also known as metadata) to business information.

Good metadata descriptions include relevant title information, format or preservation requirements, security and disposal requirements, business process information and information concerning use of or actions performed on the information. Having this detail from creation and sustaining it as a resource is essential for ensuring the accountability, manageability and useability of information.

8. Reduce duplication

Reducing copies of digital information will reduce storage load, server and energy costs and preservation requirements. If records exist in both paper and digital versions, it is important to consider issues such as:

- versioning and control
- identifying and controlling duplicates
- authenticity and accountability concerns that may arise as a result of slight variations between paper and digital versions of what is purportedly the 'same' record. What is the 'true' record and how are staff aware of this?
- reducing storage costs associated with paper-based duplicates.

9. Manage migration

Migration is a preservation activity that transfers digital information from one hardware or software configuration to another or from one generation of technology to another. Migration is necessary because the many protocols and software components that enable digital information to be read and used are constantly evolving.

Without migration, access to digital information would be lost. Migration, however, is a high risk process. It changes data and therefore threatens the integrity and even the existence of important business information. Migration projects must therefore be designed to mitigate risks associated with migration and to protect the authenticity, integrity and accessibility of information.

10. Be aware of complexity and start to manage it now

Digital information is becoming more complex as greater capacities evolve. If your business uses complex information types, including CAD drawings, purpose-built databases, dynamic web pages, digital photographs, digital sound or video files, you need to be aware that these types of information may be difficult to manage in the long term.

If you require ongoing access to these types of information to meet business and legal needs, you need to start planning now how you will manage these complex information types.

For more information see:

- State Records NSW, *Standard on digital recordkeeping*
- State Records NSW, *Guideline: Managing digital record*

[Future Proof: Protecting our digital future](http://futureproof.nsw.gov.au)

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