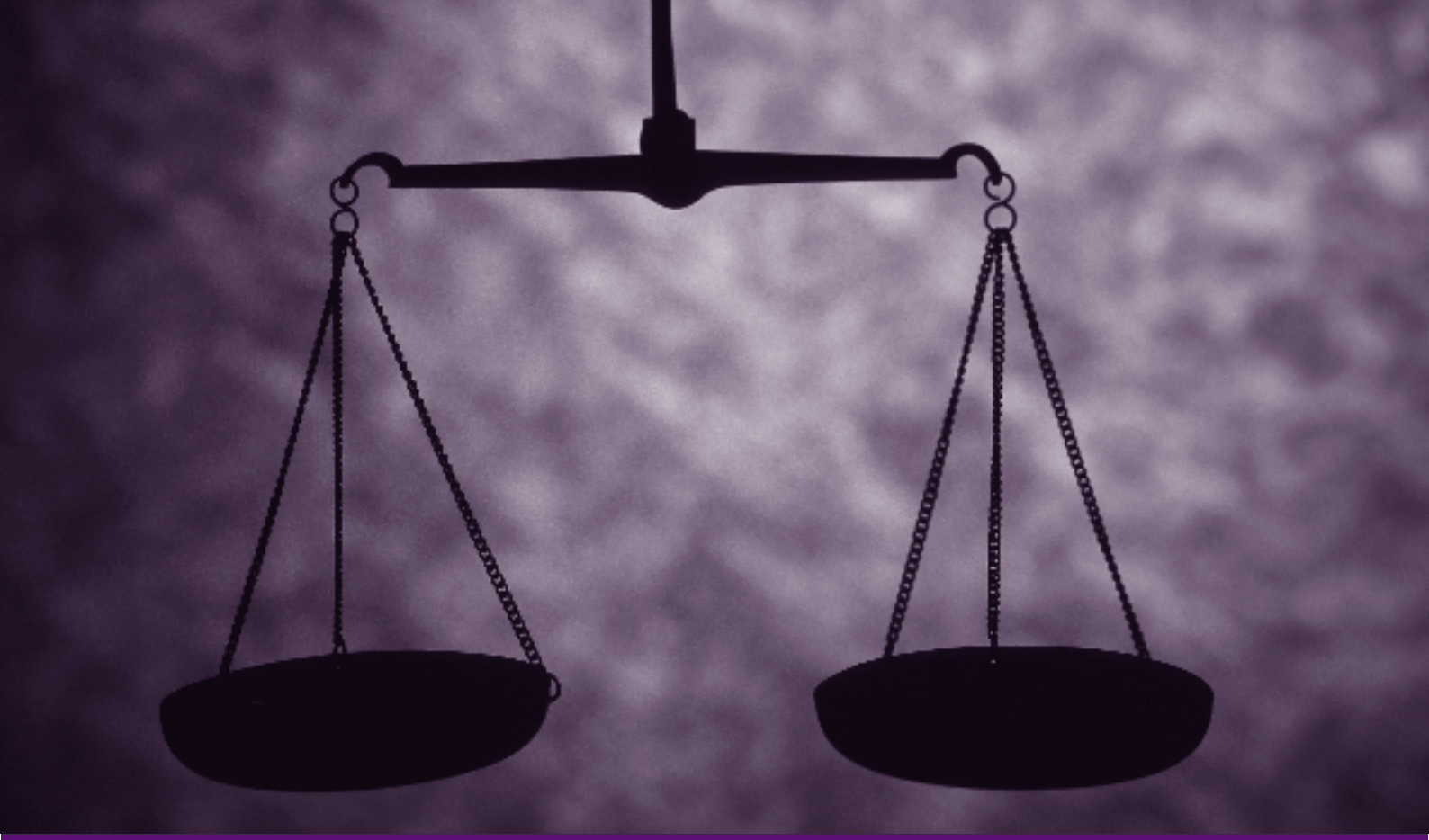

MICROFILM:

A revitalised role in corporate and governance risk strategy.

Extracts from a whitepaper that:

- Reviews the enhanced business risks caused by the fac t that modern computing life cycles are much shorter than document retention requirements, and
- Suggests a mitigation for those risks

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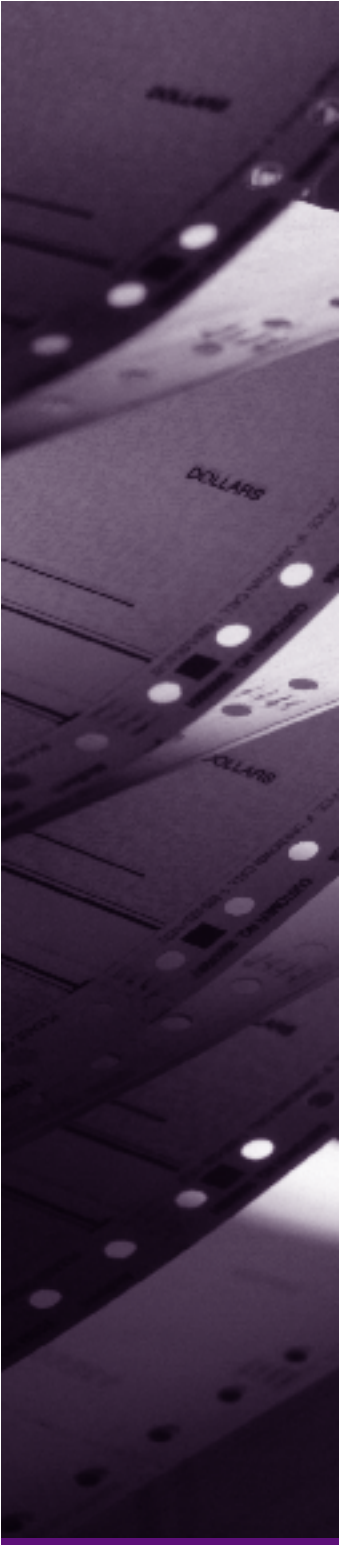

Controlling Documents

Documents are a vital component of any organisation. They move information around within the organisation and beyond. They provide a record of tangible matters like events or intangibles like intentions. In a recent IDC survey 82% of respondents thought that documents were crucial to the success of their organisation.

The Sarbanes-Oxley Act (SOX) in the USA and the UK Financial Services Act (FSA) have created a new awareness about controlling documents. The possibility of prison sentences seems to concentrate the mind. The UK Data Protection Act (DPA) and the Freedom of Information Act (FoI) also place new document control responsibilities on organisations.

Documents are assets, and an awareness of their values has recently been brought into the public domain dramatically by the acts of managers who failed to reconise their value, or who did, and wilfully destroyed the asset and were caught.

Paper document life cycle management has been around for centuries. Over 100 years ago, the problems of scale began to be addressed by microfilming. Manaing electronic documents has become a mature business process within the last decade and has always had a microfilm component.

Short term storage is straightforward. Medium term storage can be achieved by filing cabinets or their electronic equivalents. But long term storage has always caused problems. Documents that have permanent significance are relatively small in number but retain comparatively great value. The sweeping demands of recent legislation have caused organisations to keep far more documents for longer. How can the new volumes of documents be stored costeffectively.

A balanced document archive strategy for an organisation of any size or complexity will include frequent bacups to remote locations, periodic transfer of documents to archive servers, and an analogue component comprising paper and film.

Despite huge advances in the price performance of magnetic storage, microfilm remains a cost effective long term storage medium that has recently been re-discovered as a reliable method to spread document risks. Some states in the USA now demand that all e-documents that have a significant life cycle should be stored in analogue format in addition to digital. The Government of Singapore has also made this a requirement for firms operating in their country.

The fact that microfilm is a more efficient storage medium than paper has been established for over 100 years. Analogue formats are inexpensive, the media are relatively stable, the storage method is bidirectional, and, most importantly it spreads the risks involved with long term storage. Gartner recommends that any record stored longer than 10 years should be stored in an “analogue, human readable form” such as paper or microfilm.

Retention Requirements v IT Life Cycles

Modern fiduciary controls mean that individuals, teams and companies are now commonly measured on a quarter-by-quarter basis. For this reason, it has been difficult for managers to invest in a long term document archive. Managers now feel that if there is a document related problem six years from now, they will be long gone and the problem will probably rest with their successor's successor. Hence organisations are exposed to increasing levels of document risk.

There is an assumption that because a digital document has been stored on a medium that has been guaranteed by manufacturers for decades, then the document has been preserved and can be retrieved on demand. There is a significant risk associated with this assumption. The whole structure of the IT business is based upon change. Even in the last10 years the software products we use have changed significantly.

It is unlikely that an e-document created in the 1980's could be read, without modification that affects its authenticity, in a contemporary software product. Yet some digital documents created in the 1980's will have authority now and maybe for another decade.

If business managers need to go to Court to protect the assets of the organisation, or to defend themselves, how can they demonstrate that these old digital documents, such as e-mails, are authentic? How can a defence operate if relevant e-documents cannot be found? And worse, what are the implications to a jury of twelve good men and women if the defendant cannot find relevant documents but the plaintiff can?

Migration and emulation introduce their own risks which become substantial the more times they are used. Checking document integrity is time consuming and labour intensive. Over 30 years, which, for example, is how long organisations should keep Occupational Health Records, repeated use of migration or emulation is likely to be both expensive and high risk.

More digital document risk is created if electronic record back-ups are not properly performed or aren't being performed at all. In the real world there is a wide-spread management assumption that data back-ups are created frequently and faultlessly. Many are, but as it is such a tedious job some are not.

If back-up tape hardware is updated, there has to be a back up plan for accessing data on old tapes, because, after a while, these may not work with the newer hardware. Old back-up tapes stored in a seldom visited cupboard could pose an unpleasant surprise if they appear suddenly in discovery proceedings, particularly if your operations team is unable to find the hardware needed to review them. Incompetence is not a sound defence strategy!

The benefits of an analogue archive

Although some are in denial, managers face the task of long term document risk mitigation. For a life cycle of 5 years, a risk avoidance plan using a single technology may be sufficient. But for longer periods the risks become unmanageable. The storage or preservation method you choose may not survive. How would your organisation recover in 20 years time from a decision you make today? Of course the temptation is to not care – it's going to be your successor's successor's problem. However, the document retention regulations do exist, they exist for good governance reasons; and, as recent prosecutions show, there are immediate penalties for failing to meet long term obligations..

Documents produced within the organisation are normally held in electronic format. This data can be streamed to a server where the pages are converted to TIFF image and passed to a microfilm production device. Documents that are produced outside the organisation and delivered in paper format can be scanned in batches and then sent as a data stream to fiche production.

The process is fast, fully automated and low cost. Microfiche has proved to be the most flexible format and is now the dominant medium. Microfilm supplied on a roll is used for specialist large volume applications. A typical microfiche now contains around 270 pages and a microfiche tray contains 3,000 fiche. Film is a very compact storage media – over 5,000,000 pages in small trays with a total size less than a typical shoe box!

Microfilm has the advantage of maintaining access to information for hundreds of years. Recent claims by media manufacturers have extrapolated a usable life expectancy, from accelerated aging tests, of up to one thousand years for microfilms produced today; and it stores images in human-readable form.

Microfilm is technology independent. All that is needed to access information on microfilm at any time in the future is a light source and a lens. Optical technology has improved alongside all other technologies but to read a microfiche one just needs light and an ancient or modern lens. Modern is best, but nothing can stop a user from retrieving information using a 400 year old lens.

Once captured, images will be available to future generations without the need for an expensive programof regular data migration throughout the intervening years which could fail if one crucial step. is missed.

In conclusion

Three assertions relating to a long term document strategy can be made:

- Organisations must strive to maintain integrity for the whole life cycle of a document; and the longer the life cycle the more difficult is this task.

Regulators are now showing greater interest in document risk and managers should review their long term document storage policy annually as part of their audit process.

- Long term storage is fraught with risk, and organisations should mitigate it as they do all other risks by spreading and sharing the risk – it's called insurance..

Despite the current industry fashion to focus on digital documents, a balanced strategy that includes paper and microfilm is justified as a reasonable risk mitigation investment (insurance).

- There is currently a significant disengagement between the IT development cycle and long term document retention periods. This, and the separation of the stakeholders' desire for profit on a quarterly basis and the need for adequate investment in long term document storage, are contributing to the under-provision for archives in many organisations. This is building up un-quantified and un-managed risks.

A balanced long and short term archive strategy is cost effective and most importantly, spreads the risk. Long term storage should depend upon at least two technologies and the greater their diversity the better the spread of risk. On the basis that one format will be digital – the other should be analogue, and for over a century microfilm has enjoyed a reputation of being an excellent long term analogue storage medium. On this basis, microfilm is due to discover a revitalised role in corporate and governance risk strategy.

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