

The scope and impact of EDM on organisations

An Electronic Document Management White Paper that considers the ways in which this technology affects working practices and supports business processes

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Edited by Nick Berzins

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1 Purpose

Electronic document management solutions are designed to organise business files and records digitally, whether they started out in paper form or were generated by software applications.

Paper files are first converted to electronic format by scanning. This provides a more compact means of storage, universal access for retrieval, and higher levels of data security and privacy.

A company-wide document management system also controls digital files that are generated directly through applications such as those in the Microsoft Office suite (Word, Excel and PowerPoint), accounting software, CAD, email, and so on. Managing (rather than simply storing) documents enables quicker access to, and greater command over, business information. It also becomes practical to map business processes onto electronic workflows to further enhance productivity and drive value.

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2 Long-term Value

Document management solutions exist first and foremost to organise, store, and retrieve files accurately and efficiently. Once documents and company data reside in a structured system, more sophisticated file-handling procedures become possible. For example, because most document management systems log information about the history of document creation and modification, managers can query the system to assess the status of employee progress or trace the history of past versions through the audit trail.

This accountability also makes a document management solution indispensable for businesses in industries that must report their record-keeping procedures to maintain compliance with regulatory mandates or ISO 9000 and 9001 standards.

With the right electronic document management solution in place, businesses have far more capabilities than they would with just a paper-based file or standard PC folder structure.

Effective document management enables employees to:

- Retrieve the correct document out of myriads of items throughout the company within seconds
- Access up-to-date file changes while working from home or on the road
- Prevent overwritten changes, misfiled items, and confusion over file versions
- Share information confidentially with other employees, partners, and customers
- Recover automatic backups of digital content to protect against accidental data loss

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3 Gaining the Document Management Advantage

Central to the document management advantage is access to information. With the increasing volume of business documentation, the need to find the right information at the right time becomes more and more critical. Electronic document management solutions deliver information more quickly and with more precision than traditional filing systems and at a much lower cost.

These two benefits - saving time and reducing costs - speak directly to the mission of most organisations.

Yet there are several other motivations for companies to deploy a document management solution. Many seek out more effective document control because it addresses a critical business issue. A digital document management system can provide an effective solution to several common problems, such as:

- Paper and electronic records spread among geographically dispersed locations
- Security breaches of paper documents or electronic files
- Inconsistent processes resulting in cluttered folders, misplaced files, or confusion between versions
- Overwritten revisions on documents generated by several collaborators
- Lags or bottlenecks in procedural workflow

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4 The Hidden Cost of Paper Files

4.1 Labour

Walking to the file cabinet seems like an insignificant amount of work, but a closer examination reveals that paper filing adds up to an enormous drag on productivity. If it takes five minutes for a £12-per-hour employee to get up from a desk, find the appropriate file cabinet, and locate the folder he or she needs, and this occurs five times a day, then that's more than 100 hours spent filing per employee per year.

Double the five minutes to put each file back in its proper place, and it works out about £2,400 in wages per person per year. For a staff of ten employees, the cost is roughly £24,000. That's one employee's worth of salary literally devoted to shuffling paper.

Cost of labour for a department of 10 £24,000 pa

4.2 Misfiling

PriceWaterhouse Coopers estimated that it costs £80 to search for every misplaced file and £150 to wholly re-create a lost document. In a hypothetical ten-person department, one could estimate that three items are misfiled per month, and once a month someone has to re-create a document that was already completed but they just can't find.

Cost of misfiling for a department of 10 £4,680 pa

4.3 Office and Storage Space

The footprint of an average cabinet takes up 15.7 square feet, while the average office rent in the UK is £10-£20 per square foot annually. On the low end, offices spend £157 per year per cabinet. It is reasonable to assume a small storage unit to store older archives is at least £100 per month. Add in the minimal expenses of cabinets and boxes, and the storage cost comes out to about

£2,800 pa

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4.4 Annual Cost of Paper

The habit of keeping hard copy documents on file means a lot of printing, photocopying and reams of paper. The average office worker consumes 10,000 sheets per year. That's about £60. By the end of the year, an office of 10 eats through £600 worth of blank paper alone.

A heavier drain on budget than paper is everything related to it: ink and toner, printer and copier repair. According to studies, the printing, copying, binding, and other handling works out to almost six times the cost of paper itself.

Cost of paper and handling for a department of 10 £4,200 pa

Total cost of paper filing for a department of 10 £35,680 pa

Put in those terms it is quite frightening year on year. In practical terms it means that there is a real opportunity to do more for less.

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5 Increased Efficiency and Productivity

Saving time and reducing budget outlays do not make up the full business value of the document management advantage. By removing the wasted labour associated with old filing methods, employees can execute more projects, increasing productivity, and spend more time and attention to client needs, increasing customer service. Opening up office area formerly devoted to file storage enables a business to expand without having to acquire more space.

Therefore, the value of a document management system is more than just lower overheads; there is typically an amplification of business performance across the board.

The increase in productivity and revenue in most cases far outweighs the costs of the system, implementation, and training. According to an IDC study of new software adoptees, roughly half of the companies paid off the cost of the system within 6 months. Overall, all participants found an average return on investment (ROI) of more than 400% after five years.

ROI, of course, varies based on the choice of system and the specific circumstances of each case. In some business situations, a digital system will create a quantum leap in growth because new capabilities give the company an opportunity to expand in ways previously not possible.

For example, most document management solutions allow secure access to company records and information from anywhere with an Internet connection. This feature alone fosters fluid collaboration within a geographically dispersed organisation that would not have been possible with paper files or unmanaged PCs and servers.

In this and many other ways, a document management system often eliminates entire steps from business processes, thereby producing tremendous gains in efficiency, productivity, and ultimately, profitability.

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6 Privacy of Company Information

Companies implement server firewalls and anti-virus solutions to protect against potential security threats from the outside. Yet research shows the biggest source of data tampering, as well as the most financially damaging, comes from the inside.

According to respected industry research firm Gartner, 70% of the time company employees are the culprits of unauthorised access. Perhaps more troubling, employee cases comprise 95% of the breaches that cause a company significant financial losses.

Placing company documents into a paperless environment is the best method of gaining control over internal data security.

Talk of “data” in the context of information leaks makes one think of only digital content, but actually 49% of the reported access violations involve paper files, according to a survey by Ponemon⁵. Paper files are particularly vulnerable to information breaches because it is difficult to know where a paper document has been, who has seen it, or for that matter, whether it is missing or just misplaced. Migrating to an all-digital format gives companies a platform on which to establish effective security controls.

The Gartner study also makes a distinction between different types of digital data. ‘Unstructured’ data, the files scattered among hard drives, laptops, and servers in standard Windows folders constitute the low-hanging fruit for data violators. These unstructured files are not embedded into any kind of document management system to track their usage or control their access. People can view, copy, or delete content without anyone knowing.

By contrast, a document management system will structure company documents into a single system that logs the history of user actions.

Structuring company files also enables password protection on sets of important documents. An administrator can make certain documents available only for certain managers, such as the head of HR for personnel files, or for a whole department of users i.e., engineers for CAD design files, and exclude others from viewing or editing operational documents. The administrator can also define access permission rules for recurring documents to ensure protection is consistently applied to potentially sensitive material.

When managers have the ability to have an audit trail of document usage and can establish the permission rules into employees’ daily workflow, a document management system becomes an inherent deterrent to inappropriate employee behaviour. A real possibility of getting caught now counters the temptation to steal or sabotage company data.

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7 Streamlined Business Processes

Faster file retrieval, better organisation, and increased data security are the immediate results of adopting a digital document management strategy. Beyond these advantages, managers can also make significant improvements in their business processes.

By using a document management system to automate recurring procedures, managers gain higher levels of productivity and quality control. With a few basic customisations based on their own business rules, they can make almost any office task faster and easier.

Applying automation to workflow is relatively simple once an organisation has an effective document management solution in place. Automated tasks can be added gradually and refined according to practical use. The right document management solution for your organisation will:

- Cut time spent on repetitive computing tasks
- Maintain consistent record keeping and file nomenclature
- Eliminate mistakes and quality lapses that occur due to skipped steps
- Facilitate clearer and more reliable communication
- Provide managers a birds-eye view over work progress
- Trace the source of work bottlenecks and employee errors
- Allow greater staff flexibility, new employees or substitute staff will need less training on procedures since the system will guide them through the process

Managers can use automation to impose a disciplined approach to complicated, multi-user workflows, where a single error can affect an entire chain of actions. In addition, they can apply configurations on a wide variety of simple tasks to eliminate repetitive work.

In either case, embedding business rules into a document management system extends the benefits of the solution well beyond the initial productivity gains from improved organisation and retrieval.

Further than the ability to perform tasks more effectively the system is collecting data at each stage of your business processes. The ability to report on these transactions provides valuable business intelligence which gives you the basis for strategic future planning based on fact not guesswork.

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8 Compliance and Accountability

Many companies must comply with regulatory mandates for record keeping and transaction reporting. Others choose to comply voluntarily with standards, such as ISO 9001 for manufacturing and engineering or ISO9000 for quality, in order to gain industry certification. In either case, compliance hurdles require a massive documentation effort in addition to the paperwork generated in the normal course of business.

The scale and importance of these efforts often makes an upgrade to document management solution somewhat of a requirement in itself. Organisations still reliant on paper filing or standard PC and server storage find it nearly impossible to cope with formal filing requirements without hiring the equivalent of a second staff. A document management system, on the other hand, can often manage the additional work associated with compliance efforts without additional administrative staff.

An electronic document management system that supports compliance with regulations or standards typically must provide:

- Automated back-up and archiving procedures
- A history log and audit trail of user file actions
- Automated workflow features
- Template forms that conform to specific submission rules

In 2011 British Gas were fined £2.5m and NPower £2m. In both cases Ofgem stated they "failed to put in place adequate processes". These are clear examples of where good systems should be in place and should be underpinned by good electronic document management systems with robust workflow processing capabilities.

Even companies not regulated by a government agency or outside professional association are still subject to a higher authority from time to time. The concept of risk management involves implementing record-keeping and audit strategies that can defend a company in case of a legal dispute with vendors, customers, or workers.

Sometimes rather than a regulating body or other third party, the authority that needs satisfying is the organisation itself. The same goals of risk management also happen to be the essential elements of good business, where important files are properly maintained and employees and departments are held accountable for their decisions.

The central question for most organisations is no longer whether or not they should adopt a document management solution, but rather which they should choose. Which will incorporate all the features needed to maintain complete compliance documentation? Which delivers the best value for its cost? How effectively will the system mesh with the everyday tasks of staff and integrate with existing systems?

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9 Conclusion

The reality in the second decade of the 21st century is that resources are scarce and financial systems are in turmoil. The only way to address this situation is either to use fewer of the scarce resources or switch to renewable options. Current methods of working need to be examined to see how we can work smarter and live within our means.

We cannot turn back the clock to a simpler age: we have to deal with the realities of today. What we can do is learn lessons from the past and see how certain technologies have revolutionised our society; computers, mobile phones and understanding the human genome to name but three.

None of those technologies made an immediate impact however revolutionary they were. It was only over time and incremental refinement that they became so powerful and woven into the fabric of our existence.

While I am not saying that document management in anyway compares to these technologies, it is one of the incremental elements of computer technology that allows us to do more with less. That is why the people today who consider it to be an optional extra will, in time, realise the benefits it brings every day.