

Dematerialisation and document collaboration



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Letters, contracts, invitations, invoices, advertising—an avalanche of paper documents that need to be managed according to their importance, the legal requirements, the approval workflow, the distribution list and also the time it takes to archive them.

In the last few decades IT has put a lot of effort into structuring data to better manage processes. Many companies improve their processes using Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Enterprise Content Management (ECM), Master Data Management (MDM) or whatever other software can manage unstructured data. But the processes supporting the production of structured data also generate a lot of unstructured data exchanges such as emails, photos, videos, letters, claims, phone calls, etc. IT efforts have also changed to better manage unstructured data, but this has often happened separately from changes in the above process-driven software. Analysts estimate that 90% of data produced is unstructured. Reconciling the worlds of both structured and unstructured data is the next IT challenge. Using workflows, the data content of both structured and unstructured data can be mutually enriched.

Today, business transformation can be achieved by giving content, and the interactions this content enables, a bigger and more central role. Although our data exchanges are becoming increasingly electronic, the entry of paper documents is still one of the main starting points within an organisation. Switching from a paper document flow to an electronic document flow is where dematerialisation starts, though paper documentation will probably never disappear. Everybody speaks about dematerialisation but how can it be achieved? What are the impacts? What should be taken into consideration?

Let's focus our attention on the different aspects that would be considered important when designing or re-designing an electronic document flow. This includes physical organisation, legally compliant paper archiving governance and process flows as well as the IT organisation surrounding it all.

Physical organisation: paper flow

Dematerialising documents is not just about scanning the document. If everyone scans their own documents, dematerialisation has no benefits. Such a decentralised approach is acceptable in small offices that are spread throughout cities and geographical locations. Dematerialisation starts by centralising a specific function within one physical building, which is often easier to organise. This is especially relevant in the case of global shared services locations.

The person/team processing incoming papers will first have to prepare the different documents (by removing staples, etc.), check if the document is single-sided or double-sided, separate the main document from its attachments (annexes) and sort the documents according to their nature. There might be purchase orders, invoices or reminders, but also advertising, invitations or information, etc. Based on the nature of the documents, different batches of documents are managed by accounts payables, by simple electronic document flow or by additional data case.

Preparing the different batches for scanning involves separators and assigning a unique sticker number to each document. The different invoices need to be separated by something like a blank sheet of paper so the system knows it is a new supplier/PO. Other techniques can be used such as patch codes or blank pages. But, a barcode presents the advantage of containing information that can be reused later on in the process. The scanning team is responsible for preparing the hard copies for scanning and launching the scanning batches.



Dematerialising documents is not just about scanning the document

The scanner differentiates between the different types of documents (using separators) in order to store the scanned document in the correct content management system. This first step consists mainly of pdf or image storing. The sticker numbers are then used to ensure synchronisation between the scanned image and the physically archived document. With legally compliant archiving, you can also dispose of the paper version, which should be the ultimate goal. At this stage, the scanned document can simply be stored in a network location. More process steps follow however.

Operators can flow the digital document to the sender via email. This step can be automated using a simple workflow and minimum metadata per document. In order to fill the metadata, scanners are usually linked to Optical Character Recognition (OCR) software that recognises minimum sets of data. This software is trained to retrieve specific information depending on the type of document (e.g. invoice number, VAT rates, bank accounts, etc.).

Some documents require an additional process workflow; therefore, the OCR must be customised to extract additional metadata in order for the workflow to be initiated.

The original document must be physically archived in good storage conditions (correct temperature and humidity). The costs of storage can be very high as the following factors need to be taken into account: space, storage conditions, the management of in and outflows, the destruction after a certain expiration date, the confidentiality and sensitivity of the content.

A global policy or procedure regarding physical archiving must be established internally to avoid physically archiving paper when it is not legally required. As for master data governance, paper governance concerning physical archiving is a good way to avoid storing tons of unnecessary paper.

Certified scanned documents

Presently, Luxembourg cannot destroy legal/original documents after scanning. Unlike Luxembourg, other countries allow this practice and the actual trend on the market is to minimise physical archiving in favour of more and more certified scanned documents. Destruction is only possible if the scanned image can be approved or certified by an external organisation or procedure. The certification of scanned documents is not yet enforced for legal documents. This topic

requires some additional legislative changes and certified labels. Even though the technology is improving constantly in this area, the law is still under discussion by the Luxembourg government.

For further information on this topic, please refer to the draft law that can be found on <http://www.chd.lu/wps/portal/public> and then go to 'Travail à la Chambre' -> Recherche -> Rôle des affaires.

Structured and unstructured data

Apart from paperwork, records include emails, phone calls, paper documents (internal and external), videos, images, etc. The management of structured and unstructured data requires several characteristics. An electronic content message avoids scanning and saves processing time. The workflow of these documents should be controlled by a robust procedure and/or an operational clerk that sorts and guides the workflow.

As these documents have different formats, they also have different sources: EDI, emails, xml, web service queues, etc. These sources are the most common types of entries, but other formats exist and can be supported. Even if the paper documents are centralised, the record management collects data from different

legacy systems like ERP, HR, CRM, Access, SharePoint, Oracle, PeopleSoft, Navision, etc. The content management system should therefore be able to have flexible and standardised interface from/to most of the common systems on the market. Content management systems should be able to keep the data structure from and to legacy systems synchronised without complex and additional steps.

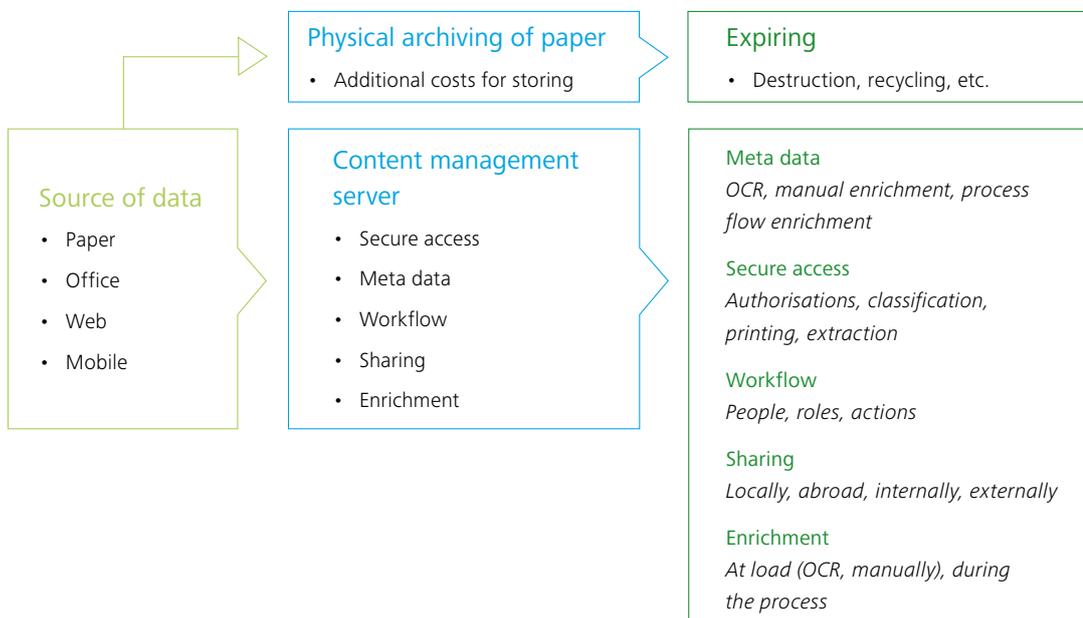
Offerings from existing software providers on the market are improving daily in this area. To illustrate, let us mention the new 'OpenText Extended ECM' software¹.

OCR metadata collected or entered by the content clerk are used to structure the record and the document link within the content management system. Sometimes metadata can be enriched by additional data for further processing or are enriched as the flow is processed.

Legal and brand risks

Recent media attention surrounding large data leaks or brand risks demonstrates that centralised data storage must be protected against unauthorised or undesired access. Appropriate data management, including access authorisation, management of the expiration date and

Key elements for the process flow



¹ Source: <http://www.opentext.com/what-we-do/products/opentext-suite-for-sap/opentext-extended-ecm-for-sap-solutions>

For a business to run smoothly decision-makers need accurate and up-to-date data

destruction of confidential data after the retention period, reduces the risks of legal 'incompliance' and of sensitive data leaks.

New technologies such as cloud can be accessed from everywhere. Consequently, our data are exposed to malicious attacks. Secured links, encryption, downloading into a temporary location with deletion when logging off and avoiding updates to documents from unsecured connections are key points to take into consideration. This is a real barrier for companies when deciding whether to move to the cloud or keep documentation on the premises.

Process impacts

Once paper documents are digitised, any additional emails, videos, words and pictures are grouped together into a record with similar metadata. These collections of documents are not there just to centralise the information. Most of them are linked to a business process or are the initiator of it. The record will be enriched with other documents throughout this business process and the metadata will be adjusted.

With the pace of business picking up, decision-makers need accurate and up-to-date data. This is crucial to ensure efficient and top-of-the-range business processes in our accelerating world. Collaboration and workflows are key elements that should be introduced to reap the benefits of an innovative process.

Before starting the process it is important to correctly describe the business process, including system definition, role management, workflow, etc., like you would for any BPM process description. Even if good software exists on the market, process changes should not be underestimated and the workflow definition should be integrated into the IT landscape.

Collaboration

Given the fact that collaboration between people located around the world is of utmost importance, the processes should be designed to provide secure access from everywhere using user-friendly software (web browser or similar). Access to cloud content management must be secured, and encrypting every document is advisable.

Open shared document databases are regulated by terms and conditions. They can be owned by your organisation or be part of a cloud offering. General terms and usage conditions are important, but in reality who really reads them—especially in this new era of social media? In this respect, before choosing any external open shared document database, take the time to read the terms and conditions and seek advice from your legal department. You need to be clear about IT issues but also about the public usage of your own data. Some good tools exist on the market to exchange data, but most of them take ownership of the content once it is uploaded. These tools even go so far as to use the content without your authorisation. As mentioned above, there are legal and brand risks, so you need to be careful!

Processes create and/or transform content, move it through a workflow, use it or trigger new processes, maintain and store existing content or new documents (structured) or unstructured data. The potential to build new processes based on content is tremendous. The benefits for the new technology, workflow, content management and collection of unstructured information are potentially huge if you can find an innovative solution. Not using this new technology will mean that you are left behind as 21st century business is transformed.



Workflow

Once the process is implemented, a workflow is launched which facilitates interaction between people using the workflow. Documents are linked with stored metadata. A typical workflow is the incoming invoice check. Even though expected invoices should be correct in terms of the quantity ordered and the price, experience shows that invoices generate a lot of extra work when prices and quantities differ, or if general terms and conditions vary.

Legacy systems for checking invoices need to be supported by the scanned image of the vendor's invoice. Processors of the assigned invoice are still required to check the invoice before approval or rejection, and request additional information from the vendor, or issue a credit note.

Workflows are defined to accelerate and optimise document processing and actions to be taken as well as to address questions that might crop up during the process flow. This is especially important in the case of invoice verification. Automatic but flexible routing, collaboration between the different people involved in the process and eliminating risks using business rules is a must when it comes to invoice process automation. To give an example, let us mention SAP Vendor Invoice Management by OpenText².

As this process will probably include different email exchanges, phone calls, word documents, letters and additional documents, the complete invoice processing record must be enriched during invoice verification to ensure a complete and accurate audit trail.

Metadata are then used to drive the full validation workflow.

Conclusion

The dematerialisation journey can be complex and addresses many aspects of organisation, processes and IT. The system architecture, business processes, data access control, hardware and software will also be impacted. Rather than reinventing the wheel, existing software on the market can help automate processes and use best practice processes through integration with existing vendor specialists. Software providers have already contributed to IT integration so you should concentrate on the tools and the benefits you can derive from them to innovate in new legally compliant, structured and unstructured processes where collaboration and efficient document routing are key.

² <http://www.opentext.com/what-we-do/products/opentext-suite-for-sap/opentext-vendor-invoice-management-for-sap-solutions>