

Digital Conversion Projects: A Decision-Making Checklist

Determining what paper to convert and whether to outsource are the critical first steps in a successful backfile conversion project

Bud Porter-Roth

When implementing a document management system (DMS), many organizations are faced with the task of converting their paper documents into scanned images that can be stored in and retrieved from the DMS for use. The two initial major decisions they must make are: 1) whether to convert all or just some of their paper documents; and 2) whether to undertake the conversion project in-house or outsource it to a service bureau, which scans paper documents as its primary business.

Determining What to Convert

Organizations have several options for converting all or some of their paper documents, including the following:

- **Full Backfile Conversion.** A full backfile conversion converts all existing documents. This includes active working documents, archived documents that are still within the official retention period, and vital records needed to resume business in the event of a catastrophic event.

A full backfile conversion process also requires converting new documents being received as part of the

daily business process. One option is to scan incoming documents in-house and outsource the backfile conversion to a service bureau.

- **Partial Backfile Conversion.** A partial backfile conversion includes only select groups of documents. For example, it may include only the most recent documents that are still considered works-in-process, or active file documents. Undertaking a partial conversion allows the scanning project team to limit the total number of documents for the initial conversion effort, while allowing for a second conversion effort (for historical or archived documents) if time and budget permit.

Another common approach is to convert all documents back to a certain date, such as for a calendar

year. This process may also require the project team to plan for scanning current incoming documents as they arrive.

- **On-Demand.** An on-demand conversion means that no backfile documents are scanned, but when a document or file is requested and pulled from the file room or archive, it is scanned and the digital image rather than the paper is provided to the requestor. On-demand conversion may not require the use of a service bureau unless there is sufficient volume to justify it.

On-demand conversion can also be paired with a partial conversion effort. As documents are needed during the normal course of business, they are scanned into the system. This allows the project team to slowly lessen the number of physical documents over time, while enjoying the benefits of a document imaging system.

Determining the correct strategy is an exercise based on an organization's document usage, available resources, and the project budget. If budget and time are not a consideration, a complete conversion may initially be considered. Many organizations, however, realize

At the Core

This article

- ▶ Lists options for various volumes of paper to be typically converted
- ▶ Describes resources needed for in-house conversion
- ▶ Provides tips for controlling quality in the conversion process

that this is not the best strategy because some paper documents are seldom accessed and others may be nearing the end of their retention period and are soon to be destroyed.

If a records management system is already in use, it can be used to ensure that files nearing their destruction date do not become part of the backfile conversion project. For organizations without such a system, it may not be possible or it may be too cost prohibitive to manually go through all the boxes containing paper documents to purge documents that should not be included, especially if the boxes are stored in different warehouses or in geographically diverse areas. In these cases, it may be faster and less expensive to scan all paper and later delete images that do not need to be retained.

Making the In-House vs. Outsourcing Decision

Determining the volume of paper to be converted provides critical information needed for an organization to determine if it has the necessary resources to handle the conversion in-house, if it needs to add resources, or if it should outsource the project.

The following options must be considered for any conversion effort:

1. *Do the conversion in-house with internal resources.* Partial or on-demand efforts are suitable for smaller in-house conversions – unless the facilities and personnel cannot be made available.
2. *Hire a service bureau to do the conversion.* A service bureau can take on the complete effort – removing the paper from offices and returning digitized images on a CD.
3. *Use some combination of in-house and outsourcing conversion.* Many companies have a modified process in which archived documents are handled by a conversion company while more current and sensitive documents are handled in-house.

Considerations for In-House Conversion Projects

The following are the key resources needed for an in-house conversion project:

1. *Facilities and space.* To handle large volumes of paper in an efficient manner, there should be physical space for each of the following activities:

- a. *Storing incoming documents.* Space should be adequate for the weekly incoming documents to be scanned.
- b. *Preparing documents for scanning.* Documents are typically not clean, one-sided, stand-alone documents. Archived documents may be in boxes or

Tips for Quality Control

Whether scanning in-house or using a service bureau, quality control (QC) is an important consideration. QC includes both the image quality and the indexing accuracy. Below are several points that should be considered:

1. *Establish QC guidelines for an acceptable image that requires it to be as readable as the original.* This is of primary importance, especially if the original documents will be destroyed after the scanning project is complete.
2. *Ensure that all parties agree to the QC guidelines prior to any scanning or conversion.* This should involve test runs, samples, and corrections until the image quality is correct. The amount of QC will also affect the time and cost of the project.
3. *Watch for bottlenecks. In-house projects require sufficient internal personnel to review all scanned documents daily.* If 10,000 pages a day are being scanned, for example, and each page takes an average of two seconds to review, it would require nearly six man hours to check them.
4. *Remember that indexing accuracy must also be part of the QC process; it is as important as the image quality itself.* If an image is incorrectly indexed, it is essentially lost forever.
5. *Determine what happens if the original document is of poor quality or not readable.* How will a system user know that the original source was poor?
6. *If documents are to be returned to their original folders/binders in their original order, determine if QC will be performed on the "re-assembled" folders/binders.*

file cabinets. The documents can be inside file folders or binders and may be paper-clipped, stapled, or otherwise fastened together. They will need to be removed from their containers, oriented, and prepared for scanning. Documents are usually prepared and bundled into batches of 50 to 100, which can require a large space depending on the daily number of documents to be scanned.

- c. *Scanning.* The scanning area must be large enough to accommodate the scanner, scanner workstation, and the operator, as well as incoming batches to be scanned, the current batch being scanned, and the batch that has just been scanned. Mixing these batches could cause a serious problem.
- d. *Reviewing for quality control.* After scanning, many companies immediately perform quality control (QC), which is to review each document image and determine if the image quality is good and consistent with the original document. (See sidebar "Tips for Quality Control.")
If the quality of a document is bad, it may be rescanned at the quality-control station and re-inserted into the electronic batch, or the whole batch may be rejected and sent back to scanning to be rescanned. As with scanning, enough space is needed to handle incoming and outgoing documents plus equipment.
- e. *Indexing or data entry.* After QC is complete, documents

are typically indexed so they can be located in the system. Indexing may be data entry of key fields, such as name, account number, or Social Security number. Typically, indexing is performed by looking at the image of the document on the monitor and keying the data into a second application area on the same monitor (or dual monitors). If the data in the screen image is not readable, the key entry operator may need to refer to the original paper document. Therefore, the indexing area should also have enough space for document batches, both incoming and outgoing.

f. *Storing paper temporarily.* Once the scanning, QC, and indexing are completed, the documents are often stored for 30 days to as long as several months to allow an opportunity for review and rescanning for problems not caught during the scanning phase. Also, in some cases, a company may want to reassemble the documents back into their original file folder or binders, and this process may require a space similar in size to the preparation area. In either case, documents are typically kept “close” to the scanner area until they are either sent for destruction or returned to their archival area.

2. **Personnel.** Sufficient personnel must be available to handle each activity described above. Of course, the larger the volume of paper to be scanned, the more people needed for each activity. In addition, the conversion project will require a full comple-

ment of managers, supervisors, leads, and other personnel, such as from IT, to make the project successful.

3. **Equipment.** Each activity also requires specific equipment. The preparation area needs large tables, copy machines, printers, and various office supplies, such as staple removers, rubber bands, and binder clips. The

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scanner area needs the scanner, the scanner workstation, a large monitor, and work surfaces for incoming/outgoing document batches. The QC and indexing areas need to be equipped similarly, especially if the QC function includes rescanning poor-quality documents.

Considerations for Outsourcing Conversion Projects

Outsourcing to a service bureau is an attractive option for those organizations that do not have, do not want to add to, or do not want to dedicate their internal resources.

Service bureaus possess in-depth knowledge of all types of paper documents, and they usually have the latest scanners, software, hardware, and other associated equipment needed for conversion projects. In addition, they may have specialized software and scanners to handle difficult documents that could not be handled with typical in-house equipment.

Because service bureaus are set up for large high-volume jobs, they are often able to process documents faster and more efficiently than can be done in-house. Therefore, outsourcing can be affordable and may be less costly overall than doing the work internally.

For example, to convert a large volume of paper documents in a short amount of time, an organization may need to dedicate a large amount of facility space, add staff, and purchase several large, expensive scanners to do the project in-house. Once the backfile scanning has been completed, on-going scanning needs may be small, making the high-volume scanners and additional personnel unnecessary.

If documents are highly confidential and it is against company policy for them to leave the premises, look for a conversion company that does the work onsite. Some companies will set up their equipment in a designated building or a nearby rented building; others will bring an equipped trailer onsite and do the project there.

Outlining Other Criteria

After deciding what to convert and how, organizations must determine the following before work is commenced:

1. *How to properly name and index the documents being converted* so users can locate the documents via the DMS search-and-retrieval tool
2. *Whether a service bureau, if used, will complete all indexing or only a partial index, with in-house resources completing the indexing effort*

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3. *Whether a service bureau, if used, will do indexing at an offshore facility.* Some companies scan at their local facility and transfer the document image offshore, where it is quality checked, indexed, and perhaps other operations are performed.
 4. *Whether to use optical character recognition on imaged files for indexing instead of manually keying indexing data*
 5. *Whether there is a database of indexing information* (such as an Excel file containing customer names and account numbers) that will facilitate the indexing process, making it potentially less costly and more accurate
 6. *How to get the documents to and from a subcontractor, if used*

7. *How many of the “original” documents can be released to the vendor* (think “disaster recovery”)
8. *How to get the electronic index data and document images back and loaded onto the DMS*
9. *What to do with the paper documents after they have been scanned.* In many cases, once the paper has been converted to a digital format, the physical paper may be destroyed; the digital image becomes the legal representation of that document. Documents that may not be destroyed can be stored

in a secure place for retrieval in the event the paper versions are needed while their digital images are used for work-related activities.

10. *Whether the documents should be returned in their original folders and in their original order,* which can be time-consuming and costly

Taking the First Steps

Backfile conversion is an important consideration for any electronic document management implementation. Determining what paper to convert and who should convert it are the critical first steps in a successful project. ■

***Bud Porter-Roth** is a consultant specializing in electronic records and document management systems. He is the author of Request for Proposal: A Guide to Effective RFP Development and Writing Killer Sales Proposals. He can be contacted at budpr@erms.com.*