

Docuvision Inc.

Document Management 'Return on Investment'

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Challenge

Within most organizations, the battle for funding is extremely competitive. In these uncertain economic times, any IT spending must have a clear positive impact on the corporate bottom line or competitive position. To justify spending on a document management solution, proponents often must make their case to upper financial management in a dollars and cents manner. According to Ernst & Young's Survey of Fortune 1000 IT Buyers 2002, "a technology investment isn't going to make it through the approval process if it doesn't carry with it a reliable financial analysis showing the impact the investment will have on an organization's bottom line.

The results from this survey make that abundantly clear." (Source: Ernst & Young) While it may seem obvious in general terms that a managed document environment would provide significant benefits, justification in clear-cut financial and competitive terms is less clear. The information below provides a road map for clarifying the ROI process for a Document Management System.

What is ROI?

Simply put, ROI answers the question "What do I get in return for the money I'm being asked to spend?" Some organizations express ROI as a simple measure of the time it takes to recover the cost of an investment e.g., "the system will have paid for itself in 24 months". Others state it as a percent of return over a specific time period such as 135% in 2years.

In the past, when IT professionals and executive leaders discussed the ROI of a technology investment, they were primarily thinking of financial benefits. Today, business and technology leaders need to take into account the *nonfinancial benefits* of IT investments such as how document management will facilitate the achievement of broader corporate goals.

Financial benefits include changes to a company's budget and finances, e.g., cost reductions or revenue increases. Non-financial benefits include effects on business operations and productivity, e.g., improved customer satisfaction, better usage of current and archived information, and shorter product cycle-time. These more transparent benefits can be hard to define, difficult to quantify and vary in importance with different businesses. These present the greatest measurement challenge.

The Case for Document Management

Increasingly, document management is seen as a "bottom-line" enterprise application and technology with objectives identified as reducing administrative costs, improving efficiency and/or enhancing profit. Everyone has experienced the frustration of not being able to find that piece of paper or file with the answer to that important, pending question. "IDC has estimated that the typical enterprise with 1,000 knowledge workers wastes \$2.5 million to \$3.5 million per year searching for nonexistent information, failing to find existing information, or recreating information that can't be found."(Source: IDC)

BAE Systems conducted a study that discovered that 80% of employees waste an average of half an hour per day retrieving information, while 60% are spending an hour or more duplicating the work of others. (Source: "Show me the Money, Measuring the Return on KM" Knowledge Management)

More statistics supporting the need for document management come from Coopers & Lybrand (Source: Imersion Technologies, Inc.):

- 90% of corporate memory exists on paper.
- Of all the pages that get handled each day in the average office, 90% are merely shuffled.
- The average document gets copied 19 times.
- Companies spend \$20 in labor to file a document, \$120 in labor to find a misfiled document, and \$220 in labor to reproduce a lost document.
- 7.5% of all documents get lost, 3% of the remainder get misfiled.
- Professionals spend 5-15% of their time reading information, but up to 50% looking for it.
- There are over 4 trillion paper documents in the U.S. alone - growing at a rate of 22% per year.

These statistics easily support the fact that most businesses will benefit from a well-deployed document management system. It is not an issue of "if" but "when". From Accounting and Human Resources to Product Development and Customer Service, every department can realize productivity improvements. The sooner a document management solution is in place, the sooner the benefits can begin to affect business bottom-line and become the basis for efficiently conducting every business function.

General Findings for Document Management ROI

Productivity gains as well as bottom-line results are important criteria for evaluating a document management implementation. "It's easy to claim that productivity gains should not be included since there are not direct benefits or reductions in budgets from increased productivity. However, you should consider the additional employees you would need to hire to do the same work, or the increase in output from the same number of employees." (Nucleus Research, Inc.).

Document management has been declared "ROI-Positive" according to an article from Line 56 (an E-Business Executive Daily) about a benchmark study conducted by Nucleus Research (an analyst firm that provides CFO's and CIO's information for evaluating IT decisions). This study found that 83 percent of document management implementers, chosen without vendor input, claimed positive ROI from their DM implementation. "Overall, participants cited the biggest productivity returns in terms of accelerated document retrieval, faster filing, reduced staffing requirements, and the biggest cost savings in the reduction of printing, distribution and storage costs." (Source: Nucleus Research)

Additional findings in the study by Nucleus Research illustrate the significant value that is delivered to a majority of companies who invest in document management solutions. Specifically 86 percent cited increased productivity and the average participant reduced document retrieval time by 52% with their solution. Many participants indicated greater regulatory compliance as well. This study also revealed a caution that lengthy deployments can adversely affect the ROI when companies take longer than necessary to deploy the solution. Delays resulted in additional costs for employee time and implementation consulting and postponed the accrued benefits of the solution. To avoid long implementation pitfalls, Nucleus recommends companies deploy document management as a series of smaller scale, discrete projects that can individually promise a positive ROI.

Understanding and Calculating the ROI of Document Management

Although ROI may be expressed as a simple number or percent, calculating it is not so simple. To begin, a clear comprehension of costs must be undertaken. “The financial benefit of a document management system must be clearly recognizable. Without a business case and without the knowledge of the actual documentation costs before and after an implementation, a ‘successful’ project cannot demonstrate its success and justify further investment.” (Source:PriceWaterhouse).

It is also important to assess the ROI potential – the broader the scope, the greater the potential ROI. Common applications that are used frequently by many people will result in a greater return on investment.

Getting started: This involves two parts - knowing what to measure and understanding how to quantify the value of those measurements into actual dollars. The first step is estimating your document handling costs. This might include the following:

- Storage costs such as off-site expenses, on-site space usage, current archiving system (e.g. microfiche), and filing supplies
- Copying costs
- Labor cost estimates for document search, retrieval and filing
- Document distribution expenses – overnight shipping and mailing

Answering some of the questions outlined below can assist you in compiling your current document handling costs. Then you can evaluate document management implementation expenses to render some bottom-line breakeven data.

Questions	Example	Monthly Calculations ¹
How many people in your office handle paper documents?	10	$10 * 20 * 2 = 400 \text{ mins.}$ $400 / 60 = 6.6 \text{ hours}$
How many times does each person retrieve or file a paper document per day?	20	$6.6 * \$10 = \66 $\$66 * 20 = \$1320 / \text{mo.}$
How long does it take to retrieve a paper document?	2 minutes	
What is the average hourly salary of those staff members?	\$10.00	
How much time does each person spend making copies per day?	5 minutes	$10 * 5 = 50$ $50 / 60 = .8 * \$10 = \8
How many paper copies are generated per day?	50	$\$8 * 20 = \$160 / \text{mo.}$
How much time does each person spend filing per day?	20 minutes	$20 * 10 = 200 \text{ mins.}$ $200 / 60 = 3.3 \text{ hours}$ $3.3 * \$10 = 33.00$ $\$33.00 * 20 = \$660 / \text{mo.}$

¹ Monthly calculation takes the # of people, multiplies it by the # of times and the amount of time to get the total #of minutes for the action per day. The minutes are divided by 60 to get the # of hours and then multiplied by the hourly rate of the employee. This daily expense is then multiplied by 20 workdays per month. In this example, document handling costs are roughly \$2140 per month.

Secondly, it is necessary to collect document storage expenses.

How much do you spend on off-site storage per month?		
How many hours are spent per month accessing this off-site storage?		Multiply by the hourly salary for a monthly calculation
How many file cabinets do you maintain and could this space be used for other purposes?		Use square footage costs to determine value.
How much do you spend on filing supplies per month?		
How much do you spend on overnight delivery services per month?		

By adding together document handling costs and storage expenses, you generate a realistic estimate for your document expenses today. Using this data, the following chart illustrates how to compare your current document handling methods with a document management system. Measuring the effectiveness of a document management solution requires that you realistically think about the departments it will impact as well as the number of employees and the value of their time. The values below are just suggestions.

Reduction in time spent locating and retrieving documents	75%
Reduction in time spent filing	75%
Reduction in copying	50%
Reduction in off-site storage costs	75%
Reduction in on-site storage costs	75%
Reduction in overnight shipping expenses	50%
Reduction in filing supply expenses	50%

Now, multiply these percentages by the calculations in the first section. This will give you an idea of the monthly savings your company will realize by implementing a more efficient document management solution. Now, you can input the costs associated with the document management system you are evaluating. The most difficult cost to derive will be the conversion expenses. There are scanning service bureaus who will scan and index your documents, or you can accomplish the conversion in-house. Most scanners operate as quickly as a copier and support batch processing. And grouping together similar documents can streamline the indexing process. The operator can take advantage of zone indexing tools and batch indexing processes as well as automatic full text indexing for accurate information collection.

Cost of the software	
Implementation costs	
Training expenses	
Consulting expenses	
Conversion expenses (one time or ongoing)	

It is important to note that these are simply the *measurable* expenses. But, this analysis can provide an initial framework for demonstrating potential success and further investment. Most organizations use one or more “financial metrics” which they refer to individually or collectively as “ROI”. Both Net Present Value and Internal Rate of Return are valuable for larger scale or multi-year projects. These metrics include:

- Payback Period. The amount of time required for the benefits to pay back the cost of the project (usually expressed in months).
- Net Present Value (NPV). Evaluating future benefits using the value of today’s money.
- Internal Rate of Return (IRR). Stating the benefits including calculations for the time value of money.

Using this type of model will provide a basis of comparison for pre and post installation, as well as for comparing various solutions. Carefully considering your business specific measurable costs for an IT purchase is just good business practice. Then by evaluating the non-measurable benefits that are discussed below, the big picture for achieving positive ROI for a document management implementation will be clear.

Non-financial Benefits

Taking this analysis further requires answering more difficult questions that are frequently more challenging to quantify. Given the varying definitions of these “softer” benefits, there are no comprehensive tools that can be applied. However, the potential for producing positive impacts on business performance and mission results are undeniable. This process also requires an organization to take a look at the bigger picture of a document management installation – from department level improvements to company-wide benefits. This will help them to define what to evaluate and how to measure it. Some suggestions include:

- How will this system improve meeting regulatory compliance needs?
- How will improvements in communication and collaboration benefit business?
- The greater the potential to re-use information in the system, the greater the ROI. How much time will be saved by using existing information instead of recreating it?
- What are the benefits of a shorter product cycle time?
- How valuable is a more secure and accessible archive of business assets?
- How much will improvements in customer service benefit repeat business?
- How much will more efficient document processes improve competitive positioning?
- Will better document availability lower risk factors and errors?
- Will employees be happier?
- *Can I really afford to not implement a document management system?*

Critical Success Factors for the Introduction of a DMS

After the decision has been made to move forward with a Document Management Solution, many factors can impact implementation success.

Time. A timely installation with effective training is a key to user acceptance and success. The sooner a DMS can be used to speed up the process the bigger the profit.

Cost Evaluation. Understanding and recording document handling expenses before and after installation is important for determining bottom-line success. Financial benefits can be accountable and can help determine further investment or changes in the current procedures.

Compliance. Full staff acceptance with comprehensive usage is critical for success. And training is imperative to ensure a full system usage, prevent parallel document systems (old and new) and to realize the full business benefits.

Scalability. The DMS system must be able to expand with a growing business. Expansion should be evaluated in terms of document volume as well as format. A document management solution must be able to accommodate all common document and drawing formats now and into the future. Document distribution needs should be also be considered.

Long-term product availability. The product strategy of the solution manufacturer is a consideration for long term support and future development. A path for new releases and technical support should be clear.

Conclusion

The economy of today's business environment demands accountability. Until recently, IT decisions were not expected to provide financial data to support its expenses. That has all changed and with it, ROI has emerged as a critical influencer in decision making. Simple ROI calculators can't take into account the complexity of business activity that can be impacted with the implementation of IT advancements, specifically document management systems. While effectively managing business information is a critical mission of any operation, process improvements demand cost justification. Using the ROI information contained in this paper will provide a springboard to make the right document management solution decisions for your company.

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