Document Management
Return on Investment (ROI) Analysis

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Introduction

This paper will outline how a document management system can generate a significant return on investment for small to medium sized businesses. The changes in technology pricing over the last 10 years has finally made it possible for small to mid-sized businesses to enjoy the same efficiencies provided by information technology systems that large enterprises have enjoyed for decades. Think about where we would be today if banks did not have computer systems, or clinics could not provide access to patient folders at remote locations. These advances in technology can now be applied with ease at the small to medium enterprise level.

Current Conditions

In today's business world the ROI of any project is important as competition increases, it is imperative that a company make sure investments generate a large enough return. Increasing business efficiency is the most compelling reason for investing money in any project. Obviously technology has helped many businesses over the last 10-15 years become more efficient. Just replacing typewriters with word processors and calculators with spreadsheets initiated a huge increase in productivity per employee. Taking the next step is more challenging than simply replacing one tool for another as these programs were basically point solutions. It was predicted as early as 1975 that the "paperless office had arrived". Obviously progress has been made toward this goal, but the amount of paperwork necessary to run a business (particularly a regulated one such as financial services and medical clinics) has increased a great deal since 1975. Just to maintain the status quo requires businesses to move to the next level in office productivity and implement a complete document management solution.

Almost every business in today's workplace uses some type of document management system (including paper-based systems) to maintain the documents used on a daily basis. Accounting departments maintain A/P and A/R files for customers and vendors. The sales department maintains orders for each of the customers. Customer service representatives maintain records on service calls and the service needed. A comprehensive electronic document management system (EDMS) can provide a method for storing all relevant documents about a particular customer or vendor allowing office staff to gain a total view of the customer or vendor. If the EDMS can be integrated into the point software solutions that each department uses, significant gains in productivity and efficiency can be gained. For instance the accounting department could access documents (orders, invoices, contracts, …) online from their accounting application. Sales could access documents from their CRM (customer relationship management) software. The goal of an EDMS should be the software glue that ties the different software packages together in such a manner that all departments in a business gain efficiencies.

What is ROI?

ROI is simply Return on Investment. In layman's terms this is the amount of time it takes to get the value of the dollars spent on a project or item back (returned to the business). For instance if large lathe is purchased for a machine shop and it cost $50,000 and each month a profit of $10,000 can be tied to the lathe, then your ROI (in simplistic terms) is 5 months ($50,000/$10,000). This type of formula can be applied to virtually anything purchased although it can be harder to determine for some purchases. Typically the effort to calculate an ROI is only done on medium to large investments, as the time spent can be extensive and requires gathering appropriate data.

What is a document management solution?

Simply put, a document management solution is a system that can replace not only the paper files and documents in an office, but enable the user to send an electronic document through the same steps a paper document or file would follow. For instance, if a financial services firm has a new account form that is filled out for each client account and it must proceed from the agent to the trader and then to accounting, then a document management system must provide the same path. So a true management system not only provides storage, but must provide the same workflow capabilities. Along the way it must also protect documents so that only the necessary people can view them. An example, might be a medical clinic which must comply with HIPAA regulations. Patient records must be kept confidential and an audit trail kept for all record access. An EDMS is a step up from the point solutions like spreadsheets and word processors as the entire office must be capable of using them. Therefore they must be easy and straightforward to use and ideally would integrate with other applications the office is already using with a minimum of effort. So to sum up the attributes of a document management solution

- Maintain a repository of electronic documents.
- Provide a mechanism of securing the documents.
- Integrate with other software solutions being used.
- Provide a method for putting the documents into a defined workflow.
- Supply audit data providing the four W's (Who, What, Where, When).
- Capture form data in a database for usage in monitoring and managing the business.
- Comply with any necessary regulatory requirements.

Benefits of a document management system

There are some statistics attached in Appendix A which outline problems that arise from using a paper based system. The list below is an outline of benefits of a document management system.

- Documents are stored in an electronic format which is easily backed up and can be copied offsite relatively easily. Multiple copies of the documents can be made easily and cheaply. In contrast, a paper based system would require copies of each piece of paper as they are generated. At a $.05 a page this can become prohibitively expensive.

- Misfiled documents can be easily found using the search capabilities built into the document management system. Misfiled documents in a paper based system can be impossible to find depending on how and when they were misfiled.
- Filing documents is relatively easy particularly if the document management system is integrated with other software packages. Filing paper documents requires a trip to the filing cabinet.
- Moving documents from one point in the workflow to another is simple. Determining who has a document or folder in workflow is available at all times. Finding a paper folder somewhere in a workflow can be difficult at best, particularly if it's buried on someone's desk.
- Move any paper forms to an electronic version. Data can be captured and populate a database and the paper is no longer necessary. Filling out paper forms can be tedious and prone to human error. Using electronic forms allows data to be prefilled eliminating these types of errors.

How do these benefits generate an ROI?

It is relatively easy to take the benefits listed above and the statistics in Appendix A and determine if an office will get a significant Return on Investment. Here are some ways to calculate an ROI for a system.

Physical Costs

- How many filing cabinets do you have – a standard four drawer filing cabinet requires at least 12 sq of office space. How many cabinets do you have?
- Do you rent an offsite storage facility – What is the monthly cost?
- Number of copies made of incoming documents – For instance if an order comes in, how many copies of it are made and where do they go? More than likely all of these copies are placed in filing cabinets in separate departments
- How much do you spend on filing supplies per month?

Labor costs

- How long does it take to retrieve a paper document?
- How many people handle each document?
- How much time does it require to file a paper document?

A Sample ROI calculation

To calculate an ROI for a small office, we'll use a financial advisors office as a sample. Financial advisors generate paper with each new order, trade or account and the industry is regulated by FINRA and the SEC. This sample office will consist of two advisors plus five support staff for a total of 7 people. Let's assume that it's an average office and generates 100 new documents a week (This is a fairly low new document count, but helps prove the point that EDMS systems generate a great ROI). This office has been in business for 10 years and has a row of 10 filing cabinets in the back room. The spreadsheet on the next page demonstrates the payback.

Daily Labor Costs for a paper based document management system	Example	Time Spent	Cost
What is the average hourly salary?	$ 15		
How many people handle documents?	7		
How many times does each person retrieve a document daily?	10		
How long does it take to retrieve a paper document? (minutes)	3	210	$ 52.50
How many new documents are generated a day?	20		
How long does it take to file a paper document? (minutes)	3	60	$ 15.00
How many paper copies are generated per day?	60	0.05	3
Daily total costs for a paper based system			$ 70.50
Monthly total costs for a paper based system (20 working days/month)			$ 1,410.00
How much do you spend for off-site storage monthly?	$ 100		100
How many filing cabinets (12 sqft/cabinet - $15/year/sqft)	10	120	$ 150
How much do you spend on filing supplies per month?	$ 50		$ 50
Monthly costs for maintenance			$ 300
Annual cost to maintain paper based document management system			$ 20,520
Implementation cost for a 5 user document management system			
Software (5 concurrent users)			$ 5,000
Server with 200 GB of storage			$ 2,000
Scanners (3 mid range scanners at $500 each)			$ 1,500
Training and Setup			$ 2,000
Total Cost			$ 10,500
Daily Labor Costs for an electronic document management system			
What is the average hourly salary?	$ 15		
How many people handle documents?	7		
How many times does each person retrieve or file a document daily?	10		
How long does it take to retrieve a document? (minutes)	0.5	35	$ 8.75
How many new documents are generated a day?	10		
How long does it take to file a document? (minutes)	0.5	5	$ 1.25
How many paper copies are generated per day?	0	0.05	0
Daily total costs for a EDMS			$ 10.00
Monthly total costs for an EDMS (20 working days/month)			$ 200.00
Annual software maintenance contract (20% of software purchase)			$ 1,000.0
Annual cost to maintain an electronic document management system			$ 3,520
Monthly savings			$ 1,417
Months to payoff			7

Visit http://www.cabinetng.com/media/docs/ROI_Calculator.xlsx for an Excel version to this spreadsheet.

Notes on the ROI calculation

By now it is evident an EDMS can be a very valuable tool for small to mid-sized businesses. The ROI calculation portrayed was done without taking into account the following factors.

Lost documents become a thing of the past. The powerful search tools built into an EDMS make it virtually impossible to lose a document. In our sample office that generates 100 documents a week, 7.5(See Appendix A) of them will be lost requiring the document to be recreated at a cost of $220 each. If the paper based system being used is very efficient and this loss is reduced to 4%, the total is still a cost of $880/week. If the EDMS is inefficient and has a loss rate of 2% the savings in using an inefficient EDMS is $440/week or $22,880/year. **It's hard to calculate how much time and effort is saved just by not losing documents**

Misfiled document also become a non-issue. Again the powerful search tools built into an EDMS allow misfiled document to be easily found and refilled in the correct place. At a misfile rate of 3.5% and a cost of $120/misfiled document, the sample office will save an additional $420/week or $21,840/year. **Misfiled documents are a huge problem and can turn an office upside down when looking for misplaced documents.**

Answering a customer's query while on the phone with them is also a source of significant savings. Imagine the following scenario – a customer calls in with a question about their last order. If the customer service representative can pull up the document on their screen and answer the question right then without having to pull the file and call the customer back, a huge time savings is generated for the business. It is also more efficient for the customer and the telephone tag game is avoided. Being able to email the customer a copy directly has the same benefit.

Another time saving illustration not reflected above is using electronic workflow to distribute and route documents through an organization. Think of the time used in moving paper from one point in the company to another. Some companies still have a person that goes around and picks up paper documents and moves them from one point to another. With an EDMS this function is eliminated entirely.

The worksheet used in this sample ROI calculation can be downloaded at http://www.cabinetng.com/downloads/ROIcalculator.xlsx. Take a look around your office and plug in numbers that make sense for your business and see what your ROI would be.

Appendix A

Office Document Statistics (from a Cooper's and Lybrand study)

- Comprise greater than 80% of corporate memory (contracts, memos, project plans, …)
- 90% of documents that are handled in an office are merely passed along or shuffled through.
- The average document gets copied 19 times in it's life
- Cost
    - $20 to file a document
    - $120 to find a misplaced document
    - $220 to replace a lost document
- Percentages
    - 7.5% of all documents get lost
        - A sample office that generates 200 documents a week will lose 15 of them, costing the company $3300.
    - 3% get misfiled
        - A sample office generating 200 documents a week will misfile 6 of them, costing the company $720
- 50% of a professional's time is spent looking for information. Only 5-15% is used in reading the information
- There are over 4,000,000,000,000 (4 trillion) paper document in the U.S. alone. They are growing at the rate of 22% a year or roughly 880 billion a year.