



Choosing an Enterprise Content Management System

**An Integrated Document Technologies (IDT) White Paper
by**

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When you consider the array of business processes, structures and strategies at work within every company's operations, and combine those with the unique nature of various departments (such as finance, marketing, information technology and sales), it is no surprise that there are many separate vehicles or approaches used to move an organization forward in achieving its target objectives and fiscal goals.

Among the most important and common tool in that collective is the company's technological infrastructure– from its networks to its applications. To establish greater efficiencies and allow for collaborative data sharing, reporting and tracking, many businesses are taking advantage of Enterprise Content Management (ECM) systems as part of their infrastructures.

Overall, ECM systems handle a multitude of tasks and services:

- **Document and Data Capture** – Content is received by organizations in a number of different formats: EDI, ACH, XML, paper, e-mail, etc. Capture is a component of an ECM solution that provides the necessary software and hardware to electronically capture, classify, process, and index or categorize the content and deliver the content to a content management repository.
- **Content Management** – Provides the organization with a central content repository. Content can be classified as "active" or "fixed." Active content is content that is dynamic in nature such as web pages or web sites. Fixed content deals with content that is static in nature such as paid invoices, closed purchase orders, e-mails, etc.

Captured content is delivered electronically (usually by way of the information capture component) to the Content Management repository for all need-to-know employees, trading partners, customers to access securely.

Content managed today is inclusive of e-mail as well. E-mail poses a new challenge for organizations. Today, many organizations are faced with the burden of having to monitor and filter e-mail – allowing the software application and compliance officers to screen inbound/outbound mail - for sensitive data that potentially can place an organization at risk. In addition, organizations are in need of solutions to archive the e-mail because of compliance, regulatory and legal reasons. Without ECM, an organization has no real effective means of knowing whether inbound or outbound e-mail would be deemed "non-compliant" – hence putting the entire organization

and its employees and officers potentially at great risk. Content Management further augments e-mail systems by offloading the voluminous storage management challenges that frequently face IT. Today, the e-mail content – both message and attachment - need to be managed or memorialized in the corporate record books in a similar manner as we have historically treated other forms of corporate documents – such as paper. ECM is the natural repository for this content.

- **Share content** – Retrieve documents commonly used by employees in multiple locations and by customers and trading partners. This is usually achieved through integration with business portals, web applications, or ERP applications.
- **Manage the life-cycle of content** – Determine and manage the media platform (SAN, WORM, tape, etc.) for storing data, documents and image records electronically (content). Manage the duration of time content is kept within the ECM system, adhere to the organization's records retention policy, and manage the final disposition of that content.
- **Business Process Management** – Provides the ability to automate manual business processes, provide metrics, feedback and reporting to management about the business process(es).

Within each of these functional categories fall many possible products and approaches needed to create a complete system – from scanners, storage devices, integration considerations, content and process management software to web-based document capture. How do you choose which products are right for your company's needs, and how do you combine them into an easy-to use system?

It begins with conducting a formal Requirements Analysis: determining what you need and why you need it. Obvious, yes; but frequently, companies do not really know what they are looking for – or, what an ECM system can do for them. They don't know how much they need to spend or are allowed to spend. They don't know what to ask of the vendors they plan to meet – or, which are a fit for them and which are not. They are surprised by the proposed costs of the system. Companies typically come to the conclusion that they need an ECM system. Then they perform initial research of available products over the Internet, or by attending trade shows, and ask for product demonstrations. This is *not* an ideal approach to the problem.

Why? How do you know if vendors can meet your requirements when you haven't formalized them yet? How do you know the vendor is in your price range when you haven't identified your budget? How can you even ask about costs when the vendor

doesn't know what you need? How do you know the product is a technical match with your organization's operating systems, networks, etc., your internal technical expertise, when you don't know the answers to these questions yourself? How do you know you or don't know you need an integrator or VAR when you don't know what you'll be integrating with - if anything?

Then, what functionality do you need from your system? Imaging? Document Management? Records Management? Report Management (ERM), Fixed Content or Active Content Management? Business Process Management? Do you need them all? Can you utilize magnetic media to manage the content or must you utilize an unalterable device such as WORM or Content Addressed Storage?

Tough questions? Yes, but they do require real answers. Can you skirt the issue? Unfortunately not.

You need to be an informed consumer. Believe it or not, all ECM software and hardware products are NOT the same. Yes, they all may allow you to store and retrieve content, maybe annotate it, provide web access or even allow for integration with an ERP System such as SAP or Peoplesoft. But how do you decide which products and suppliers you will partner with "perpetually?" After all, you only want to make the purchase decision *once*.

Many ECM products are designed to be "plug-and-play." However, these systems probably do not take unique processes or needs into consideration, and therefore, will not provide the optimum capability. To use a plug and play product, you may need to redesign your processes to fit within the inner workings of the application. Some solutions are more departmental in nature rather than "enterprise class" solutions - even though the vendor may claim to offer "enterprise class" applications. More importantly, the ECM market is a market comprised of a multitude of vendors that supply various components that make up a complete ECM solution. The idea that you can get a complete end-to-end ECM solution from a single *manufacturer* of a product isn't a realistic expectation.

Given the cost, time, and accountability constraints facing businesses today, the hit-or-miss theory is no longer an option. Public or private, all companies are accountable, so the final decision **MUST** be the right one.

It all boils down to doing your homework - the Requirements Analysis - up front.

Before You Buy

The Requirements Analysis becomes the foundation of how your system is ultimately designed. Because you will be using the ECM system to handle all of your vital company records, intellectual property and customer or vendor files, the effort is worthwhile.

Consider the following aspects of a Requirements Analysis to prepare your company to commit to the right system for your needs, and to minimize delays or inadequacies down the road:

- Identify what you **need and why**
- Confirm the **budget** and evaluate ROI
- Prepare a **cost/benefit example**
- Understand and document your **technical infrastructure**
- **Identify technical features:** Do you need imaging? ECM? ERM? BPM? Non-alterable media? Integration? Internet capabilities? Etc.
- **Identify and differentiate between capture, content management, business process automation, integration and infrastructure requirements.** Further separate those requirements into hardware and software categories and identify the associated vendors with each category
- Prepare **questions** for each product vendor
- **Identify an integrator** needed to pull the entire solution together and support it
- Consider product **interoperability, flexibility and scalability** to adapt to future growth
- Plan the time required for **development, testing, QA, training and implementation**
- Plan for the extended time needed to deal with any **legal, regulatory, compliance or corporate governance issues.**
- Expect, plan and budget for recurring costs for **upgrades, maintenance, support, consulting services, legal, regulatory, compliance, corporate governance revisions** that need to be translated into a functional application, **expansion and integration.** ECM is not a "get it and forget it" appliance purchase.

The Requirements Analysis

Analyzing your requirements begins with:

- Identifying and stating the business problem(s) at hand;
- Detailing the components and processes involved; and,
- Describing the ultimate solution for your company.

First, sum up the business issues in a few sentences, and be specific. For example, "Our customer service representatives (CSRs) are complaining they can't respond to customer inquiries because they don't have access to the complete order history. This causes dissatisfied customers, frustrated CSRs, and sometimes multiple CSR's working to solve the same problem unknowingly." Or perhaps: "Our collections department is constantly faced with manually collecting and assembling the original purchase order, quote, shipping document, and invoice in order to resolve order discrepancies. It is very labor intensive and causes our accounts receivable aging to extend over 65 days, which is out of line with our acceptable business practices."

Though individual challenges vary, most companies share a consistent need: to gain unified access to all relevant documents, records and data-types in order to resolve the stated business problems and meet the goals and expectations of the department or business entity.

Take heed: Though a thorough analysis is important, do not become too entrenched in solving every issue. If the scope becomes too broad, it is likely the solution will not be found in the near future.

For example, if the goal is to provide an enterprise-wide solution for every department within the company or to web-enable your trading partners or customers, you may be approaching the more basic problem too broadly. Large consulting firms like to create this kind of "requirement scenario" (for obvious reasons), whereas most of the time, the need for an ECM system stems from a single department or a few departments within the organization. Taking the "enterprise" approach to solving challenges for either one or a few departments may become time-intensive, laborious, frustrating, and ultimately a **very costly proposition**.

In the meantime, as months or years go by while your company formalizes its Enterprise Requirements, the technology will change, and your company, its employees and customers will continue to suffer from the delays and inability to find a solution for these business problems in a timely manner.

The key is to stay focused on the business problem. While some element of future planning is important, it should not supersede the business needs driving the purchase today. Distractions could cause your team to lose its focus on needs of your current “customer” and drive up the costs of the system needlessly. Remember who is ultimately going to pay for the system and if it can be cost-justified.

The Requirements Analysis should involve significant details, and can seem a monumental task. However, doing the analysis will prove the significance of why the system should be carefully planned. After all, you do not want to replace the system in a few years because the first no longer meet your needs.

The more *relevant* the content of your analysis, the better. What other items should be included?

Budget and Cost-Justification

What level of budget is anticipated, and, what is the timeframe for the purchase? Identifying these is extremely important for both evaluating potential vendors and solidifying internal support.

If you have no idea about costs and need to set a ballpark range, typically ECM systems start at \$30k on the low-end to \$1 million on the high-end. On average, the investment for most *departmental* systems falls in the range of \$100k - \$150k. As you plot your budget, you should anticipate related costs such as new servers, workstations, monitors, upgrading your network, personnel training, and reoccurring support and maintenance fees.

Next, you must identify who has the authority to approve your budget, usually the CIO or CFO. Be certain to keep this person updated on every aspect of the project and related costs. In some instances, a committee may be charged with assessing the purchase. If this is the case, be prepared to wait. Committee-based approvals can be lengthy processes; sometimes, the wrong constituents can do the organization more harm than good. If a committee is involved, suggest it be kept to a maximum of three qualified people – possibly one representative from such key areas as customer service, owners of the business process, operations and information technology.

ECM system purchases in prior years have not been considered among the top three projects of a CIO, CFO or president. Other technologies vying for budget approval include ERP, e-mail, financial and web-based projects. ERP, e-mail, &

financial solutions struggle in delivering both operational *efficiency and compliance* without the aid of an integrated ECM solution. As a result, it is becoming increasingly difficult to purchase and implement any of those solutions without simultaneously (or shortly thereafter) implementing ECM as part of the overall operational efficiency and compliance strategy.

As a result of recent legislation and regulatory changes that have occurred in nearly every industry, C-Levels can no longer afford to delay the internal requests for ECM. This is primarily due to the fact that C-Levels have become keenly aware of recent legislation and regulatory pressures being asserted upon them such as: Gramm-Leach-Bliley Act, SEC 17A-4, NASD 3010, NASD 2711, Sarbanes-Oxley, Check 21, HIPAA, and numerous others. It is nearly impossible from a cost perspective to comply without the use of an ECM solution. And since accurate financial reporting has become increasingly important in today's business climate, ECM properly integrated with ERP can provide the evidence behind the financial transactions contained within ERP systems – authenticating and justifying their existence. (To learn more about ERP and ECM, e-mail info@idt-inc.com and request the briefing: "How Enterprise Content and Records Management Enhance Financial Systems.")

To serve as an example, regulatory agencies around the world have and continue to impose strident regulations on pharmaceutical and healthcare products companies. The regulations have impacted nearly every major segment of the pharmaceutical value chain, from box and packaging companies, R&D through clinical trials toward marketing and manufacturing processes. These regulations are voluminous, complex, and they are strictly enforced.

When non-compliance or a violation occurs, executives can be (and have been) imprisoned for negligent violation. Plants have been shut down. Companies have been fined. Products have been recalled.

The bottom line, in order to achieve both *efficiency and compliance* in an organization today, ECM must now be included in the organization's overall strategy and decision process.

Technology-based purchases must show a *measurable increase* in productivity to even be viable. It is nearly impossible to sell management on the necessary budgeting and encumbering of capital funds and staff resources without some substantiation. Therefore, the best way to present the case for investing in an ECM system is to demonstrate a positive financial impact and also how the use of ECM can be used to mitigate organizational risk. That will require a cost/benefit

analysis (CBA) to illustrate the return on investment, but it is undeniably a worthwhile exercise.

The CBA identifies your company's or department's current cost of doing business, and compares it to expected costs after the ECM system is in place. Running the numbers will allow you to reach a conclusion: "the cost of doing business under the current model is \$xxx,xxx over XX years. With an ECM system in place, we expect current operating costs to be reduced by two percent annually, and our revenue to increase by one-and-one-half percent." Essentially, the ECM system will pay for itself in two years.

If accurate numbers are unavailable or difficult to establish, there are many sources offering industry cost averages (such as the Association for Image and Information Management (AIIM) at www.aiim.org).

Cost/Benefit Example

As part of your CBA, an example from your daily business reality can make a compelling case to management in support of purchasing an ECM system.

Let's look at a very simple but realistic scenario:

A problem exists in customer service with a new customer concerning an order shipped a week ago. To resolve the problem in today's manual environment, your CSR requires all the order documentation, including: original purchase order, shipper, signed bill of lading, packing slip, and invoice. As you outline your example, include every step the CSR must take.

For example:

1. CSR receives incoming call from customer;
2. CSR determines incoming call requires original PO, invoice and shipping document in order to close call;
3. CSR determines all paperwork is not available at their desk because it is located on microfilm or in a central files location. Therefore he/she must tell customer they will need to follow up at a later date with customer;
4. CSR hangs up phone and puts phone "off-line" so they can research paperwork and problem;

5. CSR leaves desk to go to file room and to pull order info together;
6. CSR copies originals (3 documents);
7. CSR returns originals back to file room;
8. CSR returns to desk and places phones back on line;
9. Between other calls, CSR researches cause of original customer's problem and determines customer is in error;
10. CSR puts phone back off-line to go to fax machine on opposite end of building to fax the documents to customer indicating their error by highlighting quantity shipped.
11. CSR returns to desk and calls customer, issue closed.

Why is this level of detail necessary? First, it illustrates that the effort and time involved in resolving the problem is not caused by your CSR's inability to address the customer's question on the incoming call. It is more about the encumbrances caused by the *process* of reconciling the customer's dilemma. Think about it. It took 11 *manual* steps to resolve the customer's inquiry. Now, multiply the CSR's hourly rate by the downtime involved in making copies, going to a file room, etc., when that resource could have found the solution through a few clicks in an automated ECM system, and moved on to solving more customer issues – and generating more revenue. The real pain is in the process, not the paper.

What else is important? During the process, the company incurred needless costs in a few tangible areas: copy paper, copy machine use, outbound fax phone charges, outbound follow-up call, etc. Now, add in the fixed cost of the central file room, its lost workspace occupied by file cabinets, the personnel required to manage it, and so on. Then, there are the intangible costs. For example: The CSR put his phone in an "off-line" mode because he needed to leave his desk to go to the file room. That means another CSR had to handle the increased call volume the CSR just temporarily created. And as for the client waiting on the resolution, he is further delayed and may become frustrated with your company because of the inconvenience and choose to place his next order with your competition. These are all very real costs.

How can an ECM system make a difference? From an initial assessment, you could minimally automate the storage/retrieval of documents through document imaging (using scanners, data capture software and storage hardware). This would allow the CSR to look up documents online, and fax the retrieved documents to the client directly from his or her computer screen (via an electronic fax system) without

leaving his desk. Best of all, the issue would be closed on the incoming call and eliminate two-thirds of the manual steps. That's money in the bank with a better solution for everyone involved.

Now, what about the last piece of the puzzle: the fact that the customer had to CALL your CSR to about the order problem because your organization did not offer them any alternative means to resolve it. Because of this, you actually *increased* your cost of doing business by having to allocate a full-time CSR, phone equipment, computers, facilities, etc. in order to resolve the client's dilemma. What are your options? Your company could provide a secure, web-based, "self-service" application that would allow customers to access their own documents, determine the problem was in fact on their end (not yours), and never have to call your CSR in the first place. No frustration. No time delays. No embarrassment. Furthermore, the same web-based application allows them to order more of your products and services by themselves and, if need be, have online interaction with your CSR to assist them in finalizing the new order.

This example demonstrates two *very* important cost justification benefits. First, as a result of taking your internal customer service application outside the brick-and-mortar of your company and extending it to your customers, you have elevated your ECM project's priority to a web-based application (remember the CIO's, CFO's, president's top priorities). Second, by integrating an online order-entry system with a customer self-service application, you have now raised the eyebrows and attention of senior management. Anything that has the potential of increasing market share or revenue will gain their attention.

If in the end, your cost analysis produces figures that do not substantiate an investment in an ECM system, you may need to search for an alternate solution to the business problem; or, confirm it is not worth the company's time or money to pursue. Either way, a cost/benefit analysis will provide some definition on current issues and a possible map for the future. With your budget established and approved, you can determine when the purchase can occur (CFOs can also assist here) and define the anticipated project start and completion dates. This is critical to planning the staffing requirements for both you and your vendors, and important in case of competing priority projects during the same time frame. Anticipating any fluctuations (such as seasonal sales spikes or valleys) can make the difference between a smooth or rocky transition to the new system.

Technology and Functionality

Ideally, what should the application be capable of doing or delivering? Features could be defined as “redlining for a specific purpose; black redaction for sending sensitive information out to third parties,” and so forth. Be careful to differentiate the “requirements” from “desires.” Also, you may also list integration requirements such as “We need to be able to automatically retrieve an image from our line of business application, Microsoft Great Plains 8.0 Enterprise Edition, specifically from the Invoice lookup screen.” However, integration requirements that tend to become very complex and specific may be better suited within a dedicated section.

Next, get an up-front understanding of the compatibilities and potential conflicts of your firm’s current computing infrastructure. This area can get very technical but deserves close evaluation from top to bottom of current and future computing directions. For example, if your IT team has an ongoing initiative to switch to SQL-Server 2000, you may wish to avoid a vendor’s product that today supports your current Oracle infrastructure but will not be compatible under SQL-Server 2000. Plan ahead.

Who Should Conduct the Requirements Analysis?

You can attempt it yourself, but ideally, the actual analysis, compilation of data and report should be performed by a professional consultant in the industry with the close involvement of your team.

Consultants are keenly aware of the content that needs to be “discovered” and the best way to gather it (during a workshop, one-on-one interviews with key employees involved in the business process, through formal surveys, etc.). Also, a consultant is likely to be more objective, less emotional and apolitical. The fact that the system expert is not an employee means he or she has a much better chance of obtaining the real data behind the process as opposed to internal staff taking the responsibility. Why? People have a natural tendency to tell the “real story” of what goes on internally to people outside of an organization as opposed to co-workers, especially when it involves *change*. Additionally, people have a natural tendency to not disclose all of the details of their job to other coworkers, whereas a professional consultant – who is not tied to the organization – can get to the minutia.

Gaining access to the true fundamentals very frequently exposes the real inefficiencies in a process. Again, you are looking to maximize your return on investment, and the best way to achieve this is to really understand the entire business process that needs to be fixed. Every step in the process must be captured to do this successfully.

In short, a consultant is often better able to determine the key areas for reducing expenses and overhead and increasing revenues, and, because he or she is focused on the project, can complete the Requirements Analysis on time. In a best-case scenario, the Requirements Analysis should go beyond detailing the processes and business challenges to begin to decipher all the tools that will be required. From there, a viable vendor evaluation can be created for reviewing hardware and software products, along with an initial implementation schedule and training plan.

Choosing an ECM Consultant

So how do you find the right consultant? *Carefully*. Check the firm's qualifications by obtaining references about their products, services and even the employee who will be performing the analysis for your organization. Interview them to make certain they are compatible with your organization and its employees. Experience in the market space your organization serves is a plus but not necessary. Trained consultants are professionals in understanding business processes. Business processes exist in every market sector, every public/private organization, for profit and not-for-profit organizations.

Seek a consultant who has real product knowledge. Why? Consultants are a dime a dozen. They come in many flavors and shapes. Would you consider hiring an architect to design your new home, and he or she never actually designed one before? Architects work closely with the builders. The builder will come back frequently and interface with architects because at times there will be a disconnect between what's on paper and what is actually being built. Those answers require appropriate experts to resolve.

ECM system implementations follow similar patterns. That is why you should work with a firm that can perform the analysis, and interface with the product vendors, development team and implementers as well. This will ensure a much smoother transition and better implementation if the individual(s) performing the analysis is also involved with implementation, possibly moving into the role of Project Manager.

An ECM system can quickly become a productivity and revenue boost to the majority of companies inundated with too much paper – but only if the prospective organizations carefully develop a Requirements Analysis before deciding on the technologies to be purchased.

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About IDT

IDT helps companies eliminate paper at its source, offering system design services and a full line of content management, data and image capture and process automation products.

Since 1992, IDT has put its sole focus on creating customized ECM solutions for companies in diverse industries, serving as a one-stop resource for design, integration and long-term system support.

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