

## **Executive Summary**

Enterprise Content Management has become a critical strategic business process, due in part to increasingly stringent legislation and aggressive litigation.

Canadian corporations must observe the Personal Information Protection and Electronic Documents Act (PIPEDA) which governs how personal information is collected, stored, shared, and used. While this is onerous enough, a Canadian company with US relations may also have to comply with America's Sarbanes-Oxley Act (SOX) and, depending on its industry, the US Patriot Act or Securities and Exchange Commission directives.

Further, American-style litigation, including the use of electronic document discovery, is growing increasingly common in Canada, such that a legal policy group, Sedona Canada, was formed to draft a set of national policies governing e-discovery legal issues. The Lawyers Weekly, a newspaper for the Canadian legal profession, observes, "You can't put your head in the sand. It's just not going away. You are going to have to be dealing, in every piece of litigation, with electronic records." (The Lawyers Weekly, November 2007)

To meet this challenge, some organizations take a do-it-yourself approach, letting their in-house IT department build an ECM system from scratch or using ostensibly cheap tools. Inevitably, this only complicates matters and leads to greater expense with an inordinate amount of time spent on research and development, testing and debugging, and on-going support. When ECM is viewed as a technology system and managed as an IT project rather than as a management-led information governance initiative, the resulting implementation may lack the necessary security features and functionality to ensure regulatory compliance and discovery protection.

This white paper will demonstrate why the preferred alternative is to seek the assistance of an experienced ECM consultancy. Such a resource will provide a thorough understanding of the factors affecting your industry in general and your organization in particular, saving you valuable time on research and development.

By deploying a pre-packaged application customized to your specific environment, an ECM consultancy will cut short the cycle of testing and debugging that typically plagues in-house projects. The result will be an ECM system that will meet your organization's governance and compliance obligations faster and at a lower cost than is possible with in-house developed applications.

## Labour

### *IT's Role*

ECM implementations are often mistakenly viewed as simply Information Technology projects that will have little impact on the business until the finished application is installed and ready for use.

Of course, IT does have a major role to play in any ECM deployment. Typical tasks include configuring application and database servers, setting up backup and recovery devices and schedules, integrating the application with user account services, installing client software on user's workstations, training end users and administrators, and so forth.

*"Services such as project management, systems design, and integration support are a few of the needed services that systems integrators provide information and knowledge management professionals to get ECM up and running."—Forrester Research, 2008*

This will inevitably consume a significant portion of the IT department's time and may, for even limited deployments, require the sole focus of one or more IT team members for the duration of the project.

### **Beyond IT**

A successful ECM implementation satisfies the needs not just of Information Technology but of the business as a whole. To do this, it must include the active participation of

other departments within the organization to address issues of planning, research, and business process analysis and alignment.

For example, the Legal department (or the organization's external legal counsel) will need to review applicable federal and provincial legislation to determine which type of documents must be captured and stored, retention policies, and security restrictions. Human Resources may be called upon to define security access roles based on job functions and to assign employees to these roles. Finance and Accounting may need to identify documents to be classified as records and determine procedures for document capture, cheque scanning, and so forth.

Other questions may include:

- Do industry regulations require that Customer Service communications be captured?
- Will Engineering drawings be included in the repository?
- Will Sales need to capture contracts and RFP responses?
- Does Manufacturing need to retain production schedules?

### **Share The Load**

A qualified ECM consultancy can assume much of this load for both IT and other departments. The consultancy will work with all staff by providing experience-based guidance so that the necessary information is gathered and essential tasks are performed without wasting time and effort on non-

essential tasks.

*Choose an ECM consultancy with experience in your industry that can provide guidance and oversight for the most efficient use of both IT and non-IT resources.*

## Research

Before turning on a server or writing even a single line of code, a successful ECM development effort requires substantial and time-consuming research into applicable legal requirements, business processes, and technologies. Yet, some organizations focus only on the last—and least important—element, technology. This occurs when ECM is viewed and implemented as an IT project, rather than as a business strategy.

### ***IT Doesn't Have The Time***

An informal survey of IT employees revealed that few if any were able to devote quality time to researching new technologies within the scope of their day-to-day activities of administering and maintaining existing systems or training and supporting users. For most, time for research and education

*"The guy who did it at his last company is not an expert. ... Find someone with experience with a number of products and projects and then listen to him. You are less likely to end up with the product that suited your "expert's" last organization rather than yours, and run onto reefs that they happened to avoid."— Infonomics Magazine, 2008*

had to be stolen from other activities in one or two minute increments, or conducted after hours on their own time. It is thus not surprising that many in-house ECM projects suffer from delays, scope creep, cost overruns, or even abandonment and complete failure.

### ***IT Doesn't Have The Resources***

A successful project must bring together multiple departments within the company, even those which may not yet be putting the ECM system into use. Including other departments in the planning and definition phase, including those not targeted for the initial rollout, makes it easier to extend the system to those departments later without additional development and customization.

Only when all parties are involved can critical questions be answered, such as:

- What documents must be managed? Is it necessary to keep every piece of communication including e-mail, instant messaging logs, and hand-written letters?
- For how long must the various document types be retained? Which level of government legislation takes precedence? Are there documents that should not be saved?
- What security must be applied for access, editing, and destruction of documents? Should some records be prevented from being edited? Who should be able to delete records and when?
- How will the system accommodate and enforce workflow and

document routing? Can business processes be adjusted or simplified?

- Which paper documents need to be scanned? Should the system perform optical character recognition on the entire document, on only specific form fields, or is metadata sufficient, and if so, how will it be generated?

This is by no means an exhaustive list. Yet, it illustrates the complexities inherent in even a basic ECM system and the need to see beyond the walls of the IT department.

### ***Seek Outside Expertise***

Considering the importance of the project definition phase, it's wise to seek experienced help from the beginning, even to the extent of outsourcing the process to a qualified ECM consultancy. Unbiased consultants can provide an objective needs analysis, unfettered by internal politics and the "that's the way we've always done it" mentality that hamper many implementations. Such a consultant can evaluate an organization's processes and workflow to improve efficiency prior to implementing a system that would otherwise only amplify existing inefficiencies.

*Select an ECM consultancy ready to draw on years of experience with similar deployments for similar industries, and in-depth familiarity with a well-developed ECM platform.*

## **Software Licensing**

### ***Open Source Tools vs Commercial Applications***

Determining an organization's license requirements for commercial applications, analysing license options and negotiating volume purchases can be a complex and time-consuming task, such that larger corporations may employ full-time Contract Managers to navigate these agreements.

Some organizations attempt to side-step this process using free and open-source alternatives. While such options exist, for everything from the database and application server to the IDE used to write and debug code, this course is not without cost. Such a solution invariably takes longer to implement—and therefore costs more in the long run—than an off-the-shelf pre-developed and tested system.

### ***Application and Database Licenses***

Some document management systems are designed to give users direct access to the underlying database used to store document metadata and therefore require a database access license for each user.

For example, an installation of Microsoft Office SharePoint Server 2007 (MOSS) requires a license for each SharePoint server, as well as client

access licenses (CALs) for each device or user connected to the servers. Additionally, an equal number of server and user CALs must be purchased to allow those users to access the requisite Microsoft SQL Server. It should be noted that these MS SQL Server licenses and CALs cost almost as much as the MOSS licenses, immediately doubling the apparent license cost of a SharePoint system.

In contrast, other ECM systems, such as Spielberg's FileDirector, shield the underlying database from direct user access and therefore do not require a database client access license for each user. Further, organizations have the option of choosing a database engine—MS SQL Server or Oracle—that best fits their environment and IT skill set.

### ***Types of User Licenses***

Most packaged ECM systems provide for different levels and types of licensed users. Rather than one class of user that can do anything and everything, functionality is divided into at least two categories, Administrators and Basic Users. A vendor may also provide the option of purchasing licenses for either specific named users or for a pool of concurrent users.

While these options increase licensing complexity, they can reduce overall cost if an organization accurately determines which employees will actually use the system and judiciously allocates administrative licenses only to those users who really need them.

Illustrating why this is important, a report by the Association for Information and Image Management noted, "Many organizations that purchased enterprise licenses have found those licenses going underutilized."

*Opt for an ECM consultancy that will analyse your organization's structure to determine which employees really need administrative access and which may be more suited to less expensive user licenses, and that can negotiate a better price for volume purchases. Look for a consultancy that will deliver an application that separates users from the database, thereby reducing the need for database licenses.*

### **Testing and De-Bugging**

ECM systems created in-house tend to be in a constant state of flux, undergoing continual cycles of development and customization. The resulting testing and debugging may take as long as the development itself. This presents two major problems.

### ***User Resistance to Beta Testing***

Commercial application developers frequently open their application to beta testers before making available a release version. ECM systems developed in-house likewise require rigorous and ongoing testing in a real-world

environment. This poses a serious challenge since one of the most difficult aspects of an ECM development is overcoming user resistance.

Employees exposed to an incomplete or buggy system will feel as if they're being used as guinea pigs to work out excessive bugs in a poorly developed system. Their dissatisfaction will inevitably be transmitted to other users so that, even once the bugs have been eliminated, the application will be ill received by the general user population, hampering the effectiveness of the system. Some users may even seek covert ways to circumvent the system or return to old ways of working.

*"The development of effective ECM requires end-user buy-in. The easiest way to accomplish that is to deliver software and processes that are as transparent as possible to the end-user." —The AIIM Guide To ECM Purchasing, 2008*

In contrast, a professionally developed pre-packaged system will have already had the majority of bugs found and eliminated before being exposed to users.

#### **Parallel Production and Test Environments**

Before updates are put into production, they must be verified on a test or development platform. This requires maintaining a complete duplicate environment with an application server, database, and backup scheme separate from the production system, increasing hardware and license costs.

A capable ECM consultancy will instead test all updates and customizations on its own dedicated test environment before delivering them to its customers.

*Select an ECM consultancy that will deliver an application boasting a proven track record that already has all major bugs eliminated. Select a consultancy that tests updates and customization on its own systems, or that can supply a temporary test or demo system at little or no cost.*

### **Development and Customization**

A mature ECM system represents many development-years of effort with careful attention paid to security, workflow, data integrity, extensibility, and usability. It is unrealistic to expect even a dedicated programmer-analyst to build a skill set to match this challenge, particularly in an environment where the relatively low cost and accessibility of polished, pre-packaged line-of-business applications has seen most organizations move away from maintaining in-house development teams.

Yet, even if such an application could be produced in-house, development efforts could not end once the system was in place. A myriad of factors—both internal and external—would force continual re-development and customization. An organization's growth and changing environment necessitates extensive and costly updates to all of its systems, including ECM.

An application originally sized for a limited number of users will not scale well when extended to additional departments or branch offices, and will require considerable modifications to support multiple servers for load balancing and redundancy.

New data types and specialized file formats—including scanned image graphics, audio, and video—will require custom plug-ins, assuming the application developers had the foresight to build with a modular architecture.

*"When asked what they sought most from an ECM solution provider, survey respondents indicated a desire to address ECM through packaged solutions, rather than through just a platform on which they themselves can build solutions. More than half, 69% of our survey respondents stated they seek solution-based products."—  
AIIM Market Intelligence 2008*

Integrating the ECM system with legacy applications—or new applications—can be easily accomplished through the use of open formats such as XML, HTTP, or ODBC, but again only if the developers foresaw this need. Otherwise, extensive re-programming will be necessary.

Applications written to support only specific image capture devices will need to be revised to work with new hardware.

Other forces beyond the control of the developers will also necessitate ongoing customization.

New government legislation may require changes to document security, retention, and workflow.

Updates to the underlying language and framework, be it Java or .NET, frequently demand extensive re-coding and a complete cycle of testing and debugging. The same holds true for operating system updates. (Consider the notorious case of Windows Vista. Many applications and hardware devices that worked well with Windows XP were incompatible with Vista and had to be either updated or replaced.)

Alternatively, an organization can choose to shield itself from much of the added time and expense of unanticipated re-development efforts by purchasing a pre-packaged ECM system covered by a clearly defined software maintenance agreement.

*Choose an ECM consultancy that will deliver a complete system that is easily upgraded and that will provide customizations to match your organization's changing needs.*

## **Security**

One of the key elements of an effective ECM system is strict security controls. When faced with a document discovery order during litigation, or with a government-imposed audit, an organization must be able to prove that key records have not been tampered with or deleted.

The ECM application should control which users can create, read, revise,

and delete specific classes of documents. It should track revisions, prevent conflicting simultaneous edits, and disallow direct access to document stores that bypass business logic and workflow. It should produce audit logs that track both user and machine activity.

While IT may be instrumental in implementing these controls, the policies themselves must be set at the executive level—through close cooperation between Human Resources and Legal—to meet regulatory compliance and litigation requirements.

*"The preservation of electronic evidence is NOT part of the IT person's day job and, without a combination of detailed instructions, legal overview, supervision and research, problems arise down the road." — Martin Felsky Ph.D., J.D., E-Discovery in Canada*

The principle of least privilege—giving users only the access necessary to accomplish their primary job function and no more—is often contrary to the full trust model to which organizations become accustomed. It may also be contrary to the way IT is used to working, having free reign over systems for administrative convenience. This is particularly true when the ECM application was developed by in-house IT staff or is perceived as being an IT system, rather than a business system.

In this regard, drawing upon the services of an external ECM consultancy will provide two immediate benefits. First, they'll provide objective advice on writing and implementing security policies, and on educating employees on the benefits of these policies. Second, they'll deliver an application designed from the start with strong security in mind.

*Select an ECM consultancy that provides clear security guidance along with an application with strong security and audit controls built-in.*

## **Legal Requirements**

### ***E-Discovery***

Without a doubt, one of the major factors driving ECM implementations is the rising tide of legislation and litigation. In the United States, there has been as much as a 50 percent increase in the filings of class action lawsuits in the past year, half of them related to the financial crisis. (San Francisco Business Times, December 2008) Most of these will rely heavily on electronic discovery, a trend mirrored in the Canadian landscape. "It would appear almost inevitable that we will see parallel decisions in Canada to the precedent-setting electronic document litigation matters in the United States." (The Lawyers Weekly, February 2007) During these actions, courts may order the discovery of any and all documents, including those on paper, in e-mail, instant messages, and audio logs.

When a discovery order is issued, it may be necessary to freeze data stores, preventing the accidental or deliberate deletion of documents. Failure to comply with these directives can result in significant fines, negative rulings, exclusion of evidence, default judgements, and worse. As noted by IT World



Canada, "The price of failing to comply is significantly higher than what it could cost to install the appropriate tool. Credibility can be destroyed and penalties imposed that can bankrupt a small business." (IT World Canada, May 2008)

### **Legislation**

Legislative requirements for document retention and disposal can vary from industry to industry, and from jurisdiction to jurisdiction, while federal legislation may differ from provincial legislation.

*"The wide scope, enormous costs and time-consuming nature of e-discovery can be an outright deterrent to litigation, since it can cost millions to do massive electronic production." — The Lawyers Weekly (Canada), 2007*

To illustrate: The Canada Revenue Agency stipulates that a non-incorporated business must retain certain books, records, and their related accounts for six years, unless those are documents concerning long-term acquisitions and disposal of property, which must be kept indefinitely. However, the Ontario Ministry of Revenue specifies that records may only be destroyed after seven years, except in the case of the Mining Tax Act, where the figure is ten years, or in the case of the Labour Sponsored Venture Capital Corporations Act, where the figure is eight years.

Registered charities must keep donation receipts for two years, unless these are receipts for donations of property which are to be retained for ten years.

The Personal Information Protection and Electronic Documents Act (PIPEDA) governs how personal information is collected, stored, shared, and used by Canadian organizations. However, a Canadian corporation with a US parent, or that is traded on a US exchange, may also have to comply with the Sarbanes-Oxley Act, the US Patriot Act, or US Securities and Exchange Commission requirements.

Understand, too, that government legislation is undergoing continual revision, meaning that an ECM system fully compliant yesterday may not comply today.

### **Alternatives**

In most organizations, the IT staff is simply not equipped to determine which of these myriad laws apply. Doing so requires the combined effort of the company's legal counsel, Finance, Customer Service—indeed, any and every department that produces any sort of documentation, even if that department's employees won't actively use the ECM system.

*Choose an ECM partner fully versed in all applicable legislation, regardless of location and industry, that will keep the ECM system compliant with changing requirements.*

## Training

User acceptance is crucial to a successful ECM implementation. If users are not comfortable with the interface or don't understand how to carry out their jobs, they will invariably find ways to circumvent the system or return to their old ways of working. To this end, sufficient training—for system administrators and for end users—is essential.

Unfortunately, ECM systems developed in-house tend to be works-in-progress, with long cycles of development, testing, and debugging. This means that end user training must likewise be ongoing, leading to reduced efficiency and increased frustration.

Further, systems developed by an in-house IT department may suit the knowledge level and work style of IT staff, but may be unsuitable for the average less-technical users of other departments.

Additionally, an IT staff focused on the development and administration of existing systems, as well as the implementation of new projects, may have little time to train and re-train users, further leading to user frustration and resistance.

In contrast, a well thought out professionally developed pre-packaged ECM system will have undergone extensive usability testing and will be designed in accord with stringent human interface guidelines. It will require significantly less training time for both basic users and administrators.

*Select an ECM partner who can keep training costs low by providing an application designed with typical users in mind, and who can train your administrative and end-user staff.*

## Ongoing Support

ECM experts are in high demand. Gartner forecasts that, "Worldwide enterprise content management total software revenue will grow at a 12.8 percent compound annual growth rate from 2005 through 2010," exceeding \$4 billion. Finding and retaining experienced talent to support this growth and maintain existing systems will be a challenge for any organization.

It's almost inevitable that an individual crucial to an in-house ECM development will eventually move on, either to another position in the same company, or to an outside firm. JDA Professional Services, an IT staffing agency, comments that "78 percent of all IT workers will leave their company before their fifth anniversary. IT workers with eight to ten years experience—the category of employee that previously was most likely to stay with a company through retirement—are now changing jobs more frequently than ever."

When this happens, an organization may be left without adequate support for an application developed in-house. While knowledge transfer programs and succession planning can mitigate the risk, ongoing support for custom applications is an issue that should be considered before an in-house development project is allowed to grow into a mission-critical application like ECM.

Even when experienced support exists within an organization, it may not be available where and when it's needed. Added time and cost is required to support satellite offices, possibly incurring expensive travel and accommodation. Issues can arise during vacation periods and sick days, times when Murphy's law dictates emergencies are most likely to occur.

A pre-developed ECM system supported by an external consultancy will help to alleviate the burden of ongoing support by providing expertise regardless of time, location, and employee turnover. The consultancy can commit to service level agreements that in-house staff may be unable or unwilling to meet. Further, an ECM partner who's been involved with an implementation since its inception will be able to provide faster and more comprehensive support in case of emergencies.

*Opt for an ECM partner who is willing to commit to SLAs, and who can provide ongoing support across your organization's territory, using either hands-on or remote tools, directly or through an established network of associates.*

## Choose MES

MES Hybrid Document Systems has been providing professional best-in-class document management solutions to public and private sector customers since 1971. For more than 37 years and through hundreds of successful implementations, MES has demonstrated a commitment to superior service and responsible corporate citizenship.

Offering a full range of services including business process consulting, image capture systems, and both electronic and physical document management solutions, MES helps organizations achieve and maintain full regulatory compliance, productivity, and sustainability.

MES' professional services ensure:

- Reduced load on your internal staff.
- A thorough understanding of the challenges facing your industry and your business.
- Analysis of your employee pool for optimum application licensing.
- Rigorous testing of updates and customizations before delivery to your production system.
- Expert customization to suit your organization's specific needs.
- Security profiles tailored to your environment and workflow.
- Hands-on instructor-led training for your IT staff, administrators, and users.
- Ongoing support long after the sales call has ended.

As an active member of key industry organizations including the Association for Information and Image Management (AIIM) and the Independent Information Management Dealer Association (IIMDA), MES maintains current expertise in the technologies and regulations impacting your business.

Contact MES Hybrid Document Systems to ensure your ECM success.

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