

Enterprise content management (ECM) is a process that takes your content throughout its lifecycle—from the creation of an idea scribbled on a sheet of paper to the management of the multiple working documents to flesh out that idea to the archival and ultimate disposition of the policy that had its genesis in that flash of inspiration.

Managing your content is hard. Which records do you keep—for how long—to comply with regulations? What’s the best way to manage the content on your website? What’s the best storage medium for your content? How do you find the right content when you need it? How do you create—and possibly automate—processes that enable your organization to increase efficiency?

ECM technologies, properly implemented, improve access to your content, enable the reuse of content, and can provide faster time to market. In short, ECM:

- guarantees business CONTINUITY, 24x7x365
- enables employee, partner, and customer COLLABORATION
- ensures legal and regulatory COMPLIANCE
- reduces COSTS through process streamlining and standardization

Begin your purchasing decision by understanding what ECM is. Just remember that technology is only part of the solution.



Defining an ECM Champion

By TOWER Software

With numerous challenges involved in successfully implementing an Enterprise Content Management (ECM) deployment, it takes a special kind of leader to make it happen. Finding an individual with the right set of skills and surrounding them with the most talented team can make all the difference between an unsuccessful or successful deployment.

In addition to managing risk, gaining compliance effectiveness, improving governance, and increasing organizational efficiencies and effectiveness, the foremost objective of implementing an ECM initiative should result in significant contribution to long-term economic value for the enterprise and its stakeholders—internal and external. Accomplishing this vision requires enterprise cultural buy-in emotionally, logically, and behaviorally from both enterprise producers and consumers of content. The greatest challenge is to bridge the gap between technology and the end-user constituency.

An ECM implementation can, directly or indirectly, address many business drivers, including greater competitive advantage, increased leverage of information assets to propel growth, increased profitability, increased efficiencies of scale of operational processes, and improved responsiveness to customers. This takes a special leader, in fact, an ECM Champion. The ECM Champion views the enterprise as a system within an ecosystem in order to construct and articulate compelling value propositions for all enterprise stakeholders to make content management an enterprise discipline of strategic competitive value.

The ECM Champion serves as the “executive sponsor” of the ECM solution, bridging the gap between the ECM vision,

the deployment strategy, and implementation execution. In this role, the ECM Champion serves as a central coordinator for the deployment project team—providing liaison to the line-of-business/department owners and the enterprise executive management team.

Assembling the ECM deployment project team requires thinking beyond the usual corporate headquarters talent to include the stakeholders who will benefit the most from a successful implementation.

The ideal team will include leaders from:

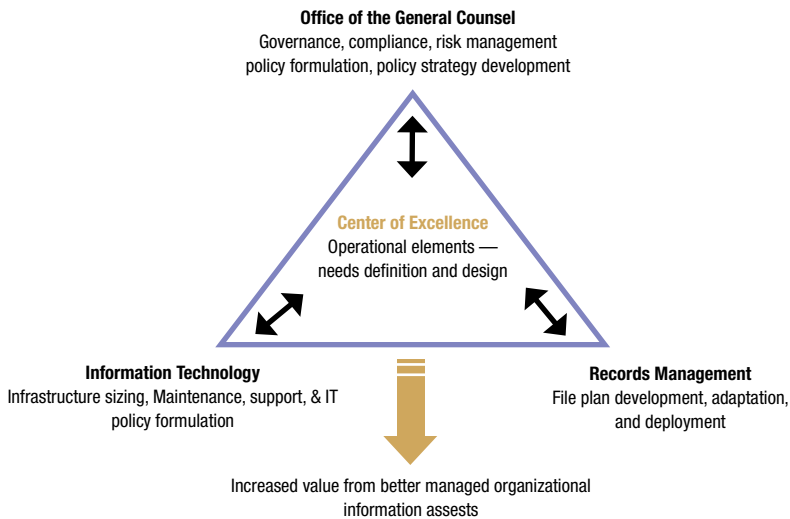
1. **Information Technology** – Infrastructure providers and operators understand the organization’s unique system architecture and how the ECM solution will fit. Their support is critical since they maintain the technology. Total cost of ownership and the risks around customization will be of concern to them.
2. **Legal Department** – Compliance and litigation mitigators have ownership for “content.” This department will be on the front line when, not if, lawsuits occur. As a result, the ECM solution must support the requirements of this group in a rigorous, timely, and accurate method.
3. **Records Management** – Classification and codification structure providers deliver the vocabulary that will be used to store and retrieve content. This structure may already exist for paper records and will need to expand to manage unstructured electronic media.
4. **Project Management** – Apply project management standards and resources. Internal projects often get short changed when people with best

practices skills are needed most: this isn’t the project to give to a “B” team.

5. **Change Management** – Mitigate the impacts of change brought by the ECM deployment with early adoption of change management methodologies and practices. These leaders effectively communicate the need for change throughout the enterprise. Maintaining the momentum in an enterprise deployment is a challenge so they will also monitor the communication’s ongoing effectiveness and adjust as needed.

The team may also include:

6. **Line-of-Business (LOB)/Department Owners** – Producers and consumers of content
 - (1) Establish a champion to serve as the ECM advocate in each LOB/Department. These LOB champions have ownership of the vertical silos of information that need to be shared and brought into compliance.
 - (2) Develop champions or “power users” at each functional level of the enterprise to build a network of “intrinsic support.” These horizontal departments, such as finance, audit, and human resources, have ongoing responsibility to monitor the quality of content.
7. **External Producers and Consumers of Content**
 - (1) Building coalition between content suppliers may produce added efficiencies in content management for both parties.
 - (2) Where appropriate, involve external organizations that produce



content consumed by the enterprise or consume content produced by the enterprise.

- (3) If the ECM initiative touches the enterprise's customers, consider creating a customer review panel.

The operative word of an ECM deployment is "enterprise." The ECM Champion stands in the center of individual contributors whose roles by definition charge them with being subject-matter experts for their domains of responsibility. The role of ECM Champion is to bridge the often disparate information and record management needs of these domains. This requires a common understanding of how individual silos of information fit within the overall organizational hierarchy of needs and information asset value creation. Encapsulating the requirements and operational knowledge of the individual domain owners within a structure such as a Center of Excellence (outlined above) begins the process of making record and information management policy and process pervasive throughout the organization. The boundaries of this structure are permeable in that the participants and the policy/process focus can be targeted at the lowest level of the organization within the context of broader governance and management precepts.

As a credible authority on the business objectives and operations of the enterprise, the ECM Champion has a clear understanding of the requirements and

implications of the ECM deployment at all levels of the enterprise. Through rigorous, candid communication of the risks, rewards, and benefits of the ECM vision, the ECM Champion minimizes resistance while building a network of supporters and advocates.

SKILLS INHERENT TO AN ECM CHAMPION

1. Can communicate complex concepts to varied audiences with differing views and needs.
2. Demonstrates personal commitment to and investment in the ECM deployment.
3. Is, or is empowered by, an enterprise leader.
4. Has the ability to earn the right to lead the ECM effort beyond that of current position of authority.
5. Has credible authority on the business and operations with a clear understanding of the implications of the ECM deployment at all levels of the enterprise.
6. Possesses systems thinker skills to view the enterprise as a system of systems, processes, and networks. The ECM Champion will understand the interconnection and relationships affected by the ECM initiative.
7. Has explicit and intuitive knowledge of the value (declared and intrinsic) of the content assets of the enterprise.

ABOUT TOWER SOFTWARE

TOWER Software, a global leader in the delivery and successful implementation of industrial strength Enterprise Content Management (ECM) solutions, delivers proven productivity gains and compliance policy management to government and regulated industries. With more than 22 years of domain expertise, strategic partnerships, and an award-winning ECM solution—TRIM Context®—TOWER Software enables organizations to capture, manage, access, and secure all information forms to increase productivity, achieve compliance, and be prepared for e-discovery. TRIM Context brings together electronic document management, records management, Web content management, imaging, workflow, and document-centric collaboration in a complete, unified solution to maximize the value of your business information.

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VALUE TO ECM DEPLOYMENT OF AN ECM CHAMPION

The person that takes on the challenge of being your organization's ECM Champion is going to know more about how your enterprise runs than most individuals: your champion should become a key advisor in every strategic planning session going forward. A successful ECM deployment entitles this champion to credibility and authority, having proved that she can lead the organization to meet one of its biggest challenges: managing and giving value to information assets.

What Is It?

It's not enough to “manage” content.

By Janelle Julien

CONTENT AT WORK
Enterprise content management (ECM) is the technologies, tools, and methods used to capture, manage, store, preserve, and deliver information, content, and documents related to organizational processes. ECM tools and strategies allow the management of an organization's unstructured information, wherever that information exists.

The ability to access the correct version of a document or record is important, but organizations must plan beyond this point. Content must be managed so that it is used to achieve business goals. Central to this strategy are the tools and technologies of ECM, which manage the complete lifecycle of content from creation to disposal. Use the following information as a starting point to review a common content lifecycle. Map a current process to see where you may find overlap and room for improvement for the applications and strategies that your business is developing. The following information only touches the surface of the complexity in any process that manages an organization's content. You must match the technology tools to address your business needs. Technology can enable streamlined management of content; however, the underlying strategy must come first.

CAPTURE

Unstructured content enters an organization's IT infrastructure from a variety of sources. Regardless of how a piece of content enters, it has a lifecycle. Electronic unstructured data includes email, instant

messages, text documents, spreadsheets, etc. Structured data includes both electronic/paper forms and paper documents. Content can be captured by the following methods: scanning, document imaging, forms processing, and recognition (OCR, ICR). Once content has been captured, develop an indexing scheme by creating metadata from scanned documents (e.g., customer ID number) so the document can be found. Indexing can be based on keywords or full-text.

MANAGE

Document management technology helps organizations manage the creation, revision, approval, and consumption of electronic documents. It provides key features such as library services, document profiling, searching, check-in/check-out, version control, revision history, and document security. Records are content of long-term business value, which can be managed according to a retention schedule that determines how long a record is kept based on either outside regulations or internal business practices. As the de facto standard for business communication, email must be classified, stored, and destroyed consistent with business standards—just as any other document or record. Web content management technology addresses the content creation, review, approval, and publishing processes of Web-based content. Key features include creation and authoring tools or integrations, input and presentation template design and management, content re-use management, and dynamic publishing capabilities.

STORE

Content needs to “live” somewhere. Storage technology (optical disks, microfilm, repositories, etc.) provide options for storing content online (rapid access) or near- or off-line for content that isn’t needed often. The key is to have information that can be found once it is placed in the system. Create a categorization/taxonomy system to ensure that content is properly stored. Taxonomy provides a formal structure for information based on the individual needs of a business. Categorization tools automate the placement of content (document images, email, text documents; i.e., all electronic content) for future retrieval based on the taxonomy.

PRESERVE

As storage media ages, migrate content to new media for continued accessibility. Develop a backup/recovery plan that outlines how content will be backed up in various formats and/or locations to ensure business viability in the face of a disaster. The archival of content must be saved to media such as paper and film-based imaging for long-term preservation.

DELIVER

One of the greatest benefits of a strong ECM system is search and retrieval. With strong indexing, taxonomy, and repository services, locating information in your system should be easy. Content can be delivered via several tools such as print, email, websites, portals, text messages, and RSS feeds. This allows for the distribution of content for reuse and integration into other content, which can be recast to fit the needs and cultural mores of different global markets. By drawing on a taxonomy and based on established user preferences, various types and subjects of content can be delivered via user-defined preferences.

ECM is an ongoing and evolving strategy for maximizing how your content should be used. To drive understanding of these tools, highlighted below are the four key business drivers in which content and ECM is fundamental to the success of your organization: compliance, collaboration, cost, and continuity.

COMPLIANCE

The key to a successful compliance strategy is integrating the idea of compliance success into your

business—not viewing compliance as a project that can be completed and then considered “finished.” Complying with regulations provides an opportunity to improve common business processes. You can limit the risk and cost by developing proactive ECM strategies within key areas, such as records management and business process management. Follow through on proper business practices by ensuring that content is properly captured, stored, managed, and disposed of at the appropriate and legal time

Content must be managed so that it is used to achieve business goals. Central to this strategy are the tools and technologies of ECM, which manage the complete lifecycle of content from creation to disposal.

in its lifecycle. Developing a compliance initiative will require several areas of expertise (particularly legal, IT, and records management), which all support the overall business objectives of the organization. While compliance is not always a technology problem, information technology and the massive growth of unstructured content contributes to corporate exposure. The tools of ECM, properly used, can help reduce the overall cost of compliance to the business.

COLLABORATION

Collaboration is the art of working together. The key to strong collaboration is utilizing the technologies (instant messaging, whiteboards, online meetings, email, etc.) that allow work to take place wherever and whenever needed. Collaboration allows individuals with complementary or overlapping areas of expertise to create better results faster than before. With today’s collaborative tools, business units and teams can work together anytime—whether in adjoining offices or in different countries. These technologies can now address operational objectives like saving time, streamlining processes, cutting costs, and improving time to market. With the many different types of collaborative

tools available, organizations must be sure that they select the correct tool for their business need.

Functionality can be divided into three groups:

- 1) **Communication channel facilitation:** enables short-lived interaction such as chat, instant messaging, white boarding, etc.;
- 2) **Content lifecycle management:** manages content objects involved in a business process;
- 3) **Project facilitation:** organizes and simplifies the way that people work toward a common goal.

When using collaborative tools, you must be aware of records management, knowledge capture, and compliance requirements. For some industries, all customer communications must be kept. During a collaborative product design process, organizations must be sure that the results are kept as business records.

COST

While an ECM investment can be costly, consider the costs of poor content management. The cost of not implementing ECM tools is usually left unmeasured until too late. Factors such as the cost of long legal proceedings, the loss of repeat business through the inability to perform customer service interactions, and the cost of typical business process delays are easy to measure in hindsight. While the cost of these potential losses may justify investment in ECM technologies, the ROI of ECM is often difficult to measure. Set your key metrics for success up front and measure your success based on those expectations. For example, measuring the revenue based on improved information in the call center can be done as well as measuring the cost benefits of improvements in process speed for a loan application. The ROI of ECM tools could result in improved business processes, whereby making your organization more efficient while lowering the cost of doing business. These technologies provide value to your organization by more efficiently organizing information for its subsequent retrieval, use, and, ultimately, disposition.

CONTINUITY

Business continuity planning allows a business to operate around the clock. More than a disaster recovery plan, business continuity is the overall strategy for ensuring that operations continue in the event of any disruption—whether through cause of nature or human error. As a subset of business continuity, disaster recovery mainly focuses on getting an organization's IT infrastructure going again. Today, electronic documents are the lifeblood of most businesses, and ECM plays a significant role in business continuity. ECM technologies provide centralized repositories where vital corporate information can reside. The method of storage will vary depending on the importance of the content. A strong continuity plan will demonstrate that not all content is critical. These are steps to keep in mind:

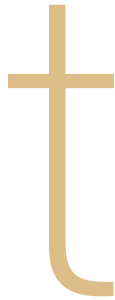
- 1) Prioritize content to determine how quickly content needs to be back online.
- 2) Determine mission-critical processes and the entities on which they are dependent.
- 3) Perform a business impact assessment to determine the impact of a disruption or loss of those processes.
- 4) Define what a business considers a disaster and explain how key processes will be recovered.
- 5) Establish a crisis operations center with procedures for chain of command and other roles.
- 6) Update and test the plan annually or as business needs change.

A sound continuity plan will enhance an organization's ability to recover during a system failure and better define the priority of the business content while improving the overall ECM strategy.

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ECM Definitions

A short glossary of the technologies and concepts of enterprise content management.



This list is not all-inclusive. A more complete listing of ECM terminology can be found in *ANSI/AIIM TR 2 – Glossary of Document Technologies*. This report is available through the AIIM bookstore, www.aiim.org.

Aggregation – The process of combining data inputs from different creation and authoring tools, and other systems.

Application Service Provider (ASP) – Provider of applications via rental to customers via the Internet. Differs from software-as-a-service in that ASP is a one-to-one customized solution delivered to a single customer.

Audit Trails – Log of changes for accountability.

Bar Codes – Vertical rectangular marks and spaces in a predetermined pattern that are machine-generated and machine-readable representation of data.

Business Intelligence (BI) – Encompasses a broad category of applications and technologies for gathering, storing, analyzing, and providing access to data for improving decision-making for businesses.

Business Process Management (BPM)/Workflow – Automation of business processes, in whole or in part, where documents, information, or tasks are passed from one participant to another for action, according to a set of rules. A business process is a logically related set of workflows, worksteps, and tasks that provide a product or service to customers. BPM is a mix of process management/workflow with application integration technology.

Categorization – Organizing documents, Web pages, and other content into logical groupings, based on their contents.

Check In/Out – Ensures that only one person can work on a document at any time.

Check Imaging – Specialized imaging and scanning tools for digitizing checks.

Classification – Categorizing data for efficient retrieval and use.

Collaboration – Tools (collaborative authoring, video conferencing, shared whiteboards, etc.) that allow multiple users to work on the same content in a common environment.

Compact Disc Read Only Memory (CD-ROM) – Optical disc that is created by a mastering process and used for distributing read-only information.

Compression – Technique used to reduce the number of bits in a digital image file; JPEG and TIFF are two examples.

Computer Output to Laser Disk/Enterprise Report Management (COLD/ERM) – Stores and indexes computer output (reports primarily) on magnetic disks, optical discs, and magnetic tape. Once stored, the reports can be retrieved, viewed, printed, faxed, or distributed to the Internet. Often used for Internet Billing applications.

Content Addressed Storage (CAS) – Storage methodology designed for rapid access to fixed content.

Content Management System – The capability to manage and track the location of, and relationships among, content within a repository.

Data Capture – Extracts data from a business form.

Data Transformation – Mapping and conversion of data from one format to another.

Data Warehouse – Central repository for all, or most, of an organization's structured data.

Database – (1) Electronic collection of records stored in a central file and accessible by many users for many applications. (2) Collection of data elements within records or files that have relationships with other records or files. Relational databases are most common—data is stored in standard rows, tables, and columns. XML databases are a developing technology.

Digital Asset Management (DAM) – a set of systematic strategies or workflows that engender the reuse of those assets and the integration of them into a given workflow.

Digital Rights Management (DRM) – Enables secure distribution, and disables illegal distribution, of paid content over the Web.

Digital Signature – Electronic signature that can be used to authenticate the sender of a message.

Digital Versatile Disc (DVD) – 120mm optical disc on which digital video, audio, data, and images can be stored. Available in read-only, recordable, and rewritable formats.

Disaster Recovery – The strategy and process of maintaining and/or regaining access IT and other business infrastructure to resume critical business operations after a disaster.

Disposition – An action taken after a record is no longer needed for current business. Archival and destruction are two possible actions.

Distributed Capture – Strategy for getting documents into the business process in decentralized locations across a company rather than sending all documents to a central location for scanning.

DoD 5015.2-STD – The standard for evaluating electronic records management applications used within the U.S. Department of Defense (DoD). It has been endorsed by the National Archives and Records Administrations. Many RM products are certified to be in accordance with the standard.

Document Imaging – Process of capturing, storing, and retrieving documents regardless of original format, using micrographics and/or electronic imaging (scanning, OCR, ICR, etc.).

Document Management – Software that controls and organizes documents throughout an enterprise. Incorporates document and content capture, workflow, document repositories, COLD/ERM and output systems, and information retrieval systems.

ECM Suite – Integrated set of products from a single vendor that includes (but not limited to) collaboration, document management, records management, capture, workflow/BPM, and Web content management functionality.

Electronic Bill Presentment and Payment (EBPP) – A process that allows electronic payment and presentation of statements, bills, invoices, and associated information.

Email Management – Strategy and technology associated with ensuring that email is managed as a business record and archived/stored/deleted accordingly.

Enterprise Application Integration (EAI) – Software that allows the integration of disparate computer applications.

E-Forms/Web Forms – Forms designed, managed, and processed completely in an electronic environment.

File System – The way in which files are named and where they are placed logically for storage and retrieval, most commonly in a hierarchical (tree) structure.

Film-based imaging – Eye-readable, machine independent method for long-term preservation of information.

Forms Processing – The ability for software to accept scanned forms and extract data from the boxes and lines to populate databases. Software usually includes the ability to drop out the form so that recognition accuracy improves. Intelligent Document Recognition automatically identifies document types from the layout and structure of the document.

Full-Text Indexing and Search – All words in a document are indexed, enabling the document to be retrieved by words or phrases within the document.

Grayscale – In electronic imaging, capability to display varying levels of gray and usually represented as a number such as sixteen levels of gray. The gray levels are created by varying the strength of the electron beam. The higher the level of gray scale, the smoother the transition from light to dark.

HCR (Handprint Character Recognition) – OCR technology designed to turn images of handprint characters into ASCII code.

ICR (Intelligent Character Recognition) – Advanced form of OCR technology that may include capabilities such as learning fonts during processing or using context to strengthen probabilities of correct recognition or that can recognize handprint characters.

Indexing - Identification of specific attributes of a document or database record to facilitate retrieval.

Information Lifecycle Management (ILM) – Strategy for managing information throughout its lifespan by migrating it to new media according to access requirements based on the business value of the information.

Information Organization and Access (IOA) – Consists of a content preparation process and a content search and access process. Major concepts include content architecture, content intelligence, search and retrieval, and findability (enhancing access to the right information).

Input Designs – Templates used to enable authors to more easily enter content into a system, typically customized, based on the type and format of content to be entered.

JPEG (Joint Photographic Experts Group) – Image compression format for storing color photos and images. There are multiple JPEG formats.

Magneto Optical (MO) – Recording data using a combination of magnetic and optical means to change the polarity of a magnetic field in the recording medium. Data is erasable and/or rewritable.

Magnetic Storage – Hard disks on down to floppies.

Microfilm (Aperture Cards, Microfiche, Microfilm Jackets, 16mm Roll Film) – (1) Fine-grain, high-resolution

film used to record images reduced in size from the original. (2) Microform in the shape of a strip or roll. (3) To record microphotographs on film.

Multi-function Device (MFD, or multi-function peripheral) – Machine that connects to either a PC or network and performs two or more of the following functions: print, scan, copy, or fax. Digital copiers, fax machines, and printer/scanner combinations are all examples.

Network Attached Storage (NAS) – Can be part of a SAN. Hard disk storage directly attached to the network to provide information access.

Optical Character Recognition (OCR) – Technique by which images of characters can be machine-identified, then converted into computer processable codes.

Optical Disc – Medium that will accept and retain information in the form of marks or density modulation in a recording layer that can be read with an optical beam.

Optical Mark Recognition (OMR) – Detects presence, or absence, of marks in defined areas. Used for processing questionnaires, standardized tests, etc.

PDF (Portable Document Format) – Format developed by Adobe Systems for document publication.

Personalization – Matching content to the individual.

PKI (Public Key Infrastructure) – Enables the secure exchange of content through the use of a public and a private cryptographic key pair that is obtained through a trusted authority.

Portal – Provides consolidated access to employees', via a company's intranet, applications (such as email, customer relationship management tools, etc.), and company information.

Records Management – Enables an enterprise to assign a specific lifecycle to individual pieces of corporate information from creation, receipt, maintenance, and use to the ultimate disposition of records. A record is not necessarily the same as a document. All documents are potential records, but not vice versa. A record is essential for the business; documents are containers of "working information." Records are documents with evidentiary value.

Records Retention – The process of determining how long an organization needs to keep its records, taking

into account the operational business needs, legal, and/or regulatory requirements.

Redundant Array of Independent Disks (RAID) – Storing the same data on multiple hard disks for improved performance and fault tolerance.

Repositories – Part of a document management system; specific functionality to control the check-in/out of material, version control, and look-up against defined attributes.

Retrieval – Procedure for searching for and extracting database records or content.

Scalability – The ability of a system to expand capacity and number of users.

Scanner – Input device. Converts paper documents (microfilm scanners are also available) into a digital image of the document. Speeds range from 12 pages per minute to 200+ pages per minute.

Scanner Drivers (ISIS or TWAIN) – Provide communication between scanners and computers.

Service-Oriented Architecture (SOA) – Strategy for loosely-coupling applications together without the need to customize links between the applications to do so.

Software as a Service (SaaS) – Renting access to an application over the Internet rather than purchasing software and installing that software within your IT infrastructure.

Storage Area Network (SAN) – A high-speed network that connects computer systems and storage elements, and allows movement of data between computer systems and storage elements, and among storage elements.

Syndication – Supply of content for reuse and integration with other material, often through a paid subscription.

Systems Integrator – Business (or individual) that puts together software and hardware from multiple vendors to address a client's business information needs.

Tape – A magnetic storage media. Standard widths are 8mm, 1/8-inch, 1/4-inch, 1/2-inch, 4mm DAT (Digital Audio Tape), and DLT (Digital Linear Tape) in either rolls or cassettes.

Taxonomy – Way to structure and categorize content. Usually hierarchical, categories (nodes) in the hierarchy progress from general to specific. Each subsequent node is a subset of the higher level node. There are three basic types of hierarchical taxonomies: subject, business-unit, and functional.

TIFF (tag image file format) – Widely used image file structure that consists of a series of headers or tags, plus the image data. There are many choices among the tags used, such as type of image, compression used, resolution, colors planes, bit sequences, and annotations. NOTE: All TIFF viewers should be able to interpret the tags, but may not all be able to use the image.

Transformation – Changing content from one format to the needed delivery format.

Value-added Distributor (VAD) – Intermediator between vendors and VARs/system integrators.

Value-added Reseller (VAR) – Offers customization of an existing product(s) and resells it as an integrated product or turn-key solution. The value can be a combination of integration (software and/or hardware), customization, consultation, training, and implementation.

Version Control – Procedures to identify the authorship and the sequence of different versions of a document.

Viewing Software – Allows documents of different formats to be viewed and annotated.

XML (eXtensible Markup Language) – An established standard, based on the Standard Generalized Markup Language, designed to facilitate document construction from standard data items. Also used as a generic data exchange mechanism.

Web Content Management (WCM) – A technology that addresses the content creation, review, approval, and publishing processes of Web-based content.

Web Services – Allow applications to be connected without deep integration.

WORM (Write-Once, Read-Many) – Optical disk on which data is recorded by the user once (and is unalterable) and can be read many times.

Why ECM?

A healthy business depends on strategic use of enterprise content management strategy and technology.

By James R. Dukart

The lifeblood of just about any business today is content. Over the years, that content may have taken many different shapes and forms—from paper-based legal documents or meeting minutes to today’s email messages or Web-enabled multimedia content. But no matter what form it happens to be in, the content that courses through the business body does what blood does for the human body—it informs, regulates, and enables all else that the business does, from the way it interacts with customers, shareholders, and regulators to the way it delivers its products and services.

Moreover, just as healthy blood flow is critical to human health; strong enterprise content management (ECM) is paramount to the health of your business or organization today.

A HIGH CONTENT DIET

We are all awash in content. Take a quick look around any office or workplace and you will likely find file cabinets stuffed with paper; shelves and desks strewn with printouts; books, magazines, or other printed media and computers chock full of all types and flavors of electronic content. The flow of content, moreover, is not only pervasive but ever-expanding. The average white-collar employee in the U.S. gets hundreds of email messages per day (including spam or unsolicited email). Most information-based businesses provide always-on Internet access to all employees with laptops or computers. An average employee’s content intake

does not stop at the office door, either. Increasingly, employees of all rank have access to enterprise networks from their home, hotel room, resort location, airport lounge, or coffee shop.

While the flood of incoming content continues to grow, moreover, enterprises are increasingly attuned to the value inherent in managing that content, as well as the risks entailed in not doing so. Highly publicized cases such as the Enron or WorldCom trials underscore the cost of legal discovery, and all a company has to do is fight one patent lawsuit to recognize that guardianship of its intellectual property content is crucial. Perhaps just as critically, managing content well just makes good plain old business sense.

“A major driver for ECM is the inundation of information today,” says Russ Edelman, CEO of Corridor Consulting and past chair of AIIM’s Emerging Technologies Advisory Group (EmTAG). “People are just overwhelmed, and feel they have too much going on.”

Alan Pelz-Sharpe, principal, CMS Watch, reports similar reactions on the part of businesses and organizations today. “ECM is about bringing order to chaos,” Pelz-Sharpe says, “if there isn’t either an impact on the bottom line or the ability to meet regulation you would have fallen afoul of otherwise, there is no value.”

Brett Shellhammer, vice president and general manager, Global 2000 and Government Solutions for Open Text, puts it another way. “The need [for content

management] has always been there,” he says, “but companies are now starting to realize the exposure they have as well as the value of the content. Now that there are litigation and compliance issues, the value of managing your content only grows.”

TAKING ACTION

Compliance is almost always named a prime driver for ECM. “People are concerned about unstructured content,” says Debra Logan, vice president of research for Gartner Group in London. “They are getting all this stuff in through the email door, and they realize they have a huge problem and major exposure. It’s not just Sarbanes-Oxley but also the cost of legal discovery.”

“Fear drives compliance” adds Edelman, but in this case, he says, fear is a good thing. Edelman credits high-publicity events such as the Enron trial with driving home the value of ECM to not only top management but to rank-and-file employees as well.

Another key driver is that ECM—when done right—improves an organization’s ability to do business. Shared storage and indexing is perhaps one of the more obvious examples. Companies without effective (or effectively managed) ECM may have employees with voluminous content on their own laptops or hard drives, each all but inaccessible to other employees or business partners. “You can have ten or twenty people running around with the same PowerPoint presentation on each of their computers, rather than have one copy on a shared network drive,” notes Shellhammer. “With ten different copies floating around, version control is nearly impossible, you are wasting ten times the storage space, and if your personal copy is not available, it’s likely you can’t get to anyone else’s copy either.”

Shellhammer also says ECM enables consistency of content. “Not just from everybody using the same marketing logos or PowerPoint templates,” he says, “but the form and feel of the content. If you are collaborating in teams, you can leverage what went before you and everything looks like it came from the same source.”

Strong ECM practices also encourage collaboration in the creation of documents. Electronic whiteboarding, for instance, can be used to replace the mass emailing of documents related to a sales or product development meeting. A meeting agenda on a corporate intranet can be changed without forcing the replication of numerous emails or paper memos. Engineers from across the globe can log in to software programs

to share their ideas rather than print and mail documents halfway around the world.

Continuity is often cited as another driver behind content management. In its strictest sense, ECM protects organizations and provides continuity in the case of natural or man-made disasters, but ensuring business continuity is about more than disaster recovery. Edelman points out that creating and then storing standard processes can be of critical importance when a business experiences a great deal of turnover, such as a leadership change or buy-out. The best ECM programs thus not only categorize and store the content a company keeps, but also record the processes used to produce or derive that content.

Cost is another ECM driver. That said, cost cutting with ECM is not always a straightforward proposition. While most organizations can see the hard cost savings in avoiding lengthy and expensive legal discovery or regulatory review, some might overlook the “soft cost” savings of ECM.

“People don’t always think about the process,” notes Logan. “They focus on the result but not the process. But in many cases, you have spent a lot of time and effort in creating the content, and if you now need to replicate it, knowing how to do so would be more valuable than just knowing what the content itself was in the first place.”

Cost is another ECM driver. That said, cost cutting with ECM is not always a straightforward proposition. While most organizations can see the hard cost savings in avoiding lengthy and expensive legal discovery or regulatory review, some might overlook the “soft cost” savings of ECM. These include things like reduced storage capacity demand, greater process efficiency, improved employee morale (provided ECM makes it easier to locate documents and thus do one’s job), and reduction of redundancy or replication across departments.

Perhaps an even more intriguing benefit to ECM is mentioned by both Logan and Shellhammer, and

might be called—for lack of a better term—“expert location.”

Logan explains that the better ECM systems today can produce expanded and accessible HR systems that let anyone in an organization quickly and easily find the right expert or knowledge source for a particular issue or problem. In this case, the content is nothing more than a listing of the expertise of various people within (or outside) an organization. “You want to be able to leverage experts or communities,” notes Shellhammer. “Good content management helps you do that, by putting those resources in front of you.”

REALISTIC EXPECTATIONS; REAL BENEFIT

While ECM continues to grow in both importance and popularity, there are some words of warning for those relatively new to the field.

One is that the development of effective ECM requires end-user buy-in. The easiest way to accomplish that, Shellhammer says, is to deliver software and processes that are as transparent as possible to the end-user. “If users see it as a collaborative tool that helps them, they will use it,” he says. “Does it work with Microsoft Office? Can they get it anywhere? Can they VPN into it? The keys are to provide availability and familiarity.”

Logan warns about being too ambitious with the scope of ECM. “Not all content has the same value,” she observes. “People get into a ‘save everything’ mentality, and you don’t gain anything that way. You have to decide what the important documents are, what will we focus on?”

Pelz-Sharpe warns companies not to “over focus” or “overspend” on technology. “ECM is more about business analysis than it is about technology,” he says. Keeping that in mind, he says, “you will save millions not only in costs, but also reduce the likelihood of buying functionality you will never use.”

Edelman, too, warns about putting too much faith in ECM technology alone. “You have to be careful about technical success versus business success,” he says. “You don’t want to be putting in a technology in search of a solution.”

These issues aside, the right ECM system should produce benefits that far outweigh costs. Shellhammer measures ECM effectiveness in terms of shortened search times for documents, or increases in employee usage of search and retrieval tools. Another way to measure the benefit of an ECM system, he says, is to

track the time it takes to perform a specific function both before and after ECM implementation. “If it generally took a sales team three weeks to generate a proposal and now it only takes a week and a half, you have just increased your productivity,” he says. “But it is also likely that by making information from a previous presentation available on a shared basis, you have not only saved time, but have a better proposal too.”

Shellhammer adds another benefit—the ability to share content across departments to the benefit of the organization overall. An example he cites is the obligations laid out in a sales contract. By entering that contract into a shared electronic content database, an organization can look across legal, sales, customer service, and other departments to ensure that all stipulations of the contract, including its parameters, costs, renewal dates, and other key variables, are understood by and agreed to by all. “That could not be done before,” Shellhammer says. “Now I can take the unstructured content [the contract] and put some triggers and parameters or tasks around things.”

Logan cites reduced process steps and more straightforward automation as performance metrics for ECM. “You should be able to do more with the same number of people,” she comments. “You can also enable version control and lifecycle management.” Being able to get rid of stuff in an orderly and appropriate way, Logan says, can be a big and often overlooked benefit.

“ECM really ought to make your job better,” Logan concludes. “Getting the right information to the right person at the right time might not always be realistic. But what you can do and should aim to do is give the right person the right tool for the right task.”

Pelz-Sharpe takes it one step further, arguing that effective content management is the lynchpin to running a successful business in today’s content-centric world. “You need ECM simply to gain some measure of oversight on what is happening in your business,” he says. “Most or all core information transactions involved unstructured data. If you are not managing that, then at best you are guessing as to how your business is faring.”

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Market IQ

Smart Security or Crippling Controls?

By Dan Keldsen and Carl Frappaolo

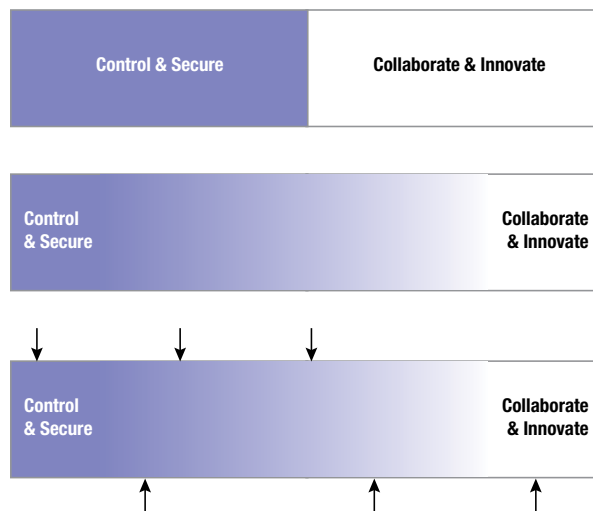
This article is a glimpse into the concerns raised and explored further in AIIM's first Market IQ (see sidebar on the next page for details). We'll also illustrate some use cases that lean towards the cutting-edge (but real) solutions, to supplement the extensive information provided in the research.

The analysis in findings came from 600 respondents across a broad swath of industries, and examined their understanding of concerns and capabilities in proactively and reactively securing content (including office documents, email, records, etc.), the influence of compliance and regulatory concerns on their thinking, scope of current projects, and adoption of technology specific to securing content.

IMPROVING "BUSINESS AS USUAL"

Control over content, or rather, lack of control over content, have made the headlines regularly in recent years. A lost laptop here, a disgruntled employee there, an inadvertent coding mistake that exposes private financial data, a database sniffed via unsecured wireless access, a scientist hired away from an established firm to jump-start a new company... the list is extensive and growing.

Electronic content is still a relatively recent phenomenon, and has given way to evolving business challenges and opportunities. Indeed, in the case of content security, there is not one business challenge or set of issues, but two dynamic forces, that make up the spectrum of concerns. This convergence of need is a strong force behind the adoption rate of content security, and its ultimate business drivers.



As the figures above illustrate, the need for security is driven by:

1. The need for increased control and an ability to lock down, or "secure" content for compliance, regulatory, or legal issues as well as a need to enforce general business operational rules of the business itself, regardless of third party directives;
2. The need to enable the ability to collaborate and innovate freely within whatever community the business chooses to embrace. This also harkens to enabling traditional Research and Development (R&D) work, and more broad-based knowledge management (KM) initiatives.

However, a black and white security model does not provide the flexibility that organizations have to have

in the midst of the industry dynamics already mentioned. These dynamics are requiring that organizations protect online content and employ policies, procedures, and processes that control how content is accessed, by whom, and how long the content is maintained. The need to know the who, what, and when associated with content mandates the application of workflow and document management with their associated audit trails. The need to establish valid content that is beyond repudiation requires application of records management, e-record filing, data integrity, and content authenticity technologies. Enterprise rights management (ERM) enables organizations to prohibit access to content not just by user, but by a dynamic business context, in support of both externally imposed and internally desired controls and safeties.

Data loss/leak prevention (DLP) technology, content filtering, ERM technology prohibit intentional, and accidental shipping of content to unauthorized users and/or to unauthorized media (e.g., inability to print certain content). This functionality protects the organization not only from the overt and obvious content (such as the source code to a new online game), but from the “hidden content” (e.g., metadata) in electronic files, as described above. Content filtering also allows the organization to control incoming and outgoing content for inappropriate statements and subjects. This is a proactive application of content security that can seriously and positively impact risk reduction.

EXAMPLE USE CASES

Some examples of how a more subtle or dynamic approach to content security might impact the way your own organization approaches the business use and implications of information management with a more modern approach:

Discovery. From the above model (black vs white, control vs collaborate), it is hard to determine how best to handle prepping for the potential of a lawsuit, and in complying with discovery requests for subpoenaed “records.” The problem is two-fold—and this is a case where records management practices would clearly apply, records would need to be kept according to retention schedules determined by the organization, and records pulled back in accordance with the discovery request. That scenario is not terribly hard to understand, and with records “under control” (managed), complying with the request should not be that difficult. However,

The AIIM Market Intelligence Quarterly (Market IQ) explores a timely enterprise content management (ECM) topic with distinction and objectivity, providing education on both the associated business issues and technical solution components. Each Market IQ is comprised of pithy and compelling commentary that serves to assess the current state of the market supported by results from the extensive survey and illustrated with charts and diagrams to complement the analysis. At the end of the report, a summation provides clear lessons learned, value statements and challenges, recommendations, and calls to action.

Download the first report, *Content Security: At the Fulcrum of Innovation and Risk*, at www.aiim.org/industrywatch. Listen to the webinar on the same subject at www.aiim.org/webinars.

the more troubling side of the discovery coin is in suddenly needing to free or hold current documents (perhaps not yet submitted to a records system), and which suddenly turns what could (and from a business standpoint should) be a dynamic and collaborative environment, into a system that actively prevents destruction of content, or in preventing back-dating, shipping content to parties that should be barred from having access to content while investigation is underway, etc..

Freedom of Information. An alternative example has a similar dynamic, with a twist. For organizations that deal in “secret” or private conversations, intellectual property, etc., but that are either part of a governmental agency, or have significant enough dealings with the government, they may be subject to the Freedom of Information Act (FOIA), and be legally required to make all records/documents public within certain timeframes and parameters. This is an interesting problem that again runs afoul of traditional security thinking. The content is secret or private for a time, and therefore tightly controlled. As soon as the content hits the threshold in being available to the public via the FOIA however, it now needs to be openly distributed (not collaborated on per se, but read-only access).

Both of these examples show a degree of control that moves into the gray space between “locked down” and “free to all” that a black and white security model is ill equipped to handle. This is why in both cases, currently, either type of request causes a chaotic fire-drill reaction within most organizations. The lack of ability to do fine-grained tuning of rule-sets that allow content to be aware

of its own content, the context of its desired use (in discovery, or “business as usual”), and the community (user or group) seeking to read, write, share, or destroy it, causes significant pain to most organizations.

Beyond the externally imposed controls that an organization needs to concern itself with in the 21st century, there are the operational rules that an organization wishes to ensure are imposed consistently, in order to conduct its own business profitably, or to minimize its perceived risks, and in accordance with its own desired goals, objectives, cultural norms, and ethics.

Some examples of operational rules that again fall into the gray area unaddressed by black/white security models:

“Secret” Expertise Location. In companies that are heavily R&D-oriented, and who may be both paranoid and completely justified in focusing R&D efforts by decoupling teams from each other, there may be operational rules that are applied to content repositories that provide hard and fast “walls” around content, purely for access by certain teams, yet still allow search engines to know that the content exists, and will point searchers/researchers to an internal expert who (subject to organizational policy) may be able to contribute expertise to another project, without violating the otherwise “secret” work they have been working on.

Mergers & Acquisitions. For M&A negotiations, technologies such as ERM, user authentication, and

DLP enable the establishment of secure online collaborative environments to support business situations such that, should negotiations fall apart and it is clear that the parties will not be working with each other, the “virtual deal room” (online collaboration space) can be “sealed” and destroyed, and any content that has been checked-out of the deal room becomes “digitally shredded” (contents rendered unreadable or un-lockable) via rules that know that the context of use has now changed (i.e., the deal is off).

Process-aware Content. More mundane, but still important, operational rules may be as simple as workflow-enabled processes that require the authorization of two vice presidents on a proposal, and in meeting of certain thresholds (determined automatically and electronically) as to minimum profitability, maximum daily billable rate, etc.

A TASTE OF THE NEAR-FUTURE

Explore the business drivers and technological issues of content security by reading the full Market IQ report, www.aiim.org/industrywatch.

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A sampling of the study results from Content Security:

At the Fulcrum of Innovation and Risk

Awareness Levels Regarding Content Security Technologies					
Technologies: What is YOUR level of awareness of the following terms/phrases?					
	Fully understand	Mostly understand	Somewhat familiar	Vaguely familiar	No Idea
Archiving	45%	30%	14%	5%	6%
Records Management	41%	24%	18%	10%	7%
Digital Signatures	34%	30%	19%	8%	9%
Email Management	31%	29%	24%	10%	7%
Content Filtering	20%	24%	28%	15%	13%
Content Authentication	16%	27%	27%	16%	14%
Public Key Infrastructure	14%	12%	16%	18%	40%
Trusted Timestamps	11%	19%	22%	21%	27%

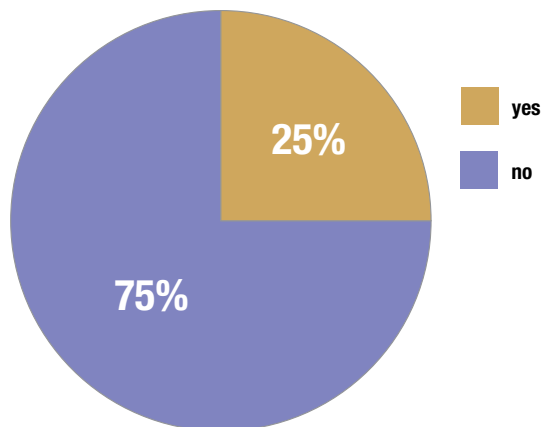
Survey participants were asked to identify those technologies that fit within their definition of Content Security. The older, more mainstream technologies were predominately and consistently selected, while more cutting-edge technologies received mixed ratings.

Records Management	55%
User Authentication	55%
Email Management	54%
Document Management	45%
Data Leak/Loss Prevention	43%
Digital Signatures	35%
Content Authentication	34%
Digital Rights Management	23%
Enterprise Rights Management	23%
Policy-based Encryption	23%
Public Key Infrastructure	22%
Trusted Timestamps	21%
BPM/Workflow	19%
Hierarchical Storage Management	18%
Content Addressed Storage	13%

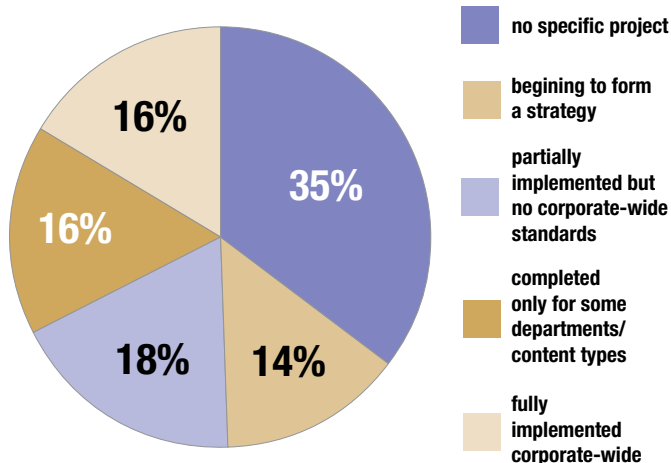
What are you trying to avoid/protect your content from? (choose all that apply)

	Non-AIIM	AIIM
Willful intrusion from the outside	70%	84%
Accidental intrusion from the outside	46%	63%
Willful leaking from inside to outside	38%	65%
Accidental leaking from inside to outside	42%	65%
Willful inappropriate sharing within the organization	34%	58%
Accidental inappropriate sharing within the organization	31%	60%
Willful misconduct or destruction of content	45%	72%
Accidental misconduct or destruction of content	46%	68%

If you have performed an ROI on your Content Security project, were you able to show an acceptable level of return?



What is YOUR ORGANIZATION'S Current Involvement with Content Security?



Is Content Security Included in Your Corporate Governance Model?

