



Technologies that Enable Knowledge Management: Understanding the Options and Taking First Steps

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An Overview of Overlapping and Complimentary Systems and Technologies

1. Grant Management Systems
2. Content Management Systems
 - i Web Content Management
 - i Document Management
 - i Enterprise Content Management
3. Knowledge Management Systems
4. Record Management Systems
5. Search Engines and Search Appliances
6. Active E-mail Archiving Systems
7. Web Portals

Grants Management Systems

- i Typically a foundation's largest, shared, organized, commonly used, and searchable information repository.
- i Common capabilities include:
 - | Proposal and grant tracking
 - | Organization and contact management
 - | Flexible classification and coding
 - | Proposal review
 - | Requirement tracking and management
 - | Budget and payment tracking
 - | E-mail messaging
- i Some enable:
 - | Customization of fields
 - | Calculations and graphics
 - | Basic file and document management



Grants Management Systems and Services

Costs can range from US \$5k-250k+ depending on modules and number of users.


- i Arlington Group - Easygrants
- i Bromelkamp - Pearl
- i Collaborative Standards - GrantStream
- i CyberGrants
- i Foundation Source
- i MicroEdge/NPO Solutions – GIFTS, FIMS, FoundationPower



Some Key Trends in Grants Management Systems

- i Growing use of online applications with document attachments
- i Growth in online submission of progress and financial reports
- i Synchronization with Microsoft Outlook/Exchange
- i Use of portals to access and display data in graphical formats for presentation, management reporting and decision-making





Three Different Types of Content Management Systems (CMS)

1. **Web Content Management Systems (WCMS)**
2. **Document Management Systems (DMS)**
3. **Enterprise Content Management Systems (ECMS)**

Web Content Management Systems (WCMS)

- i A type of CMS emphasizes managing only Web content.
- i Database driven
- i Products and services vary in functionality, complexity, and range.



Resource: <http://www.cmswatch.com/ContentManagement/Products/>



Web Content Management Styles

i Commercial

- Vendor develops the application for sale to the client
- The client has more control
- The client is responsible for operation & maintenance
- Ÿ Usually more expensive up front

i Hosted

- Vendor hosts and maintains the CMS
- Frees the client from most administrative responsibilities
- Reduces the initial cost
- Ÿ Reduces the amount of client control
- Ÿ Usually results in larger long-term costs



More Content Management Styles

i Nonprofit

- Some CMS systems are built for and by nonprofits
- May be either commercial or hosted
- May include some features useful for nonprofits

i Open Source

- The software is free
- The client has a lot of control
- Ÿ The client has a lot of responsibility
- Ÿ Hard to find staff with knowledge of the software
- Ÿ The client must depend on the open source community for support
- Ÿ Systems are typically poorly documented and have a more limited set of features

Some Web Based Content Management Products

Web publishing systems are typically about US \$150-300.



Low/medium database driven software from US \$7k-\$40k+.



ektron
CMS300

ektron
CMS400.net

Some Web Based Content Management Hosting Providers

Typically about US \$40-100k+ for hosted systems.



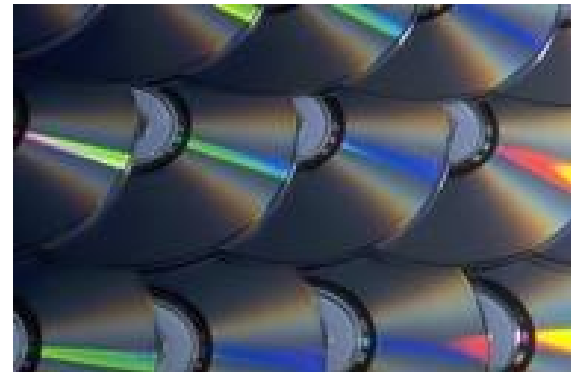
Document Management Systems (DMS)

- i Similar to Content Management Systems (CMS) but primarily handling versions of active files and documents.
- i Are usually used internally (e.g. legal offices) vs. presenting information to the public.
- i They vary broadly in functionality, complexity, and range.



Enterprise Content Management Systems (ECMS)

- i Used to manage all aspects of an organization's content publication processes, including Web, print, documents, images, digital media, etc.
- i These products offer a wide range of functionality, modularity, complexity, and cost.



Some Leading Enterprise Content Management (ECMS) Systems

Typically about US \$125-175k+.



Typically about US \$200-250k+ for entry-level licensing.



Records Management Systems

- i Systems that enable the management of records in any format or media type, from their inception/receipt, all the way through to their disposal.
- i Typically used to implement retention/archiving policies and to meet legal, compliance and regulatory requirements.
- i Now integral to many Enterprise Content Management systems.





Knowledgebase Systems

A self-service integrated KM application that is easy to install and use to provide searchable access to content.

Typically about US \$10-100k+.



Resource: <http://www.eweek.com/article2/0,1759,1036976,00.asp>

Desktop Search Engines

Searches files, e-mail, IM, and previously viewed Web pages stored on local drives. Typically cost US \$0-\$199.



Resource: www.pcmag.com/article2/0,1759,1772156,00.asp

Enterprise Search Engines

Searches Microsoft Office files, e-mail, IM and Web content on local and networked drives across the intranet and/or Internet. Cost varies depending on licensing and volume.

- i **Microsoft Index Server**

(Part of Microsoft Internet Information Server – IIS)



- i **Coveo** (free for 5,000 document license, \$4,000 for 10,000 documents and more for higher volumes)



- i **dtSearch** (\$995 / per server)



- i **Autonomy Enterprise Search** (\$100,000+)



- i **Verity** (integral to Macromedia / Adobe Cold Fusion, otherwise \$100,000+)



Search Appliances

Similar capabilities as enterprise search engines but preconfigured in easy to install hardware. Enable greater configuration options and higher performance. Cost varies depending on features, document volume and annual support.

- i **Google Mini Search Appliance**

\$ 2,995 / 100,000 docs

- i **Google Search Appliance**

Cost varies with models and volume of documents

- i **Thunderstone**

\$4,995 / 50,000 docs \$10,000 (unlimited docs)





Some Key Features to Consider

CONTENT PUBLISHING

- q Easy content import
- q Multi-user access
- q Customizable article publishing workflow
- q Indexing contents of all popular file types (HTML, Word, Excel PowerPoint, RTF and PDF)
- q Document display in native format or auto conversion to HTML
- q Display of related articles and links
- q Assignment of hierarchical categories and priority keywords
- q Print, e-mail, bookmark, subscribe and rate article
- q Federated searching of remote sites and databases

More Key Features to Consider

CONTENT MANAGEMENT

- q Multi-level workflow creation and approval
- q Article check-in / check out
- q Change, version control and content history
- q Scheduled publishing, expiration and archiving

SEARCHING AND RETRIEVAL

- q Keyword, phrase, natural language and advanced searching
- q Stemming (variations on endings, like apply, applies, applied)
- q Query terms highlighted in context – including PDF hits
- q Detect misspellings and suggest corrections
- q Suggestions of synonymous and related terms
- q Browse by category
- q Top articles within category
- q Frequently Asked Questions



Even More Key Features to Consider

PORTAL

- q Flexible choices of portal templates and options
- q Public access, registration, secure or personalized portals

REPORTING

- q Reports by visitors, articles, search phrases, user or group, unanswered questions, etc.

OTHER CONSIDERATIONS

- i Integration with other applications
- i Scalability
- i Supports industry standards
- i Terms of the support contract



E-mail Active Archiving

- i Improved e-mail archive management, access and retention
- i Compliance with regulatory requirements
- i Reduce cost of litigation
- i Eliminates e-mail quotas
- i Shorter backup and recovery times
- i Uses random access high density media (e.g. optical jukebox) for near-line data storage



Some E-mail Active Archiving Products

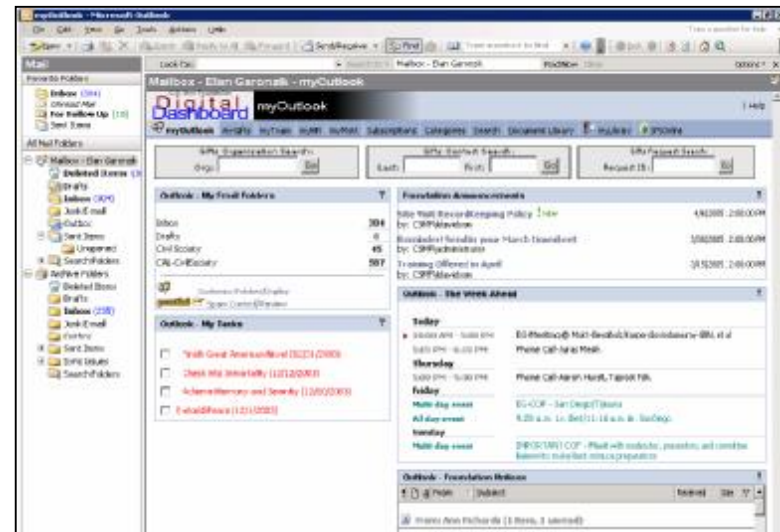
Typical enterprise hardware and software can be US \$50k+.



Web Portals

Also often referred to as simply a *portal*, a Web site or service that offers a wide range of resources and services, such as:

- i E-mail
- i Forums
- i Search engines
- i Knowledgebases
- i Document libraries
- i Databases
- i Forms
- i Online Discussions
- i Reference links
- i On-line services



Portal Servers and Applications

Typical enterprise hardware and software to enable public access can cost US \$50k+. Internal access can be free.

i BEA WebLogic



i Windows SharePoint Server 2003
(Free with Windows Server 2003
Team collaboration + Web Part infrastructure)



i Windows SharePoint 2003 Portal
(Built on Windows SharePoint Services to
create, manage, and organize SharePoint sites)



Public Web access = \$38,000

Client Access Licenses = \$175 each

50 user hosted solution = \$20 / month (www.1and1.com)



Some Key Differences Between Portals and Content Management Systems

- o Today, most portals typically provide easy access to a wide range of documents and data but with limited content-integration capabilities.
- o Portals typically don't recognize the data's underlying meta data or security model.
- o Portal products are most appropriate for workgroups with basic workflow and content management needs . . . such as most foundations.



Some KM Lessons Learned



Knowledge Management Strategic Planning and Project Management

- i Most KM implementations haven't worked because organizations try to tackle too much at one time.
- i Start with a small KM initiative that makes sense for multiple reasons. Identify the ripe low hanging fruit.
- i Implement smaller projects — or split large ones into phases to gain more control over the outcome. This way a small-scale failure won't doom the entire effort.



The “Baked-in” Approach

“A lot of early KM efforts failed because they added cumbersome steps to the jobs of already overworked employees. So when things got busy, workers just didn't bother with the extra steps.

You need to embed knowledge into the structure of the job that knowledge workers already pursue so it can't be avoided.”

Tom Davenport - Professor and Director of Research at the School of Executive Education at Babson College



Taking the First Steps



First Things First

1. Determine which information is really most useful, to who, and the best way(s) to share it.
2. Establish consensus and develop a taxonomy of codes (meta tags) to classify content . . . *one that will last over time.*
3. Determine the best way to integrate KM tasks into the routine workflow and job functions.
4. Establish standards including logical and intuitive file naming conventions.



More First Things First

5. Identify, select and implement an integrated system that meets your realistic needs (*don't under/over buy*).
6. Build prototypes, measure, evaluate and make appropriate changes.



Some Low and No Cost Strategies

- i Create and maintain well structured shared file server drives and directory folders.
- i Use grants management system codes, custom fields and built-in document management.
- i Explore the use of e-mail rules, shared e-mail folders and Outlook forms to classify messages.
- i Explore the use of search engines and \$20/month SharePoint hosted services.
- i Encourage grants management vendors to provide more integrated solutions.



Reduce IT Infrastructure Complexity

- i Standardize, consolidate, and streamline systems, processes and technologies.
- i Use industry standard off-the-shelf applications whenever possible vs. build-to-order custom systems.
- i Eliminate application and data silos.
- i Reduced complexity and duplication = improved efficiency, greater productivity and lower costs.

