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Tony Byrne Talks Technology

While content management is not all about technology, technology is a critical component of any content management solution. After all, according to Tony Byrne, "you can't do a CMS implementation without technology." Tony Byrne has established himself as a leader in understanding content management technologies and their role, so if you're looking for information on how technology supports content management, then CMSWatch is the place to look. CMSWatch.com, founded by Byrne in July 2001, provides an independent source of information, trends, opinion, and analysis about Web Content Management (WCM) solutions. In this issue of *The Rockley Report*, Tony Byrne discusses the role of technology and provides tips on the technology selection process, with much emphasis on the need to "try before you buy."

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Best Practices for Selecting a CMS

Selecting the most effective content management system (CMS) is recognized as a crucial first step for a content management project, yet many organizations struggle with this process. James Robertson draws upon industry experiences to outline the best practice approaches to selecting a CMS, thereby providing the foundation for a successful CMS implementation.

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Gaining Management Support

Building a Business Case for Content Management

This article provides direction for those seeking to build a business case for a content management system (CMS) in a specific functional area of an organization. While there may be resources in your organization to help you with technology and automation projects, in most cases you need to drive the initial efforts from your functional area. You are the subject matter experts, you know the issues you are up against, and what to do to solve them. Getting others in your organization—where there are so many needs and so many things to do—to listen and to allocate resources is the difficult part. But, if you go about building your business case the right way, it can go a long way toward building credibility, raising visibility, and making your CMS implementation a reality.

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Editorial

The Wonders of Technology!

A resounding theme throughout this issue of *The Rockley Report* is "technology does not a successful content management implementation make!" Yet, technology is important, important enough for us to devote an entire issue to it, exploring topics such as the impact of technology on information architecture, the impact of technology on its users, and the impact of XML on authoring, specifically the role of XBRL. Steve Manning with Diane Mueller-Klingspor, who is currently heading up the XML and XBRL efforts at BusinessObjects help us to understand XBRL's role in a content management strategy.

For an expert's view on the role of technology, we turned to Tony Byrne, Founding Editor of CMS Watch and president of CMSWorks, Inc., a USA-based content management consulting and training firm. CMSWatch.com provides an independent source of information, trends, opinion, and analysis about Web Content Management solutions, including information about related technologies, such as XML, digital asset management, and content syndication. Besides residing over CMSWatch.com and being principal author of the CMS Report, Byrne helps organizations identify and select appropriate CMS technologies. He definitely qualifies for as an "expert" when it comes to understanding CMS technology and in our feature article, "Tony Byrne Talks Technology."

We also look to James Robertson, Managing Director of Step Two Designs, a vendor-neutral content management consultancy located in Australia. Robertson is also the author of the *Content Management Requirements Toolkit* and provides us with his "Best Practices for Selecting a CMS."

However, if you want to be a position to select a CMS, you have to make a business case for it, and Steve Huffman and Janice Jones from Medtronic Core Neurological take us through their step-by-step approach that won them approval for their content management system and their project to implement it.

Technology also has a way of not realizing its potential, and companies often have to compromise, especially when they choose their tools up front, then attempt to develop a content management strategy that will work with their chosen tools. Kelly McCurry and Tim Wilkes, from Scratchcat Communication Consulting in Regina, Saskatchewan (Canada), describe their experiences developing an intranet content management strategy for one of their clients, learning when to compromise and on what, given the clients' selected tools.

And, as always, Scott Abel provides us with a look at goings on and valuable resources in the content management world. Mark your calendars for the upcoming Gilbane Conference on Content Management Technologies (Nov. 30 to Dec. 2), during which CM Professionals (a newly formed, international community of content management practitioners) will hold their first summit.

We welcome your feedback. Please send comments, as well as suggestions for stories in future issues to kostur@rockley.com. Our Call for Submissions describes the kind of stories we're looking for and how you can submit articles for publication in future issues.

THE ROCKLEY REPORT

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Tony Byrne Talks Technology

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While content management is not all about technology, technology is a critical component of any content management solution. After all, according to Tony Byrne, "you can't do a CMS implementation without technology." Tony Byrne has established himself as a leader in understanding content management technologies and their role, so if you're looking for information on how technology supports content management, then CMSWatch is the place to look. CMSWatch.com, founded by Byrne in July 2001, provides an independent source of information, trends, opinion, and analysis about Web Content Management (WCM) solutions.

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For more information on CMS technologies and to subscribe to the CMS monthly digest of new articles and findings, visit CMSWatch.com.

Q. What is your background?

I started my career as a radio reporter and magazine publisher, but got involved in international exchange and technical assistance with the fall of the Berlin Wall and opening of Eastern Europe. Through an international non-profit, we developed some of the first public e-mail networks in Russia, Central Asia, and Eastern Europe, and started an "Internet Peace Corps."

We learned some hard lessons about the difference between network availability and network adoption, particularly in cultures with decades-old legacies of strict information control. Some of our most fruitful work entailed putting Internet stations in public libraries and nascent student unions. That program (now funded by the U.S. government) continues today.

When the Web hit in the mid-90s, I migrated to the commercial sector and joined a company building e-commerce storefronts.

Q. What drew you to content management, and in particular, to content management technology?

At our web development firm, our customers naturally wanted to start updating content themselves. We built some homegrown tools, but quickly saw their limitations and were concerned about the overhead required to maintain and enhance them.

So we started working with various commercial technologies (early versions of Interwoven, Vignette, Spectra, etc.), and experienced what now seem to be very familiar challenges: the software was under tested and difficult to customize; there were severe usability problems; authors and editors saw little daily improvement in their work, etc.

Some of our better accomplishments actually came from working with open-source CMS tools, despite their substantial learning curve for developers and authors.

I began to think there was a need for a public resource to review web content management technologies and the practices around them. So I founded CMS Watch (www.cmswatch.com), and wrote The CMS Report to evaluate tools. The report is now in its 6th edition.

Q. What is the most common mistake companies make when selecting a tool? How would you recommend companies ensure they make informed decisions when selecting technology?

Every consultant will tell you that the most common mistake is a failure to adequately prepare and prioritize user requirements. I agree.

Beyond that, I would say one of the most common (and little understood) mistakes is a failure to actually test systems thoroughly to allow all parties to get comfortable with them—warts and all. This can be an informal "bake-off" or a formal proof-of-concept; in either case, you need to do it **before** you sign a contract. Some vendors will resist this tooth and nail. You need to hold your ground.

A little while ago I went into a large company to participate in the implementation of a major Web CMS package they had just licensed. There was a meeting during which the customer's security guru informed the team that the vendor's approach to promoting content to the "live" servers would violate corporate security policies. The project leader didn't exhale for about 3 minutes. She sensed that the security problem—which had slipped through the cracks in their requirements gathering—would resist resolution. Unsuccessful testing of various work-arounds suggested by the vendor proved her right. The company had to write off the cost of the software and begin their search again.

Testing products head-to-head is difficult and laborious, but it really could have saved this company a lot of time and money. Testing also forces you to think about use-cases (or "scenarios"), which should drive product selection in any case.

Q. What role does technology play in a successful content management implementation?

Well, you can't do a CMS implementation without technology. It's necessary but of course not sufficient.

An important question to ask, though, is whether you need a content management tool to solve your content management problem, and if so, what kind of tool. A lot of basic design consistency problems can be solved with Dreamweaver templates. Valuable library services can be provided through a simple WebDAV server. Not everyone needs a CMS.

Q. Is the acquisition of technology the most important decision to make in a content management implementation, or is it an important one among many? What are the other key areas of content management a company should focus on?

The acquisition of technology is important because you can make a really bad mistake here. On the other hand, after doing their homework well, most companies can get down to 3 or 4 solutions that could all work out very well.

The other thing I encourage people to do is evaluate the implementation team as carefully and critically as you evaluate the software—even if the implementation team is sitting down the hall. You're almost surely going to spend more money on services than software, and the quality of the implementation will likely have a greater impact on your overall success. So proportion your selection energy accordingly.

Finally (and this is no surprise to your readership), without proper content and process analysis—along with some vision about how you are going to improve your business by managing content better—all technology investments are in vain.

Q. You have done a lot of work in the field of web-based content management, but you are starting to do more in the area of enterprise content management. What prompted this move? How are these two areas of content management the same or different?

I started getting more involved in enterprise content management because there is some convergence happening, although not the kind of convergence that many vendors talk about.

Part of what's going on, I think, is that web content managers want to expose more content from deeper in the enterprise—sometimes integral documents, sometimes content chunks or components. At the same time,

enterprises are seeing customer and employee demand for data and content from all sorts of different information systems to be made available via the web. So more documents and assets are coming to the web, and vice-versa. Of course, many enterprises also want to reconcile print and electronic publishing processes further upstream (and they are all finding it very hard!).

Another big challenge here is combining data and documents in various useful ways. For example, a common scenario in the mutual fund industry is to be able to merge brochure-type content about a particular fund with current data about its performance. Enterprise search engines are starting to offer some interesting capabilities here.

The key thing for any organization embarking on an ECM strategy, I think, is to be brutally rigorous and specific about identifying high-value use-cases for information integration, then tracing those to specific repositories and management systems, rather than starting from the premise that you need to be able to make all content and all data within the enterprise manageable inside of one über-dashboard. That's not realistic.

No one really knows how this is going to play out from a technology perspective. Analysts keep predicting that major platform vendors (SAP, Microsoft, IBM, Oracle) are going to dominate the CMS space. That hasn't happened yet and won't happen soon, if ever.

However, the roll up of various content management products within major ECM vendor "suites" continues apace. The products in these suites are really free-standing tools packaged together for marketing purposes, but usually sold, implemented, and supported by separate internal groups within the vendor.

Sometimes people ask why ECM vendors don't just dissolve all these tools into a single package to create a truly "enterprise" solution. After all, document management (DM), records management (RM), digital asset management (DAM), and XYZ management products do fundamentally the same thing: they ingest content, enable repository services, employ metadata, support workflow, allow you to decompose and recompose derivatives, then output or archive content in various formats. Is there another über-dashboard here for all your content?

I don't think so. It turns out that these different tools tend to get used by different people within the enterprise, who employ different authoring systems, have varying interface needs, and create diverse downstream products. Sure, these systems often need to work together, but we are all still figuring out how, when, and where. Smart managers will ask "why," too.

So I think the product families (DM, RM, DAM, WCM, etc.) will remain distinct, at least in the near-term. ECM suite vendors seem to agree. They are expending much more effort cross-selling these tools than integrating them.

I would like to see greater focus on the shared methodologies and disciplines required to make *any* of these various content management products work effectively, and less focus on the need to buy multiple packages from the same supplier. For example, we could probably all learn a thing or two from the document imaging specialists who may be laboring somewhere around the corporate mailroom. They've been dealing with metadata, indexing, storage, and workflow for decades, and probably lay the most legitimate (and certainly the most longstanding) claim to mantle of "enterprise" content manager.

Q. What is your favorite CMS tool?

People ask me this a lot. I don't have a favorite. Really.

There is a right time and place for nearly every product. The trick is the find the right tool for your circumstances and budget. I don't think magic quadrants and other horserace-type rankings are helpful in this regard, because they don't tell you *how* a particular solution works, and what it will likely cost over time. All the more reason to try before you buy.

Best Practices for Selecting a CMS

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Selecting the most effective content management system (CMS) is recognized as a crucial first step for a content management project, yet many organizations struggle with this process. This article draws upon industry experiences to outline the best practice approaches to selecting a CMS, thereby providing the foundation for a successful CMS implementation.

Content management marketplace

The first step in selecting a content management system is to recognize that CMS products in the marketplace are extremely diverse, with every product having a unique vision, architectural design or strategic direction. This means that each product has a strong mix of both strengths and weaknesses; there is no one 'best product' in the marketplace.

The challenge therefore is to identify the product that is the best fit to your unique business requirements. Out of the hundreds of products in the marketplace, perhaps less than a dozen will be suitable in any specific situation, putting further weight on the selection and evaluation process.

Requirements-based selection

Best practice recommends a *requirements-focused* [1] selection process that starts by identifying the specific business requirements for the CMS. This involves consulting all stakeholders, reviewing existing systems, and aligning with business strategy. The result is a comprehensive set of requirements, driven by business needs (not technology issues). Among these, your key requirements are clearly identified, along with the "nice to haves".

For example, technology-focused requirements may specify that the CMS should "store content in multiple repositories". While this may be meaningful to the writer of the requirement, it often means little to others (including the vendors), and gives no real context for the business need. Instead, the business requirement may be to "allow authors located in offices world-wide to easily and efficiently write content for the centralized corporate intranet". This gives a clear description of the business need, and it allows a range of technology solutions to be proposed by the vendors.

Once captured in this form, content management systems can then be evaluated against these business requirements, to identify the most suitable product. This resolves the difficulty of comparing very different products against each other, as each product is assessed against your business requirements alone.

Focus on how, not what

When evaluating products, you need to focus on the *how*, not the *what*. At a high level, all content management systems have the same basic capabilities (authoring, workflow, version control, publishing, etc.). Beyond this, it is *how* these features work in practice that will make the difference between a product that is suitable for your needs, and one that won't work (or will require extensive customization).

The classic example of this is integration with other systems. It is clearly not sufficient to simply say "the CMS must integrate with existing systems" (although this appears all too often in tenders). Instead, the tender must outline which specific systems the CMS will be connected to, how these connections will be made, what information will be exchanged, and how often.

The selection process must therefore be designed to give you the confidence that the way the CMS is designed is a good match to your working practices and environment. In practice, this is best done by:

- describing specific needs in the tender, providing details about the organizational environment
- requiring the vendor to provide *descriptive* answers, rather than "complies" or "does not comply"
- asking vendors to include examples and screenshots in their responses

It must also be recognized, however, that some aspects of the content management system cannot be

meaningfully evaluated solely on written responses to the tender. For example, the usability (ease of use) of a CMS can only be assessed by examining the system in operation (such as during the vendor demonstrations).

Capturing business requirements

The primary purpose of the requirements (and the tender or RFP documents as a whole) is to *clearly communicate* your needs, to both vendors and internal stakeholders. This means writing the requirements in a form that can be easily understood by all readers, and providing sufficient context about the underlying business needs and environment.

Using a narrative format

Traditionally, requirements have been documented in a very formal, highly-technical format. While the aim was to ensure that all the requirements were captured in sufficient detail, tenders in this style typically generated more confusion than clarity (for both stakeholders and vendors).

Instead, requirements should be written in a narrative format [2]. For example, the requirement "the CMS must provide web-based admin tools" is much better captured as follows:

> All day-to-day administration of the CMS will be conducted by the web team. There are limited technical skills in-house, so the CMS should provide easy to use GUI interfaces for administrative tasks. It is expected that the site designs are unlikely to change frequently, so the capability to maintain stylesheets and templates in-house is less important.

Using this format provides much greater context to the requirements, and in practice is actually easier to evaluate than the over-formalized format generally used.

Focusing on key selection criteria

Many tenders contain hundreds of requirements, with little (or no) information indicating the relative importance of each requirement. Beyond making it harder and more time-consuming to evaluate tender responses, this over-specification of requirements can force the selection of a CMS that is larger than is actually required.

In practice, there is a very real cost to be paid for each requirement specified, in terms of cost, complexity, and impact on usability. For this reason, it is critical to identify the *key selection criteria* for the content management systems.

The key selection criteria are those requirements that absolutely must be met by the CMS, if the project is to be successful. There will be typically less than a dozen of these for most projects, and they must be clearly identified and communicated in the tender.

Avoiding over-emphasis of technical details

The final challenge is to avoid over-emphasizing technical details [3] in the tender documents. While there will be some important technical constraints and considerations, experience has shown that the final selection of the CMS is more likely to be based on the business (rather than technical) requirements.

Developing the tender

Once the business requirements have been developed, assemble them into a tender (or RFP) document, suitable to be given to prospective vendors. This must provide sufficient background and context to allow the vendor to easily interpret the specific requirements listed.

Using scenarios

Scenarios (narrative descriptions; stories) should then be used to explore specific issues, and to document how the CMS will work in practice. In the context of a content management system project, scenarios are a very effective way of documenting key CMS requirements, and they complement the list of requirements in the tender.

The scenarios bring together a range of requirements, putting them into a sequence that matches how users will typically work with the CMS. When documented in this form, a much clearer (and richer) picture is provided of the particular needs of the authors and publishers. For example, the following is a simple scenario that captures common authoring needs:

> Robert is an author who has the responsibility for maintaining some sections of the website. A new press release needs to be created for the site. Robert creates a new page in the CMS, indicating that it will be a press release.

This provides a number of specific fields to be filled in (such as title, release date and contact details for the press officer), as well as an area for the body of the press release (as formatted text).

Robert then specifies the metadata for the page (this has been made very simple by the CMS, which has defaulted many of the values). He also indicates that the press release should be released at 9 AM tomorrow morning, in sync with when the press release will go to the media.

Having completed the mandatory metadata for the press release, Robert forwards it to his manager Lyn for her review. Lyn is happy with the release, and therefore forwards it to Sandra (one of the web team) to do a final quality check, before approving it for release.

Vendor demonstrations and beyond

The scenarios then form the basis for the vendor demonstrations, thereby ensuring that the sessions are more than just a generic 'sales pitch' from the vendors. The scenarios also allow the demonstrations to be directly compared, as well as making it easier to evaluate the products against the business requirements.

Beyond the vendor demonstrations, you should then take whatever additional steps (contacting reference sites, conducting trial periods, etc.) that are necessary to build confidence that the selected product is going to provide the best (and most cost-effective) solution for your specific needs.

Guidelines for the selection process

Beyond the approaches discussed above, consider the following when selecting a CMS:

- specify business goals and outcomes
- build internal content management knowledge
- ensure sufficient time is allocated to the selection process
- consider a wide range of products in the marketplace
- focus on mitigating project risk
- focus on usability and simplicity

See the *AGIMO Better Practice Checklist* [4] on selecting a CMS for more on these guidelines.

Further resources

Organizations looking for further resources on selecting a content management system should consider obtaining the *Content Management Requirements Toolkit* [5]. This contains a comprehensive set of pre-developed CMS requirements, as well as supporting details on the selection process (including instructions on how to write scenarios).

The CMS Report [6] also provides valuable information for organizations looking to purchase a content management system, and it includes reviews on major CMS products (both commercial and open-source) along with an exploration of many content management issues and approaches.

Summary

Selecting a content management system out of the hundreds in the marketplace is not easy. By taking a requirements-based approach, you can identify a product that is a close fit to the unique business needs and environment of your organization. Capturing requirements in a narrative format, using scenarios, and managing vendor demonstrations will then help you to explore, in-depth, prospective products, and to mitigate the risk of selecting the wrong product.

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Impact of Technology on Information Architecture

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This article points out the key areas where technology impacts information architecture for content management and provides guidelines to help you understand how your information architecture requirements should guide you in your technology decision.

Information architecture (IA) defines how your content management strategy will function from authoring through to content management and delivery. A content management strategy is typically supported by technology, such as authoring tools as well as a content management system. Yet, different tools have different capabilities, which will impact your information architecture. While your information architecture should form the basis for your tools selection, you also need to keep the tools' capabilities in mind when you develop your information architecture. Wherever possible you should partially complete your information architecture prior to selecting technology, using the development of the preliminary IA to answer the following questions:

- How semantic should your content models be
- What is your level of granularity
- What types of linking requirements do you have
- How do you plan to control reuse
- At what level should security permissions apply

Content models

Content modeling is a key component of information architecture. Content models indicate the structure of your information products (defined semantically), their granularity, and their reuse strategy. Content models are supported in authoring tools; authors are guided through creating content by authoring templates or forms that reflect the content models. The more semantic your content models are, and hence your authoring templates (refer to "Semantic vs Generic Elements" in The Rockley Report, Volume 1, Issue 2), the more effective the authoring templates will be. However, more semantic structures require more work to implement. If you are using an XML-based authoring tool, the technology does not provide any restrictions on how semantic the template can be, but because individual tags must be created for each uniquely named element, the person responsible for implementation may prefer a more generic authoring template. Likewise, if you are using a non-XML-based authoring tool, numerous semantic tags can be problematic.

Traditional authoring tools support semantic structure by listing all the semantic tags in a single drop-down list, which can quickly become unusable when there are too many tags to choose from. In both cases, you may have to compromise, deciding to identify only the larger elements semantically. Supporting semantic models is even more problematic if you are using authoring forms. Authoring forms are supported by XML or HTML and typically provide a field-based interface where authors "fill in the blanks" with content. Forms can be very useful if you don't want to provide a fully-functional editing tool to authors or if you have occasional authors creating content. However, supporting semantic structures can be very challenging for the following reasons:

- Control over optional vs mandatory fields

  You often don't have any control over the display of optional vs mandatory elements; essentially all elements are displayed. You will need to provide an interface that clearly identifies required content.

- Repeatable elements

  There is usually no facility that allows authors to select repeatable elements. For example, steps may be defined semantically by the name "Step". Some steps may apply to all products/processes, but others may be unique to a certain product/process, so you want be able to add metadata to identify where each step should be used. However, when authors enter a number of steps into one field, there is no way to add metadata to an individual step. Further complicating the matter is that authors typically don't know how many steps there will be before they start writing. Because authors don't know how many step fields they will need, it's impossible to provide

the right number of step fields in the authoring form. In this case, you want authors to be able to add step fields as required. Some—although very few—tools for creating forms allow authors to request another field.

Granularity

Granularity identifies the smallest piece of information that is reusable. For a further discussion of issues with granularity associated with implementation, refer to "Implementation: Issues with Granularity" in The Rockley Report, Volume 1, Issue 2. Granularity is a key component of your information architecture because it enables you to identify how small your elements should be to optimize reuse; however, different content management systems handle granularity differently. Only with a thorough knowledge of your granularity requirements and how you plan to implement reuse can you select an appropriate content management system or customize it to meet your requirements.

Another aspect of granularity is "bursting". Bursting is the process of breaking content into element parts so they can be stored individually in the content management system. When determining your level of granularity, you also determine which elements are stored individually, but not all tools have a built-in bursting mechanism. This forces authors to create the individual reusable elements first (e.g., individual steps) then assemble the individual elements into the complete piece of information (e.g., procedure). This is a counter-intuitive process and very frustrating for authors, who prefer to create content in context (e.g., an entire procedure rather than an individual step). To avoid this, make sure your content management system can support bursting.

Linking

Content frequently includes links such as hypertext links between sections of content in online materials or cross-references to content in paper. When content is reused, the destination for the link may no longer exist in the information set, or the location of the destination may change depending upon where the content is reused. Your system should:

- determine if a link exists and if it does not, then it should hide the link
- link content so location does not matter (e.g., link using element IDs)

Controlling reuse

You can control reuse in multiple ways:

- Opportunistic reuse
- Systematic reuse
- Nested reuse
- Workflow

Opportunistic reuse

Opportunistic reuse occurs when authors make a conscious decision to find an element, retrieve the element, and reuse it. Opportunistic reuse is the easiest reuse because it is not supported by technology; rather it is supported by author education and an effective searching mechanism that provides for full-text search as well as search based on metadata. In fact, opportunistic reuse relies very much on the metadata you define as part of your IA. If you are employing opportunistic reuse, it is important to know that the system will support both types of searches (full-text and metadata).

Systematic reuse

Systematic reuse is automatic reuse. This means that the content management system automatically populates authoring templates with reusable content. Systematic reuse relies heavily on your information architecture to define where content is reused (e.g., which element takes reusable content) and on metadata to correctly identify which content to reuse. Systematic reuse essentially personalizes content for authors instead of users and employs the same technology. If systematic reuse is part of your IA, then you must select tools that support that technology.

Nested reuse

Nested reuse is content that has a number of reusable elements contained within a single element. The individual elements can be filtered out depending upon requirements. Nested reuse is a useful way to handle very granular content. If nested reuse is defined in your IA, your technology must support semantic models and metadata on granular elements (see the previous discussion of Semantic models in this article).

Workflow

People don't tend to think about workflow when they think about controlling reuse. However, workflow can play a valuable role in controlling reuse. For example, Author1 creates an element which goes through the review and approval cycle (workflow). This element now becomes approved source. Now what happens when Author2 reuses the element, modifies it and has it reviewed and approved. Does the revised element become source? You decide based on your business rules. Your workflow helps you to control when an element is considered source based on your corporate processes. Make sure your technology can use workflow to control content at the element level, not just the information product level.

Security

Security is applied to content to ensure only the appropriate people can view, edit, delete, or reuse content. You define security as part of your information architecture, determining if an element carries its own security or if it is derived from the information product where it resides/is reused. Security at multiple levels is ideal and you should have business rules that determine how security is applied, depending upon how and where an element of content is used. Ensure your content management system supports security at both the element level and the information product level.

Summary

Technology impacts your information architecture and information architecture impacts your technology selection. Create a preliminary version of your information architecture to guide you in your tool selection, but don't finish the information architecture until you have selected your tools and can fine tune your architectural decisions. If the tools are selected first (I highly recommend that you don't do this) make sure you know the functionality of the system as you begin your information architecture and customize the technology if necessary.

XBRL (eXtensible Business Reporting Language)

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It is difficult to explain XML and its value because XML is such an abstract concept and still widely misunderstood. Sometimes it's easiest to describe XML as an enabling technology, and by talking about the ways in which people are using XML successfully. One such success story is XBRL. In this article, we spoke to Diane Mueller-Klingspor, currently heading up the XML and XBRL efforts at BusinessObjects, for her views on XBRL.

XBRL (or eXtensible Business Reporting Language) is arguably one of XML's success stories. It uses the best of XML—structural focus, separation of format from content—to provide financial information to a wide audience n a format capable of satisfying many different business needs. XBRL International is leading the effort to develop XBRL and they describe their goal as follows:

> XBRL is being developed under the umbrella of XBRL International, a not-for-profit consortium of approximately 250 companies and agencies worldwide working together to build the XBRL language and promote and support its adoption. The consortium members meet periodically in international conferences, conduct committee work regularly via conference calls, and communicate in email and phone calls throughout the week.
>
> This collaborative effort began in 1998 and has produced a variety of specifications and taxonomies to support the goal of providing a standard, XML-based language for digitizing business reports in accordance with each countries' accounting rules or with other reporting regimes such as banking regulation or performance benchmarking. [1]

A major goal of XBRL is to improve the business report product. It facilitates current practice; it does not change or set new accounting or other business standards, that is, XBRL should facilitate changes in reporting over the long term.

You can read more about the history of XBRL International, the missions of the working group, and get a better understanding of what XBRL is and how you might employ it in your organization by visiting www.xbrl.org.

Q & A with Diane Mueller-Klingspor

To get some firsthand feedback on the use and impact of XBRL on the financial industry, we went to Diane Mueller-Klingspor, currently heading up the XML and XBRL efforts at BusinessObjects (www.businessobjects.com).

What is XBRL?

eXtensible Business Reporting Language is a freely available electronic language for financial reporting. It is based on the industry standard Extensible Markup Language (XML). It is also based on accepted financial reporting standards and practices to transport financial reports across all software, platforms and technologies.

XBRL allows software vendors, programmers, and end users who adopt it as a specification to enhance the creation, exchange, and comparison of business reporting information. Business reporting includes, but is not limited to, financial statements, financial information, non-financial information, general ledger transactions, and regulatory filings such as annual and quarterly financial statements.

XBRL consists of a core language of XML elements and attributes used in financial reports as well as a language used to define additional elements and taxonomies.

XBRL and XML

XBRL is built on top of several XML initiatives. It uses several World Wide Web consortium (W3C) recommendations, including XML 1.0 and XML Namespaces, and refers directly to XML Linking. It also relies extensively on the XML Schema recommendation.

There are also ongoing discussions between the XBRL consortium and other bodies issuing XML specifications in the financial arena, including OAG (Open Applications Group), OMG (Object Management Group), FpML (Financial Products Markup Language), finXML (Financial XML), OFX/IFX (Open Financial Exchange), Acord Insurance XML) and ebXML (e-Business XML).

The scope of XBRL includes financial reporting and provides extensive detail in the representation and use of accounting conventions, which distinguishes it from these other efforts. Note that XBRL does not include transaction protocols. However, it does not specify the mechanisms by which XBRL documents are communicated or transported to other systems.

Who uses XBRL?

There are four categories of users:

- business information preparers
- intermediaries in the preparation and distribution process
- users of this information and
- the vendors who supply software and services to one or more of these three types of user

What are the benefits of using XBRL?

XBRL provides a number of benefits:

- Provides users with a standard format in which to prepare reports that can subsequently be presented in a variety of ways (e.g., multiple media or multiple organizations of content).
- Provides users with a standard format in which information can be exchanged between different software applications.
- Permits the automated, efficient and reliable extraction of information by software applications.
- Facilitates the automated comparison of financial and other business information, accounting policies, notes to financial statements between companies, and other items about which users may wish to make comparisons that today are performed manually.

What does this mean for preparers of financial statements? Will they need to learn XBRL?

Preparers will not need to 'learn' XBRL; the software tools they use to prepare statements must be able to import and publish XBRL-tagged documents much in the same way they currently must push content to the web using HTML. The onus is on the software vendors to provide XBRL-aware tools for the accounting and financial services market. What XBRL does is enable the content consumers (in this case, the Securities and Exchange Commission) to automate the analysis process much more rapidly and accurately, and respond to submissions in a timely fashion.

How do companies create statements in XBRL?

To date, a number of companies, including Reuters and Microsoft, have posted their 10Q/K results on their websites for interested parties to review. In Japan, Korea, and Australia, stock exchanges and regulators alike are accepting XBRL-tagged financials. The Financial Services Authority (FSA) in the UK and the Federal Deposit Insurance Corporation (FDIC) both have multi-million dollar projects in progress, that will allow these agencies to begin accepting and analyzing XBRL-tagged information.

Currently, most of the filings being submitted to regulators today are being authored with tools normally reserved for developers. The process is as follows:

- Create the company-specific set of XBRL schemas

  Usually, the schemas (or taxonomy sets) that map to the financial document are edited and extended by the company's resident XML/XBRL guru – generally this task lands on shoulders of a Business Analyst with an IT background in the Finance department of the filing company. This analyst works with the existing XBRL schema sets available today from XBRL.org and extends them to meet the company-specific needs.

- Author a financial statement using the company's XBRL schema

  This schema set (or taxonomy as we call them the XBRL world) is then used to create a template instance document for the financial statement (10K/Q) using a product like BlastRadius' XMetal Author.

At this stage an accountant from the company will generate the usual financial reports (balance sheet, statement of cash flow, income statement) from the company's financial reporting application. A number of the larger ERP companies, Oracle's e-Business suite for example, have the ability to generate XBRL-tagged versions of these reports which can then be imported into the XMetaL Author template. Otherwise, the reports are generated as Excel files (which mostly consist of tables of numeric information) that can be dragged and dropped into corresponding tables and fields in the template.

It should be noted that a typical 10Q/K document consists of much more than numerical content. The prose sections of the financial statement (narrative text), such as the Management's Notes and Discussion, must also be entered into the document. These prose sections can be entered directly into the template using XML authoring tools and distributed for review by all interested and required parties within the organization.

The key here to remember is that financial statements are made up of data from numerous sources such as report writers, spreadsheets, word processors. The goal of the author is to create a composite document that mixes prose and numeric data.

What is the difference between XBRL and FpML, Fix, FinXML, OFX, XML/EDI? What makes XBRL stand out?

XBRL is not a transaction protocol. XBRL includes financial reporting and provides extensive detail in the representation and use of accounting conventions, which distinguishes it from these other Financial XML standards efforts. It's built by accountants for accountants!

What is key to a successful XBRL implementation?

The key to success is to ensure the infrastructure for success in place. Check with your vendors of accounting applications, report writers, and authoring

tools, and make sure that incorporating XBRL is in their product road map. Make sure your auditors, and the accounting firms with which your accounting team works, has XBRL expertise.

What is the future of XBRL?

The future is now, the SEC recently announced plans to pilot accept XBRL, the FSA in the UK is working diligently on their launch for next year, and stock exchanges and regulatory bodies worldwide are building XBRL into their applications.

Additional Resources

See the following sites for more information on XBRL:

- XBRL: A case study in complexity (Info World, April 30, 2004), www.infoworld.com/article/04/04/30/180Pstratgegic_1.html
- Water Boards EMU Reporting: European reporting obligations fulfilled digitally (an XBRL case study from semansys.com), www.semansys.com/PDF/XBRL_Case_Water_Boards.pdf

Summary

The development of XBRL highlights the usefulness of XML when applied to content intended for a wide range of audience. It has become a standard (suggesting boundaries and limits) that is none the less providing much needed flexibility in content communication, so that information can be quickly and easily moulded to meet users needs. In a few years' time, consumers of financial information won't even notice that their annual reports, earnings press releases, and market research documents and web portals all have XBRL under the hood, but they will notice that the accuracy and timeliness of their data has greatly improved. And those responsible for content management will be using and reusing XBRL content in multiple information products.

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Technology's Impact on its Users

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While implementing a content management system is indeed a technology implementation, it has other drivers, related to people and processes. Implementing a CMS is never just about installing a system; it has tremendous impacts on its users, which must be assessed throughout the project life cycle, and on an ongoing basis once the CMS is up and running. This article explores the impact that CMS technology has on its users, and suggests ways to make the acceptance a technology more successful.

In the late 1700s, the German physicist and philosopher Georg Christoph Lichtenberg wrote:

> There is no greater impediment to progress in the sciences than the desire to see it take place too quickly. [1]

What held true then appears to hold true today, as companies introduce more and more technology into the workplace, many times forgetting that technology has a significant impact on its users. Most technology implementations today are intended to help businesses "progress" in their line of work, to do more, to do it better and faster, and ultimately, to enhance their bottom line, either through reduced costs, or increased profits. Content management similarly makes promises such as faster time to market, reduced costs (content creation, maintenance, and production), and improved quality of content, and better use of "resources," both systems and people. These are all admirable goals for progress.

However, "progress" in business, like "progress in the sciences" can be greatly impeded by not taking users' needs into account and by not allowing users enough time to learn and become accustomed to new technology. Now, as many companies move ahead with content management implementations (whether restricted to a few departments or extending throughout the enterprise), many struggles come about as a result of technology, from the authors' and other implementers' (such as information architects and database managers) perspectives. This article explores technology's impact on its users, suggesting ways to slow down the "progress" by putting users' needs first.

A look at the issues

Implementing a technology solution such as a CMS is never a simple matter of buying the tools and installing them. It is not an easy process and there are many issues that must be addressed, most of which are not related to the technology. Rather, they are related to the people who will be designing, implementing, and using the system. Issues include:

- Not identifying and communicating project goals to everyone who will be involved
- Not identifying all needs, including training needs, for the technology up front
- Not thoroughly testing the system before buying
- Setting unrealistic deadlines

Identifying and communicating project goals

This is a change management function and is as critical as selecting the right technology. In fact, it should start even before the technology selection process even begins. In his article "Prepare for impact", Phillip Donetti states, "When it comes to implementing any large-scale project that has a major component of technology behind it, experience shows that its success is boosted by 70% if the change management process is comprehensively thought through and executed." [2] Activities to assist with change management include:

- Build a cross-functional, collaborative leadership team. Projects that involve the creation, production, maintenance, storage, dissemination, and use of content require the input from many different players from many different areas throughout the organization. The people who create content (in different areas within the scope of your project) will certainly need to be represented as will the people who use it. And, HR and IT are

critical as well; IT must install and maintain the system and HR must arrange for training on it. A broad stakeholder group that participates in the selection, design, and implementation of a content management system will be less likely to resist it and more likely to adopt any new or redefined processes.

- Hold facilitated sessions where all players are present and learn each others' needs. All areas affected by a content management implementation need to understand what is required to get content into the system, what is required to maintain content once it's in the system, and what is required to get content out of the system to support its various uses. They also need to understand how a content management implementation will impact their areas so they know what resources to allocate to the initial design and roll out of the system, and how much time to allocate to training. You need to access the breadth of organizational change to be able to address it.
- Prepare a change plan and a communication plan. Internal communication must start at the beginning of the project, when requirements are first identified. Communication must continue throughout, right up to the time the system goes live, and for awhile after so that users can give feedback. Consider creating a project site on your intranet that allows people throughout the organization to see status reports, project plans, and provide input. Also, it may be useful to contract with change management/communication consultants if your organization does not have this skill set in house.

Identifying the need for the technology

The purpose of a content management project is almost never just to install a new system for the sake of installing a new system! A CMS project almost always has other drivers, such as improving publishing processes, delivering dynamic content to users, or improving the structure of the internet/intranet or of other information products. And, those other drivers require involvement from the authors who create content, the reviewers who verify it, the editors who prepare it for publication, the users who read it. With your joint leadership team in place, you can define your content management requirements within the context of a business solution. Avoid developing "functionality checklists" and define what your real business reasons are for needing content management in the first place.

I happen to believe that the driver behind any content management implementation has to be the content. Amy Gahran, writing in CMSWatch, advocates driving a content management system implementation from a content strategy. She claims that the first step is to clarify content goals, thus "[marking] the beginning of your content strategy. Decide which groups you most need to reach, through which channels. Decide which basic types of content you need to supply in order to attract and satisfy your target audience(s) as well as further your core business goals — in that order. Determine how much content you should publish (based on your audience's needs and constraints), how often, and how it should be delivered. Start to consider whether you really need a CMS — and if so, which parts of your content production and publishing processes make the most sense to automate." [3] Wise advice, indeed. A content management system should always be based on what you want to do with your content.

Testing before buying

In their respective articles in this issue of "The Rockley Report", both Tony Byrne and James Robertson advocate testing of systems, with users performing the functions the CMS is intended to handle. In our interview with Tony Byrne, he stresses that "...one of the most common (and little understood) mistakes is a failure to actually test systems thoroughly to allow all parties to get comfortable with them—warts and all ... Some vendors will resist this tooth and nail. You need to hold your ground." [4] Likewise, James Robertson states that "the usability (ease of use) of a CMS can only be assessed by examining the system in operation." [5] However, you can only do this kind of testing if you have clearly identified the requirements for your CMS up front, a point also emphasized by Robertson. You have to know what you're testing—and what constitutes success—in order to truly evaluate how the technology perform.

Anne Pellicciotto, writing in E-Doc Magazine, also champions exposing users to "bits and pieces of the system, as they are being developed." She writes, "According to the Technology Acceptance Model (TAM), devised by Fred Davis at University of Maryland's Smith School of Business, perceived usefulness and ease of use determine an individual's level of acceptance and use of new technology." She further suggests that a "hands-on approach should be extended to acceptance and rollout phases, to generate additional good will, and good data upon which to base system adjustments." [6]

Setting realistic deadlines

In our experience at The Rockley Group, one of the biggest issues with a technology implementation is setting unrealistic deadlines. We've seen organizations ask project teams to implement a content management system that includes new authoring tools, new structured authoring methods, content reuse, metadata, conversion of thousands of pages legacy content, as well as a new interface for displaying the content...all within a few months. When unrealistic deadlines are set, then all the collaborative work required to identify needs, analyze content, communicate project goals, provide training, conduct usability assessments, etc. suffers. We've also seen that faced with tight and often unrealistic deadlines, organizations usually eliminate usability assessments, which are key to the design, structure, and ultimate acceptance of the system.

So, how long should you allow for a content management implementation, or any large scale technology implementation for that matter? It depends. You have to plan for all phases of the project, including training and usability, then sent your deadlines. To start out with a deadline before you have assessed the scope of the work almost guarantees that you will have problems (both technical and user acceptance) once your system goes live. However, if you do have a tight deadline, then define the scope of your project to accommodate the deadline, but keep all critical phases of the project, such as analysis, design, training, and usability in the plan.

Summary

I like the way Bryant Duhon, editor of AIIM E-Doc Magazine, sums it up:

> ECM is not easy and it's not limited to the technology. However, the technologies do work and they are constantly improving. It's up to you to ensure that these critical technologies are appropriately matched to your company. ECM technologies, properly implemented, improve access to your content, enable the reuse of content, and can provide faster time to market. Just remember that technology is only part of the solution. [7]

It's dangerous to discount the impact that ECM technology, or any technology for that matter will have on its users. Be aware that the system is only as effective as the people who use it perceive it to be. Take measures to lessen the negative impact and focus on making the introduction of new technologies a positive experience, for everyone involved.

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Building a Business Case for Content Management

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This article provides direction for those seeking to build a business case for a content management system (CMS) in a specific functional area of an organization. While there may be resources in your organization to help you with technology and automation projects, in most cases you need to drive the initial efforts from your functional area. You are the subject matter experts, you know the issues you are up against, and what to do to solve them. Getting others in your organization—where there are so many needs and so many things to do—to listen and to allocate resources is the difficult part. But, if you go about building your business case the right way, it can go a long way toward building credibility, raising visibility, and making your CMS implementation a reality.

Introduction

For a small technical communications group in a large medical device company, gaining management support and approval for implementing a content management solution was not a simple matter of selling an "efficiency and savings" project to management and securing some funding. Instead, the path to approval, and ultimate implementation of a content management system (CMS) involved a tremendous amount of time, energy, resources, and diligence to build a compelling and highly focused business case.

We needed a business case that was clear, simple, and smart enough to attract interest and support, yet detailed enough to meet organizational requirements for what was, essentially, an information technology (IT) initiative. To do so, the business plan had to include a finite scope, identify issues at the root cause level, and present objectives to address each issue. The approach to identifying the solutions and the recommended technology choices had to link directly to the problems and objectives and be aimed at delivering tangible, cost-returnable benefits. Return on investment (ROI) had to be measurable, attainable in the short-term, and it needed to come solely from the technical communications functional area.

Identifying the high-level need

When you start, you may know only two things:

- You "need" a content management system
- The high-level, philosophical arguments for content management that you read about on websites and hear about at industry conferences will not suffice to convince potential purchasers or users of the system that it is needed, let alone to secure the funding or resources you require

So you need to start at the ground level. Before anything else, you must:

- Gain a thorough understanding of your situation (to begin building credibility)
- Achieve buy-in from the would-be users and ensure them that they will "create" the system solution by defining what it needs to do, and how it does it
- Educate management and other decision makers in your organization on content management and its potential *direct* and *measurable* benefits for your business

The fastest, most effective way to achieve all these goals at once is to contract with an industry expert (consultant organization) for a needs analysis and recommendation. From a third-party industry expert, you get a baseline of where you stand, the general causes behind some of your greater problems, and possible options for addressing them. And, it will likely get you the buy-in from your functional area staff, as these would-be users of a CMS will finally have someone who understands their issues, and maybe more importantly, someone who can document them objectively for sharing with others.

Digging deeper: getting to the root of the problems

Quite often, the core issues identified in an industry-expert analysis are wide-ranging, cross-organizational, and simply too complex to resolve all at once. If you are a single department looking for answers—with no ability or desire to drive sweeping cross-business process and cross-organization change—then the issues and recommendations, while interesting to management, are not ones that you can take forward. You need to dig deeper before you can begin building your case.

You need to thoroughly analyze what your functional area does and how it does it. One approach is to create an end-to-end, step-by-step map of what it takes to generate a single instance of your end product (for instance, a published document). Breaking down formal department processes, instructions, and forms that are completed is only part of it. The other half is identifying all the informal user steps, tasks, and activities that go on day in and day out but remain undocumented, unrecognized, and accordingly, not officially identified as part of your area's resources from an organizational standpoint.

Creating an end-to-end, itemized activity breakdown of your process is only part of digging deeper. You need to identify where "what you do" and "how you do it" is preventing you from doing your job effectively and efficiently for the organization.

A simple method of evaluating might be to give weight to each step. How much resource does it consume (its burden)? How often is it done (its frequency and repeatability)? Simple weighting (such as 1, 2, 3, for low, medium, high) helps find the items that bog down a department, and the core issues and problems you need to focus on at the root of your business case. For instance, you may find that a simple (not very burdensome), previously undocumented, informal task may be repeated many times during the lifecycle of a document (and will get a high repeatability weight of 3). The high repeatability rating shows the task as being one you need to address.

The desired outcome of digging deeper is a clear picture of what needs to be fixed and what works fine as is—at a granular, task level.

Finding real ROI

The burdensome and repeatable steps can become the core drivers of your proposed return on investment. Using these specific, detailed metrics, you can analyze how and where your cost center dollars are being spent: Are writers really writing, or are they spending 60 percent of their time on administrative tasks that are either very burdensome or often repeated? From your end-to-end analysis, you need to determine what types of savings (for instance, in person-resource hours) can be associated with fixing some of the glaring root problems you identified.

Knowing where your cost center is lean versus where you are drowning (often, unknown to you prior to this point) in resource allocation is critical in determining where you will focus your project efforts and direction. You need to go after real, measurable, and attainable ROI, mapped directly to issues identified in your end-to-end analysis.

ROI related to specific activities, issues, or problems provides other benefits as well. You now have solid evidence to avoid a potential solution path that targets things you were doing effectively and misses the areas and items you really need help addressing. You gain credibility within your organization by demonstrating that you understand the workings of your functional area and cost center at an in-depth level. You know and are able to articulate how efficient, or inefficient, you are at providing your core competencies to the organization.

Identifying the risk

An analysis of how your department works at the step level begins to identify where the areas of "risk" are in your process and day-to-day project workflow. But risks don't always sell well to management, as the consensus can be to "keep doing what you're doing because you've been getting it right, with no problems, so far."

However, risk can resonate if you can find the right projects coming down the pipeline. What are the highly-visible initiatives that could result in higher costs to both the organization and to customers if things go "wrong" in your area? Measure those risks, determine what the potential costs might be if risk becomes reality, and in turn, show how the risk can be mitigated by addressing the areas of concern you have identified.

Gaining Management Support

Crafting the case

Armed with metrics, ROI, and an assessment of risk associated with real business initiatives, you are ready to involve management to help you craft the case. Your situation begins to look real and compelling to your management team because you have detailed research, analysis, and current cost and future ROI numbers. Management sees that you are going after the right issues, and are chasing the most significant ROI. You've bridged the gap from months ago when you had only high-level analysis and recommendations to show them. Your management team knows what will sell, and what will not, and seeing that you have plenty of data and metrics available, they will want to help you build and sell your business case.

Your management team (along with input from other areas, such as IT, quality, and finance) can help you prepare the appropriate style of business case that typically works in your particular organization. The business case style we used was a stepped approach. We built our case in steps or components: a problem statement; a set of goals and objectives to address those problems; an approach that describes how to meet the goals/objectives; recommended steps to take; and finally, the recommended solution.

This stepped approach worked well in our environment for a number of reasons:

1. As we gathered input and solicited assistance, by working on the steps one at a time in a linear fashion, we could keep those who were helping us (management, IT, others) focused.
2. The completion of each step in our business case built credibility with our management team and with other key decision-makers, such as IT.
3. During the presentation stages, we had our situation chunked into bites that were concise, presented easily, and could be understood by various types of audiences.
4. As we gained approval for each component in our business case, we essentially created "bankable" items. For example, once we gained agreement on our problem statement and objectives, we would not need to revisit or rework them.
5. Credibility of our case built with the approval of each step, making the final approval of our ultimate recommendations a much more logical progression of events.

A stepped approach might be constructed as follows:

- **Problem statement:** You have all the problems identified, but you need to sift that information down to a small set of easy-to-grasp issues that can be taken forward. All the research, analysis, documentation, and metrics must be honed down to a concise problem statement (for example, four or five bullet points), each one with direct supporting data. Once you have these common problems identified and your next-level manager's support, they become the root of your battle cry, or the repeatable message that will follow your project through planning and implementation. The problem statement is the first thing that resonates up and across the organization. If done well, others will start speaking your battle cry for you.
- **Objectives:** For each component in your problem statement, articulate a clear, and directly matching, objective to solve that problem. Objectives are not tool solutions to the problems, but rather what your functional area has determined should be done to address each problem. Again, you are working on building credibility within your organization, and you must be sure you are not just telling management to buy some expensive software or system that "can fix everything." This is not the appropriate time to be recommending a solution, and if you appear to be, it will be obvious. But you can start setting expectations by mentioning terms like "technology" and "automation," in the sense that you need to "leverage" them as part of your solution.
- **Approach:** Show management an approach (the optimal way) to meet each objective. The approach is likely to be the first time you start talking a little bit about tools and technology. For an objective that is something like "leverage technology" or "leverage automation," your approach can include "going out and looking at what technology might be available, both within the enterprise and in the general marketplace. This is clearly the place to make it known that you are going to research software, systems, etc., that will need to be purchased, thus continuing to set expectations. Your organization is likely to buy in to the "looking at software and systems" part of your approach because they agreed with and approved your problem statement and objectives.

  Your approach must also include a timeline that shows the at-risk projects you identified, and that your objectives can be implemented before those projects suffer. You need to point to the calendar and identify for managers, finance, and other key decision makers, the point at which you are likely

to need funding (assuming all goes well and your ultimate recommendations are approved) in order to head off the risks you identified earlier.

The timeline also provides the vehicle for you and key approvers in your organization to start talking about the potential amounts of money this effort will require—in ballpark terms only, as you have not done any tools research. But you need to have the discussion about budget so that you get the commitment from management that they are willing to allocate and approve the (general) estimates in the defined timeframe, if the ultimate recommendation is one they can support and the ROI is there to fund it. It is critical to set expectations about time and money. Do not hide potential dollar amounts. You must gain at least a head-nod for the ballpark expenses (which should be easy to obtain since you showed your ROI is real).

- **Recommended steps:** Define the "next steps" that you are asking your management team to support. It must be clear to management that you are going to do the necessary research and investigative work and come back with a recommended solution. Showing "next steps" gets you a firm "OK" for your approach, and the backing from management to investigate and define the recommended solution. Your project's official recognition by management may also be a key to your gaining access across the organization to resources you need (again, such as IT, finance) to get your research done and build your recommendation.

The desired outcome is:

1. Agreement and approval: Agreement with your problem statement and goals/objectives, and approval for your approach and recommended steps. This gives you the clearance (really, the authorization) to do your work and return with a recommended solution.
2. Accomplishment of expectation setting: Agreement and approval makes it clear to decision makers that you will be returning with a recommended solution. Your timeline (based on the future risks that need to be addressed) shows when you will be coming back with the recommendation, and that you expect them to act on it when you do. Alternatively, if they do not want you to do the work and identify the solution, they need to tell you at this point.

Preparing the recommendation

After having done so much work to sell your project, it is critical that the solution you propose includes spending money on tools and technology that will solve your "real" problems—those in the problem statement—and thus meet the goals and objectives you committed to, and provide the ROI needed to pay for it.

With the appropriate organizational approvals, the challenge now is to gather the necessary input from your users and draft your requirements. As you gather these requirements (and there will be many), go back to your detailed department analysis work and associate the requirements with the items where you identified the opportunity for greatest improvement, and the most significant ROI. By linking back to that detailed department activity level, your requirements will align with your problem statement, overall ROI, and goals/objectives.

Matching requirements with ROI and previously identified critical problem areas also ensures that you remain on target as you assess technology and tools. You will be able to press the software and systems providers on whether their systems and solutions can deliver what you need, and where you need it. In other words, you are much less likely to purchase a system that completely misses the mark.

To facilitate the processes of gathering requirements and obtaining systems and software information from vendors, leverage resources within your organization that have these competencies. Work with areas such as IT and procurement, which regularly assemble requirements and solicit vendor proposals. If you have to do the work yourself, ensure you follow the protocols for the requirements and selection processes used by those areas. Ensure that you follow the organizational standards for documenting requirements, preparing a statement of work, issuing requests for information/proposals (Riffs/Riffs), and scoring and assessing the vendor submissions. This will avoid a scenario in which you are told to do the work over because you did not follow standards for this activity. Furthermore, following protocol and standards continues to build your credibility.

If requirements are correctly prepared and defined, the ultimate solution, including system and software selection, will be obvious to you and the critical decision makers in your organization. With everyone hav-

ing supported you to this point, they now have a stake in your success—and none of them will want to push you in an alternative direction that might result in failure (for you, for them, or for the organization). At the point when you are finally asking for final approvals and signatures for funding, support for the recommended solution will run deep and wide across your organization.

Summary

The result, a properly developed business case, will help you gain the multi-level and cross-functional support and sponsorship needed to promote your initiative through the rigorous scrutiny of the approval process and secure the necessary funding. Those same sponsors will ensure that the infrastructure and organizational support are properly allocated and in place as you move ahead, avoiding new obstacles and surprises down the road to implementation. For you, what this might mean is that the most difficult work has been completed before the project activities even get started.

Developing an Intranet Content Management Strategy

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Background

Our client is a Canadian organization that provides financial solutions (loans, insurance and business services) to the agricultural sector. In 2003, its fledgling intranet was suffering from navigation and content issues.

In a bid to move the intranet from an under-funded "off the side of the desk" project to a business-critical tool that would increase productivity, the organization researched and purchased an enterprise content management system (Interwoven's TeamSite) and hired an intranet manager. The intranet manager brought us in to develop and help implement a content management strategy for the intranet.

Issues

Our initial assessment indicated that the organization's intranet wasn't meeting the needs of its users or the business. Content creation and management costs were increasing even as employee productivity and satisfaction levels were decreasing. The organization had realized no return on investment for its content management system.

- The organization didn't have a centralized content development group or qualified writers in the business units. There were no unified content standards or processes. Content was produced and maintained by the subject matter experts who didn't have the necessary skills or time to produce quality content.
- The information architecture and interface design didn't make it easy for users to find information or create a positive user experience.
- Content didn't meet minimum usability and accessibility standards. It consisted primarily of Word documents and Excel spreadsheets hidden behind HTML menus. These documents were difficult to find, scan, or use online.
- The organization had a powerful content management system, but it wasn't being used to automate workflow or manage content effectively. It simply served up the paper-based documents, which were more difficult to use online than when they were distributed as paper documents.

Goals and opportunities

Our goals for this project were to deliver an information architecture plan and a content management strategy that the client could implement and build on for several years. We wanted to help the organization develop new standards and processes for developing and maintaining internal content through a centralized content management group. Specifically, we set out to:

- Support the organization's commitment to customer service, innovation, leadership, and knowledge management.
- Make information more accessible and usable. In the early stages of developing its intranet, the organization's priority was to make information available online. While that was a step in the right direction, the organization now needed to realize significant productivity gains and employee satisfaction.
- Reduce costs for developing and managing information. We wanted to help the organization maximize its investment in TeamSite to automate workflow and manage content. We wanted to help eliminate information silos and duplication of effort and content across the organization.

Given the content management system the organization had purchased, we saw many opportunities for reusing content for multiple audiences and across multiple media. We also planned to leverage the power of the system to support archival, version control, and bilingual content requirements and use metadata to facilitate content relationships and more accurate searching.

What we did and why

We started by doing an inventory of the intranet's content. We met with content developers to review content standards and processes and we studied users' needs.

Based on the results of our analyses, we prepared a comprehensive, long-term content management strategy, documenting priorities, roles and responsibilities, governance, workflow, content standards, and guidelines and metrics for success. We developed information models and metadata dimensions, and then created a new information architecture, layout, and navigation plans.

To test our new architecture, we built a prototype of the first and second navigation levels of the intranet, designed a new search interface, and rewrote two content modules using structured writing principles. The results of the testing were positive. Users were able to learn the new navigation and layout very quickly, and in comparative tests, all users found information more quickly than with the existing site. Those users who preferred to use search found the new interface more comprehensive and intuitive. Only one label posed a problem for our users, so we modified it based on their comments.

Once the new architecture, navigation and layout were approved, we began work on a pilot project. We redeveloped and repurposed the Human Resources policies to demonstrate how quality content should be structured for online use.

Challenges

The biggest challenge was the organization's attitude towards internal documentation. It was viewed as necessary overhead expense rather than a valuable corporate asset.

Another challenge was the technology. The technical side of the intranet was handled by an in-house web team, rather than the corporate IT department. While the web team was comfortable with web design and HTML, implementing and managing an enterprise level content management system was outside their experience. The web team faced a steep learning curve with TeamSite.

Added to these challenges was the reluctance of the subject matter experts to relinquish their role as content developers to the centralized content management group or to adopt the content standards and guidelines.

Benefits

The redesigned intranet was only recently launched, so we're still in the process of gathering information to assess the tangible benefits of the project, but here's what we know so far…

- User feedback about the structure and navigation has been very positive.
- Usage has doubled from a year ago.
- A recent survey by a Human Resources consultant indicates employees view the intranet as the leading source of performance support in the organization.
- We decreased the word count of the Human Resources policies by 40%; the content is modular, concise, scannable—and less costly to translate.

Outcome

While we're pleased with the outcome of the project so far, not everything has been positive. Some problems stem from the web team's inability to implement TeamSite in the way needed to support the information architecture and content management strategy. For example, search was implemented incorrectly. Metadata was not implemented, affecting not only the search, but also the ability to reuse and link to related content. Workflow was not implemented, affecting the automation of the content creation and maintenance processes.

Some of the business-critical content is still being developed by subject matter experts, who are not following the structured writing standards and guidelines set out in the content management strategy. They produce long, convoluted content that's difficult to link to and impossible to reuse.

In addition, the organization didn't establish a number of the baseline metrics set out in the content management strategy, making it difficult to obtain a true measure of the project's success.

Lessons learned

While content management is business process, not technology, enterprise content management requires the business process be supported by the chosen technology. The quality of the technical implementation is as critical to the success of the project as the quality of

the strategy—and in this case, the strategy was built around leveraging the capabilities of TeamSite. As long as the organization uses TeamSite as an authoring tool rather than a content management system, it won't fully realize the goals and benefits set out in its content management strategy.

In implementing content management, compromise needs to be weighed carefully. Throughout implementation, the content management team made what it thought were small compromises to save time and avoid conflict with subject matter experts, graphics designers, and technical staff. But these compromises caused usability issues, e.g., using a fixed-pixel layout resulted in a printing problem for users. And, not capturing baseline metrics means that it's now difficult to demonstrate return on investment.

New Content Management Community of Practice, Industry Conferences, Online References and more

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This month is an exciting one for those involved in content management. Most newsworthy, a group of thirty content experts from around the world have announced the formation of CM Professionals, an international community of content management practitioners whose purpose is to further proven best practices based on shared experiences of experts and peers.

Content Management Professionals: New "community of practice" offers services, information, education

CM Professionals will offer a members-only mailing list, a collaborative website, discussion forums, issue-oriented group blogs, knowledge wikis, syndicated web services, a job board, a professional directory, and a calendar of face-to-face meeting opportunities.

CM Pros President Bob Boiko, author of the *Content Management Bible* and Director of the University of Washington iSchool CMS Evaluation Lab, says, "As a group of CM practitioners, CM Pros seeks to create a membership organization that will enable sharing of information, practices, and strategies. This type of organization is needed to help move the discipline of content management forward, helping practitioners avoid the pitfalls and costly mistakes made by others."

"We also envision a variety of members-only services, including a newsletter, professional discounts, and summit-type gatherings devoid of marketing hype," says CMSWatch Editor and CM Pros Treasurer, Tony Byrne.

"CM Pros will raise awareness of content management as an essential discipline that builds value, both financial and human, for companies and organizations, says author of *Managing Enterprise Content: A Unified Content Strategy* and CM Pros Secretary, Ann Rockley.

CM Professionals will hold its first CM Summit, in conjunction with The Gilbane Conference on Content Management Technologies, Tuesday, November 30, 2004 in Boston, Mass.

As the organization grows, Boiko says, "We will work closely with other organizations that share many of our goals. We will coordinate our thinking about recommended standards for best practices with these organizations, and we hope to work closely with graduate schools that are training the next generation of information professionals."

To learn more about CM Professionals, visit www.cmprofessionals.org/.

For information on the Gilbane Conference on Content Management Technologies visit www.gilbane.com/CM_conference_Boston_04.html.

Online CM Product Finder: Locating information about content management tools

If you're looking for information on content management tools, look to ContentManager.net. The site offers a "product finder" feature that helps you locate products to meet your needs in three easy steps. The system walks you through each step, prompting you for information required to complete your search. Step one involves selecting the tool category (e.g. content management system, enterprise content management system, open source content management system). Step two asks you to further define your needs by providing selection criteria (e.g. XML support, workflow, automated publishing, content reuse, multilingual support, localization). Step three displays the results of your search.

Of course, you'll need to know what you need (what's required of your project) before you locate meaningful product data. There's no online help or instructional text available to help guide you toward selecting the appropriate criteria for your search. The site could be improved in the future by adding defini-

tions of each category as well as some instructional text designed to better define a search.

The database from which product finder recommendations are derived is not a complete inventory of what's available from all vendors (many of the big name CM software players are not included in the database), but it's a great starting place for those searching for CMS software that meets specific business needs. As the database grows, it will become even more useful.

Graphically pleasing and easy to use, ContentManager.net is available in both English and Dutch, and offers a product comparison feature (a central repository for CMS vendor information), access to a content management glossary of terms, a resource library, job board, newsletter, online magazine, and more. It's a worthwhile resource for any content management professional.

To learn more, visit www.contentmanager.net.

Open Source Content Management: OSCOM 4 Annual International Conference

Wednesday, September 29th - Friday, October 1st, 2004
Zürich, Switzerland

The Fourth International Open Source Content Management Conference will feature open source product presentations, case studies, technology presentations, and a track dedicated to Apache projects.

Some topics include:

- Content and Interface Accessibility for your CMS
- Seamless Content Management with XUL and XAML
- Interpersonal Content Management
- Drupal - gluing people and code together

To learn more, visit www.oscom.org/events/oscom4.

The Gilbane Conference on Content Management Technologies

Wednesday, November 30 - Friday, December 2nd, 2004
Boston, Massachusetts, USA

According to conference organizers, The Gilbane Conference on Content Management Technologies provides "everything a project team needs to know, but also offers a look ahead at upcoming technologies, 'new' best practices, and a broader look at the technologies necessary to supplement core content management applications."

Leaders from the analyst, consultant, integrator, vendor, and enterprise communities will chart the course of the content technology markets, and provide advice, techniques, best practices, and case studies to help businesses understand and successfully implement the most critical content technologies.

Some topics include:

- Enterprise content management
- eForms
- XML
- Authoring tools
- Multichannel delivery
- Content security
- Multi-lingual content management
- Web content management
- Taxonomies, categorization & search
- Topic maps
- Information architecture and modeling
- Brand management
- Syndication
- Digital rights management and rules management
- Metadata development and management
- Integration with other enterprise systems
- Enterprise content architectures
- Open source CMS, databases, and tools
- Security
- Standards technologies and their effect on content strategies

The newly formed Content Management Professionals (CM Pros) organization will hold a special one-day "summit" on November 30, in conjunction with the conference.

To learn more, visit home.lighthouseseminars.com/lighthouse/ccmt.html.

Content Management Professionals "Summit" 2004

Wednesday, November 30, 2004
Boston, Massachusetts, USA

Content Management Professionals (CM Pros), a group of content management professionals from around the world, will hold its first "summit" in conjunction with The Gilbane Conference on Content Management Technologies, Tuesday, November 30, 2004 in Boston, Mass. (US)

The CM Summit is a peer-to-peer meeting. Sessions will take the form of participatory discussions—no "talking heads" reading slide shows—facilitated by some of the world's top CM experts: Bob Boiko, Ann Rockley, Tony Byrne, Frank Gilbane, Erik Hartman, Mary-Lee Kennedy, Brendan Quinn, and many others.

Some topics include:

- Aligning content strategy to business strategy
- Making the business case for content management
- Assembling a content management project team
- Auditing content

"Birds-of-a-feather" sessions (informal gatherings of people with common interests) are planned for lunch at the Summit and for dinner at a Boston-area restaurant. Summit sessions will be videotaped and made available online to members who cannot travel to Boston.

To learn more, visit: www.cmprofessionals.org/summit/program.html.

Contributors

Scott Abel

Scott Abel is a freelance technical writing specialist and content management strategist whose strengths lie in helping organizations improve the way they author, maintain, publish and archive their information assets.

Tony Byrne

Tony Byrne is Founder and Editor of CMS Watch (www.cmswatch.com) and principal author of *The CMS Report*. Tony Byrne has established himself as a leader in understanding content management technologies and their role. CMSWatch.com, was founded by Byrne in July 2001, and provides an independent source of information, trends, opinion, and analysis about Web Content Management (WCM) solutions.

Steve Huffman

Steve Huffman is the Content Management Project Manager for Medtronic Core Neurological Technical Communications in Minneapolis, MN. Steve initiated the content management effort for Technical Communications, and is currently overseeing system implementation. He has 18 years of technical communications experience, and has initiated and managed automation efforts for publication groups in the corporate, education, government, and non-profit sectors. Steve is a member of STC.

Janice Jones

Janice Jones is Manager of Medtronic Core Neurological Technical Communications in Minneapolis, MN. In her current position at Medtronic, Janice sponsored a major content management system initiative for her department and secured multi-year funding and resources for project implementation. She has 16 years experience in the medical device industry and the creation and publication of FDA regulated product labeling. Janice is a senior member of STC.

Pamela Kostur

Pamela Kostur is a Principal with The Rockley Group, specializing in information analysis, information modeling, and structured writing to support a unified content strategy. Pamela has over 18 years experience developing information solutions. During that time Pamela has completed many projects and presented papers at numerous conferences on topics including iterative usability, miscommunication, structured writing, editorial "magic", building and managing intranets, creating usable online documentation, unified strategies for web-based learning, information modeling and analysis. Pamela is a co-author of *Managing Enterprise Content: A Unified Content Strategy* with Ann Rockley and Steve Manning.

Steve Manning

Steve Manning is a Principal with The Rockley Group and has over 16 years experience in the documentation field. He is a skilled developer of online documentation (WinHelp, HTML Help, Web sites, XML, and Lotus Notes) and has created single source production methodologies using key online tools. Steve has extensive experience in project management and has managed a number of multiple media, single source projects. Steve teaches "Enterprise Content Management" at the University of Toronto, and is a frequent speaker at conferences (ASIS, AUGI, STC, ACM SIGDOC, DIA) on the subject of XML and Content Management. Steve is a co-author of *Managing Enterprise Content: A Unified Content Strategy* with Ann Rockley and Pamela Kostur.

Diane Mueller-Klingspor

Diane Mueller-Klingspor is currently heading up the XML and XBRL efforts at BusinessObjects. In the past, she's filled roles as director of research, VP of new products, and VP of professional services for companies like BlastRadius, MakeTechnologies, and ACL Services.

James Robertson

James Robertson is the managing director of Step Two Designs, a vendor-neutral content management consultancy located in Australia. James has helped many organizations to select a CMS, and is the author of the *Content Management Requirements Toolkit*.

Contributors

Ann Rockley

Ann Rockley is President of The Rockley Group, established to assist organizations in adopting content management, unified content strategies, and information architecture for content management. Ann has been instrumental in establishing the field in online documentation, single sourcing (content reuse), enterprise content management, and information architecture of content management. She is a frequent contributor to trade and industry publications and a featured speaker at numerous conferences in North America and Europe. Ann is the author of *Managing Enterprise Content: A Unified Content Strategy* with TRG Senior Consultants Pamela Kostur and Steve Manning.

Tim Wilkes and Kelly McCurry

Tim Wilkes and Kelly McCurry are technical writers, information architects, teachers, and webmasters with more than 25 years of experience helping businesses plan and develop content and content management strategies. They own Scratchcat Communication Consulting, a Regina-based business that offers a range of strategic communication consulting and structured writing services.