White Paper



# The Multi-Website Challenge in Enterprise Content Management

Balancing Central Control and Distributed Content Creation

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### **Executive Summary**

Web content management is a staple technology for thousands of enterprises—and for good reason. Every enterprise needs a basic web presence, and organizations of even modest size and complexity have multiple websites. These multiple sites likely span a range of purposes and needs, including supplier and distributor extranets, customer support websites, and corporate and departmental intranets. Every enterprise's needs will vary, of course, but the larger the organization, the greater the likelihood that the organization will have multiple internal and external websites.

The abundance of websites results from sound business needs. Consider the need to work closely with suppliers, and how that requirement can be met by a content-rich and functional extranet. Human Resources is another likely arena, where the organization might want to provide benefit information through an interactive website. The examples abound, and the recent explosion of blogs and wikis has amplified the need.

A key element in multiple website management is understanding who does what when it comes to website design, content creation, and the day-to-day efforts to keep the site or sites going. Can these users be productive and efficient? The matter of scale is another central question. Are there only one or two sites? Or is the enterprise in the position of having dozens or even hundreds of sites, and serving content to intranets, extranets, and portals, with new websites regularly demanded by the needs of the business?

Multiple websites present challenges in many different typical workflows and processes. These include identifying and empowering the IT personnel who need to take the lead in web architecture to the line of business manager who must decide on the content and organization of the site and keep it up to date. Perhaps most significant are the needs of the content contributors. At the end of the day, they need easy-to-use tools that allow them to create content within the policies of the overall enterprise and the specific line of business.

Given the strong demand for multiple websites and the potential costs and inefficiencies of building these out separately, there is a natural need for the right technology. At minimum, organizations need web content management technology that uses IT resources efficiently and supports centralized strategy and governance; at the same time, the technology must give site managers and contributors the means to create and manage the content quickly and easily. We see in Oracle's multisite management solution the kind of technology that can address these challenging and critical business needs.

## **Enterprise Content Management and Multi-site Management**

How does an enterprise best manage content, especially when there may be dozens or hundreds of different websites the enterprise needs?

Obviously, there is no easy answer.

For one thing, there are significant limits to the utility of the vocabulary that is brought to bear to describe how enterprises can better use information. For example, "Enterprise Content Management" (ECM) is a name for many different things.

"Enterprise" refers to good-sized businesses, but there are huge differences between an operation made up of a number of departments and those that consist of divisions, conglomerations, or national or international subsidiaries.

Within the context of ECM, "content" refers generally to the information such businesses generate and use. The specific is what is important. In practice content can range from product marketing material on a single customerfacing website, to a bewildering array of internal data and records, technical documentation, employee human resource information, and partner and supplier input that power the business processes of particular divisions or product lines.

"Management," if anything, is even more amorphous than "enterprise" or "content," since different companies (and their various parts) have different content and differing requirements of the content, and hence, what to do with content components. The what, how, why and who of "managing" ranges widely from one part of an enterprise to another, never mind between different enterprises. Mix in questions about content output—internet, intranet, extranet, blog, wiki, or portal; localization, personalization, security, and compliance—and no one can really blame today's content manager for the confusion he or she feels.

Nonetheless, there are basic principles and best practices that can be described with a level of abstraction that can help content managers. In today's enterprises, it is no longer a question whether automating content furthers productivity and improves operations, nor is there any doubt that the Internet is the foundation for this work. These days any and every business bigger than a mom 'n pop shop knows that enterprise content management (ECM) is a necessity. And in almost every enterprise today, the content being created and delivered via the web goes through multiple sites within and outside the enterprise.

By rough count—and not including "home-grown" applications—there are now over 200 content management platforms available<sup>1</sup>. Which one does an enterprise need?

It is much better to start by asking: Who does what when it comes to the work of website design, content creation, and the day-to-day efforts to keep the site or sites going? The matter of scale is another central question. Are there only one or two sites, or is the enterprise in the position of having dozens or even hundreds of sites, and serving content to intranets, extranets, and portals, with new websites regularly demanded by the needs of the business, or new portals in which the enterprise is required to participate?

### The Multi-Site Management Challenge

Even though companies spend many billions of dollars a year<sup>2</sup> on buying and implementing web content management technology, challenges in managing business content remain all too real. For some enterprises that have embraced web content, the problem may still be one of too many contributors flooding a company's multiple websites with incorrect, redundant, hidden, and inconsistently structured information. Even more enterprises face the "Webmaster bottleneck," the slow deployment of the variety of Web-based content needed to serve the many audiences and needs of the business.

While instituted to bring control to content structure and usefulness, this ITheavy tactic creates its own problems of delays and higher IT costs. Furthermore, the "Webmaster bottleneck" can result in even more serious drawbacks for an enterprise. The original content creators—

<sup>&</sup>lt;sup>1</sup> Like market sizing, determining what is to be included in the list of content management software depends on who makes the selection using what definition. "More than 1000 products purport to manage Web content," notes *CMS Watch* (January 3, 2007).

<sup>&</sup>lt;sup>2</sup> According to Gartner, *Magic Quadrant for Enterprise Content Management, 2006* (October 2006): "Enterprise content management (ECM) was a \$2.3 billion software market in 2005 (based on total software revenue) and has a forecast compound annual growth rate of 12.8% through 2010." Such figures vary, of course, depending on who does the counting and the methodologies behind the market sizing, but all reports agree on the basic point that content management is a huge undertaking across significant market segments.



the "line of business" (LOB) people who carry out the essential day-to-day work of the business—lose flexibility, timeliness, and control of the very content for which they are responsible in presenting to customers, partners, and each other via the Internet, intranets, extranets, portals, and other devices.

But minimizing the role of the Webmaster and related staff such as developers and graphic designers is not the same as doing away with the Webmaster and his or her crew. Smart multiple-site content management requires an ECM platform that addresses the needs and appropriate contributions of each IT and LOB member.

### Business Needs Define the Need for Multiple Websites

The abundance of websites that companies are managing today result from sound and direct business needs. A main driver of multiple websites is that they are used to communicate to specific audiences. For any enterprise involved with complex markets and products, there are many types of audiences and many types of communication. Today's enterprises use websites to deliver customer-oriented material such as fact sheets, sales brochures, newsletters, and catalogs, reducing or eliminating expensive and inconvenient visits and meetings, as well as the printing and shipping of sales material. The web is a standard method of communicating not just with customers, but also, increasingly, for interacting with employees and partners via intranets and extranets and as for reaching beyond the enterprise itself through portals.

These days, the types of websites an enterprise may require in the efficient functioning of its business can vary in kind and number and be both internally and externally oriented. Some of the main categories include :

- Corporate Internet sites
- Localized public websites
- Supplier and distributor extranets
- Customer support websites
- Corporate and departmental intranets
- Sales portals
- HR websites
- Micro-websites for products, divisions, events, promotions, etc.
- Supply of Web content to portals or other enterprise
- Specific internal applications websites
- Corporate blogs and wikis

Furthermore, audience expectations—whether external prospects, business partners, or internal employees—have evolved over time. With its capability

to help people quickly and accurately find what they seek through search and personalization technologies and search engine optimization (SEO) tools, the web is now the foremost medium for delivering information the users demand. Meeting the needs of various audiences is definitely not a "one website serves all" solution: topic- and application-specific websites, including very particular micro-sites, can enable enterprises to better define and target key audiences and tailor content specific for them. The business need for targeted communication is grounded in efficiency.



Figure 2. In this fictional example, an enterprise's monolithic website makes for difficult service to any prospective customer looking for and wishing to purchase a particular product offered by one of the enterprise's many divisions. A micro-site dedicated to the product line would provide the desired information and actions more quickly and effectively.

Not every site has the same business or content management requirements. Intranets, extranets, and public websites present different business challenges while having equivalent levels of technical complexity for site development and management.

The business problem enterprises face is finding web content management systems that can keep pace with the website explosion *and* offer decentralization methodology to promote reuse, collaboration, customization within a controlled, managed environment. Without a supporting infrastructure, the process of creating and maintaining new sites is inefficient, inconsistent, and expensive. Teams simultaneously managing website development are often unaware of each other or of available, reusable information.

BUSINESS NEED OR DRIVER	INTRANETS	EXTRANETS	PUBLIC WEB SITES
Number of contributors	High	Medium	Low
Number of consumers	High	Medium	High
Volume of content	High	Medium	Low-Medium
Level of consumer security	High	High	Low
Level of contributor security	Medium	High	High
Content volatility	High	Medium	High
Need for immediate content updates	Medium-High	High	High
Need for workflow approval processes	Medium	High	High
Degree of personalization	Medium-High	High	Low-Medium
Importance of information dissemination	High	High	High
Importance of revenue generation	Low	High	Medium
Importance of branding	Low-Medium	High	High
Support for commerce transactions	Low	Medium-High	Medium
Support for compliance regulations	High	High	High

### The Multi-Website Challenge in Enterprise Content Management

Table 1. Business needs can be quite different across an enterprise's many websites. Here the relative importance of typical business needs of three basic website types is shown.

Even if centralized standards, guidelines, and services are recognized by the enterprise (typically through the IT web services group), the demands placed on lines-of-business, departments, satellite offices, or other geographical locations may require frequent and immediate changes to their particular websites. Business units need the freedom to create, manage, and customize their own websites to meet their specific requirements. Without the right ECM infrastructure in place, centralized guidelines and established processes may be overlooked or ignored.

### Requirements of Multiple Websites: Ownership is Key

The challenges associated with managing multiple websites lie in the many different processes involved within and across them, including:

- Maintaining content accuracy and quality
- Ensuring content is updated and removed on time
- Managing brand guidelines
- Enforcing governance and standards
- Keeping site development and maintenance costs down
- Meeting time-to-market demands (getting new sites up and running)
- Empowering hundreds of contributors without requiring HTML skills

The answer to these many challenges is a combination of technology and resources, but underlying any successful implementation is the need to be clear about appropriate roles in the stages of website design, development, creation, and management. Identifying and empowering the right owners of these various processes is key.

For example, corporate service groups—central IT, web development groups, brand teams are among the typical names—should take the lead for the following responsibilities:

- Central control over users and content
- Consistent corporate branding
- Information technology efficiencies and minimizing IT-related costs
- Compliance with corporate standards

On the other hand, it is the sensible responsibility of local business units (LOB, department, subsidiary, etc.) to assume the following responsibilities:

- Local control over users and content
- Individual product branding/differentiation of local business in context of larger corporate image
- Meeting local business objectives
- Lower costs but also improved productivity, time to market, sales, retention, or customer satisfaction

The differentiation between corporate service groups and LOB can be even further extended in order to understand the best strategies for managing multiple websites. There are three main categories of participants, as follows:

- 1. Corporate IT (Web Manager)
- 2. LOB manager (Site Manager)
- 3. LOB contributor (Site Contributor)





### **Corporate IT: Taking the Lead in Web Architecture**

Central IT can be thought of as owning site development and architecture, creating and designing website functionality. Participants may include Web specialists, developers, site designers, information architects, and usability experts, all working together as architecture, programming, and technology experts. Design teams are sometime supplemented by external agencies (branding, initial site design, etc.).

For enterprises with many websites, it falls on this central team of developers to create multiple sites based on structured, metadata-driven applications that enforce intrinsic website creation principles and methodologies that should include:

- Separation of content and presentation
- Separation of navigational structure and presentation
- Hierarchical website structure
- Template-based pages comprised of multiple regions
- Reusable content and XML-based fragments

The corporate IT group, therefore, will find necessary tools for easily creating and customizing libraries of reusable web components or fragments. These components may include templates, layouts, fragments, and navigation, as well as integrations with databases or enterprise applications like application servers, portals, or commerce servers.

### LOB Manager: Taking the Lead in Site Management

LOB managers are the audience experts, and so own website organization and the responsibility for success. The LOB manager best understands why the particular website is created, who it targets, and its underlying business case within the context of the overall enterprise strategy.

Depending on the enterprise's scope and business objectives, the site managers can be any of the following, or any combination of such:

- A single person who is responsible for an entire website (typically seen in mid-size organizations or for secondary sites within larger corporations)
- A team (headed up by a manager) that is responsible for the entire site. Teams tend to be formed around highly visible and strategic sites (.com, revenue-generating websites, customer extranets, large-scale partner portals, etc.).
- A team of site managers, where there may be separate managers for specific sections/portions of a website

With corporate IT managing the enterprise architecture and standards for the websites, the ownership of individual website design and ongoing maintenance may be distributed to the business units, departments, franchises, or other satellite groups. Website designers in the business units are free to design and customize their own sites, using secured libraries of reusable

components developed by the corporate or central IT group, thus maintaining a centralized and consistent look and feel. Little or no knowledge of HTML or other programming languages should be required. Central IT needs to provide designers with power and flexibility if advanced programming capabilities are desired.

Under these conditions, LOB managers can focus on how to best organize and improve their website and the user experience, including:

- What terms to use within navigation
- Which layouts best present their content
- What paths to visitors take on their website
- What content is most popular
- Who should be able to access different sections of the site
- Search engine optimization

### LOB Contributors: The Content Implementers

LOB contributors are the business users and content experts, and as such own the responsibility for new and updated content on the particular website. These users know best when the content is inaccurate, worded improperly, and when the content needs to be on the site or removed by a specific date. Within a well-designed multiple website management system, the contributors can work directly through the website to make their changes, preview, and then publish their changes immediately. Assets including text, presentations, images, hyperlinks, downloads, Flash files, audio and video, etc., can be added and modified by these knowledgeable content experts.

It is crucial that the multiple website management platform put content back in the hands of the LOB expert. Business users must retain ownership of content and be able to easily add, modify, or retire content using in-context WYSIWYG editing, web-based forms, or standard desktop applications like Microsoft Office. Content can be routed for approval via automated workflows and published on schedule.

## The Multiple Websites Balancing Act: LOB Site Manager as the Fulcrum

Any new site can appear well ordered, but in any active business, a site will grow organically, organizational requirements will change, and different people will take over responsibility for the site. Hierarchal structure for sites help keep problems from growing out of control, but unless this structure is both easily seen and consistently enforced, the site can all too rapidly devolve into a hard-to-use, hard-to-maintain mess. Among the manifestations of problems are inconsistent navigation, dead-ends, unused pages, and out of date and contradictory content, to name only a few of the potential problems that can happen all too frequently.

When it comes to WCM, audience experts—those LOB managers who daily carry out the work of the enterprise in its particular departments, divisions, and subsidiaries—play an evolving role. In many instances, especially involving secondary websites, individuals are simply "thrown into the fire" because they are either technical or know the website audience very well (e.g., the HR manager or the Partners manager). While this person knows a lot about the audience and business unit objectives, he or she (or they) may be fairly new to websites and web technology.

These business-world realities must be addressed by any multiple website management platform. In particular, several key conditions must be met:

- Centralizing web strategy and governance
- Using the IT web team efficiently
- Distributing content creation
- Giving site managers the means to manage

### **Centralized Strategy and Governance are Crucial**

Many enterprises have teams dedicated to website governance and strategy, addressing issues of design strategy and focusing on website usability standards and information architecture. Other teams may tackle business strategy, focusing on analytics, understanding the audience, and making sure the site or sites meet business objectives and goals.

The right technology gives a centralized web team the ability to create reusable website components, fragments, and layouts, and the ability to distribute the means to create websites to different divisions, departments, franchisees, etc. The central IT teams also can provide the interactive functionality for any of the sites, as well as the integrations with other applications, such as centralized security systems and regulatory compliance.

### Using the IT Web Team Efficiently

Additionally, an IT web team can empower the site managers and content owners to make changes to the sites on their own, and not need to wait in line for IT. In the end, the overall goal of the central IT web team is to develop a web creation platform that instills the enterprise's best practices in ways that are both automated and enforced.

While distribution of ownership of website management and content contribution is necessary for any enterprise struggling to manage multiple websites, ensuring the appropriate amount of control to maintain website functionality is also essential. After all, the nicest graphic design for a website will mean little if its utility is compromised should a site manager unwittingly change a URL or delete navigation. A content contributor should not be able to change fonts on a whim, nor insert images or delete pages without approval. An effective multiple website management platform must be able to offer sufficient site management and content creation and editing capabilities, but at the same time also provide the right amount of control and validation, to make sure edits and additions comply with the enterprise's standards.

### The Distributed Model for Content Creation

With multiple websites within an enterprise, the workload must frequently be distributed across the enterprise and into different business units. Different levels of distribution can take place, including:

- Distributed web teams, with centralized creation of components, but distributed site creation and maintenance to divisions and business units
- Distributed site managers and content authors, often found in different business units

While many of these individuals are spread across the organization and not a part of a dedicated website team, they should be governed by a single cohesive strategy and set of standards to make sure the websites are usable, adhere to branding guidelines, and meet the organization's online business objectives. Strategy teams work with website managers to create systems that ensure that all the individuals who play an important role in creating and maintaining the websites are following standards. These systems, however, must be transparent and non-intrusive, in order to permit the content contributors to focus on their contributions, not on replicating the work of central IT web teams and website managers.

### Giving Site Managers the Means to Manage

With the well-designed multiple website management platform, website managers are empowered to alter websites to suit changing business goals, without the technology getting in the way. They may want to try a blog, add this feature easily, and monitor its reception and participation by website visitors. They may try changing site navigation with a new element that aims to encourage particular actions by visitors, or adding a new content section that reflects a new product offering, while removing all references to last year's now-retired model.

The manager of the website (or his or her designated agents) can only achieve such actions if the means to do so are clearly defined, easily seen, and changeable. While the IT web team may be described as setting up the web hierarchy—creating the building blocks—the website manager must have the tools to build with those blocks—editing, adding, modifying, and changing the site as needed. Multiple website management platforms must give the website managers the ability, right from the website, to organize navigation, choose layouts that best display content, update search engine optimization terms, access links to usage reports and analytics, and identify, revise, or approve content for each section of the site. As the audience experts, these website managers must own the organization of the websites and define what types of material would best serve their audiences.

There are software tools available that can help enterprises to maintain consistent branding across all company websites, while distributing the creation and management of individual sites to business units and distributing the workload to website managers and content contributors. These multi-site web content management technologies allow web IT developers to focus on their own mission-critical projects for the enterprise by automating and enforcing key website creation and maintenance requirements. Such requirements include:

- Balancing corporate branding and central information technology (IT) needs with department, business unit and satellite office requirements for delivering timely, personalized web content.
- Enforcing consistent branding and corporate standards while supporting local business objectives and image differentiation.
- Enabling the efficient, consistent and cost-effective creation and maintenance of multiple websites.
- Increasing the volume of web content published without raising head count.
- Leveraging reusable, malleable fragments across multiple sites.

## Multiple Site Management in Action: Oracle's Multisite Web Content Management Solution

With its recent acquisition of Stellent, Oracle has added significant content management capabilities to its solution—specifically, for multi-site content management. How does this offer align with the requirements described above?

Oracle Universal Content Management includes the following multisite management components:

- *Site Studio Manager*, a web-based application for assembling, organizing, and managing site content
- *Site Studio Contributor*, a web-based application enabling users to create, edit, and review web content
- *Site Studio Designer*, a desktop application that allows web developers and designers to build fragment libraries or design and build websites

Oracle's multisite Web content management solution is based on a site development model in which site managers and designers contribute to and draw from a customizable library of code and content snippets. With this model, sites can be built quickly because they are rapidly developed based on common code and content snippets. This model of reuse lends itself to the concept of centralized policy and control while also enabling distributed management of multiple websites.

Along with this reuse model, the Oracle solution incorporates a number of features that help ensure that website creation and contribution best practices are *automated* and *enforced*:

- Hierarchical website structure and navigation
- Template-based pages comprised of multiple regions
- Separation of content and presentation

- Separation of navigational structure and its presentation
- Secure, regional-level content authoring and editing
- In-context contribution and updates directly from the website
- In-context site organization and management directly from the website
- WYSIWYG XML-based contribution forms
- Reusable content and XML-based fragments

The hierarchical website structure and navigation is a useful example. Site managers are presented with a clear graphical user interface that shows the current site structure and obvious mechanisms for adding additional sections or content within that structure. Consider in the following screen shot the HR intranet for the notional company Ravenna. Within the current site section "Benefits" the site manager wants to add a new subsection on Dental benefits.

Ravenna HR (refresh)			
Site Hierarchy	Section Layout	Site & Section Properties	2
Home Policies Benefits 401K Plan		he <b>Benefits</b> section.	
Life & Disability	Auto-genevate section ID     Manually enter section ID	Labet: Benefits pation:  Only: Name: benefits	

Figure 4. Adding a new section to an existing site with Site Studio Manager.

The benefits of this kind of approach are clear to us. Instead of submitting a support request to the web team, site managers can have the control that they need, accessible directly from the website. The manager can see the site navigation in a glance, and can readily add the new section without having to use any specialized tools or markup, enabling him or her to focus on the

editorial process and not on the supporting technology. The tools for deleting or reorganizing sections are just as simple, again allowing the site manager to focus on the business problem and not on the technological underpinnings. We think this kind of ease of use is critical, as content requirements are certain to change and users need to make judgments and modifications routinely.

Site Studio Manager provides a similar approach to metadata management. Here again, HTML editors and some content management systems would require the site manager to use arcane tools or to edit the underlying HTML. Site Studio Manager instead exposes the specific metadata that the site manager needs to create and possibly later modify. A form-filler interface makes the edits easy to accomplish while protecting the integrity of the underlying HTML markup.



Figure 5. This screen shows how Site Studio Manager supports creating metadata for a new section.

Site Studio Contributor and Designer offer similar straightforward interfaces for the users. Contributor, for example, provides menu-based interfaces for many common editing tasks that are complex and error-prone when the user is required to work in HTML. These include adding and editing tables, creating links, and working with other media formats such as sound and video.



Figure 6. A two-by-two table template. The tool for editing tables presents a familiar look and feel, and saves the contributor from having to deal with the underlying HTML coding.

But while ease of use is important, especially for contributors, Site Studio can configure different interfaces for different users. Some contributors might want to work in a WSIWYG HTML editor, but other users may be most comfortable and productive working in, for example, native Microsoft Word or Microsoft Excel files. Site Studio Contributor enables these users to edit the content in the native format, assign the content to a web page, and upload the content and metadata. These native files can later be opened and edited in the same way that content can be edited in the WYSIWYG HTML editor. This kind of flexibility in the user interface presentation is critical, as different users will want different methods for creating and maintaining content—and native content is a critical element for extranet and intranet sites.

What is significant about Site Studio and its component applications in an enterprise setting is that Site Studio leverages the underlying Oracle Universal Content Management platform. ECM functionality for managing multiple sites—functionality required for intranets, supplier extranets, localized sites, and major domains—can vary. Oracle provides a single, unified architecture for deploying web content management, document management, collaboration, digital asset management and records and retention management on one platform.

### Conclusion

Multi-site management is a significant challenge for organizations of almost every size, but especially for larger organizations with a mix of communication needs. These needs range from the predominant Internet presence to intranets to supplier extranets and more. Organizations need multiple points of contact, and the Web is the dominant medium for many kinds of consumer search, customer contact, and customer support, to name just a few applications. Add blogs and wikis to this mix, and it is clear that large organizations face a daunting challenge in successfully managing multiple websites.

A key part of the challenge of multiple website management is the tension between the need for centralized policy and control and the reality that line of business users need to rapidly and continuously create and update web content. How can an organization maintain the right level of control—think, for example, of brand consistency and issues of governance, to name just two—while simultaneously not burdening their business users with complex and inefficient processes that are bound to create bottlenecks and impede critical business activity?

The answer is in providing line of business managers and users with the right platform, one that is built on a solid infrastructure of ECM technology that has powerful tools for enabling designers to create websites, managers to manage and oversee the sites, and end users to easily and reliably create web content. Such a platform would need functionality for hierarchical website structure and navigation, template-based pages with a clean separation of content and presentation, secure content authoring and editing, and a library of reusable content and code fragments.

We see these capabilities in the Oracle Universal Content Management platform and, in particular, in its Site Studio applications. Organizations that require an enterprise-class solution for managing multiple websites should put Oracle's multisite Web content management solution on their list for consideration.

## About Oracle Universal Content Management

Oracle's multisite web content management solution is powered by Oracle Universal Content Management (formerly Stellent® Universal Content Management<sup>TM</sup>) —an award-winning platform offering a full array of enterprise content management (ECM) functionality, including web content management, records and retention management, document management, and digital asset management. The scalable system manages and delivers the entire spectrum of unstructured content, from documents, graphics and web pages to scanned images, email, and records.

Because of Oracle's unified ECM architecture, organizations implementing multiple internal and external web sites can consolidate sites onto one platform and leverage robust functionality to support all their web site needs with:

**Web Content Management**: a critical component of multisite management, enabling organizations to leverage template technology for content re-use and consistent branding. Functionality such as web site publishing, in-context web site contribution, editing and review, as well as automatic native content conversion to web pages, are all important for building and maintaining web sites.

**Records and Retention Management:** an important feature for internal and external web sites. Web sites today frequently contain records and other discoverable items. Additionally, policies can be put into place to help lower storage costs by automatically removing outdated and irrelevant content.

**Document Management:** enables features like desktop integrations and tracking content usage for analytics. For example, integrating with desktop applications like Windows Explorer, Microsoft Word, Visio or Excel removes the web administrator bottleneck by allowing contributors to find, add and edit content on multiple web sites using applications with which they are already familiar.

**Digital Asset Management:** provides efficient management of web images and graphics, which is essential to successful multisite management. Digital asset management functionality automatically generates renditions of graphics that can be used across multiple sites, in addition to other business uses. Oracle Universal Content Management can support virtually any content management application. Its unified architecture ensures all content management applications can be deployed on the same platform, and specific content management components are interchangeable, extensible and complementary to each other. This architecture enables customers to fully leverage content management investments across the organization and throughout various applications.

## **Sponsoring Company Information**

For more information, please contact:

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