

IV. Why CMS? Utility Analysis on CMS from Functional and Business Value Perspectives

Before we continue our discussions, let's go back to the previous industry mapping chart of AIIIM on page 10 (**CHART 2.01**) to have a review on the CMS concepts and technologies. Then, let's use the ranking list of content management problems in Top500 U.S. in the survey of Forrester Research 2002 as a checklist of our won and ask ourselves: Do we have similar problems?

Checklist for the Content Management Health of Your Company	
✓	Content bottlenecks with a webmaster, IT department, or some other related gatekeepers in company.
✓	Site visitors have difficulty finding what they need.
✓	Content contributors have difficulty finding what they need.
✓	Some content is inaccurate / outdated / redundant / unauthorized.
✓	The home page does not provide a full, up-to-date portal information into the rest of the company internal/external web site.
✓	The web-site exhibits inconsistent design and navigation schemes.
✓	Contributors occasionally overwrite content / files accidentally.
✓	Web managers need to “roll back” the site to a previous version – perhaps for legal or regulatory reasons – but cannot.
✓	Content contributors are unable to pre-publish content to appear at a specified later date or time.
✓	Web-site managers cannot associate the company's products and services to articles or news on the site (or vice-versa).
✓	Content has feet of clay: web managers cannot easily reuse / share / distribute / import it.
✓	An inability to protect or control access to content keeps good material offline.
✓	Marketing and product managers cannot customize content for customers, partners, and other important visitors.
✓	Internal company staff is not invested in web communications.
✓	Company staff lament, “Our web-site is not as good as we are.”

(Chart 4.01) “Check List for the Content Management Health of Your Company” from “Ranking List of Content Management Problems in TOP500 U.S. 2002”. CMS Market Analysis, Forrester Research and Infopark AG, Berlin, 2002. This research results are “exclusive authorized” by the Infopark AG to privileged academic uses. Please see the APPENDIX C for more Information.

Clearly, the lines between the related concept and product segments have become blurry, but CMS – however and whatever you define it – can still be seen as distinct problem domains in the modern enterprises, and perhaps more importantly, most enterprises approach them rather differently. After thinking of the questions in the checklist above (**CHART 4.01**), now, you are ready for this chapter: Why is CMS a buzz word in the Information System now? And what are the business values for implementing a CMS in your enterprise.

4.1 Utility Analysis on CMS – Functional Perspective

Obviously, the overwhelming complexity of Web sites makes effective Web communication extremely expensive to achieve using manual processes, which you might have found through checking the above problem list. To realize the benefits of Web communication, your company needs tools that increase the manageability of and reduce the cost of publishing content. And content management systems accomplish this by providing tools that automate the publishing process and providing business users with the ability to create content when they recognize a customer need for information.

In our research processes, we found out that most business cases for a content management solution starts with the cost savings generated by improved Web development and publishing processes. Most IT decision makers told us their goals by implementing the CMS are:

- **Reduce content update costs and improve frequency of information publication.**
- **Increase Web content value with workflow and approval processes.**
- **Standardize content structures, and maintain design control and branding across an organization.**
- **Maximize effectiveness of team skills by enabling business users to publish their own content and technical staff to work on site infrastructure.**
- **Leverage existing enterprise technologies and skills to deploy Web applications.**
- **Reduce site creation, maintenance, and enterprise rollout costs by creating automated processes.**

The above target settings of enterprise CIOs reflect the fact that: Many costs are involved in building and maintaining a Web site, and these costs can increase exponentially as the size and complexity of a Web site and its audience grows. By implementing a CMS, the system automates many standard content and design management tasks, and can reduce costs. Summarizing the researching materials and the interviews with IT Managers, we conclude the following six major utility benefits to implement CMS in your enterprise:

4.1.01 Enable Faster, Less Expensive Content Updates

CMS enables non-technical business users to publish their own content. Traditionally, content is published by a Webmaster whose main responsibility is the technology, not the content of the site. Web content management systems remove this middle step by putting content publishing in the hands of the content experts.

Companies have discovered that by implementing a content management system, they can scale their technical team without adding new resources. This is accomplished by reallocation of publishing tasks to the content experts, which frees technical staff to build new applications. After implementing a content management system, Institutional Investor Magazine realized

immediate savings of \$60,000 per year, the amount it had previously allocated for external technical resources to complete content updates and maintenance.²⁴ Content updated can now be done by their internal writers.

Cost	Description of Cost	Benefit of Content Management System
Content Contribution	Cost to create original content and convert existing content for Web publication.	Eliminates conversion steps by placing the responsibility for content creation in the hands of the business user.
Workflow and Approval	Cost to find and review content prior to publication.	Speeds the approval process by helping business users find and track changes.
Content Updates	Cost to update content, metadata, and links to other content as required.	Enables business users to quickly make changes, determine the impact of changes, and ensure links are not broken.

(Chart 4.02) Utility Analysis on CMS – Functional Perspectives (1) (Our Analysis)

4.1.02 Increase Content Accuracy, Quality, and Value

Content management systems that put business users in control of content creation, contribution, and updates can increase the value of the actual content on the site. Business users, who are content experts, are more likely to understand the value of accurate, relevant content than technical staff or other non-business users.

Companies without content management systems might face delays in publishing new content or in correcting errors — delays that can result in lost customers or revenue.

According to Information Week Online:

*Visitors tend to lose patience quickly with a poorly performing Web site, and especially with out-of-date content. Content-management systems offer companies an easy way to make their sites more relevant, keep content up to date and accurate, and reduce the time required to get important content published.*²⁵

Cost	Description of Cost	Benefit of Content Management System
Inaccurate Content	Cost of publishing incorrect information, such as a wrong price, poor support information, or poor guidance.	Content approval process helps ensure published content is accurate and appropriate by putting content tools and control in the hands of business users who understand the needs of the business and its customers.
Untimely Content	Customers require timely content to make decisions. Out-of-date content hinders them from making accurate business decisions.	Placing responsibility for content in the hands of the business user and providing appropriate tools ensure content is up-to-date and responsive to current customer needs.
Irrelevant Content	Customers must work to filter irrelevant material. If this task is too difficult, customers will abandon the site, having found no relevant content.	Capturing metadata in the content authoring process lets the system target content to customer content needs.

(Chart 4.03) Utility Analysis on CMS – Functional Perspectives (2) (Our Analysis)

²⁴ Landers, G: A case study in content management, INSTITUTIONAL INVESTOR MAGAZINE V.365 2001, GARTNER GROUP ADVISORY SERVICES

²⁵ Trepper, C: Content currency is key to a successful web site, INFORMATION WEEK ONLINE 06.2000, INFORMATION WEEK Inc. <http://www.informationweek.com>

4.1.03 Decrease Information Retrieval Time

Web sites provide faster access to information than print or other traditional communication tools, resulting in significant cost savings. CMS improves the information retrieval benefits of a Web site by providing a standard navigation structure and content templates. This consistency results in increased site usability and faster information retrieval times.

According to the Meta Group:

*Organizations that can provide infrastructure for employees, partners, and clients to find the concise relevant information they require to make decisions will have a significant competitive advantage in terms of efficiencies, service, and satisfaction.*²⁶

Cost	Description of Cost	Benefit of Content Management System
Information Retrieval	Cost in time to find and retrieve information, and find relevant content in information.	Infrastructure for navigation, content presentation, and metadata simplifies and speeds information retrieval.

(Chart 4.04) Utility Analysis on CMS – Functional Perspectives (3) (Our Analysis)

4.1.04 Centrally Manage Site Usability and Branding

CMS provides templates and site structure tools that help enforce centralized control over site and corporate branding. Dynamic link management reduces the costs of manual link-checking and correction while improving site usability through consistency.

The traditional Web site model requires significant costs to maintain the structure and consistency of design or branding. Organizations must impose and police strict rules to ensure the integrity of the structure, or tolerate inconsistent site navigation and broken links. The result is either higher costs for technical staff or reduced effectiveness.

Cost	Description of Cost	Benefit of Content Management System
Structure and Link Management	Cost to create, maintain, and enforce a standard content structure and navigation structure, and link validity.	Enables site architecture experts to create and enforce a consistent and usable site structure.
Brand Reinforcement	Web sites are often the only contact customers have with an organization. Weak or inconsistent site branding creates a poor impression of a company.	Centralized control of design and branding ensures the message and site design are consistent with a company's brand and values, and a professional face is displayed to the world.

(Chart 4.05) Utility Analysis on CMS – Functional Perspectives (4) (Our Analysis)

4.1.05 Centrally Manage Site Development and Deployment

CMS that combines a dynamic content repository and template-based publishing enables an organization's Web developers and designers to maintain control over the Web site's look and feel, layout, and navigation logic. Developers are able to update sites rapidly by changing a

²⁶ Warzecha, A: Differentiating content management, document management, and portals, ELECTRONIC BUSINESS STRATEGIES Nov.2003, META GROUP Inc.

few templates as opposed to updating each page manually. Once approved, template and content changes can easily be distributed to other sites. An organization can centralize its IT staff and reduce Web development costs across the organization.

Alternatively, it is very costly to update the design and logic of typical, static, file-based Web sites. Each page related to that logic must be updated to reflect changes, and the Web site content cannot be updated while the logic changes are being made resulting in lost time and cumbersome revisions.

Cost	Description of Cost	Benefit of Content Management System
Administration	Costs to maintain the system, set up security, manage scalability, and manage user rights and roles.	A comprehensive set of administration tools reduces the cost of administering multiple separate servers and Web sites. Costs are leveraged across several Web deployments.
Application Change	Cost to update existing Web applications and deploy new ones either to replace or update existing applications or to deploy Web applications in new parts of the organization.	Dynamic, template-based Web applications separate the content from the application so applications can be updated and distributed to new users without affecting the underlying content.
Deployment	Cost to deploy content and Web applications created in one part of the organization to other internal and external parts of the organization.	Content management systems provide a simple mechanism for packaging Web sites and all interdependent templates, resources, and pages, making it easier to distribute sections of a Web site developed in one location to other sites.

(Chart 4.06) Utility Analysis on CMS – Functional Perspectives (5) (Our Analysis)

4.1.06 Facilitate New Opportunities for Innovation

A dynamic CMS enables businesses to innovate on knowledge traditionally locked in static Web pages and other documents throughout the organization. By providing a standard content platform on which the organization can build automated business applications and by enabling business users to take a direct role in the Web site, a content management system opens the lines of communication between a company’s business users and customers to deliver real competitive advantage.

Organizations adopting content management systems can build Web sites throughout their enterprises using a standard content architecture and dynamic Web content infrastructure. Organizations can then create new Web applications that take advantage of the incredible richness of Web content and, by doing so, adopt innovative communication tools such as internationalization, customer relationship management, personalization, syndication, application integration, and enterprise portals.

4.2 Analysis on CMS – Business Value Perspective

Functional Analysis above could really answer most CIOs and IT staffs’ questions for the initial and deployment of a CMS. However, what’s more important to the enterprise IT decision makers are the business values of implementing CMS, especially if the CFOs have to write big checks to a software vendor and possibly an integrator as well. Though it might be painful to the most IT freaks, yet, it’s still one of the biggest concern of the enterprise by facing a CMS deployment decision.

In all likelihood tough decisions will have to be made, and it is best to have a business plan in place as a touchstone to keep the team focused. Like any investment, a CMS project should also been justified in terms of “QUANTITATIVE” and “QUALITATIVE” business values, that is, from the business value perspective: first, cost and revenue, then effectiveness and future. Based on the interviews with entrepreneurs, here we try to conclude the “niches” of implementing CMS in business logic.

4.2.01 “Quantitative” Business Values of Implementing CMS

Let’s address the revenue side of the equation first. A CMS could enable your enterprise to:

- **Increase sales.**

Better context around products and services can provide a more differentiated, solutions-oriented proposition. By providing richer, more accurate, and higher-quality information online – both pre- and post sales – you may be able to increase revenues from new and existing clients alike. According to the Gartner Group²⁷, 50% of web sales are lost because customers can’t find the right content fast enough – and go elsewhere, or use a different channel. Of course, as with all e-commerce, the marginal added sales might partly cannibalize other channels. You’ll need to decide if this is truly a bad thing. But at the end of the day, if better content management can elevate your overall gross intake, then without it, aren’t you leaving money on the table?

Some people may need to take a more liberal definition of “sales” here. For a university, it may entail fostering a greater propensity towards spontaneous transactions, such as downloading an admissions application or making a donation to an alumni fund. For a local government agency, better, more contextual content may lead to greater online transactions, saving on expensive labor and printing costs.

- **Expand the deployment of products or services, and variations of them.**

The ability to mix and match digital assets enables you to present yourself and your content in new and innovative ways at potentially very low marginal cost. This is particularly the case in content-heavy sectors such as professional services or publishing. But consider the manufacturing company that provides aftermarket product support via the Internet; if it can segment its documentation repository in new ways, it can develop novel service offerings at different price-points.

- **Obtain a greater return from your other corporate IT investments.**

Your firm may have content locked in knowledge management (KM), document management (DM), or enterprise resource planning (ERP) systems and other corporate repositories. By providing an access and management layer on top of that information, you can liberate the value of the underlying content. With a system in place allowing you to confidently manage and publish it over the Internet, you can make greater use of your content on behalf of your staff and customers. Note, however, that many other information systems – notably Portals and Search Engines – make this same case.

- **Accelerate your time to market.**

Printing and distributing marketing collateral, sales catalogs, and customer support

²⁷ Landers, G: A case study in content management, INSTITUTIONAL INVESTOR MAGAZINE V.365 2001, GARTNER

documentation takes time. Effective content management coupled with Internet delivery should enable you to reduce dramatically the time it takes for these materials to travel from your content owners to the content consumers among your prospects and customers. This speeds the return on your development investment and improves cash flow – music to any CFO’s ears!

Also, a CMS could also reduce enterprise’s costs. Since these benefits tend to be more immediate and quantifiable, they are particularly attractive in tight economic times. A CMS could enable you to:

- **Achieve process efficiencies.**

According to the Working Council for CIOs²⁸, knowledge workers spend 50% of their time looking for information and the other 50% actually working on that content. Good content management can substantially reduce the time spent finding and verifying information. If your own staff cannot efficiently retrieve web content, they will be more likely to try to recreate it, which is wasteful – and potentially damaging if it spawns non-authoritative versions of the same content. Now think about the same problem from your customers’ viewpoint: what if you could reduce the time *they* spend finding the right content on your web-site?

- **Reduce time.**

An effective content management system should enable you to spend less time on web production and updates. You will spend less effort propagating changes throughout multiple versions of the same content, and for that matter, run fewer cycles editing different iterations of the same content. CMS vendor Documentum argues that a single manager in a typical corporation typically manages less than 1,000 webpages in a manual system, but that this number can be expanded 10-fold with a good content management system²⁹.

- **Reduce paper.**

The “paperless office” may still lie far off in the future, but a good CMS can reduce the internal flow of paper. It will also lower the costs of generating print materials for external audiences, including production, inventory, and shipping.

- **Reduce human errors.**

Inaccurate web content can almost always be traced back to haphazard publishing processes. A CMS that enables site owners to “roll back” content to a particular date and time also reduces potential costs and risks associated with recreating an older version of the site for regulatory or legal reasons.

- **Improve record-keeping.**

In an era of heightened awareness and new regulations concerning the maintenance of good electronic records, a content management system can provide an essential audit trail of what was published when, where, by whom, and on what authority. Of course, this means you need to make sure your CMS is actually auditing all this activity and that you are saving the logs for a suitable period of time.

²⁸ Hudak-David G: Content management for dynamic Web delivery, TECHNICAL COMMUNICATION 2003, Vol 50, Iss 1, pp 96-97, SOC TECHNICAL COMMUNICATION

²⁹ Roth MA; Wolfson DC; Kleewein JC; Nelin CJ: Information integration: A new generation of information technology, IBM SYSTEMS JOURNAL 2002, Vol 41, Iss 4, pp 563-577, IBM CORP

“QUANTITATIVE” business value figures on costs savings are difficult to come by, and your results will vary. Some recent analysis suggested that typical web-site maintenance costs could be reduced by one-third, labor costs for content authoring and design by one-half, and Web publishing-based IT operations costs by one-third³⁰.

Also, these figures will mesh with the specific enterprise’s own experiences on successful implementations, but they must be tempered by the potential for cost overruns in mismatched CMS systems and the need to expend resources on maintaining and improving the CMS itself.

4.2.02 “Qualitative” Business Values of Implementing CMS

Some of the intangible benefits to implementing a new CMS also count among the more powerful rationales for making the investment. A CMS could enable you to:

- **Put business people in control of your online communications.**

Web publishing efforts are too often marginalized to distinct IT, Marketing, or New Media cubbyholes within companies. Greater automation and non-technical interfaces put line businesspeople in control of what gets published, when, and how. This invests them more in your company’s online success, and helps guarantee that your site “is as good as you are.”³¹

- **Maintain brand consistency.**

Experienced marketers know that it takes real work to maintain the clarity and consistency of a company’s identity, messaging, and ultimately, its brand itself. By separating content from presentation, an automated CMS can enforce that consistency. It will also increase the return on your investments in design, usability, and user-experience enhancements, by propagating your web-site’s user interfaces via a series of controlled templates.

- **Enhance customer satisfaction and loyalty.**

Perhaps the most important goal of content management is to provide more value to your customers, by offering them a faster, more relevant and timely, and deeper online experience. Sometimes this can be quantified through higher retention rates. You may well see greater page-views and longer user sessions, which gives you more time to put promotions in front of your customers³². And finally, a better managed web-site also fosters a stronger image among prospects.

- **Improve your agility.**

Time-to-Market metrics and First-Mover advantages may still be important, but even more critical in today’s economy is having systems that can evolve quickly over the next year. As markets change and customer bases shift, your web-site efforts need to respond in kind. In short, consider Time-to-Adapt metrics and Fast-Mover advantages. If your CMS places structured content in an XML repository or database, for example, you will better position your company to participate in various marketplaces, future syndication projects, and other collaborative ventures.

³⁰ Pack T: Know your customer - InStranet offers innovations in enterprise-wide content management, ECONTENT 2001, Vol 24, Iss 9, pp 56-57, ONLINE INC

³¹ Stear EB: The content management strategy: Don't go to work without it, ONLINE 1998, Vol 22, Iss 3, pp 87, ONLINE INC

³² Stein T: Intranet organization - how to get benefits from connected enterprise networks by content management (vol 42, pg 310, 2000), WIRTSCHAFTSINFORMATIK 2000, Vol 42, Iss 5, pp 476-476, VIEWEG

- **Improve security.**

Implemented properly, tighter control of your web publishing efforts can improve the security of both your systems and your content. Consider content management in part an insurance expense.

- **Maximize skills and talents through specialization.**

A good CMS enables specialization: the concept wherein designers concentrate on creativity and user experience, engineers zero in on the inner-workings of your business logic and publishing system, and content owners focus on the quality and relevance of the information they develop and edit. Specialists are able to concentrate solely on their areas of expertise. Along the way, the company obtains improved accountability – which can lead to hard savings, depending on what you do about it.

Clearly, what we’ve pointed above, whether “quantitative” or “qualitative” business values are all positive gains by implementing a CMS in your enterprise! However, there is also a negative flipside to each of these if you don’t move forward.

By adopting bad-designed content management system or designing and then implementing your CMS project in a wrong way, you risk reduced security, an unfocused staff, frustrated customers, and the potential for public embarrassment.

Therefore, it is worth discussing, how to make the CMS specifically fit the unique needs of your company? Converting these pros and cons into a winning business case is just the subject of our next chapter.