

# *A Web Content Management Blueprint*

## **Planning for a content-rich, successful web site.**

**By Ian Lurie  
President, Portent Interactive  
[www.portent.biz](http://www.portent.biz)**

**Copyright 2002, Portent Interactive**

---

The most expensive component of any website is content maintenance. Keeping your site up-to-date is essential: A web site with stale content is useless to customers, dropped by search engines, and an all-around bad investment. But fresh, timely content means constant updates, and that's expensive. Do you hire outside designers to make simple updates, or send your own staff to training courses? Both options are costly.

Another, better answer is a Content Management System, or CMS. A well-implemented CMS lets you control your site's content, without learning HTML. But these systems come in many shapes and sizes. What is a CMS? What type of CMS do you need? How much should it cost?

In this article, I'm going to try to shed some light on what has become a very, very crowded field, and provide you with guidelines for selecting — and making the most of — a CMS.

First, you need to understand what a CMS does, and what it can do for your organization.

### *What Is a CMS?*

---

Software does not a CMS make. There's a lot more to a successful CMS than a CD-ROM and a few thousand lines of code.

Then what *is* a Content Management System? A piece of software you buy, just like a word processor? A combination of software and hardware? In the real world, a CMS is a combination of three things:

---

## What Does a CMS Do?

**Content.** First and foremost, your content. The text, images and other media that comprise your message is the heart of the system. Without content, a CMS is just a shell.

**Process.** Next, the process by which you develop and publish that content.

**Software.** Last, but still important, a CMS requires software that enables you to publish your content to the Internet, using your process. This software will serve as a bridge, letting non-programmers enter and upload content, and then publish that content to HTML pages.

If you are shopping for a CMS, it's very, very important to remember that the software is at most one third of the equation. Think about your content, and your process, long before you start talking to salespeople about software. That will help you make an informed choice when you do start shopping.

There are Content Management Systems for all types of media, including print, video and radio. For this article, assume that 'CMS' means 'Web CMS'.

---

## *What Does a CMS Do?*

Technically, a CMS stores your site content in a database, and publishes that content 'on the fly' to one or more web page templates. Think of it as mail merge for the web.

Functionally, it's more complex. At its heart, any CMS should accomplish three things:

**Site Maintenance.** First, a CMS lets you and your staff maintain site content, without learning web programming, design or other web technologies. By using a web browser, content authors can write text, format pages, add links and images, and upload files. A CMS might also allow authors to add, edit and delete entire site sections.

**Workflow and Security.** Next, a CMS lets you control who can create, edit and publish content on your site, and how they do it. Small organizations may simply allow one or two people to enter, edit and publish content. Larger organizations may restrict authoring, editing and publication rights for many different users, or even restrict who can publish to which sections of the site. And, a CMS might let you restrict public access to certain areas of the site, so that only specific visitors can view that content. Regardless, part of a CMS is the workflow itself — your CMS should support your web publication process, not reinvent it.

**Cost Reduction.** By letting non-programmers maintain the site within the established process, a CMS should provide long-term savings. With non-technical staff performing day-to-day maintenance, you only need to hire designers and programmers when you want to change the site's form or function. That means lower costs.

There are a host of other functions you may need, including:

- **Version Management:** Save the last several versions of a page, so that you can 'roll back' to an earlier version if necessary.
- **Traffic Measurement:** Measure which pages are viewed most often, and how traffic flows from one page to the next.

---

## Planning for a CMS

- **Content Syndication:** Provide other web sites with JavaScript or other code that lets them ‘grab’ content directly from your system and publish it to their pages.
- **Viral Marketing:** Let visitors e-mail pages of your site to their friends, thereby helping you spread your message.
- **Personalization:** A very trendy term, but also a great concept. Customize the actual content delivered to each visitor according to their last visit, or according to selections they make.

Regardless, if your plans for a CMS will not clearly deliver the big three — Site Maintenance, Workflow/Security and Cost Reduction — bells and whistles don’t matter. To insure your CMS will really pay off, plan, plan, plan.

## *Planning for a CMS*

---

If you plan your implementation, then selection criteria for your software become clear. The tools required, and the costs involved, are easier to figure out if you answer a few questions:

### **CONSIDER YOUR CONTENT**

First, take a look at your content, and answer these questions:

1. **How much content is there?** While a CMS makes it easy to work with large volumes of content, some systems can handle large quantities of information better than others. A lower-cost system, for example, may run more slowly if it has to cull through 2,000 pages of material. Expect to pay more for a system that handles 10,000 documents than you would for one that only delivers 500.
2. **Your content is in which format(s)?** Electronic? On paper? In word processing documents, or plain text? Do you have any scanned images? Any other file types, such as video, animation, or PDFs? The further you get from typical web content — text and images — the more you can expect to pay both for your CMS software and installation of that software.
3. **How do you want to structure your content?** Information architecture is critical, and a more complex architecture requires a more powerful CMS. A small, simple site structure may only require standard navigation — a menu and submenus. A more complex structure may require a search engine, index and a custom ‘page to page’ linking tool to allow visitors to more easily find related content.
4. **What about metadata?** Whole books have been written on the subject of metadata. Suffice it to say that metadata is information about your content. If you have ‘hidden’ information about each piece of content on your site, you will need a CMS that supports metadata. You can use this information to support more advanced searches, complex publication schedules, measurement and a host of other functions.

### **WHAT’S YOUR PROCESS?**

I get many a blank look when I start a planning session by saying ‘Before we talk about software, tell me how you want it to work.’. But software doesn’t create a process — it supports one. Consider these questions, and you can better select software that supports a robust CMS:

5. How often will you revise your site? How much of the site will you change each time you make those revisions? If you only change your site once per week, and only edit one page on the site each time, then a simple CMS will likely work fine. If you make extensive edits on a daily basis, you will likely want more advanced searching and editing features, to make for a faster revision process.
6. How many people will have access to your CMS? Smaller organizations may have one person responsible for all site edits — a very simple CMS can easily support their needs. Larger organizations, however, will likely have many authors, editors and administrators, each with control over discreet sections of the site. This requires a much more powerful, and expensive, solution.
7. What's your workflow? How do you want your authoring/approval process to work? You may want anyone with access to the CMS to be able to instantly publish their changes — again, in a small organization this makes sense. Larger organizations typically want to have a pool of authors who can write, but not publish, content, with a smaller pool of editors who can then review, edit and publish each author's material. Draw a flowchart when you answer this question — make sure that your web publication process mirrors your current, non-web workflow. That way everyone will be comfortable with the system when it's launched.
8. Do you need version management? If your authors write their content using a word processor, or if you currently use a different version management tool, you may not want the extra baggage in your CMS.
9. Should the public have access to all published content? You may need to lock certain areas of your site, so that you can control who sees the content in those sections.
10. Will you need to publish content to other web sites? Syndication will let you 'push' content to other web sites, but you won't see this feature in every CMS.
11. Do you need to measure visitor behavior? If you already have a site traffic analyzer, such as WebTrends, you may not need a CMS that measures site use. That can save you money.
12. Are there any special features you think you may need? Brainstorm. What gadgets do you think you might need? Personalization? 'E-Mail to a friend'? Write a wish list, and keep in mind that even if you buy CMS software that doesn't support these items out of the gate, any system should be sufficiently flexible to allow for these features later.

## PICKING THE RIGHT CMS SOFTWARE

Now you're ready to look at software. Answer these last few questions to insure that you've accounted for potential constraints:

13. Are you under any platform limitations? If your web hosting provider — internal or otherwise — only supports UNIX, you will need to find CMS software that works in this operating system. If your organization already uses a certain type of database system, it makes sense to select CMS software that uses it, too. By checking for these constraints, you can take advantage of software and hardware you already have, and minimize costs.
14. Where will your site be hosted? If your site is hosted in a 'shared' environment, you will need to make sure that your CMS software is permitted, and that it won't overwhelm the server. If your site is hosted on its own dedicated server, you have more options.

---

## Choosing the Software

15. Do you have a deadline? Some CMS software is faster and easier to set up than others. If you have a tight deadline, be very, very careful when you select your system.

Now that you've answered these questions, you should know:

- How big your CMS will be.
- How your staff will use it.
- How the public will use it.
- How the system may need to grow in the future.
- Any technical limitations you may have.

Armed with that knowledge, you can select the best CMS software for your organization, and implement it in a way that will pay off.

## *Choosing the Software*

---

There are dozens, if not hundreds, of companies who sell what they call 'Content Management Systems'. Depending on your needs, any one of them may be ideal. How do you choose? Take the checklist you just created, and get the following from vendors you like:

### **SPECIFICATIONS**

Get a feature list for each CMS. This may not be a glossy specification sheet, but each vendor should be able to provide a concise description of what the CMS does.

### **DEMOS**

Any company worth its salt can provide you with a demonstration of their CMS software. If they can't, or won't, find someone else.

### **CONSULTING**

Even if you will maintain your own site content, you probably don't want to use internal resources to set up the system. That requires designers, programmers, and people who can help train you to use the completed CMS. Make sure that the company you buy from either provides consulting and training, or has partners who do. Then meet those consultants. They're the ones you will work with the most. Make sure they're people you want to work with.

### **REFERENCES**

Get at least two references from either the vendor or the consultants. Look at their web sites. Do the sites run smoothly? Are there errors? Then talk to the references. Do they like the system? Did it make their lives easier, in the long run, or did it just add complexity?

If you're not sure where to start, here are a few CMS software vendors I've used or worked with in the past:

**Portent Interactive.** ([www.portent.biz](http://www.portent.biz)) A shameless plug, I know, but we have a small, low-cost CMS software toolset that is an excellent starting point. For a site of 10-1000 pages, it's a great system. We install other vendors' systems for larger implementations.

---

## How Much Should This Cost?

**Ektron.** ([www.ektron.com](http://www.ektron.com)) Ektron offers a few different products, all of which are worth considering for a mid-range solution.

**Paperthin.** ([www.paperthin.com](http://www.paperthin.com)) Their CommonSpot CMS tool is one of the most powerful I've seen in their price range. CommonSpot is based on Macromedia's ColdFusion server, so it is also extremely flexible. If you have a site of 1000+ pages, or one that might grow to that size, highly recommend this system.

**Interwoven.** ([www.interwoven.com](http://www.interwoven.com)) Interwoven makes enterprise-scale (translation: very expensive) CMS software that will accomplish almost anything you can imagine, right out of the box. Their products include XML support, tight integration with the Windows operating system, powerful syndication and publishing tools, and a list of other features too long for this article. But be ready to pay at least low six figures for even a minimal implementation.

**Microsoft.** ([www.microsoft.com](http://www.microsoft.com)) Their Content Management Server 2001 costs less than Interwoven's platform, but still offers an impressive feature set. Plus, it will integrate with their other server products.

There are, of course, many other systems, including Broadvision ([www.broadvision.com](http://www.broadvision.com)), Documentum ([www.documentum.com](http://www.documentum.com)) and Vignette ([www.vignette.com](http://www.vignette.com)). But my list covers the entire price and feature range, from simplest and cheapest (Portent) to most complex and expensive (Interwoven). Most consulting firms, including Portent, can install almost any of these systems. In addition to our own CMS, we've worked with Ektron, Paperthin and Microsoft's products.

## *How Much Should This Cost?*

---

CMS Stickershock is a pretty common phenomenon. Particularly if you don't take implementation costs into account. As a rule, assume that you will spend at least as much on implementation as you will on the software itself. On average, implementation typically costs 2-4 times the price of the CMS software.

'Implementation' means:

- Planning out your site structure.
- Setting up the software.
- Formatting and inserting content into the system.
- Designing the 'look' for your site.
- Creating any custom features.

If you do it yourself, this cost may be in soft dollars, but you'll still pay it.

That may sound grim, but CMS-powered web sites are still affordable. A Portent CMS, configured from scratch, can cost as little as \$7000.00, and that includes site design, system setup and training.

---

## How Much Should This Cost?

It's hard to judge just how much your system will cost until you've planned it all out, but here are two examples that should provide you with some baselines:

### EXTERIOR RESEARCH & DESIGN, LLC

Exterior Research ([www.exdesign.com](http://www.exdesign.com)) had an existing, 25-page web site. They wanted a new look for the site, and they wanted to be able to maintain their site without our help. Their planning checklist looked like this:

---

|                                  |  |
|----------------------------------|--|
| <b>Amount of Content</b>         | 25 HTML pages, with photos and PDFs  |
| <b>Content Format</b>            | HTML, scanned images, PDF  |
| <b>Structure</b>                 | Simple tree with eight site sections   |
| <b>Metadata requirements</b>     | None   |
| <b>Revisions</b>                 | Daily, at most   |
| <b>Amount of content revised</b> | 1-5 pages per day  |
| <b>Number of webmasters</b>      | 2  |
| <b>Workflow</b>                  | Staff provides content, already edited, to webmaster for immediate publication |
| <b>Version management</b>        | Not needed   |
| <b>Syndication</b>               | Not needed   |
| <b>Content access</b>            | All pages accessible to the public   |
| <b>Measurement</b>               | Provided via WebTrends   |
| <b>Special features</b>          | Site must be search engine friendly  |
| <b>Platform limitations</b>      | Current site traffic: 10-30 unique visitors per day.                           |
| <b>Site hosted by?</b>           | Portent Interactive, on a shared server  |
| <b>Deadline</b>                  | 4 weeks  |

---

This was a fairly simple implementation, and it cost \$7500.00, including design, initial import of all pages into the system, and training. The site is hosted for \$50/month.

### THE IAM

The International Association of Machinists and Aerospace Workers ([www.goiam.org](http://www.goiam.org)) also had an existing site, but theirs was over 2000 pages in size. We chose an existing CMS written in Active Server Pages, and customized it to suit the IAM's needs. Their planning checklist was very different from that of Exterior Research:

---

|                                  |   |
|----------------------------------|---|
| <b>Amount of Content</b>         | 2000+ HTML pages, with photos, video and PDFs                                       |
| <b>Content Format</b>            | HTML, scanned and unscanned images, video, MS Word, MS Excel, MS Access, Flash, PDF |
| <b>Structure</b>                 | Complex tree with 12 sections and up to 15 sub-sections for each major section.     |
| <b>Metadata requirements</b>     | Author, Editor, Publication Date, Remove Date, Related Content, Summary             |
| <b>Revisions</b>                 | Hourly  |
| <b>Amount of content revised</b> | Potentially 250+ pages per day.   |
| <b>Number of webmasters</b>      | 20 authors, 10 editors and 4 administrators.  |

---

---

## What Are the Benefits?

|                             |   |
|-----------------------------|---|
| <b>Workflow</b>             | Authors receive content from staff in MS Word format. They cut-and-paste into CMS. Editor reviews and approves/rejects, then publishes. Authors and editors should only have access to specific areas of the site from the CMS. |
| <b>Version management</b>   | Not needed  |
| <b>Syndication</b>          | Yes, via JavaScript.  |
| <b>Content access</b>       | Some sections password restricted.  |
| <b>Measurement</b>          | Provided via WebTrends  |
| <b>Special features</b>     | E-mail to a friend, Section 508-compliant, video library, site search engine.   |
| <b>Platform limitations</b> | Projected site traffic: 20,000+ unique visitors per day.  |
| <b>Site hosted by?</b>      | Portent Interactive, on two dedicated servers.  |
| <b>Deadline</b>             | 5 months.   |

Obviously, this was a much larger project. And the site has grown since launch, with over 2500 pages, 500 videos and average daily traffic ranging from 13,000 to 35,000 unique visitors per month. Total cost: Over \$100,000.

---

## *What Are the Benefits?*

While you can't quantify all of the benefits of a CMS, some are easy to measure:

**Time to Publication.** For both Exterior Research and the IAM, a CMS meant much faster updates on their site. When it comes to day-to-day maintenance, they've cut out the middle-geek. For Exterior Research, the time between completion of a new piece of content to publication on the site went from a week to less than 24 hours. For the IAM, updates take only a few hours.

**Site usefulness.** The IAM's CMS immediately paid dividends for users. Visitors now spend an average of 10 minutes on the site, up from 3-4 minutes on the old site. And the number of visitors has almost doubled. Why? Timely, relevant content, every day. For Exterior Research, there was a different benefit: They can post new projects and clients to their site on very short notice, making exdesign.com a better sales tool.

**Maintenance costs.** In both cases, a CMS meant converting all site maintenance costs from hard to soft dollars, and reducing the time to update.

This isn't a sales pitch — rather, these are good guidelines. If you don't think your CMS will reduce time to publication, make your site more useful for your audience, and reduce maintenance costs, consider revising your plan. And after launch, you can gather hard numbers to measure your success in each of these areas.



*The Plan is the Thing*

---

A CMS isn't for everyone. But almost any organization can benefit from lower site maintenance costs and a more up-to-date site. The key to reaping these benefits is knowing your content, understanding your process, and using that knowledge to build a system that will compliment, rather than change, the way you communicate with your audience.

### *Supplement: CMS Planning Checklist*

---

1. How much content is there?
2. That content is in which format(s)? Electronic? On paper? In word processing documents, or plain text? Do you have any scanned images? Any other file types, such as video, animation, or PDFs?
3. How do you want to structure your content? What's your site map?
4. What about metadata?
5. How often will you revise your site? How much of the site will you change each time you make those revisions?
6. How many people will have access to your CMS?
7. What's your workflow? How do you want your authoring/approval process to work?
8. Do you need version management?
9. Should the public have access to all published content?
10. Will you need to publish content to other web sites?
11. Do you need to measure visitor behavior?
12. Are there any special features you think you may need? Brainstorm. What gadgets do you think you might need? Personalization? 'E-Mail to a friend'?
13. Are you under any platform limitations?
14. Where will your site be hosted?
15. Do you have a deadline?