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White Paper

>Web Solutions<

Content Analysis for a Successful CMS Implementation

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INSIDE

- Steps for a successful Content Management System Analysis
- Tools for analyzing your content
- Tips for gaining stakeholder buy-in

Contents

Content Modeling for a Successful CMS Implementation

An Aquilent White Paper ■ by Don Bruns, Senior Creative Consultant

Introduction

Spontaneity has a certain heroic charm to it. We get a thrill out of making things up as we go. Some of us refuse to ask for directions when we are lost, and we feel a small flush of pride when we find our way. Others try to assemble a new bicycle right out of the box without reading the instructions, and we feel like heroes when our work is done.

Spontaneity is great when nothing is riding on our success or failure. But a Content Management System implementation is no time for spontaneity or heroics. A CMS implementation calls for a different set of virtues, including discipline, patience, and careful planning.

As Tony Byrne has pointed out, there is a difference between a content management *package* and a content management *system*. Understanding this difference is crucial to the success of your implementation. You can install a content management package in a matter of hours. But the technology alone will do nothing for you unless it has been configured to the fit the needs of your organization.

A content management system is made up of more than just technology. It includes the rules and processes by which content is created and managed in your organization. If you fail to capture these rules and processes adequately during the analysis phase, you will almost certainly be forced to address them later in the implementation. Unfortunately, the cost of changing course or coding workarounds grows more expensive and more time-consuming the longer you delay.

As you begin your CMS implementation, resist the temptation to play with your new toys immediately. Instead, spend a few weeks (or even months) analyzing the needs of your organization. Minimally, the analysis phase of your CMS implementation should include the following tasks:

Audit Content

A high-level content audit will help you understand what content types currently reside on your site. What is the basic makeup of your site? How do you categorize the types of content on your site? What labels to you apply to your pages? How many press releases does your site have? Announcements? Job postings?

Model Content

Content modeling is the process of identifying the data and metadata elements that are distinct to each content type. This effort will inform much of the technical work behind the CMS implementation, including database design, template design, and repurposing strategies.

Plot Workflows

Workflows, or approval processes, are the rules and processes that govern the promotion of content from its inception to its publication on the site. Developing workflows can be a difficult balancing act. The ideal workflow must be complete enough to ensure quality assurance, and yet not be so lengthy as to bar your content contributors from using the system.

Build Taxonomy

The taxonomy is the system of classifying content in your CMS. An effective taxonomy can enable your CMS to reuse content, repurpose content, handle advanced searching, and compile dynamically aggregated content.

Develop Content Migration Strategy

A content migration strategy outlines the process for physically moving your web content from a static or legacy platform to a dynamic, CMS driven environment. For this effort, a

detailed content inventory will be required to help streamline the content migration process.

All of these aspects of content analysis are crucial to the success of a CMS implementation. Much can be written on each of these. In the next few pages, we are going to concentrate on just one aspect of content analysis: **content modeling**.

To perform content modeling we analyze, define, and capture the data requirements and relationships needed to support the business functions of a content management system.

In the rest of this paper, we will discuss some of the best practices for conducting content modeling sessions for a CMS analysis. We will also examine some of the tools and templates that have yielded successful results in the past. Finally, we will discuss several content modeling strategies that may help streamline your production and deployment efforts.

Educate your Stakeholders

As you lead your organization into its CMS implementation, it may be necessary not only to serve your stakeholders but also to educate them as well.

From the outset of the CMS analysis phase, it is important to teach your stakeholders not to think of the web in terms of static HTML pages. Instead, encourage them to think of a web page as a collection of data and metadata elements, or "chunks" of data. Without this understanding, it will be difficult to enlist their help.

Content chunking is an important part of the content modeling phase. The stakeholders' input is crucial. The content audit will have shown you what your content types are. But only your stakeholders can help you fully understand what data elements comprise each content type.

Some of your stakeholders may be less technically inclined than others. Fortunately, content chunking requires little technical acumen on their part. It is more important that they understand the business needs of the organization and the makeup of the content itself.

Draw a Picture

Figure 1, shows a sample Press Release, a very common type of web page. In its current form, this press release is a static web page: a combination of text, HTML code, and a few images.

To help stakeholders understand the idea of "content chunking," sometimes it can be helpful to draw them a picture. We start with several printouts of a given content type (in this case, press releases) and draw boxes around possible key data chunks, assigning labels to them as we go.

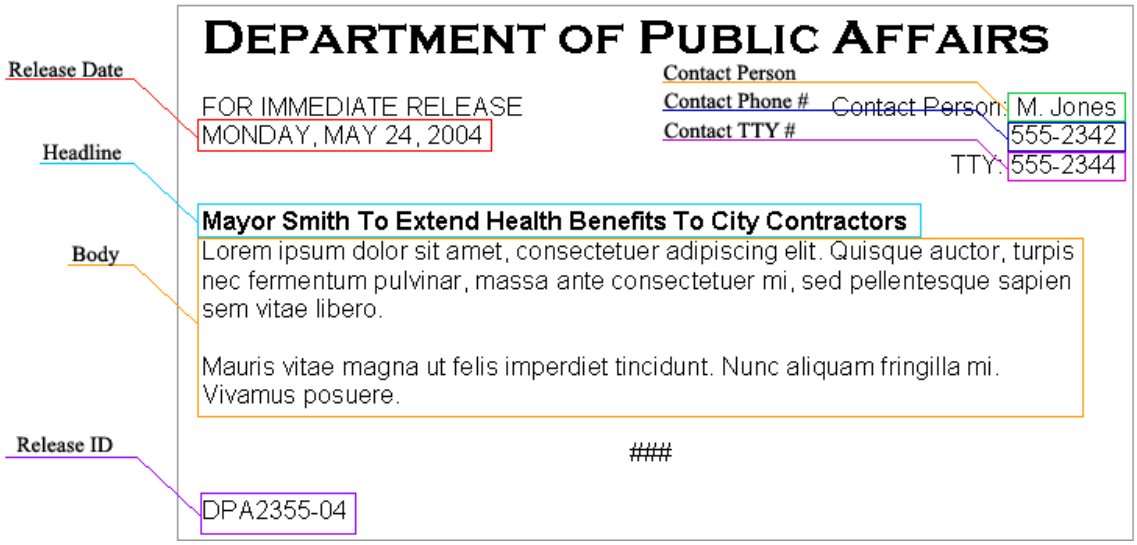

Figure 1 – Draw the stakeholder a picture.

Figure 1 literally illustrates the concept of "content chunking." Once the stakeholder is no longer thinking of web pages as a long string of HTML code, but rather as a collection of discrete data and metadata elements, a more advanced discussion of CMS functionality is possible.

In Figure 1, we have identified the following chunks of data:

- Release date
- Headline
- Body
- Press release ID
- Contact person name
- Contact person phone number
- Contact person teletype number

As we continue to review a dozen or so other press releases, we see that several page elements seem to remain the same, such as the Department of Public Affairs banner graphic, the "###" notation at the bottom of each page, and the notice that reads, "FOR IMMEDIATE RELEASE." Since these page elements seem to be consistent across all press releases, we will consider them design elements, and not data elements, for now. These design elements may form the basis for a page template, which will be used to display press releases in the future.

Of course, as always, any assumptions we make during our analysis phase are subject to confirmation with our stakeholders.

Confirm Your Analysis with Your Stakeholders

Once the data and metadata for a proposed content type have been identified, the next step is to confirm your findings with the stakeholders: the content managers and contributors, as well as senior leadership, business drivers, and external users.

The analysis work helps you understand what kinds of content types to build to support your web site in its current form. But that only gives you half of the picture. Focus groups and stakeholder interviews give a fuller sense of the end users' content management needs, their pain points, and areas for improvement.

Remember, the idea is not merely to build a system to support a web site as it has existed in the past. A CMS implementation also provides an opportunity to provide a framework for implementing new and improved functionality that may not have been possible using an outdated, legacy CMS or a static web site.

Throughout the analysis phase, it is crucial to involve your stakeholders, senior leadership, content managers and contributors to get a fuller picture of what is required. As you progress through the analysis phase, keep asking the following questions:

- Is there a need for additional data elements that are not readily apparent from merely looking at the current website?
- What requirements, pain points, and opportunities are missing from the initial analysis?
- Can the stakeholders identify additional data elements to improve the way content is categorized and manipulated on the site?

Figure 2 represents our current understanding of the data requirements of the Press Release content type.

Content Element	Description	GUI Control	Required?	Input Rules
Headline	Display title for this press release	Text Box	Y	Maximum length 500 characters
Contact Person	Name of point of contact	Text Box	Y	Maximum length 100 characters
Contact Phone #	Phone number for point of contact	Text Box	Y	### - ### - ####
Contact TTD #	Teletype number for point of contact	Text Box	N	### - ### - ####
Release Date	Date that the Press Release is published to the general public	Text Box or Custom Javascript Calendar Control	Y	MM/DD/YYYY
Body	Rich text field that contains the body of the press release in full detail.	Rich Text Editor	Y	
Release ID	Catalogue number for this Press release	Text Field	Y	Maximum length 10 characters

Figure 2 – This table helps us discuss our analysis in greater detail with our stakeholders.

When you confirm your initial findings with the stakeholders, it is helpful to present your findings in two formats:

- The diagram format (Figure 1) to help the stakeholders visualize the concept of data chunking, and
- The table format (Figure 2) to help you state your assumptions and confirm the findings of your analysis at a more detailed level.

As you go through the confirmation, walk through the analysis process with your stakeholders. Explain to them as plainly as possible the thought processes that went into this analysis. They may help you identify CMS requirements that escaped you initially, as well as correct any false assumptions.

Dig Deeper

As you scour your content types for data and metadata elements, don't just look at the web pages themselves. Consider the other ways that your pages are represented on the site. In the case of Press Releases, we have identified several data and metadata elements that are visible on the surface level. But to get a more complete picture, we must also look at what lies beneath your web pages.

The HTML source code may contain metadata summaries, keywords, and other vital metadata elements that are not visible on the surface. As shown in Figure 3, the source code of every page may contain metadata keywords and summaries that are unique to a single item. If so, then these metadata elements must also be captured as part of your data schema.

```
<META name    = "summary"
      content = "This page contains Frequently Asked
                 Questions, or FAQs about the Airworthiness
                 Certification Process.  Plain language
                 format incorporated.  (AIR-200)" />
<META name    =  "keywords"
      content =  "Airworthy, AIR-200, FAQ, awcertqa,
                  Airworthiness, Frequently Asked
                  Questions, Airworthiness, Airworthiness
                  Certification, Standard Airworthiness" />
```

Figure 3 – Source code may also contain hidden metadata elements that must be supported by the content types you develop.

Take a Step Back

While you are chunking your data and metadata, avoid getting locked into a "worm's eye view" of your content type. It is important to take a step back and to consider the content type in the larger context of the website.

In addition to digging through the source code, think of the other ways in which a particular content item may be represented on the site. For example, let's go back to our Press Release example. We've already scoured the press release web page itself. But it is important to explore the other ways in which a single Press Release may be used on your website.

Consider the website's index of press releases. Let's imagine that there is a press release index page that lists all press releases for a particular year. The data elements presented on the index page include a Title, a Release Date, and a new element, the Short Description.

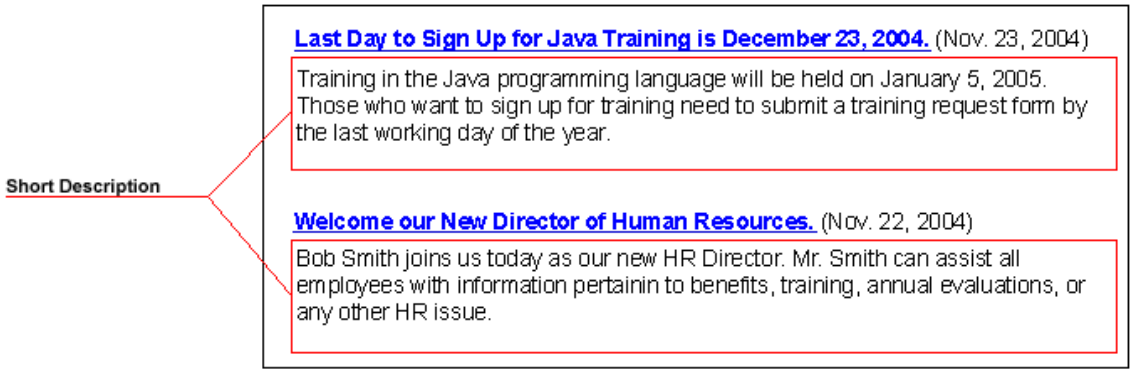

Figure 4 – Be circumspect when identifying data and metadata elements. In this example, the Short Description data element only appears on index pages, not on the Press Release pages themselves.

When you click through to the individual press releases, you will notice that the Short Description text does not appear on the Press Release itself, either on the surface level of the individual Press Release web page or anywhere in the source code. However the short summary text does appear on the index page that links to the individual press releases.

Therefore, the Short Description must also be accounted for in your data schema for Press Releases.

Additional metadata elements may be hiding on your search result pages, site maps, frequently asked question pages, or any other web page that links to your content types.

This is another example of why it is important to involve your stakeholders during the analysis phase. The stakeholders can help uncover needs and requirements that you may have missed during your initial analysis.

Consolidate Content Types Where Appropriate

During the analysis phase, it is important to understand what makes each content type unique. Bear in mind that every time you add a content type to your implementation, you're adding a significant amount of work for the CMS team – not only in terms of the back-end CMS development, but also in terms of quality assurance testing, user acceptance testing, training, and change management.

If you shortchange the analysis phase, you could be signing your team up for unnecessary headaches by developing more content types than your organization truly needs.

Before you commit to creating a new content type, scrutinize the data and metadata requirements to prove that each content type is absolutely required. Questions to ask include:

- What are the data and metadata requirements that distinguish this content type from all others?
- Is this content type truly unique?
- Can we consolidate content types that have similar data and metadata requirements?

During the course of your analysis phase, you may identify opportunities to consolidate similar content types by either **extending** the functionality of an existing content type, or **combining** two or more planned content types. This is only possible if you commit yourself to a thorough analysis process that involves careful scrutiny of your content requirements and deep involvement with your key stakeholders and subject matter experts.

For example, during the early weeks of your analysis phase, let us say you and your stakeholders have identified a need for an Events content type to allow the stakeholder to maintain a monthly calendar on the website.

For the Events content type, you have defined the following data elements:

- Event Title
- Short Description
- Long Description
- Event Start Date
- Event End Date
- Event Start Time
- Event End Time
- Location

Later in the analysis, one of your stakeholders expresses a need for a new content type for upcoming Training Classes. As you parse through the data schema for the Training content type, you may start to notice that the data elements are somewhat familiar.

- Training Class Title
- Short Description
- Long Description
- Training Class Start Date
- Training Class End Date
- Training Class Start Time
- Training Class End Time
- Location

As you can see, the data elements for the Training Class are highly similar to the data elements for Events. With a few modifications, the Events content type could plausibly handle Training Classes as well.

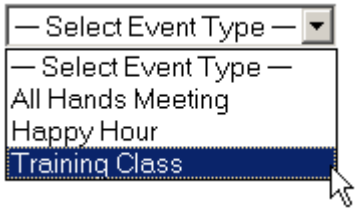

Figure 5 – An Event Type metadata element could extend the event content type to include a variety of events, including training.

One possible solution is to add an additional metadata field that captures Event Type, as seen in Figure 5. One of the choices of this dropdown list could be "Training Class." This metadata element could trigger the CMS engine to process events flagged as "Training" differently from other non-training events. For example, training events could be:

- Submitted to a different approval process,
- Published to a different area on your website,
- Published on a training calendar instead of the general events calendar, or
- Displayed using a different layout, graphic design, or navigation scheme.

Build Common Content Types First

When implementing a CMS, your stakeholders may have certain expectations of what the CMS will do for them. As you begin your analysis phase, be careful of trying to satisfy every need for all of your stakeholders at once.

In most organizations, there are departments with highly specialized CMS needs. The HR department may want to post job opportunities to the website. The Communications office may want to publish press releases. But the other departments may have little use for these content types.

Conversely, there are likely to be content types that will be utilized across departments throughout the entire organization. These common content types include events, publications, and generic web pages.

As you go through your analysis phase, look for common needs among your stakeholders. Identify the content types that will get the broadest use across the organization. **Build those common content types first.** Postpone the development of specialized content types until later in the project. Serve the greater good first. Developing the common content types earlier on in the project helps in several ways.

First, a successful deployment of a commonly used content type will buy the project a measure of credibility in the stakeholders' eyes. More constituents will realize the benefits of the CMS sooner. Stakeholders will feel rewarded for the initial work they performed during the analysis phase, and they will be more willing to

provide continued cooperation with future efforts.

Second, deploying common content types early streamlines future training efforts. By training the entire organization on how to use the common content types first, you provide a frame of reference for the other content types. Later, when you roll out the more specialized content types to individual departments, content managers and contributors will already be familiar with how the CMS works. Trainers will be able to draw upon the lessons your stakeholders learned.

More Information

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- Systems integration
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- E-Government strategy consulting
- Creative design
- Web application development

Aquilent was formerly known as Century Computing and later as an operating division of AppNet and Commerce One. In its 25-year history, Aquilent's staff has worked side-by-side with government leaders in the procurement, engineering, biomedical, and technology communities.

Some of the agencies we currently support include DOJ, DOL, GSA, HHS, USPS and VA. For the latest information about how our Web Solutions services can help your agency, please contact us.

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