



2010 CMS Intelligence Report

levelten  
INTERACTIVE

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## Introduction

Success on the modern day web demands content and feature rich websites. Content Management Systems (CMS) are the engines that bring your website to life. CMS not only allow you to easily create and edit content but play an increasingly important role in deploying powerful interactive functionality.

Your CMS is the foundation your website is built upon. It is likely the single greatest driver for your website's ROI. The right CMS can greatly enhance your website's ability to do more with less. The wrong CMS can zap productivity and limit your ability to adapt to the evolving demands of the web. It can either be a decisive competitive advantage, or an anchor.

Unfortunately changing your CMS can be a costly venture. This is why it's important to choose the correct one from the start.

There are hundreds of different CMS available, so it can be challenging to find the best solution. CMS are technical, complex applications. Getting to know their intricacies can require a considerable amount of time and effort.

Fortunately, to help guide you on your quest for the best CMS, scores of evaluations, comparisons and awards are published each year. While quality and objectivity vary, many offer invaluable insights. Each new evaluation reflects a unique perspective, providing a piece of the puzzle.

The findings in this report were compiled from hundreds of pages of CMS intelligence across more than a dozen reports. The goal of the CMS Intelligence Report is to gather all the pieces and attempt to put them together in a way that reveals the big picture.

## The CMS Evaluations

For the 2010 CMS Intelligence Report, we incorporated the findings of seven primary evaluations augmented by several secondary reports. The evaluations can be essentially divided into two categories: popularity and feature evaluations. Popularity evaluations rate CMS based on the number of people using them and the user's sentiments. Feature evaluations focus on which CMS offer the most flexibility and power at what cost and effort.

The CMS analyzed in this report are determined by the evaluations we reviewed. These evaluations tend to focus on open source, server based general CMS. Therefore, this report does not provide in-depth analysis for hosted solutions, desktop web editors, commercial & proprietary CMS and application specific web applications such as Wikis, shopping carts and forums.

Some of the reports we cite in this analysis include:

- walter&stone: CMSWire Open Source CMS Market Share Report
- Packt Publishing: Open Source CMS Awards
- NTEN: CMS Satisfaction Report
- Idealware: Comparing Content Management Systems Report
- Forrester: Web Content Management and Open Source Report
- IBM developerWorks: Using open source software
- Webology: Drupal vs. Joomla! Survey
- SourceForge.net: Community Choice Awards
- CNET Webware 100

## walter&stone, CMSWire Open Source CMS Market Share Report

The 2009 Open Source CMS Market Share Report by walter&stone and CMSWire is an in-depth analysis of market share and brand strength.

The 2009 report provides a wealth of insight, exceeding the high expectations set by the 2008 report. It uses a well conceived multivariate academic approach. Like many of the reports we included, it offers a distinct viewpoint; what CMS is the most popular. While not directly evaluating which system is best, most powerful or full featured, we feel this is a good indicator of the quality of a CMS. It is very hard to determine the best by looking at a list of features. Actual adoption and use by web professionals is a highly effective measure of which are reputed to be the best.

The report focuses on 20 CMS deemed the top based on an initial analysis. The CMS that made the cut were:

- Alfresco
- CMS Made Simple
- DotNetNuke
- Drupal
- e107
- eZ Publish
- Jahia
- Joomla!
- Liferay
- MODx
- OpenCms
- phpWebSite
- Plone
- SilverStripe
- Textpattern
- TikiWiki
- Typo3
- Umbraco
- WordPress
- Xoops

In the 2008 report, downloads were estimated as a primary indicator of popularity. Due to inconsistencies on how downloads are reported, the value of the metric is dubious. To solve this problem, in the 2009 version of the Report, a survey was conducted providing some of the most reliable information about relative CMS popularity and use.

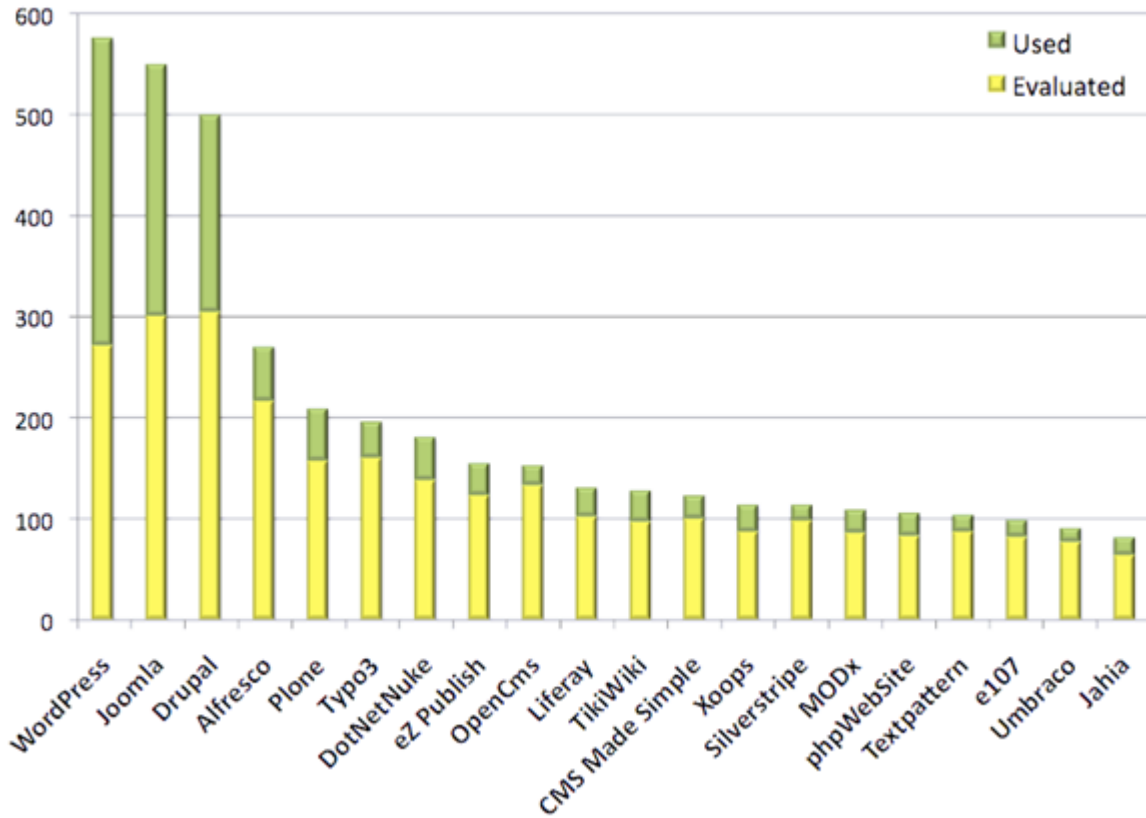


Exhibit 1 Survey Question: “Which of the following CMS have you previously evaluated and/or used for a project?”

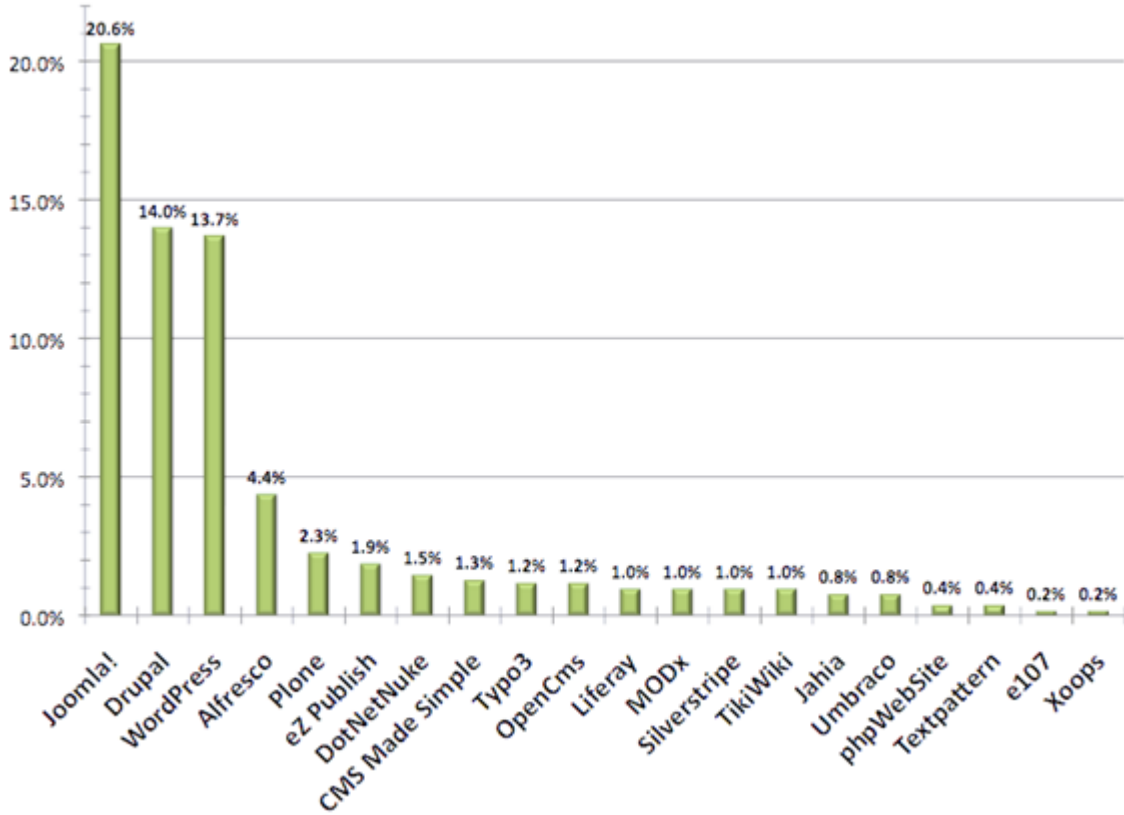


Exhibit 2 Survey Question: "Which CMS do you currently or most commonly use?"



Support is a critical factor for successful deployment and maintenance of a CMS driven website. The Market Share Report analyzed information from developers and publishers to indicate available support levels.

CMS	Elance	% Change	Guru	%Change
Joomla!	3,069	35%	1,547	97%
Wordpress	2,416	31%	1,243	151%
Drupal	1,626	74%	779	121%
DotNetNuke	243	n/a	175	n/a
Typo3	78	10%	57	68%
MODx	50	22%	35	192%
Liferay	40	n/a	33	n/a
Xoops	39	-9%	38	41%
Plone	37	16%	23	-32%
Alfresco	29	n/a	19	n/a
eZ Publish	16	167%	8	100%
SilverStripe	16	n/a	11	n/a
Textpattern	14	n/a	19	n/a
Umbraco	14	n/a	6	n/a
e107	12	-33%	11	10%
phpWebSite	10	11%	5	25%
OpenCms		n/a	8	n/a
CMS Made Simple	5	-17%	2	-50%
TikiWiki	4	-56%	8	-27%
Jahia	0	n/a	5	n/a

*Exhibit 3 Vendors offering services. % change is calculated relative to the results of the 2008 survey.*

CMS	Books in Print	Last 12 Months	Announced
Joomla!	32	22	6
Drupal	25	18	10
DotNetNuke	18	6	-
WordPress	9	6	-
Plone	7	3	-
Liferay	5	4	-
Typo3	5	1	-
Alfresco	2	1	-
eZ Publish	2	-	1
OpenCms	2	-	-
E107	1	-	-
MODx	1	1	-
Textpattern	1	-	-
Xoops	1	-	-
SilverStripe	-	-	1
CMS Made Simple	-	-	-
Jahia	-	-	-
phpWebSite	-	-	-
TikiWiki	-	-	-
Umbraco	-	-	-

*Exhibit 4 Books Announced or in Print*

Traffic to the project websites was also analyzed as an indicator of popularity. Three 3<sup>rd</sup> party reporting resources were used to determine traffic: Alexa, Compete and Quantcast.

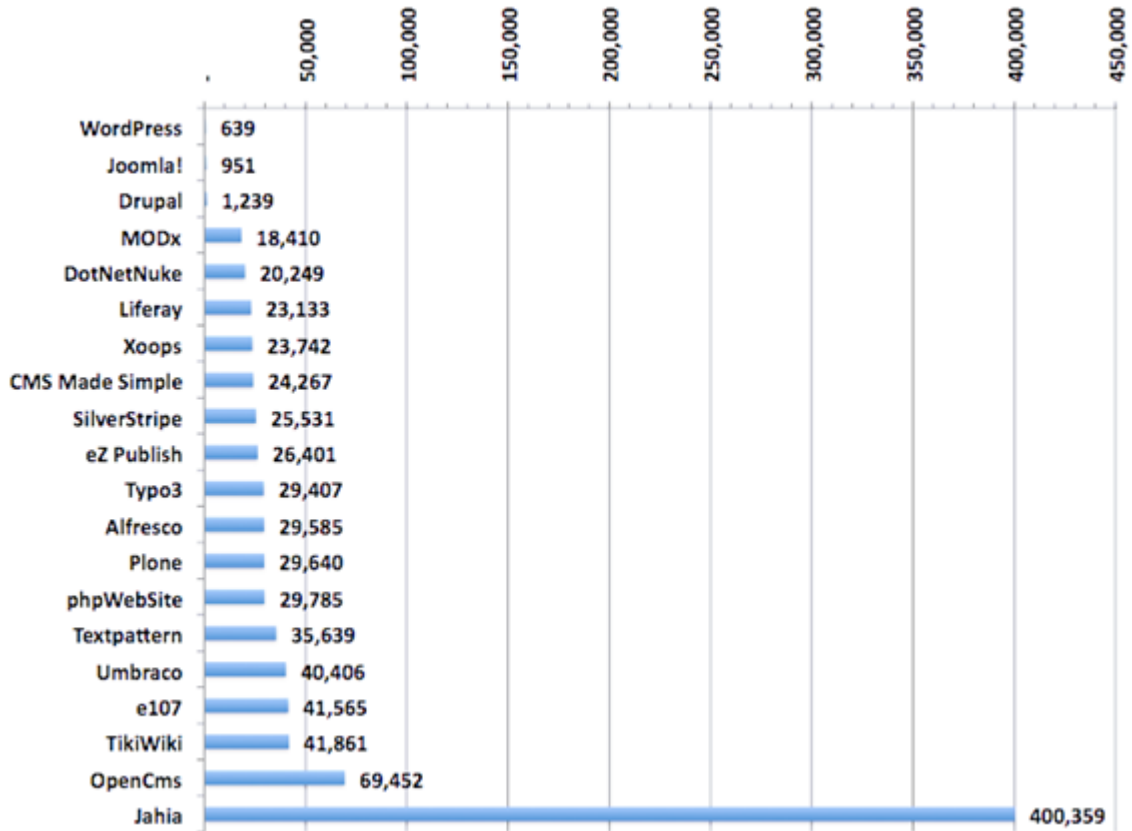


Exhibit 5 Alexa Rankings

Traffic numbers from Compete and Quantcast were similar.

Ranking	Alexa	Compete	Quantcast
1	WordPress	WordPress	WordPress
2	Joomla!	Joomla!	Drupal
3	Drupal	Drupal	Joomla!
4	MODx	phpWebSite	DotNetNuke
5	DotNetNuke	DotNetNuke	Plone

Exhibit 6 Traffic Comparison of Top 5 Systems

Section three of the report focuses on measuring brand strength. Metrics were analysed from numerous sources including: search engines, social media, user surveys, blogs, and microblogs.

The survey data showed WordPress, Drupal and Joomla! as a group to have a commanding name recognition lead relatively equivalent to each other.

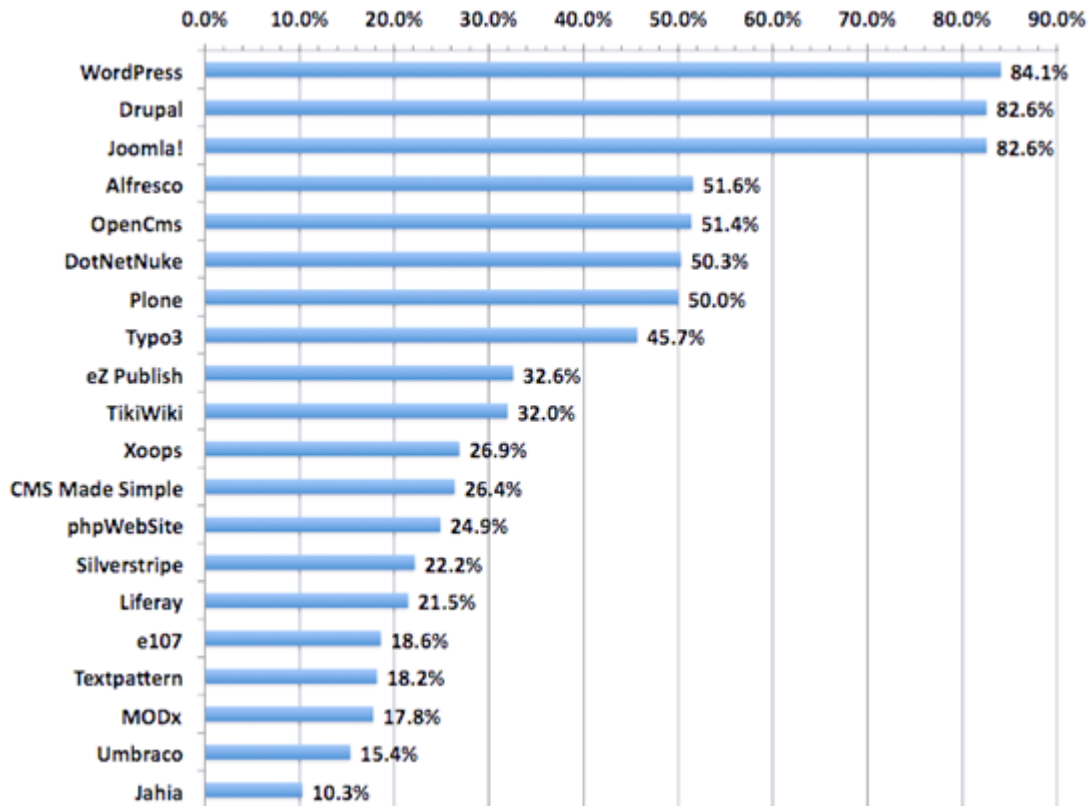


Exhibit 7 Survey Question: "Which of these companies or projects have you heard of?"

Joomla! showed a commanding lead in search, however it is likely these numbers are skewed by Joomla! embedding Google search in their groups sections.

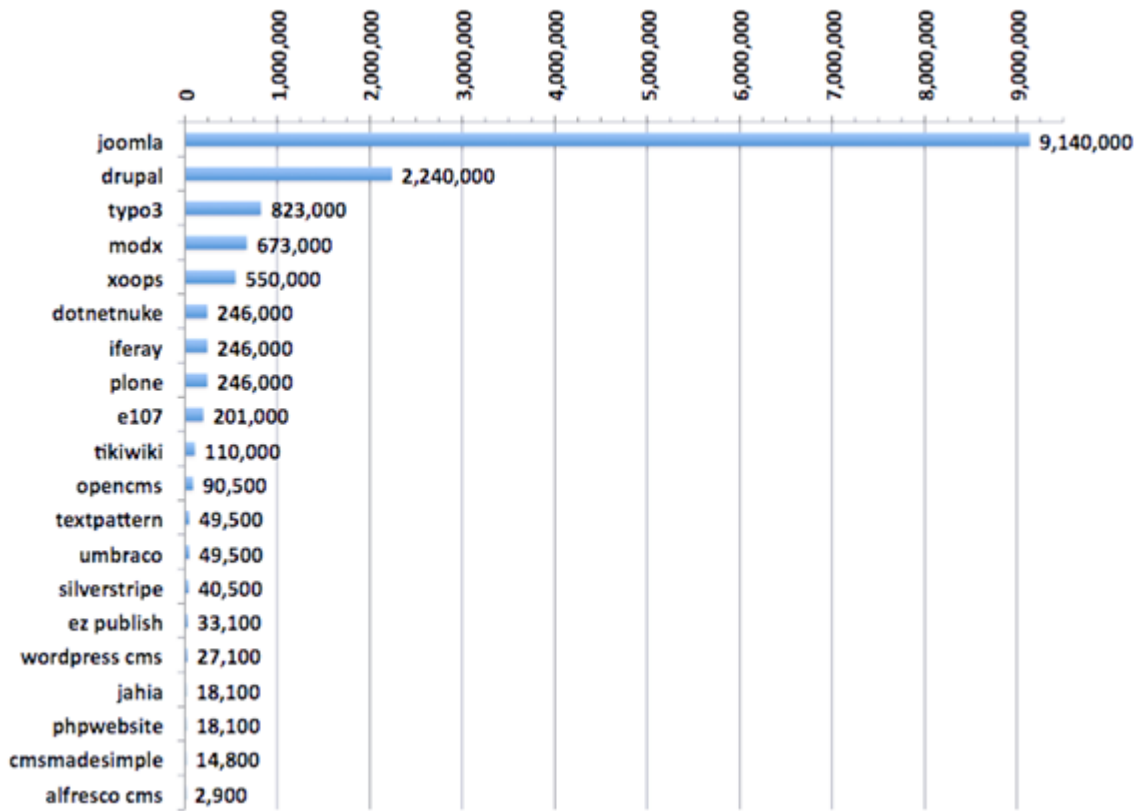


Exhibit 8 Google Monthly Query Volume (Global)

Drupal leads in Social Media Prominence determined by mentions in social media resources such as Twitter, blogs, forums and social networks.

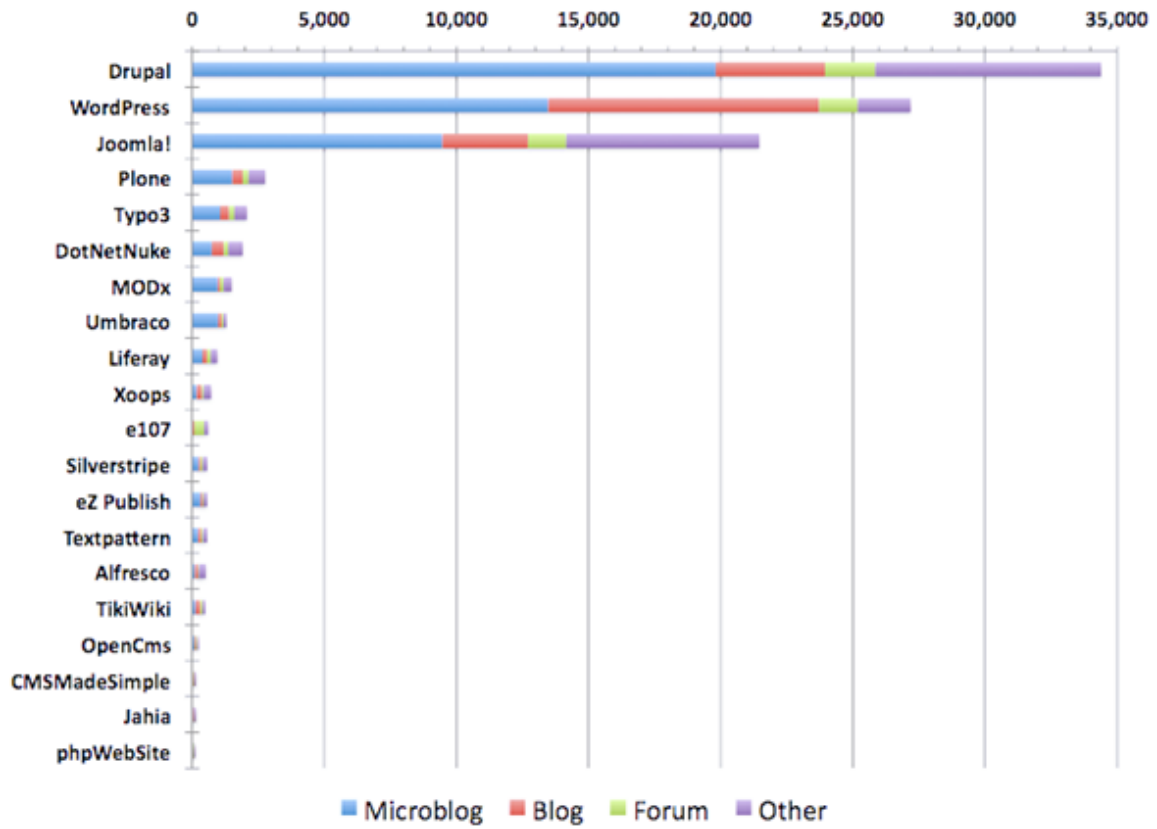


Exhibit 9 Social Media Prominence

The final section focused on reputation and brand sentiment. The primary data was gathered by survey and through social media sentiment analysis tools. The primary analysis was based on survey questions. The analyst felt the data gathered through social media sentiment measures generally agreed with the survey results.

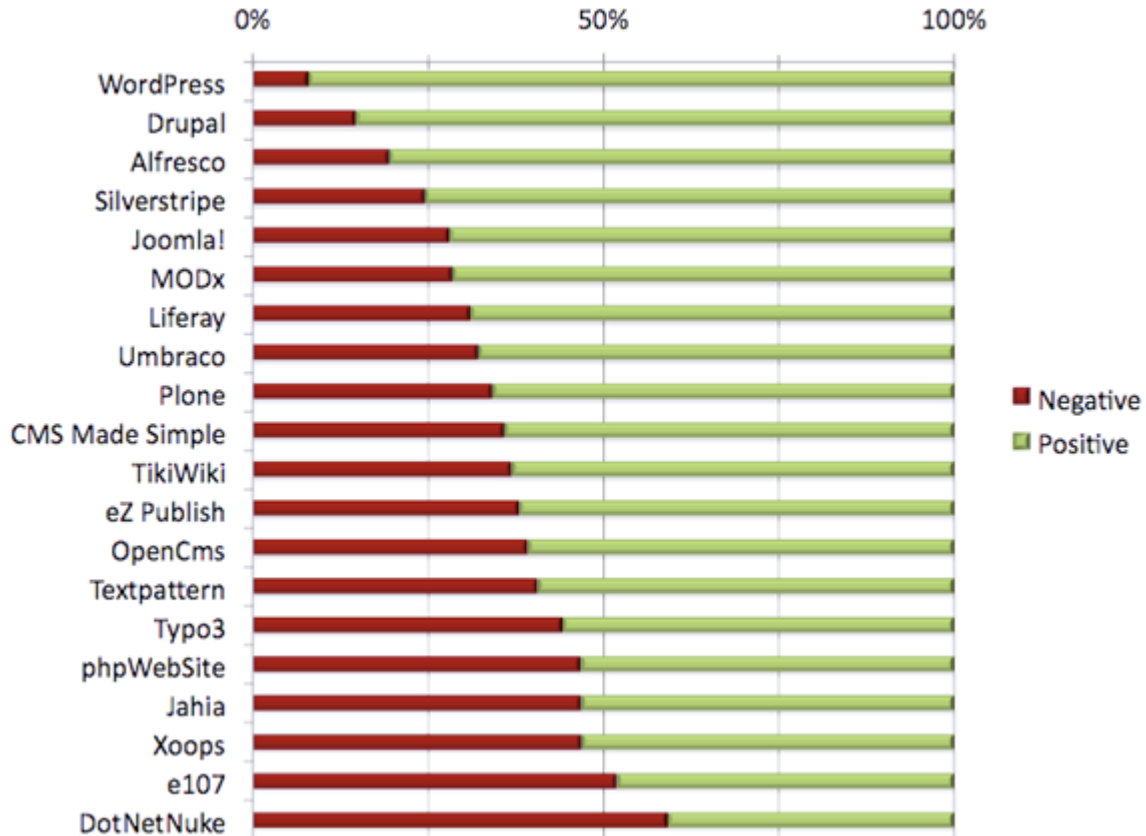


Exhibit 10 Survey Question: "What is your general feeling about these companies or projects?"

The full 96 page report can be download at:  
<http://www.cmswire.com/downloads/cms-market-share>

We would like to thank CMSWire and walter&stone for an exceptional report and for releasing it under Creative Commons licensing.

## Packt Publishing Open Source CMS Awards

Since 2006, Packt Publishing, a top publisher of technical web books, has conducted a contest to determine the top open source CMS. Finalist are selected by user voting. Then expert judges select the winning CMS. 23,000 votes were cast in the 2009 awards.

Award	2009	2008	2007
<b>Hall of Fame Award</b>	1. Drupal 2. Joomla!		
<b>Overall Best Open Source CMS</b>	1. WordPress 2. MODx 2. SilverStripe	1. Drupal 2. Joomla! 3. DotNetNuke	1. Drupal 2. Joomla! 3. CMS Made Simple
<b>Most Promising Open Source CMS</b>	1. ImpressCMS 2. Pixie 2. Pligg	1. SilverStripe 2. CMS Made Simple 3. ImpressCMS	1. MODx 2. TYPOlight 2. dotCMS
<b>Best Open Source PHP CMS</b>	1. Drupal 2. WordPress 3. Joomla!	1. Drupal 2. Joomla! 2. CMS Made Simple	1. Joomla! 2. Drupal 3. e107
<b>Best Other Open Source CMS</b>	1. Plone 2. dotCMS 3. mojoPortal	1. Plone 2. dotCMS 3. DotNetNuke	1. mojoPortal 2. Plone 3. Silva

*Exhibit 11 Packt Publishing Open Source CMS Award winners 2007-2009*

In the first three years of the awards, 2006-2008, Drupal and Joomla! won top honors. In 2009, Packt created a new Hall of Fame Award category. Hall of Fame winners were excluded from winning Overall Best. For the most recent 2009 rankings, effectively the top selections were:

1. Drupal
2. Joomla!
3. WordPress
4. MODx
4. SilverStripe

More information about the awards can be found at:

<http://www.packtpub.com/award>

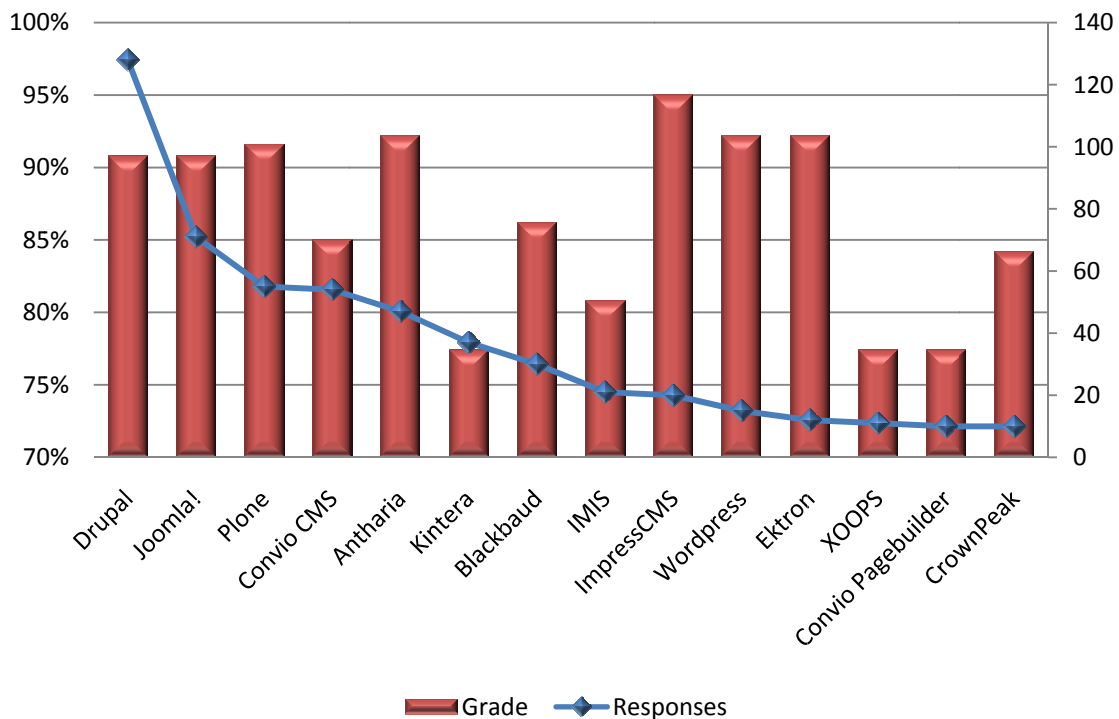


## NTEN CMS Satisfaction Report

NTEN is a leading organization for non-profit technology professionals. Their mission is to facilitate the exchange of knowledge and information within the non-profit community. In 2008 they conducted a survey of the CMS used by various non-profit and how satisfied they were with their platform.

The survey asked non-profit users to grade their CMS in five categories:

- Quality and Reliability
- After Sales Support
- Delivers on Promises and Deadlines
- Usability
- Value



*Exhibit 12 Summary of the average grades and the number of responses received for each CMS.*

From a satisfaction perspective, ImpressCMS received the highest scores at 95% with a three way tie for the second highest between Antharia, WordPress and Ektron at 92.2%. Note that of the top four satisfaction grades, only WordPress is open source.

From a popularity perspective, Drupal is the clear winner with Joomla! a distant second followed by Plone. They received satisfaction grades of 90.8%, 90.8% and 91.6% respectively, all above the survey average of 88.4%

The full report can be downloaded at:

<http://www.nten.org/blog/2008/05/29/nten-content-management-system-satisfaction-report-now-available>

## Idealware Comparing Content Management Systems Report

Idealware is a nonprofit that provides candid Consumer Reports style reviews and articles about software of interest to nonprofits. For their 2009 CMS Report they selected four CMS they determined to be the most popular in the nonprofit sector. The top four were selected using the 2008 version of walter&stone's Open Source CMS Market Share Report and the NTEN CMS Satisfaction Survey.

The four reviewed CMS are:

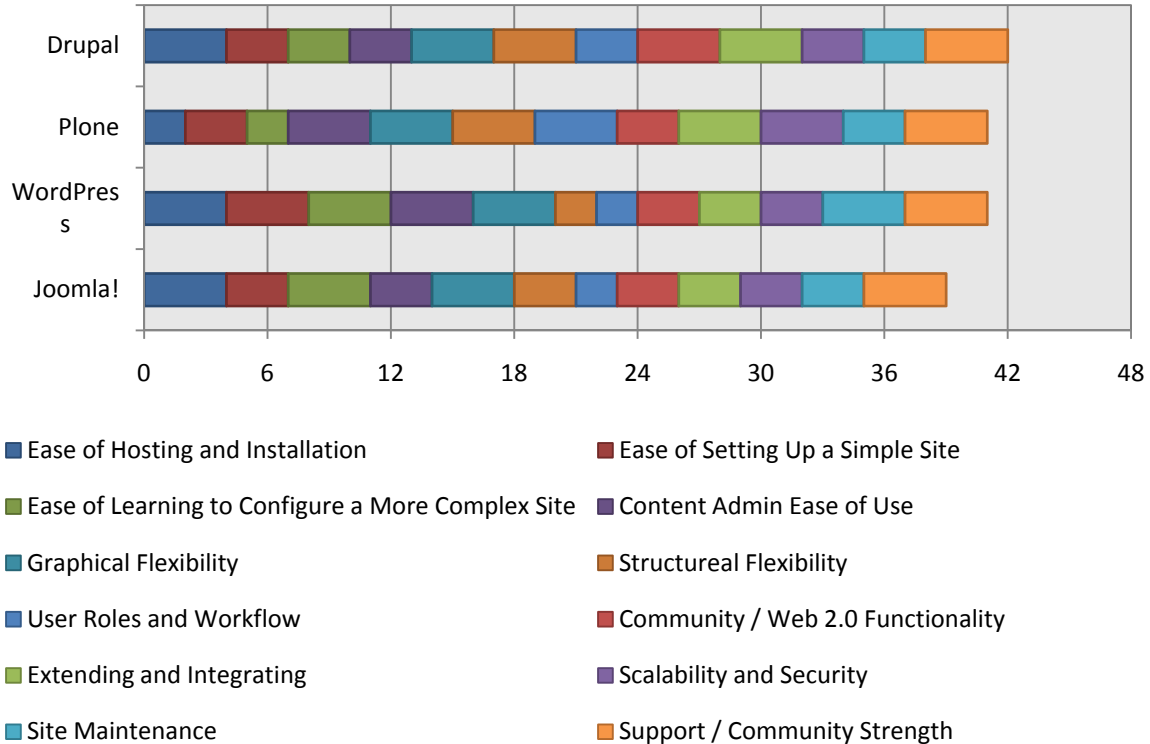
- Drupal
- Joomla!
- Plone
- WordPress

While the report is focused specifically on the needs of non-profits, the analysis criteria is fairly apt for typical business and community site needs.

This comparison is well put together primarily focusing on system features, ease of use and implementation. The comparison addresses the quality of CMS features providing an excellent complement to the other popularity based evaluations.

Two primary methods were used for assembling the data; interviews and lab testing. Idealware interviewed a panel of experts including four consultants who have implemented multiple systems, five consultant experts in one system and three non-profit IT managers. The second source of data was lab tests where each CMS was installed and run through a fairly extensive series of trials.

The CMS were rated on 12 criteria with one of four rankings: Excellent, Solid, Fair, or None. Each system ranked well, with Drupal receiving rankings slightly higher than the others and Joomla! slightly lower.



*Exhibit 13 Summary of rankings, assigning point total 1-4 for each of the four values and totaling the ratings for all twelve criteria*

The important conclusion the comparison makes is there is not any one CMS is the best. They all are very good. The question is which one is best for your situation. Summaries of Idealware’s findings for appropriate fit are:

- WordPress: a great choice for straightforward, simply arranged Web sites
- Joomla!: a solid utility player, good for a variety of different situations
- Drupal: flexible and powerful, great for more complex sites
- Plone: a powerful and robust system suitable for very complex needs

Download the full report at:

[http://www.idealware.org/comparing\\_os\\_cms](http://www.idealware.org/comparing_os_cms)

## Forrester Web Content Management and Open Source Report

On June 19, 2008 Forrester, a 16 year old leader in technology research and consulting, released a report analyzing if any Open Source Web Content Management Systems (WCM) are enterprise ready. Note that WCM is a more specific descriptor used by large enterprises to describe the class of CMS reviewed in this report.

This report is in response to mounting interest being shown by enterprise IT managers in open source solutions as a viable platform for moving to next generation WCM, e.g. Web 2.0 / Enterprise 2.0. There is a general perception that the commercial enterprise CMS have exorbitantly high costs and have been lagging in Web 2.0 features. Open source has no licensing cost and excels at keeping up with the state-of-the-art. However, enterprises have been slow to embrace open solutions, preferring the traditional safety of a brand name vendor over community supported solutions.

Essentially, the Forrester report is seeking to answer the question “Are there any next generation open source CMSs powerful, scalable, and reliable, e.g. safe, enough for enterprise demands?”

Forrester evaluated CMS based on three primary factors:

1. Satisfaction of project offering
2. Existing enterprise-level implementations
3. Strength of community support

Forrester singled out only two open source CMS, Alfresco and Drupal, to which “CIOs and CTOs need to pay particular attention”.

Specific reasons were:

- Both have taken pages from the commercial vendors’ playbooks [i.e., enterprise-class support, stability, etc.]
- Technologist praise the product architectures
- Both have strong professional communities

A downloadable version of the report is available at:

<http://acquia.com/files/Forrester%20-%20WCM%20and%20Open%20Source.pdf>

The full report can be purchased at:

[http://forrester.com/rb/Research/web\\_content\\_management\\_and\\_open\\_source/q/id/46162/t/2](http://forrester.com/rb/Research/web_content_management_and_open_source/q/id/46162/t/2)

## IBM developerWorks Using open source software

IBM's *Using Open source software* is a series of articles about using open source to design, develop, and deploy a collaborative Web site. These articles provide insight into how a world class enterprise consultancy evaluates open source solutions. What is interesting is that IBM is essentially evaluating alternatives to their own enterprise class CMS, WebSphere.

For the series, IBM evaluated seven solutions:

- Drupal
- Mambo / Joomla
- Movable Type
- Ruby on Rails
- TextPattern
- Typo3
- WordPress

It is interesting that they included Ruby on Rails (RoR), which is a general programming framework, as a possible solution for deploying collaborative Web sites. While RoR is an excellent framework, ultimately it was rejected as being too costly requiring the coding of a CMS from the ground up.

The primary evaluation criteria were:

- Ease of installation and time to figure out how to use it
- Effective control access to information with robust session and user management
- A robust pluggable infrastructure backed up with a vibrant community
- Potential to ramp up the scalability
- "Themability", particularly ease and flexibility of changing the look of a site

This study evaluates CMS based on features of interest to large organizations. It is a good complement to the Forester report that evaluated more from the popularity criteria of sentiment, adoption and community.

Ultimately, the decision was to go with Drupal: "We did have to invest some time to learn the Drupal way, and the framework just seemed to make sense. We also felt that Drupal provided the right combination of framework and flexibility to break out of the framework when needed to get the job done."

It should be noted that these articles are older, published from July of 2006 to April of 2007. While older versions of each platform were evaluated and the top platforms have grown significantly, the general philosophical direction, strengths, and weaknesses of



each remain the same. Additionally, IBM continues to use Drupal as their preferred open source CMS for collaborative sites.

View the article series at:

<http://www.ibm.com/developerworks/ibm/library/i-osource1>

## Webology Drupal vs. Joomla! Survey

Webology conducted a survey of CMS experienced web professional to compare their opinions of Drupal and Joomla!. Out of the 196 respondents 84 (42.9%) said they were more experienced with Joomla!, 70 (35.7%) with Drupal and 42 (21.4%) with other CMS.

One of the more unique pieces of information in the survey was the average budget of websites built on each platform.

CMS	Respondents	Average Budget
Drupal	61	\$45,184
Joomla!	81	\$19,847
Other	40	\$31,063

*Exhibit 14 Average budgets for projects built with different CMSs*

The survey then asked professionals to rate the two CMSs based on a wide range of factors. A tabulation of many of the factors rated on a four point scale can be found in Exhibit 15.

Criteria	Drupal	Joomla!
Client satisfied by CMS	3.4	3.1
Easy to find qualified developers	2.5	3.1
Availability of developers	2.9	3.2
CMS is easy to learn for developers	2.8	2.9
Is well documented	3.2	2.9
Support for development questions	3.3	3.0
Does not have many bugs	3.6	2.9
Does not have many module bugs	2.9	2.5
Number of site functionality modules	3.6	3.3
Quality of site functionality modules	3.4	3.0
Quality of administrative modules	3.3	2.8
Add-ons integrate well with core system	3.3	2.8
Frameworks is easy to extend capabilities	3.6	2.8
Support for multimedia	3.2	3.1
Support for social networking	3.4	2.7
Support for e-commerce	3.0	3.0
Support for search engine optimization	3.6	2.7
Support for forums	3.0	3.0
Support for photo galleries	3.2	3.1
Support for event calendars	3.3	3.0
Support for blogging	3.5	2.9
Support for document management	3.1	2.8



Criteria	Drupal	Joomla!
Support for SSL	3.2	2.9
Support for internationalization	3.3	2.9
User management and permissions	3.5	2.4
Ease of external integration	3.2	2.8
Speed	3.1	3.0
Ease of creating attractive sites	2.7	3.1
Quality of theme templates	2.8	3.3
Range of theme templates	2.6	3.3
Ease of use	2.8	3.3
Ease of customization	3.1	2.9
Creating new functionality is fast	2.9	3.2
Easy to develop large complex sites	3.2	2.5
Interface is easy to learn for non-technical people	2.2	3.1
Easy to maintain or upgrade	2.8	3.0

*Exhibit 15 Summary of key ratings based on a four point scale. Note the responses have been normalized where; 4=excellent/strongly agree, 3=above average/somewhat agree, 2=below average/somewhat disagree, 1=very poor / strongly disagree*

Joomla! received higher ratings for themeing, partly based on the large number of quality pre-made templates available for Joomla!. Drupal rated higher in virtually all other areas. This is somewhat surprising given that the 20% more respondents were Joomla! users than Drupal users.

Several critical areas Drupal rated significantly better were:

- Search engine optimization (ability to achieve top rankings in search engines such as Google, Yahoo! and Bing)
- Internationalization (multi-language support)
- Social networking
- Blogging
- Number and quality of add-on modules
- Extendibility and customization
- Being bug free
- User permissions

Of course Drupal's enhanced capabilities come at a cost, with the average Drupal site costing more (\$45,184) than twice the average Joomla! site (\$19,847).

You can download the survey results and raw data at:

<http://www.webologysolutions.com/ebusiness-blog/Drupal-vs-Joomla-Question-Responses.html>

## Secondary Evaluations

This section contains several additional evaluations used to provide insight in our final recommendations.

### SourceForge.net Community Choice Awards

SourceForge.net is the world's largest open source software development website. In 2008 they conducted a Community Choice Awards where top projects were determined by voting by their more than two-million registered users.

This evaluation is somewhat unique because it includes all types of open source software from web, desktop and even mobile apps. While most categories don't apply to CMS, two are of interest, Best Project and Best Project for the Enterprise. OpenOffice ended up winning both categories. OpenOffice is not a CMS; it's a desktop publishing suite.

However, two CMS did make it as finalists. Drupal was the only CMS finalist for both the Best Project and Best Project for the Enterprise. Magento was a finalist for Best Project for the Enterprise. Magento is technically an e-commerce shopping cart and not a true CMS, however it has some CMS capabilities and is an excellent best of breed shopping cart.

Learn more:

<http://sourceforge.net/blog/cca08-finalists/>

### CNET Webware 100

The Webware 100 identifies 100 Web applications voted "the best of the best" by CNET readers. For 2009 over 5000 votes were cast.

These awards are interesting because server side CMS are in open competition against thousands of available solutions including hosted publishing solutions and social media sites.

In the Social & Publishing category, two CMS received inclusion in the top 100; Drupal and WordPress. WordPress won for their hosted solution, WordPress.com.

The full list of winners in the Social & Publishing category are:

- Bebo
- Drupal
- Facebook

- Gaia Online
- Hi5
- Meebo
- MySpace
- StarDoll
- Twitter
- WordPress.com

Drupal and WordPress also won in 2008, the only server side CMS to make the list.

The awards can be found at:

<http://www.cnet.com/100>

### **A frank comparison from an IBM consultant**

Analysis from an IBM consultant about his evaluation of Drupal vs. Joomla.

<http://www.topnotchthemes.com/blog/090224/drupal-vs-joomla-frank-comparison-ibm-consultant>

### **CMS code base comparison**

This post graphs the changes in code base for the four CMS; Drupal, Joomla!, Plone and WordPress since the year 2000. All four exhibit strong continued growth.

<http://buytaert.net/cms-code-base-comparison>

## Feature comparisons

Consumer Reports style feature comparisons are a popular format for comparing CMSs. They list various features and how well each CMS meets the criteria. Feature comparisons enable you to quickly compare CMS functionality in an easy to understand format. However, their quick analysis with simple Yes / No answer is often an oversimplification providing only surface level insight into nuanced technically complex questions.

Best in class CMSs generally have some type of solution for most popular feature requirements. All top CMSs are extendable via numerous add on modules, theme customizations and custom programming. Many of the features evaluated in these comparisons can be reasonably solved through add ons or simple “glue” coding. This makes feature comparisons difficult and leads to ratings that are often too subjective to accurately reflect real world scenarios.

That is not to say that there is no value in feature comparisons. They can quickly reveal significant shortcomings. They are particularly useful to do it yourselfers (DIY) who need to know the simple answer to if a CMS does something they need. They are often less useful with experienced teams who know how to solve their platform’s seeming weaknesses.

We have included some of the better feature comparisons resources we have found and used for our final recommendations:

CMS Matrix customizable comparison of over a hundred CMSs:

<http://www.cmsmatrix.org>

CMS Comparison (of 9 platforms) by r2i:

[http://lab.r2integrated.com/Wiki.aspx?topic=CMS\\_Comparison](http://lab.r2integrated.com/Wiki.aspx?topic=CMS_Comparison)

*Joomla and Drupal – Which One is Right for You?* by Alledia:

<http://www.alledia.com/blog/general-cms-issues/joomla-and-drupal-version-2>

### **Additional resources**

Below is a list of other useful articles used in our final analysis.

*WordPress vs Joomla vs Drupal* by Good Web Practices:

<http://www.goodwebpractices.com/other/wordpress-vs-joomla-vs-drupal.html>

University of Texas CMS evaluation:

[http://blogs.utexas.edu/refresh/files/2009/12/cms\\_evaluation\\_final\\_report.pdf](http://blogs.utexas.edu/refresh/files/2009/12/cms_evaluation_final_report.pdf)

*8 Dimensions for CMS Technical* Evaluation by Big Men on Content:

<http://bigmenoncontent.com/2009/11/03/8-dimensions-of-cms-technical-evaluation>

## Cross Analysis

The 2009 Open Source CMS Market Share Report by water&stone and CMSWire provide the clearest picture of popularity showing the big three of WordPress, Joomla! and Drupal continuing to dominate the market.

The analysts declare Joomla! the web's most popular open source content management system having grown in several key metrics. This is not surprising given how the web has grown in sophistication yet the recession places a premium on low deployment costs. The vast majority of websites are small to mid-sized organizations with requirements larger than what a blog centric platform like WordPress offers yet not as advanced to warrant more complex and expensive Drupal development.

The analyst also present some concerns with the Joomla! brand sentiment ratings. More than 1 out of 4 respondents have a negative opinion of Joomla!, well above the negative sentiment for WordPress and Drupal.

This is also not surprising. When talking with Joomla! developers and site owners there is a common thread of dissidence in its flexibility and ability to scale in both performance and sophistication. We do not see this as an inherent flaw with Joomla! but more indicative of typical user expectations of a mid-level solution. Users are attracted to the wealth of features and low entry point, both in price and learning curve. Yet as a site's needs grow, mid-level solutions often strain to meet new and more complex requirements. What was once a cost effective cutting edge solutions is now inflexible and costly to change.

In contrast, WordPress and Drupal have the advantage of being at well defined ends of the spectrum. Users know better what to expect. WordPress is simple; use it to blog. If you want it do something more advanced, you will need a different platform. Drupal is advanced allowing you to do virtually anything you can imagine but be prepared for the higher investment that comes with additional levels of power and flexibility.

The report also identifies three contenders who are "ones to watch"; Alfresco, Liferay and MODx. The emergence of Alfresco and Liferay are the most interesting. Both fulfill another vital niche in need of an open source leader, enterprise knowledge portals. Where they differentiate themselves is in their ability to manage traditional content such as word processing, spreadsheets and presentations. They excel in the intranet space enabling companies to elegantly manage large volumes of documents.

Alfresco, along with other portals such as SharePoint, implements a cross CMS API standard called CMIS. This enables Alfresco to integrate with other CMSs effectively enable other CMS to wrap around Alfresco's superior document repository capabilities. Both Drupal and Joomla! have modules for Alfresco integration.

The Packt awards reinforce the dominance of Drupal and Joomla! as the preeminent general CMS platforms. WordPress, MODx and SilverStripe are also given the nod as viable alternatives.

The NTEN report is interesting in that it directly measures actual end-user satisfaction and pits open source against commercial platforms. Support structures for open source and commercial are radically different. Commercial products are supported by dedicated paid support teams either within the vendor or authorized vendors. Open source is primarily supported by a community of helpful volunteers although paid support is often an available option.

It is not surprising that the top three satisfaction ratings went to commercially supported products. What is interesting is that the next four highest satisfaction ratings went to open source products; WordPress, Plone, Drupal and Joomla!. These open source solutions ranked significantly higher than several other popular commercial platforms. Although it is not clear if the fact that they are free was a factor in the user's satisfaction ratings.

The Idealware Comparing Content Management Systems Report does the best job of directly evaluating the features of the top CMS. It reinforces that the top four most popular CMS determined by other reports indeed offer the most benefits. Idealware also makes the clearest case that there is not one clear best CMS but that the best is dependent on your needs. The report provides valuable insight into the benefits and limitations of each solution for specific situations.

The report recommends WordPress for blogs and very simple sites, Joomla! basic general use sites, Drupal for advanced sites and Plone for highly customized, complex sites.

The Forester and IBM reports provided valuable insight from an enterprise perspective. Enterprises demand the highest levels of performance, security, reliability, flexibility and robustness. While not all websites require enterprise class rigor, it is valuable to identify which have the greatest potential to scale with your future needs.

From these reports it is not clear, but not likely that any of the open source solutions have reached parity with big box commercial ECMs. What is clear is that two open source CMS, Alfresco and Drupal, have raised above the others as viable for some enterprise level applications. It is also apparent the gaps between commercial ECMs and open source are narrowing and the adoption of Alfresco and Drupal in enterprises will continue to grow.

Within the enterprise, Drupal is ideal for Web 2.0 and collaborative websites. Alfresco is better suited for intranet portals.

Finally the Webology Survey provides valuable insight into the strengths and weaknesses of the two leading platforms, Drupal and Joomla!. The most striking is the disparity in the average budgets of sites built between the two platforms. The average Joomla! site costing just under \$20K and the average Drupal site at \$45K.

Additionally, Drupal distinguished itself in the areas of search engine optimization, multi-language support, flexibility and customization, and several key Web 2.0 features. Joomla! did gain the edge in one main area, theming, particularly driven by the large number of available professional templates.



## Recommendations

Little has changed since our 2008 analysis. The big three; WordPress, Joomla! and Drupal have only grown in dominance. Unless your organization has a specific reason for not using one of these (see Other CMS Recommendations below), we recommend choosing one of the big three.

The real question is which one? Despite growth in all three generating more crossover than in past years, each still command their distinctive niche. Your best option is to define your specific needs and situation.

The two primary factors to consider are the complexity of your requirements and resource constraints. Secondary factors include performance, security and marketing capabilities. It is important to evaluate these factors based on your current requirements and what your needs might be as your web presence grows.

The resources required for development are expertise, time and money. All three platforms are open source thus they have no licensing costs. However, resources are needed to develop and maintain a professional level site. The DIY approach can work well for simple sites or for those with significant in-house technical expertise. However, most professional level sites are outsourced thus resource costs are best thought of in terms of budget and timelines.

Complexity should be evaluated from two perspectives; number of features and level of customization. In traditional software development, each feature costs money. CMS already include most common features. Thus in CMS driven web development, customization of features is the major cost driver. While there are some costs associated with configuring large numbers of features, closely matching your requirements to the way a CMS stock features work can greatly reduce costs and time of development.

We list performance as a secondary factor, primarily because for most websites the performance of any of these CMS should be adequate. However, if your site needs to be able to reliably handle large volumes of traffic, performance becomes a vital factor.

Popular open source CMS are high targets for hackers. The big three do have occasional security issues, however, all do a reasonably good job quickly addressing the problems through security updates. Timely application of security patches should be adequate for typical sites. If your site is mission critical, transmits or stores sensitive information, security becomes a highly important factor.

Many websites rely on online marketing to drive vital traffic to their website. If inbound traffic generation is a critical component of success, the marketing capabilities of your CMS will become vital factor. To be competitive, it will be important to select a CMS

that is highly search engine friendly, best allows you to leverage social media, and supports viral and retention campaigns.

In the proceeding section we make recommendations based on specific situations. General recommendations can be summed up thusly:

- The optimal choice comes down to a tradeoff between power and cost;
- WordPress is the most cost effective both in development time and the time to learn to use it. It however is the most limiting. It is ideal for blogs, DIY projects or very basic sites.
- Joomla! provides the best balance between investment and functionality. Use it for general websites with basic features or for sites where more advanced features can be closely match Joomla!'s standard functionality
- Drupal is the most sophisticated, but is generally more complex and expensive to implement. Use it for more advanced or high performance sites where features, flexibility and extendibility are more important than price. Drupal is also ideal for brands seeking to maximize their inbound traffic and digital footprint.

### Other CMS Recommendations

It is recommended to stick with the big three unless you have a good reason not to. There are many reasons another CMS may make more sense, but the two most common are:

1. You need a different platform than PHP
2. You have specific needs that are not well served by a general CMS

PHP is easy to learn and is adequately robust, thus it dominates the open source world. However, PHP is not for everyone. The CMS evaluations we reviewed included several non-PHP selections. If your in-house team has expertise in a language other than PHP or if your preferred agency uses a different language, a non big three CMS may be a better selection.

If this is your situation, below are recommended solutions:

- Plone (Python) – Python is a powerful language popular with \*NIX developers. Plone is an advanced open source CMS built on Python and the Zope framework.
- Alfresco / Liferay (Java) – Java is an enterprise class object oriented language. Many commercial enterprise class CMS are programmed in Java. Alfresco and Liferay are advanced enterprise CMS. They are designed primarily as document management solutions and as such excel in intranet or knowledge portal applications.
- DotNetNuke (.NET) - .NET is Microsoft's programming framework. It offers some advantages when integrating with other Microsoft systems such as Exchange Server or MOSS. .NET, however, does not attract strong open source development. DotNetNuke is at the top of the class for .NET open source,

however it is the least powerful of the recommended group. If you truly need .NET, you might look to a commercial package such as Ektron.

### **Situational recommendations**

General CMS such as Drupal and Joomla! are designed around general web requirements. Projects with a singular focus such as a blog, forum, wiki or shopping cart may be better served by a niche solution.

The following are more specific platform recommendations based on the type of website:

#### **Blog**

The simplest method to publish online is to create a blog site. Many individuals and even small companies use a blog format for their main website. If you have a static website, you can easily add a blog section to create an area for dynamic content.

Hands down, WordPress is the best solution for getting your own blog up and running quickly and easily. WordPress is even a fairly safe choice even if you think your needs will grow in the future since both Joomla! and Drupal have WordPress import capabilities.

Best choice: WordPress

#### **SMB brochure site**

Most small to midsized businesses leverage their website as an online brochure. Brochureware websites contain fairly basic pages about the company, products and services etc. Typically functionality is minimal, and may include webforms, a press room and a blog.

Joomla! is ideal for these types of sites, particularly where price is an important consideration. Joomla! can easily handle this level of content management and has numerous modules to add more advanced features. If you are on a very tight budget, you can save significant cost by using one of the hundreds of high quality templates available for Joomla!

WordPress may be a secondary option, particularly if you want a blog section or if you are doing the site yourself. Drupal is overkill for a typical brochure site, however it will work and would be a good solution if you think you may need its power in the future but be prepared to pay more than a Joomla! or WP site.

There is one important exception, if you plan to do a significant amount of online marketing, particularly through search engine optimization. Drupal and WordPress are more search engine friendly than Joomla! Drupal, featuring the broadest array of

marketing tools, it is the superior CMS for advanced online marketing campaigns. WordPress makes a solid budget minded second choice.

Best choice:

1. Joomla!
2. WordPress
3. Drupal

### **Web 2.0 business site**

Web 2.0 sites incorporate advanced interactive features. Web 2.0 sites are not just for passive reading, they are meant to engage customers into an interactive experience.

They typically include collaborative knowledge or community oriented sections such as blogs, wikis, forums and knowledgebase's. Visitors can interact with this content through commenting, rating, tagging, flagging, etc. Some sites even allow visitors to publish their own content. Web 2.0 sites are often integrated with the social cloud, sites such as Twitter, Facebook, LinkedIn and other blogs.

Drupal is the top choice. It is designed from the ground up to be a community platform and offers the most advanced Web 2.0 features.

If you are on a tight budget, Joomla! can be a viable alternative. Joomla! does have some useful Web 2.0 modules. However, the quantity and flexibility are a distant second to Drupal. If you do plan to go the Joomla! route, avoid feature customization otherwise Joomla!'s cost advantages will disappeared quickly.

Best choice:

1. Drupal
2. Joomla!

### **Enterprise class websites**

Large enterprises have much of the same needs as SMBs but everything is bigger and more complex. The Enterprise is the most demanding of environments and suitable CMS have to deliver a wealth of features while maintaining a mission critical level of reliability and scalability. Any production problem must be able to be remedied quickly thus 24x7 enterprise class support is a must.

Beyond performance, there are some advanced features enterprises value more than smaller organizations. Content is usually managed by teams of knowledge workers necessitating advanced user permissions and content workflows. CMS may be required to integrate with other legacy systems. Enterprises tend to have an appetite and budget

for advanced features so suitable CMSs need to have a wealth of flexible ad-ons and be readily extended through custom programming when needed.

Traditionally the safe selections are big box commercial web content management systems (EWCM) such as Interwoven, Vignette, Documentum, Lotus WCM or Oracle's Stellent WCM. However, the gap between traditional EWCMs and top tier open source solutions such as Drupal, Plone and Alfresco has narrowed significantly.

The problem with traditional EWCMs is they are very costly to deploy and maintain. EWCM vendors are perceived to have slow development cycles and are finding it increasingly difficult to compete with the size and diversity of open source communities.

Enterprises are being forced to redefine risk. Is it better to use a brand name EWCM and deliver an outdated feature set with five 9's reliability (99.999% uptime) or should they re-invest the high licensing costs into delivering a better Web 2.0 experience using a more agile solution?

Ultimately there is no easy answer here. There are a multitude of reasons a company may want to stick with a commercial EWCM; integration, reliability, security, specialized features, etc. However, if delivering a state-of-the-art Web 2.0 interactive experience is a priority, a top tier open source solution should be considered.

Drupal is the top selection for an open source enterprise class WCM. Alfresco is better tuned for intranets (see intranets below). Plone is technologically very capable and even arguably a more advanced code architecture than Drupal. Drupal gains the edge based on two primary factors:

- Availability of enterprise class support (via Acquia)
- Significantly larger development and support community

An interesting trend that has emerged from the commercial EWCM or open source debate is enterprises starting to use open source for community, departmental and micro sites. Many large organizations have launched separate Web 2.0 sites on Drupal while maintaining a commercial EWCM for their main website.

Best choice:

1. Tie: EWCM, Drupal
2. Plone

### Non-profit sites

Non profit sites have many of the same core needs as business sites. However, non-profits typical need to integrate donations/ecommerce and constituent relationship management systems (CRM). Many non-profit sites contain awareness, advocacy or volunteer sections that could benefit from Web 2.0 features. Social media is playing an increasingly important role in non-profit marketing and awareness. An ideal CMS would enable you to integrate and better leverage social media.

Drupal is the top choice for non-profits. It has exceptional content management features be readily extended through contributed modules. Donations and ecommerce can be managed through Ubercart or via CRM integration. Drupal provides the best integration with the largest number of CRM including CiviCRM & SaleForce. Joomla! also can integrate with several popular CRM.

Drupal further differentiates itself based on Web 2.0 features. Non-profits can deploy sophisticated knowledgebases and communities at a relatively low cost. In addition, Drupal features several modules to help integrate social media efforts.

Joomla! makes a good alternative for smaller non-profits on a tight budget. It can provide much of the same core Web 2.0 functionality of Drupal, although with less flexibility.

For non-profits with essentially no budget, WordPress with using a free template can be a great DIY way to easily start publishing online.

For non-profits needing advanced highly customized functionality and with access to Python developers, Plone is worth looking at also.

Best choice

1. Drupal
2. Joomla!
3. WordPress / Plone

### Online community / Social media

Social media covers a very wide range of sites. In general they can be described as web applications that enable online communities to publish content and connect with each other. Features typically include:

- User registration
- User profiles
- Friends / user relationships
- User generated content
- Commenting, rating, tagging, bookmarking

- Media integration; photo, video & audio uploads
- Syndication

Most the large social media hubs are built custom from the ground up or on a general framework such as Ruby on Rails (RoR), Zend or .NET. However, many emerging communities use CMSs enabling them to offer much of the same functionality faster and at a fraction cost of custom development.

Drupal is the leading general CMS solution for building social sites. Having been designed around a Web 2.0 community site model, Drupal offers the largest and most flexible set of social features. There are even several recipes for how to use Drupal to clone several popular social sites including: Twitter, YouTube, Flickr, Digg, Delicious and Tumblr.

If you plan for your social site to be the next Facebook, you will eventually need to develop on a general framework. Facebook and other social media leader also have seven figure plus development budgets. If your short term aspirations and budget are more modest, you can often get the majority of the same functionality for a six or even five figure budget with an advanced CMS like Drupal.

Plone may also be a good alternative to using a general framework and having to reinvent the whole wheel.

Best choice:

1. Drupal
2. Plone

### Online publishing

Online publishers are news oriented sites that regularly post a significant number of articles. Online publishing often integrates many Web 2.0 features such as commenting, ratings and tagging to allow users to interact with their content. They also might integrate content created by an extended group of reporters or general site users.

Online publishing places a premium on content centric features such as

- content workflows
- media management; e.g. photos, videos and audio
- syndication
- aggregation (integration of 3<sup>rd</sup> party content)
- advanced, faceted search
- semantic markup

Drupal is the proven best selection in the online publishing space. Many prestigious online publications are built on Drupal including:

- The Economist
- Fast Company
- Popular Science
- InfoWorld
- New York Observer
- Seattle Times
- Field & Stream
- The New Republic
- Us Magazine
- The Onion
- Mother Jones

Both the James L and Thompson Reuters [check] and many others have invested significantly in publishing oriented Drupal development. The result is not only top-notch support for standard publishing features but also unique advanced features such as integration with Thomson Reuters Calais semantic tagging service.

Best Choice:

1. Drupal

### **Intranet**

Intranets are designed to facilitate employee collaboration. At their core they are essentially private web enabled knowledgebases. An intranet requires much of the sophisticated content management and search of a publishing site. Most Intranets also incorporate many of the features of a social media site.

Intranets have some special needs. Many intranets have project management collaboration features allowing users to share tasks, notes, calendars and other media. Intranets incorporate document management allowing them to manage non-web content such as word processing docs, spreadsheets and presentations. Intranets may also need to be integrated with other systems, such as accounting, phone systems, email, calendars, etc.

Traditionally many companies use commercial intranet focused horizontal portal solutions such as Microsoft MOSS, IBM WebSphere and Oracle Portal. This is likely to continue, however Alfresco and Liferay have grown into formidable players in this space, providing competitive open source alternatives. If you don't have an enterprise class intranet budget, Alfresco or Liferay are quality alternatives.

Drupal may be another viable solution. While Drupal's intranet features are not as refined as best of breed horizontal portals, its strong community site orientation means the core functionality is in place. If you use Drupal for your public website or have



intranet needs beyond standard horizontal portal features, Drupal may be a good compromise.

The best open source solution may be an Alfresco Drupal integration. The two platforms can be tightly integrated via Alfresco's CMIS extensions and Drupal's CMIS modules. By using the two together you get the benefits of Alfresco's powerful document management tools wrapped in Drupal's extensive Web 2.0 features and extensibility.

#### Best choice

1. Commercial horizontal portals
2. Integrated Alfresco, Drupal
3. Alfresco
4. Liferay

## About LevelTen Interactive

LevelTen is a full service digital consultancy located in Dallas, Texas. The company focuses on building online leaders through agile Web 2.0 strategies. LevelTen endeavors to make the web more human through open tools, information and processes.

LevelTen was founded in 1999 to address the growing need for online strategy, development and marketing. Initial focus was on enterprise solutions revolving around Human Factors Engineering, Java and the Rational Unified Process. After the dot com bust, LevelTen sought to bring enterprise rigor to mid-sized projects by helping SMB leverage open source technology to build results driven websites and better leverage online marketing.

Driven by a fervent learning culture, LevelTen is a leader in state-of-the-art online strategies including agile development methodologies, integrated online marketing and next generation open source web development.

For information on how we can help your company succeed online;

visit: [www.leveltendesign.com](http://www.leveltendesign.com)

call: 866.277.9958 / 214.887.8586

e-mail: [sales@getlevelten.com](mailto:sales@getlevelten.com)

## Appendix A – The CMS Intelligence Report History

The 2010 report is the 4<sup>th</sup> CMS Intelligence Report compiled by LevelTen. It is the first one that has been openly released. This appendix reviews the history of the report and LevelTen's CMS selections in the three prior reports.

In 2010, virtually all competitive websites use some form of web application content management, e.g. where the software resides on the web server. Prior to 2005, website content management requirements were relatively simplistic, if they were needed at all.

Until five years ago, LevelTen recommended desktop applications, more specifically Macromedia Contribute for general content management and dedicated web applications for specific needs including:

- WordPress for blogs
- PHPBB for forums
- osCommerce for shopping carts
- MediaWiki for wikis

We also would customize WordPress if a site needed extended functionality.

As the needs of a more dynamic web evolved our clients had an increasing need for an integrated content management solution. In 2005 we set out to find that solution and produced our first CMS Intelligence Report.

For the 2005 report we researched the best reputed CMS. We narrowed the list to five finalists:

- Moomba
- Joomla
- Drupal
- phpNuke
- Typo3

We then installed and tested all five platforms by running them through a series of tests similar to the Idealware lab tests.

Our goal was to find a Web 2.0 style CMS built on a mature Object Oriented framework, also called a Content Management Framework (CMF) that would give our clients a competitive edge.

All the reviewed CMS were interesting, however ultimately we felt that none were appropriate for our midsized and enterprise clients. None featured an OO framework. So we did what many other agencies do; we decided to build our own CMS.

In early 2007 we decided to conduct our second review. Primarily to see how our in-house proprietary CMS was fairing against community driven efforts. We tested CMS from our previous evaluations.

We also uncovered a fairly new but elegantly constructed CMS with a well patterned OOP framework, SilverStripe. SilverStripe was the only PHP solution with an OOP framework. After much deliberation, we transitioned from our own CMS to SilverStripe. While there were many features we liked in our own system, ultimately we came to the same conclusion many boutique agencies come to about in-house platform development - it's virtually impossible to keep pace with a dedicated community of developers.

In early 2008 we conducted our third CMS Evaluation. The three top platforms from our perspective were clear:

- Drupal
- Joomla!
- SilverStripe

All three are great platforms and evaluated well. One factor stood out in this evaluation; Drupal's adoption by large enterprises.

A who's who of blue chip brands were adopting Drupal including:

- Sony BMG
- Warner Brothers
- IBM
- Amnesty International
- AOL
- SUN
- FastCompany

Our analysis flagged two issues with Drupal, lack of professional theme templates and a framework that was not object oriented. However, the wealth of modules, extensibility, large community, quality documentation and blue chip adoption swayed us to select Drupal as the top CMS. Again we switched CMS this time from SilverStripe to Drupal.

Again another lesson was learned. In 2007 we chose a platform, SilverStripe, based on a specific technological preference, an OOP framework. While Drupal is not OOP, it does have an excellent well patterned procedural framework. So this time we chose to abandon our OOP experience and preferences for a superior platform that offered the best fit for our clients, Drupal.

Two years later we set out to conduct the 2010 version (this report). CMS evolve in Web time, so a lot can change in two years. All the same competitors were back with significant improvements and there are a few new CMS on the radar. Would LevelTen need to change platforms again to keep our clients state-of-the-art?

Drupal is the clear champion for the categories in which LevelTen focuses: Web 2.0 websites and marketing. For the first time we will not have to change platforms, although we will be doing some experimenting with Alfresco integration.