The 2014 Enterprise Application Market in Higher Education
Web Content Management Systems
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What You Need to Know

The web content management system (CMS) market is the second fastest changing market in higher education (figure 1). This high ranking is reflective of the volume of institutions that plan to replace their system in the next three years (21%; third behind IT service desk management and faculty and staff e-mail) and the relatively recent average year of implementation (2009).

*Rate of change is an indicator of how rapidly a system area is changing. It is a composite score based on year of current implementation and on plans to implement new systems or replace existing ones. Systems with the highest rate of change typically have been implemented recently or are expected to be implemented or replaced soon.

Figure 1. Characteristics of core information systems
Churn in this market is expected to continue as institutions attempt to keep pace with new technology; a system implemented in 2009 would have been implemented before the iPad, before HTML5, and before responsive web design. Currently, one-fifth (21%) of institutions with a web CMS are planning to modernize their system in the next three years; of those that aren’t planning to replace their solution in the next three years, one-third (34%) have implemented a solution in the past three years (figure 2). As institutions move from a brochureware web presence to one that facilitates engagement with students, faculty, staff, and alumni, they are looking for solutions that support mobility, social interaction, interoperability, and open content creation.

Figure 2. System provision and plans for change
Market Share

With just over half of the market (56%) using a solution from one of the top 5 vendors—Drupal (20%), Hannon Hill (13%), WordPress (11%), OmniUpdate (7%), and Microsoft (4)—the web content management system market is fairly heterogeneous (figure 3).

Figure 3. 2014 web content management system market
Market Shift: 2011–14

The market share for open-source solutions (Drupal, WordPress, dotCMS) has grown from 17% in 2011 to 34% in 2014 as institutions switch to PHP-based products such as Drupal (20%) and WordPress (11%) (figure 4). Share for vendor solutions, for homegrown solutions, and for solutions at less than 3% of institutions (“other” solutions) has declined since 2011 (43% in 2011 to 38% in 2014, 11% in 2011 to 7% in 2014, and 30% in 2011 to 24% in 2014, respectively).

It is unclear whether share growth for Drupal and WordPress represents software preference or platform preference. PHP share (Drupal, WordPress) increased from 2011 to 2014 (15% to 31%). Share for Java-based solutions (TERMINALFOUR Site Manager, OmniUpdate OU Campus, Hannon Hill Cascade Server, dotCMS) increased from 19% in 2011 to 25% in 2014, while share for ASP.NET solutions (Ingeniux CMS, Microsoft SharePoint, Ektron CMS, Sitecore, OpenText Web Site Management) declined from 18% in 2011 to 14% in 2014.1

Figure 4. 2011–14 web content management system market (top 5 solutions, homegrown, and other)
Management Strategy

Although most institutions (75%) still opt for an in-house implementation, one-sixth (16%) have a software-as-a-service (SaaS) implementation, which may provide benefits such as cost savings and scalability. Of the top 5 vendors (listed in order of market share in figure 5), OmniUpdate OU Campus is most likely to have a SaaS implementation (36%).

Figure 5. Management strategies in use for top 5 solutions
Deployment Strategy

To support mobile demand, institutions are using responsive web design (52% of institutions), mobile-specific websites (16%), and mobile applications (11%). Of institutions using one of the top 5 vendors (listed in order of market share in figure 6), those with OmniUpdate OU Campus are most likely to have responsive web design, mobile-specific websites, or mobile applications.

Figure 6. Deployment strategies in use for top 5 solutions
Case Study: Transitioning to WordPress at the University of Central Florida

About three and a half years ago, Information Technologies and Resources (IT&R) at the University of Central Florida (UCF) began to reassess its web CMS strategy, particularly for the main ucf.edu website. Over time, web content morphed organically, resulting in different web CMSs, operating on different servers across campus. Coincidentally, at about the same time UCF IT&R began university-wide initiatives to consolidate servers in its main data center and to develop shared services to enhance efficiency and security. These initiatives, combined with an outdated vendor web CMS solution, created a perfect retooling opportunity.

Having discussed website development over the years, IT&R’s Computer Services & Telecommunications (CS&T) division and Communications and Marketing decided to tackle this project together. Their plan: Communications and Marketing handles the front-end web development process and CS&T maintains the back-end hardware/server/support pieces. The collaboration required considerable discussion, compromise, and consensus, taking a year and a half to plan and coordinate system and backup requirements. Both groups believe this lengthened the transition in web server platforms but considered it a worthwhile investment of time. The payoff: a smooth implementation and a solid working relationship.

Front-end web CMS requirements include flexibility, good visualization, and a large user-base community to provide needed resources and support. UCF chose WordPress because Communications and Marketing already maintained a smaller-scale implementation. Meanwhile, CS&T created 10 virtual servers housed in its data center on a VMware server cluster and deployed a Linux operating system, which was more scalable than UCF Marketing’s Windows implementation. The decision to use Linux represented a new direction for UCF. The university had not previously run Linux at a production level for web servers, but both CS&T and Communications and Marketing decided to use Linux after discussing the pros and cons.

Both groups believed that it was especially important to proactively address security measures, given WordPress’s potential open-source security vulnerabilities. For example, the UCF system uses Security-Enhanced Linux and HTTPS/SSL. A “lock down” feature for the ucf.edu site prevents accidental or malicious code changes. Tiered security roles allow content managers to perform their jobs with required access level; only a top-level WordPress administrator controls code installations and reviews plugins. Ongoing security measures include regular WordPress server and application updates and routine security vulnerability scans for servers and applications. If a security problem occurs, a dedicated e-mail channel hastens response and coordination between WordPress site administrators and technical liaisons. Developers regularly share best practices and lessons learned.
Since the launch of the WordPress CMS in 2013, Communications and Marketing developed a fast and efficient web-production process, backed by CS&T’s stable and reliable infrastructure. They can launch a new website in under a week if needed, and they can quickly redesign websites, as university situations require, by replicating minor WordPress theme styling changes.

Over time, other UCF colleges, administrative departments, and the library took notice, replacing homegrown or outsourced solutions with the Communications and Marketing/CS&T model. Today, the main ucf.edu website and its applications remain in a separate system, and Communications and Marketing manages a second hosted WordPress system instance to handle this additional demand. Together both instances support 60 sites, which is projected to grow to 217 sites over the next fiscal year. Over time, two particular benefits have emerged: a reduced number of CMSs used at UCF, and a more consistent look and feel for the content and the website presence.

For now, both parties are extremely satisfied with their WordPress environment and their shared services arrangement. No major changes are currently planned, though migration from the data center to the cloud could be a longer-term consideration.
Conclusion

In response to mobile proliferation, many institutions are replacing their web content management systems with solutions that foster community interaction and system interoperability. With this shift, market share for open-source options, PHP solutions, and Java-based solutions is increasing. Although in-house solutions are still the norm, many institutions have chosen a SaaS implementation. New implementations may require cross-institutional collaboration and coordination. As UCF found, investing the necessary time in collaboration can lead to a robust, consolidated system implementation with buy-in from multiple stakeholders.

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Notes

1. For more information on solutions and associated platforms see the list of proprietary software at the Wikipedia page that lists content management systems.

2. Vendor-hosted options include infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).

About the Enterprise Application Market Series

The Enterprise Application Market report series from the EDUCAUSE Center for Analysis and Research focuses on data from the EDUCAUSE Core Data Service (CDS) to better understand how higher education institutions approach various information systems. Market share and system rate of change are among the metrics highlighted in this series. Information provided for this series was derived from Module 8 of CDS, which asked several questions regarding information systems and applications. For reports in the 2014 series, responses from 560 institutions were analyzed. Only U.S. institutions are represented in this series.