Content Management for Financial Services:

OPEN-SOURCE OR CLOSED-SOURCE?

CUTrendScan™

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When considering improvements to their website, credit union leaders have a lot to think about. One of the most important factors is how easily their staff can update, publish and organize content for the site. If the answer is not easily at all, then the credit union should look seriously at adopting a new Content Management System (CMS).

A CMS is a platform that helps financial institutions organize their content quickly and effectively. Credit unions should be constantly updating their websites, posting blogs, news, promotions or rate updates. Yet many credit unions have little control over their own websites, instead relying on their vendor to update items for them. For some things, credit unions can't afford to wait.

What is a CMS?

As its name would suggest, a CMS is a system that manages the creation and organization of digital content for a website. Many websites use a CMS, some of the most popular content management systems being WordPress, Drupal and Joomla.

Why use a CMS?

- **Lower operational costs**
  Managing content can be a fulltime job, but it doesn't need to be. Instead of creating content, packaging it and sending it off to a vendor, credit union staff can easily upload and publish content by themselves through a CMS. Bringing content management in-house can actually lower operational costs.

- **Easier to organize**
  Many content management systems have processes and technology in place to help users organize content, break that content into different categories and archive it, if needed.

- **Freely collaborate**
  With a CMS, staff can share content and work on projects in tandem, with the additional bonus of standardized formats.

- **Publish at a click**
  Content can be published, scheduled, updated or altered instantly.

- **Manage users**
  Add or remove administrators without complication.

- **Search Engine Optimization**
  Many platforms have plugins, modules or utility functions that allow credit unions to easily and quickly improve their SEO.

Types of CMS

Often, the most asked question for choosing between different systems is whether an organization should adopt an open-source CMS or look at a closed-source, proprietary CMS.

Open-source
Open-source CMSs tend to be among the most popular, thanks to their ease of use and customization, but they are also the most attractive to hackers. Open-source CMSs are defined by the fact that their source code is open to the public, allowing anyone to view and modify it at will for their own purposes. This means that open-source systems can be incredibly easy to customize, but it also means that hackers know how and where to attack these systems.

Benefits:
- Publicly accessible source code makes it easier to modify and learn
- Large selection of vendors specializing in the platform
- Lower costs due to open-source
- Knowledge and support are widely available

Downsides:
- Open-source code makes it an attractive target for hackers
- Credit unions have to rely on third-party vendors for support
- There can be many different versions of the same CMS, making it more difficult to secure and provide updates for

Examples of open-source CMSs
- WordPress
- Joomla
- Drupal

Before shopping for a CMS, credit unions need to decide how much of a budget they have allocated, what kinds of functionality are needed, how the system will integrate with their existing third-party tools and, increasingly, whether the CMS comes with support for compliance with the Americans with Disabilities Act (ADA).

Closed-source/Proprietary

Proprietary systems are built and managed by a company. Access to the source code is restricted, meaning proprietary systems tend to be more secure. In addition, since the company that runs a closed-source system usually manages only one main codebase, rather than dozens or even hundreds of different versions of an open-source CMS, proprietary systems tend to be easier to manage.
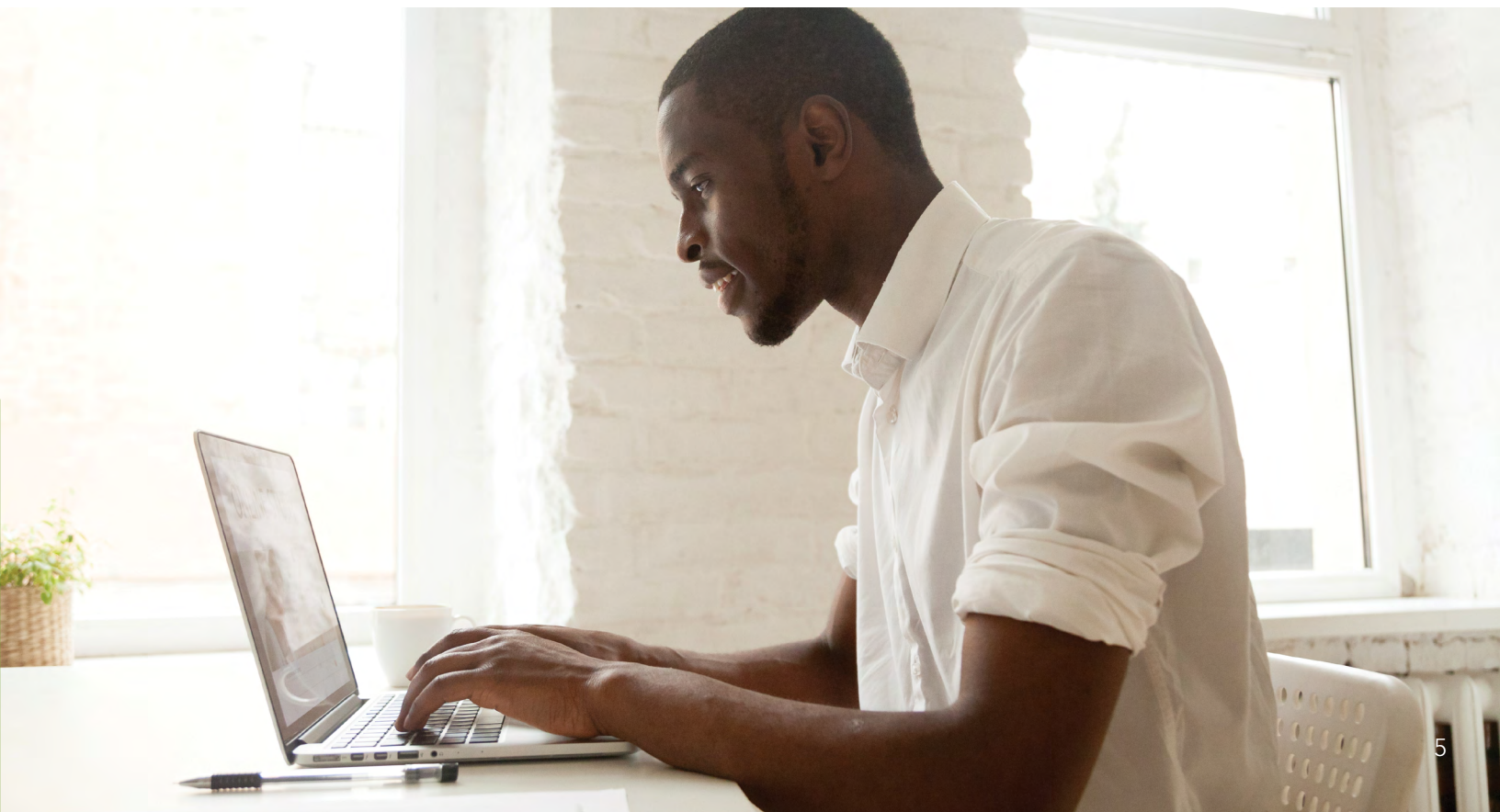
Benefits:
- Source code is not accessible to the public, preventing many hackers from knowing where and what to attack
- CMS owner may provide expert support and security testing
- Better version control and universal updates prevent security holes in outdated code
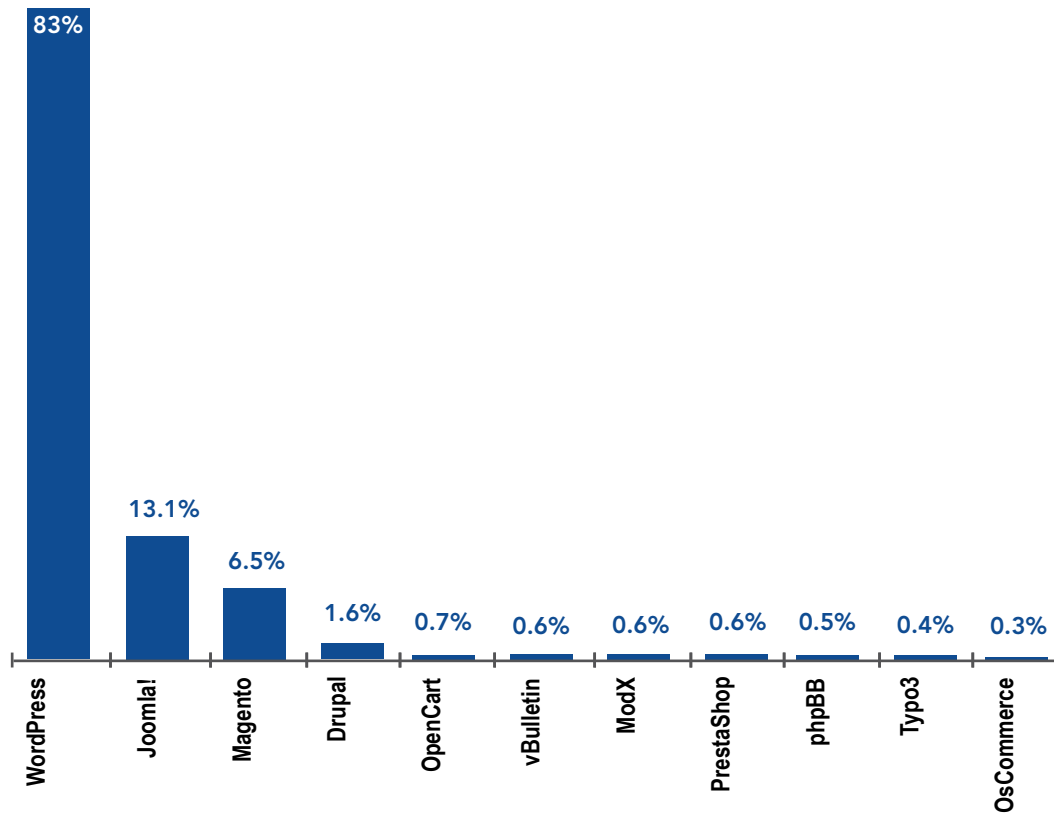- CMS owner can act quickly to fix vulnerabilities

Downsides:
- Closed-source means the CMS is hard to customize without vendor support
- Fewer options for plugins
- Licensing costs

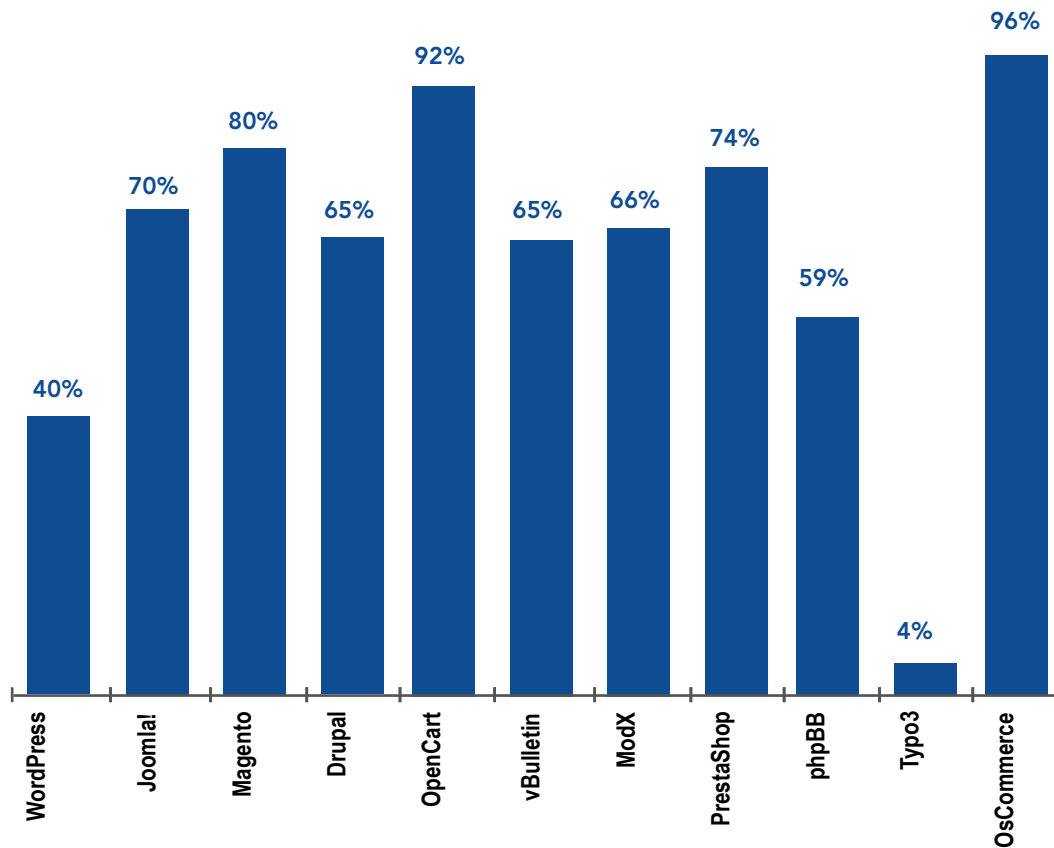*Examples of closed source CMSs*
- SharePoint
- Kentico
- CUSG CMS

Infected Websites Platform Distribution - 2017

Platform	Percentage
WordPress	83%
Joomla!	13.1%
Magento	6.5%
Drupal	1.6%
OpenCart	0.7%
vBulletin	0.6%
ModX	0.6%
PrestaShop	0.6%
phpBB	0.5%
Typo3	0.4%
OsCommerce	0.3%

Sucuri Hacked Website Report 2017

Outdated Platforms - 2017

Platform	Percentage
WordPress	40%
Joomla!	70%
Magento	80%
Drupal	65%
OpenCart	92%
vBulletin	65%
ModX	66%
PrestaShop	74%
phpBB	59%
Typo3	4%
OsCommerce	96%

Sucuri Hacked Website Report 2017

Finding the right CMS

Before shopping for a CMS, credit unions need to decide how much of a budget they have allocated, what kinds of functionality are needed, how the system will integrate with their existing third-party tools and, increasingly, whether the CMS comes with support for compliance with the Americans with Disabilities Act (ADA).

- **Cost - Not only the upfront cost, but what ongoing costs does it have?**
  The costs for content management systems can vary wildly, depending on whether an organization is using open-source or closed-source systems, whether the credit union is directly managing the system with in-house staff or relying on a third-party, etc. Credit unions need to balance affordability with security and reliability.

- **Scalable - Can the CMS grow with your credit union?**
  Is the CMS scalable? Many content management systems are customizable and can be upgraded to serve the credit union as it grows. However, scalability options can differ between different systems, especially with proprietary systems.

- **Support - How reliable is the support for the CMS?**
  Not all credit unions can afford the training or staff needed to completely manage their websites, so some degree of support may be needed for the CMS. What is the provider's reputation for support, and how timely is it?

- **Integration - Does it mesh with your current third-party applications?**
  How easy or difficult would it be for the CMS to work alongside your current third-party applications, such as calculators, mobile applications, real-time chat services, etc.?

- **Compliant - Is the CMS compliant?**
  CMSs are designed specifically for financial institutions understand and comply with the correct regulations, such as disclosures and notices, images as defined by NCUA rules and ADA-related compliance as it relates to WCAG 2.0 or newer. Purpose-built systems have pre-built functionality to make compliance easier, while adopting an open-source CMS may require a credit union to seek additional vendors.

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Current challenges for credit unions

Adopting a content management system may seem like an easy task at first, but there are a number of challenges that credit unions are grappling with when it comes to updating or enhancing their websites.

- **Providing secure platforms for their members**
  Financial institutions have different needs than other companies when designing a website, the highest among them being a secure platform. Financial institutions are attractive targets for hackers and other cybercriminals. Popular open source platforms like WordPress may be attractive, but they lack the security that credit unions need right out of the box.

- **Providing platforms that make it easier and more convenient for members**
  All the extra security can bog a website down and make it a chore for members to access. Ideally, credit unions want to make their online platforms more convenient and personalized for members, but not in a way that compromises security. One key benefit of a CMS should be organizing content in a way that is easily accessible to members.

- **Providing platforms that comply with current regulations**
  Credit unions need to pay careful attention to the many compliance issues that come with a website. Does the website have links to third parties or advertise their products and services? Is the website correctly displaying the Equal Housing logo or the NCUA advertising statement? Is the privacy notice hidden away? Is the website accessible for those with disabilities? These are all questions that credit unions should have immediate answers for, regardless of the CMS or vendor they are using.
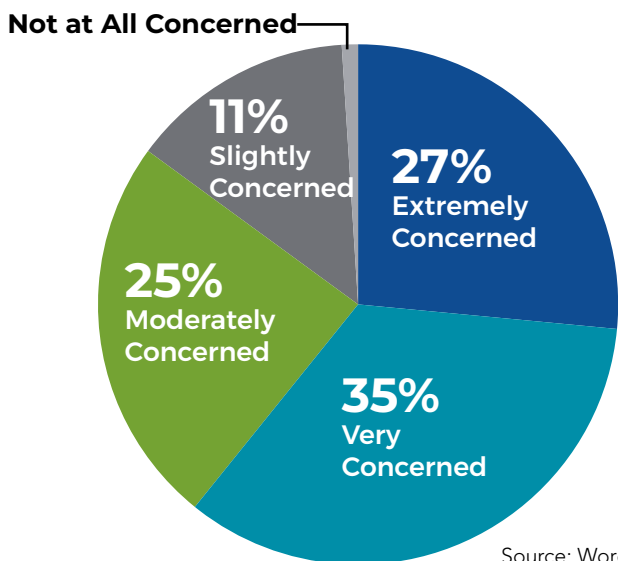
Security

Above all else, financial institutions need to ensure the security of their websites, which is one reason why many opt for a closed-source, proprietary CMS as opposed to open-source. Open-source code's greatest upside, being open to the public, is also its greatest downside. There are thousands of developers working with open-source CMS, and many hackers as well. Open-source developers need to constantly stay ahead of cybercriminals when it comes to detecting and fixing flaws in the system, as weak points can be quickly found and spread through word-of-mouth. Outdated plugins and modules are especially vulnerable to malicious activity. According to WordPress security firm WordFence, more than 50 percent of security breaches on WordPress occurred due to a compromised plugin.

How Hacked WordPress Sites Were Compromised

1	2	3	4	5
Plugin	Brute Force	Core	Theme	Hosting

Source: Wordfence

Website Security Concern

- **27%** Extremely Concerned
- **35%** Very Concerned
- **25%** Moderately Concerned
- **11%** Slightly Concerned
- **Not at All Concerned**

Source: Wordfence

Website Compromised within the Past 12 Months

39% = Yes

Source: Wordfence

What security factors should a credit union keep an eye on?

- **Secure hosting**
  Having secure hosting is a basic cybersecurity requirement and one that credit unions need regardless of what CMS they are using. Banks and credit unions are required to meet SSAE 16 standards for their web hosting. For many financial institutions, hosting transactional systems such as online banking may require dedicated servers.

  Specifically, credit unions need to consider a solid, granular, modular hosting environment.

- **Solid passwords and multi-factor authentication**
  According to WordFence, the second biggest factor for security breaches is brute force, or computer-aided password cracking. Credit unions can mitigate dangers from this by increasing their password security and having multi-factor authentication — the practice of requiring two or more pieces of identification before users can access the CMS or website.

- **Keeping the CMS updated**
  Keeping the CMS itself up-to-date is very important in combating the latest batch of security breaches. Many closed-source systems will update automatically, as ongoing support is typically one of the big selling points of a proprietary system.

- **Use safe plugins or modules**
  Outdated plugins are a major security threat and should always either be updated to the latest version or removed entirely.

- **SSL encryption**
  SSL certificates not only ensure that the connection between the member's browser and the credit union's server is secure, but can also positively benefit your website, giving users peace of mind and even providing SEO benefits.

- **Backups are vital**
  The common advice to "back up your work" also applies to your website as well. While many content management systems have options for creating backup version of a website, credit unions should keep an off-system backup as well.

SMALL CREDIT UNION PERSPECTIVES

Many smaller credit unions still rely on their vendors to update content on their websites, yet with the wide availability of content management systems, this is quickly becoming a thing of the past. Thanks to increasingly user-friendly CMSs, credit unions of any size can effectively manage their own online content, whether they have a large, specialized marketing department or just a team of one.

However, that does not mean that credit unions do not need to worry about training at all. While modern CMSs are built with ease-of-use in mind, credit unions looking to bring content management in-house should assign a role to familiarize themselves with the system. Additionally, IT should be aware of any new risks a new CMS may present over their previous system.

HOW CU SOLUTIONS GROUP CAN HELP

The Technology Solutions **Content Management System (CMS)** is everything your credit union needs to manage your site, and more. This fully integrated, closed-source proprietary system was designed specifically for the credit union industry and enables you to create, move and edit pages. You can even manage your rates, schedule when changes are published and upload files to use on your site.

Our CMS is feature-rich and flexible and lets you have nearly any graphic design you want, allowing different designs on different areas on your site. Plus, you can manage several different sites from the single CMS. We also offer numerous plugin modules like polling, ad management and more.

Technology Solutions has partnered with Secure-24 to offer cutting-edge, best-in-class hosting services for its CMS platform. Network edge technology mitigates DoS and DDoS attacks, as well as provides intrusion detection and prevention. We deliver content across our highly available, clustered virtualized farm of servers so your site is always available to your members. We also replicate our data in real-time to our secondary disaster recovery data facility and offer one-hour recovery time objective in the case of a catastrophic event at our production facility. Technology Solutions is also a certified SSAE 16 SOC 2 Type 2 hosting provider.

Read more in CU TrendScan

CUTrendScan.com

CU TrendScan is a quarterly digital publication that explores trends within the credit union industry. Focusing specifically on the areas of technology, marketing, performance and strategy, CU TrendScan takes a closer look at the issues that drive the industry forward.

Content Management System

CUSolutionsGroup.com/CMS

CU Solutions Group's Content Management System delivers flexibility, functionality and scalability. You want a website that is easy to update and maintain so you can deliver current content to visitors on a consistent basis. The intuitive CMS automates content management and simplifies how credit unions navigate their sites. Our system empowers your staff to easily make changes to the website and track usage/traffic without much technological know-how.