

Review Article

# Fundamentals of Digital Platform: Implementing Successful Content Management System

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**Abstract** - The current business landscape is witnessing an increasing number of companies adopting digital platforms by establishing a digital presence from scratch or migrating from traditional systems to modern platforms. Content management systems (CMS), such as Adobe Experience Management (AEM), are driving this shift towards digitalization. However, when organizations have multiple brands and digital marketers require the ability to push changes rapidly, traditional systems become inadequate and can become a bottleneck in achieving the desired outcomes. In this scenario, digital platforms built on content management systems, such as AEM, can provide much-needed scalability, reduce costs, and accelerate delivery for digital marketers. Nonetheless, it is crucial to have a fundamental understanding of these digital platforms, or they can become an overhead in the future. Therefore, grasping the basics of digital platforms is imperative for implementing large-scale transformation projects that utilize content management. Core success factors include comprehending the importance of the foundation layer in digital platforms, distinguishing between platforms and customizations, and allowing flexibility while maintaining branding guidelines.

**Keywords** - Digital platform, Content Management System, Digital transformation.

## 1. Introduction

Digital platform implementation is a significant challenge that requires careful consideration, despite the prevalence of out-of-the-box solutions and plug-and-play capabilities in most products. The digital customer experience is an ever-evolving journey requiring constant updates to care for new customer needs and behaviors [1] [2]. While these products can be used without customization [3], organizations seeking to leverage the full potential of a digital platform must build a custom solution utilizing a Content Management System (CMS) [4], such as Adobe Experience Manager (AEM). However, the term "platform" alone is insufficient, and the true challenge lies in defining the platform's foundation and standards. Failure to do so may result in suboptimal use of both the digital platform and the CMS, leading to traditional development and a longer development lifecycle [5].

Therefore, it is crucial to understand the customer's needs, domain, and usage to define a digital platform specific to their organization. This requires a comprehensive understanding of the organization's objectives and goals and the ability to define and enforce standards that will enable the platform to be scalable and cost-effective. Utilizing a CMS-based digital platform enables the efficient management of multiple websites for different brands within an organization [6]. Traditional systems are typically challenging, time-consuming, and expensive to manage. Still, a digital platform

built on a CMS provides a centralized location for managing content, allowing digital marketers to push changes quickly and easily. This not only leads to significant cost savings and improved efficiency but also enhances the customer experience, contributing to the overall success of the organization [7].

## 2. Fundamentals of Digital

Digital platforms [8] are essential for businesses to connect with customers and provide a seamless and personalized experience across different channels and devices [9]. According to a report by Gartner, CMS technology is a critical component of digital experience platforms (DXP), which are essential for delivering personalized customer experiences across multiple channels [10].

When building a digital platform using CMS, it is crucial to have a well-defined architecture blueprint [11] outlining the software solution's structure, components, and interactions. This blueprint provides a set of guidelines for building scalable and maintainable digital platforms using CMS, which is essential to the success of any digital platform.

To ensure that a digital platform is successful, businesses should follow several key rules:



**2.1. Define the Purpose of the Platform**

Before building a digital platform, businesses should define the purpose of the platform, identify their target audience, and determine the key features and functionalities needed to achieve their goals.

**2.2. Choose the Right CMS**

There are many CMS platforms available, and businesses should choose the one that best meets their needs—factors to consider are ease of use, scalability, and security. Selecting the right CMS for your business is a critical decision that requires careful consideration. A CMS that best meets your business requirements will not only streamline your digital operations but also help you achieve your organizational goals. Customization capabilities, integrations with third-party tools, and reliable support should also be considered.

**2.3. Follow Best Practices for Design\Development**

Adherence to the platform and content management system (CMS) standards is critical when designing and developing a digital platform. In the context of large-scale transformations, it is imperative to redefine the design with consideration for CMS reusability, component-based architecture, and platform standardization. Similarly, during development, it is important to remain mindful of the platform's underlying architecture [12].

**2.4. Follow Best Practices for Security**

Security is a critical aspect of any digital platform [13], and businesses should follow best practices for securing their platform. Security is a critical aspect of any CMS platform. Businesses should choose a CMS that offers robust security features, including SSL certificates, two-factor authentication, and regular security updates. This also includes using strong passwords, encrypting sensitive data, and regularly updating software and plugins.

**2.5. Optimize for Performance**

Performance is also crucial for digital platforms, and businesses should optimize their platform for speed and reliability. This includes using a CDN, optimizing images, and minimizing the use of plugins and scripts.

**2.6. Ensure Scalability**

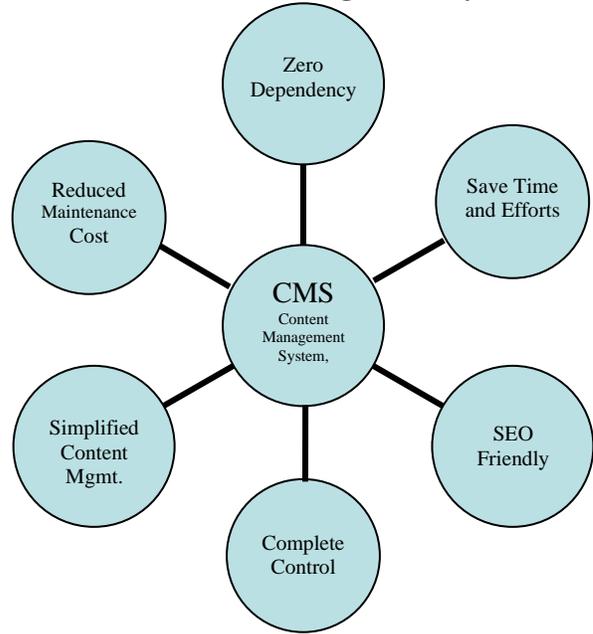
Digital platforms must be scalable to handle traffic spikes and a growing user base [14]. The platform architecture must be designed to handle large traffic volumes and users without affecting the site's performance.

**2.7. Emphasize Agility [26]**

Digital platforms must be agile to adapt to changing user needs and technologies. The platform architecture must be flexible and able to accommodate changes easily. An agile platform must be flexible, scalable, and adaptable to changes, enabling businesses to respond rapidly to user feedback and incorporate new technologies into their digital strategy [16].

By following these rules, businesses can build digital platforms that meet their needs and deliver users a seamless and personalized experience.

**3. Power of Content Management System**



A content management system (CMS) is a software application that helps users create, manage, and modify content on a website without the need for specialized technical knowledge. A CMS typically has a back-end interface where users can add, edit, and delete content and a front-end interface that visitors to the website see.

CMSs are used by a wide variety of organizations, including businesses, government agencies, educational institutions, and non-profit organizations. They can be used to create websites of all sizes and complexity, from simple brochureware sites to complex e-commerce sites.

There are many different CMSs available, both open-source and proprietary. Some of the most popular CMSs include AEM, WordPress, Drupal, Joomla, and Typo3.

The Gartner Magic Quadrant for Digital Experience Platforms (DXPs) in 2023 is a comprehensive report that evaluates various platforms driving digital content delivery and highlights the latest industry trends. This report provides valuable insights to organizations seeking to identify the most suitable vendors for their digital experience needs.

The Magic Quadrant is a visual representation of the DXP market, depicting vendors in four quadrants based on their ability to execute and completeness of vision. The report considers several criteria, including content

management, analytics, e-commerce, personalization, and customer journey mapping, to evaluate the platforms where Adobe was named leader [17].

Gartner's report on DXPs for 2023 also highlights the emerging trends in the industry, such as the growing importance of digital customer experience, the adoption of AI-powered personalization, and the integration of headless architecture with DXP platforms [18]. The report also emphasizes the importance of a cloud-native approach, which enables businesses to scale and innovate faster while reducing costs.

Overall, the Gartner Magic Quadrant for Digital Experience Platforms in 2023 provides organizations with valuable information to make informed decisions when selecting the right vendor for their digital experience needs.



Source: Gartner (March 2023)

Fig. 1 Magic Quadrant for digital experience platforms

CMSs offer several benefits over traditional web development methods. First, they make it easy for non-technical users to create and manage content. Second, they provide several features that make it easier to manage a website, such as version control, user permissions, and search engine optimization (SEO) [25]. Third, they can be used to create websites that are responsive, meaning they will look good on a variety of devices, including desktops, laptops, tablets, and smartphones.

The power of CMSs is that they can be used to create and manage websites without the need for specialized technical knowledge. This makes them a valuable tool for businesses and organizations of all sizes.

Furthermore, a report by Gartner predicts that by 2023, 80% of digital experience platforms will be built on a CMS foundation [18]. This demonstrates the growing importance of CMS technology in building digital platforms that provide personalized and seamless customer experiences.

**4. Importance of standard Branding vs. Customization**

During transformational IT projects, it is not uncommon for stakeholders to become engrossed in visual design elements such as branding, theming, and customization [19], potentially losing sight of the platform itself. While brand differentiation is a crucial factor, it is equally important to maintain standardization in the underlying content management system (CMS). Customization should not come at the expense of standardization. In instances where customization is necessary to achieve branding goals, it is important to strike a balance between the two. It is imperative to always adhere to the fundamental principles of digital platforms and CMSs.

In Liu’s article “The Importance of Standard Branding vs. Customization in CMS” [27], Liu discusses the trade-offs between standard branding and customization in CMS. The author notes that while standard branding can help to establish a consistent brand image & improve efficiency, customization can provide a more tailored user experience and allow organizations to differentiate themselves from competitors. The article also discusses strategies for balancing these competing priorities and achieving the right balance between standardization and customization in CMS.

**5. Platform Flexibility vs Standardization**

Platform flexibility refers to the ability of a CMS to adapt to various user needs, workflows, and integrations. Standardization, on the other hand, refers to the implementation of consistent design, functionality, and content across the CMS. It is important to have flexibility and give more configuration\authoring\design options to businesses. Still, at the same time, that increases the complexity, maintenance and cost as well as reduces the standardization.

Studies have explored the relationship between platform flexibility and standardization in CMS and their impact on user satisfaction and performance. A study by Chen et al. [21] found that platform flexibility positively affects user satisfaction, while standardization has a negative effect on it.

It is noteworthy that platform flexibility and standardization present their respective benefits and drawbacks, and their ideal equilibrium can differ based on the particular CMS and user requisites. To illustrate, a highly standardized CMS could enhance the efficacy of large corporations with numerous divisions and content providers,

while a more adaptable CMS may be better suited for small enterprises with distinctive workflows and needs.

## 6. Importance of Iteration

While the development of a digital platform involves laying a solid foundation and adhering to established standardization and process frameworks [22], it is imperative to review and refine these approaches over time to accommodate changes. To ensure the ongoing success of the digital platform, it is essential to prioritize iterative development practices [23].

Iteration is a fundamental process in which a series of steps or actions are repeatedly executed to improve or refine a product or process [24]. In the context of software development, iteration is a continuous review and refinement of the product to enhance its quality, functionality, and user experience. It is imperative to incorporate iteration throughout the development lifecycle and after deployment to ensure timely improvements and cleanup. At times, businesses may have ambiguous requirements at the outset but subsequently encounter gaps in the implementation process that result in dissatisfaction with the final product. Therefore, it is crucial to identify and address these gaps promptly to prevent them from becoming pain points and bottlenecks that impact customer experience negatively. Delayed resolution of these issues can lead to unsatisfactory customer experiences and diminished business outcomes.

## 7. Conclusion

In conclusion, it is evident that establishing a solid foundation for a digital platform is paramount for achieving

success in large-scale digital transformation initiatives. The digital platform serves as the blueprint for how the overall structure should be constructed, integrated, and operated. Moreover, it is critical to ensure seamless integration of this digital platform by selecting a suitable content management system (CMS) with appropriate features.

Digital platforms built using a Content Management System (CMS) are essential for businesses to connect with their customers and provide a personalized experience across multiple channels and devices. However, to ensure the success of a digital platform, businesses must follow several key rules, including defining the platform's purpose, choosing the right CMS, following best practices for design and development, security, performance optimization, scalability, and agility. By utilizing a CMS-based digital platform, businesses can efficiently manage multiple websites for different brands within an organization, leading to significant cost savings and improved efficiency.

In the realm of digital platforms, constructing upon a content management system (CMS) entails adherence to its underlying principles. However, the nuances of branding versus customization and flexibility versus standardization require careful consideration.

Failing to strike a suitable balance between these factors may result in a platform that is either excessively limiting or overly generic, failing to qualify as a true platform. Hence, meticulous blueprinting and comprehensive coverage of all relevant facets are imperative prior to commence platform development.

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