Headless CMS

Explore the benefits and challenges of this trending technology.

Unlock extraordinary

Our teams have the knowledge, hands-on experience, and people skills to ensure you succeed in the initiatives that really matter to you.

Contents

Introduction

Chief marketing officers (CMOs) are constantly challenged to surpass customer expectations and deliver high-quality brand experiences. At the same time, customer experiences are becoming more interconnected and reliant on content.

Due to increasing complexity, CMOs are stretching their budgets across an increasing number of channels. 41% of CMOs listed "reducing costs and finding greater efficiency" as a priority.

A headless content management system (CMS) can be a key to addressing these concerns. It manages publication of important content, which could include templates, graphics, and videos across multiple channels at low cost, without dictating how the content should be presented.

Separating content from design achieves the goal of lower costs and consistent expectations. As a result, CMOs and their teams are rapidly adopting this technology. 88% of CMOs are considering or currently using a headless CMS.

However, implementing a headless CMS is not a silver bullet. There are pitfalls to consider when integrating decoupled technologies. In this whitepaper, we'll dive into the benefits of a headless CMS, potential problems, and how to avoid them.

Benefits of the headless CMS approach

Headless CMS implementations can yield many positive outcomes to organizations when executed correctly. These outcomes help CMOs exceed customer expectations and build brand loyalty.

Marketing organizations can expect to:

1. **Separate responsibilities for content, design, and implementation.**

2. **Enable unique user experiences.**

3. **Increase speed to market.**

4. **Publish content across multiple channels.**

5. **Improve performance and search engine optimization (SEO) results.**

6. **Reduce costs.**

BENEFIT ONE

Separate responsibilities

A modern headless CMS helps content authors, designers, and developers. All three of these groups have a distinct role to play, but need to work together to maximize speed to market.

Content publication roles:
- Authors want to focus on what a brand says.
- Designers want to focus on how to present it.
- Developers make it real.

A headless CMS helps each of those groups do what they do best, without getting in each other's way. Each can know exactly which artifact to expect and reduce the overlap between their responsibilities.

For example, an organization without a headless CMS could have a marketing team mock up a banner ad and send it to their in-house design agency with annotations. Because marketing has access to both design and the words, their recommendations could start to bleed into design.

"Wouldn't it be great if we moved the graphic to the top right and the logo to the bottom left?"

"Why this particular green? I think we should go with orange."

"Let's put the call to action on the left this time."

In these examples, overlapping duties without a headless approach frustrate the design team because marketing is encroaching on their role to optimize the user experience.

A headless CMS addresses this problem by clearly separating duties. The marketing team can enter text on their own. The design team handles layouts and visual elements with templates approved in advance. Developers ensure the application can accept the content when it's wanted without their hands-on involvement.

Three content contributor roles

Author

Knows the audience.
Uses templates to write the text or script needed for the content.

Designer

Knows the user experience.
Converts raw content into a production ready format.

Developer

Knows the platform.
Converts the designer's vision into tangible outputs ready for customers.

BENEFIT TWO

Enable unique user experiences

The content management system is focused more on content modeling and less on presentation. This empowers designers to freely create outside of the CMS platform.

Having full user experience control is very important for organizations that:

A.

Have large, distributed design teams supporting multiple brands

When independent design teams maintain separate sites, they often have their own user experience needs. A headless CMS gives them the ability to do this because the user experience is managed independently.

B.

Require extensive customization

When design teams require large amounts of customization on websites, that logic could live in the presentation layer or the CMS platform itself. The lift for this is often lower when performed within the presentation layer as enabled by a headless CMS approach.

Organizations are able to fully own front-end implementations without being tied to the rendering technologies of non-headless solutions. Marketing can influence these design requirements upfront, enabling designers and developers to create custom experiences that fit outside the technical boundaries of traditional CMS platforms.

C.

Have dedicated design systems that live outside of the CMS platform

Designers and developers benefit from decoupling the CMS from the presentation layer. Content becomes an aspect of their technology platform instead of determining its constraints. Organizations can create design teams that manage templates, components, and other building blocks within the platform, while letting developers focus on application development.

D.

Have existing websites and apps without CMS integrations

A headless CMS can be added to existing websites and mobile apps. Developers don't have to start from scratch or port current designs and content into a large traditional CMS; value can be added to channels already in use today by enriching them with a headless CMS add-on. The investment developers put into enhancing existing solutions with a CMS is repaid by empowering authors to publish content changes without developer involvement.

BENEFIT THREE

Increase speed to market

Time to market is critical for marketers to achieve their objectives. Headless solutions primarily outperform traditional CMS approaches in these two areas that impact speed to market:
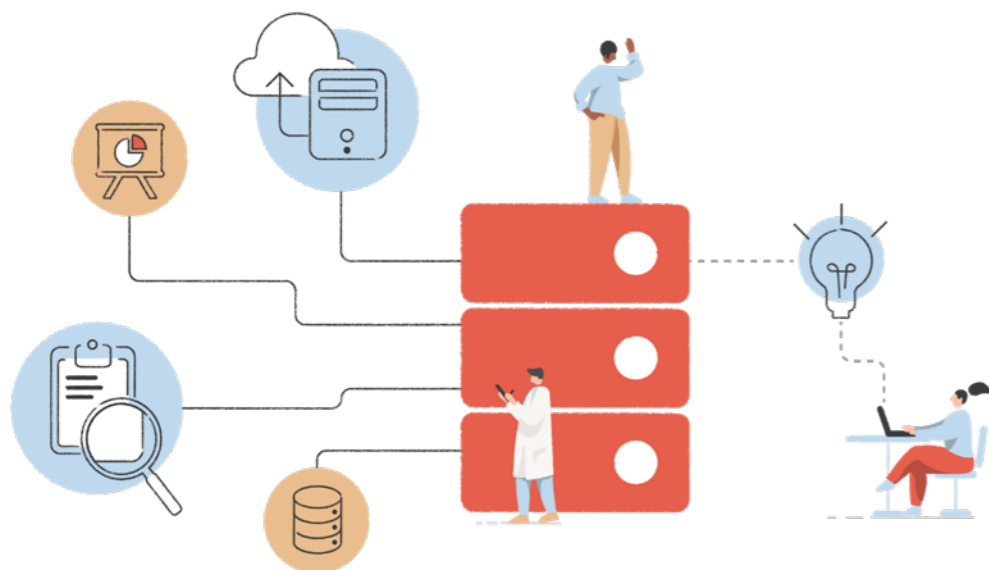
Content development

Marketing can generate finished content faster with a headless CMS than with traditional CMS platforms because they are producing and organizing content instead of implementing detailed designs and layouts. They won't need to spend time tweaking detailed layout specifics, and their available options will be codified into templates by coordinating with design and developer teams in advance.

It is worth noting that some traditional CMS platforms have templating options, but it is not a key quality of traditional CMS platforms.

Code development

Software development is faster with headless CMS platforms. Because applications only consume content from the headless CMS, developers don't have to worry about standing up local instances of the CMS. They can use a representative collection of mock content to easily test individual components.

" **Marketing can generate finished content faster with a headless CMS than with traditional CMS platforms...**

BENEFIT FOUR

Publish content across multiple channels

A traditional CMS doesn't cater to specific presentation requirements across multiple channels. Instead, they focus on deeply linking content design to presentation for one channel at a time. This is where a headless CMS holds an advantage.

Websites, mobile apps, email templates, and social media campaigns can reuse content from the same source.

Content can easily be delivered to multiple channels using a headless CMS. Content authors can write the copy, choose the graphics, and get the raw content ready—without knowing whether the target is an email, a digital banner, or a social media post. Because content is typically provided to connected platforms as structured text and layout instructions, it's up to the receiving application to determine how that content is displayed. Decoupling presentation layers in this manner provides strong flexibility, allowing for greater reuse of content.

For example, a marketing team could upload a new hero image and accompanying text to the front page of a website and mobile apps at the same time. Each independent platform can consume the same instructions to reduce content publishing overheads and ensure brand consistency.

Organizations using a headless CMS are 12% more likely to make a content change once and have it reflected everywhere.

Marketing can reap the benefits of rapid changes without IT involvement for more use cases than just simple content publishing.

> 66 **Marketing can reap the benefits of rapid changes without IT involvement for more use cases than just simple content publishing.** 99

Because developers control the channels connected to the headless CMS, they can create custom behaviors controlled by content authors. They could even allow authors to specify instructions for marketing activations.

Consider a newsletter sign-up page created by marketing. Marketing wants the sign-up email to contain content specific to the sign-up page the user selected. The CMS isn't going to send the email, but it could inform the system that does which email template should be used. Marketing can reap the benefits of rapid changes without IT involvement for more use cases than just simple content publishing.

> 66 Organizations using a headless CMS are 12% more likely to make a content change once and have it reflected everywhere.
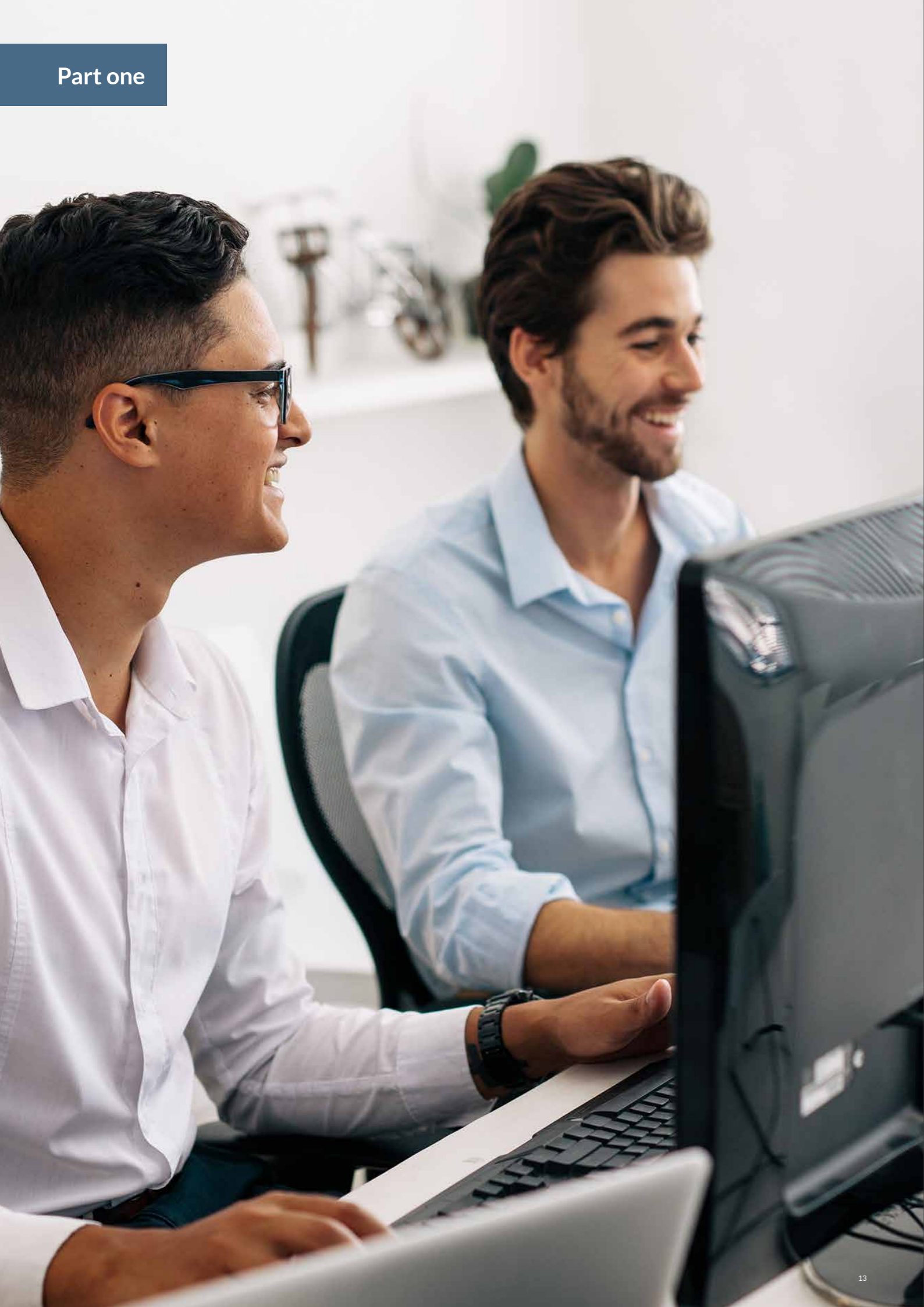
BENEFIT FIVE

Improve performance and SEO results

Headless CMS integrations are generally faster than traditional CMS platforms. Typical implementations are able to benefit from content and presentation separation which usually increases overall performance and SEO results. There are two key reasons why:

Pages are lighter

Quick load speeds are critical for conversion and SEO ranking. Increasing page speeds lowers bounce rates and increases page rankings. Nearly 70% of consumers shared that page speed impacts their willingness to buy from an online retailer.

Headless CMS platforms only provide content such as text, layout instructions, and references to media. This approach lends itself to modern front-end frameworks and libraries (e.g., Angular, React, Vue) while supporting single page applications and page pre-generation techniques for optimal performance.

In contrast, traditional CMS platforms return larger web page payloads (including full HTML and CSS) and require extra time to render. This constrains developers from using the latest techniques to lower loading speeds.

No platform bloat

Traditional CMS platforms include additional libraries and features that introduce bloat and can impact the load time of the pages. Headless CMS platforms don't deal with this because they are only passing back content.

Rather than building an entire ecosystem around the CMS (hosting, user experience, analytics, business logic), the CMS can focus on just managing content.

BENEFIT SIX

Reduce costs

Overall cost to own and maintain a CMS is a big driving force in vendor selection. Headless approaches generally outperform traditional CMS counterparts in a few ways:
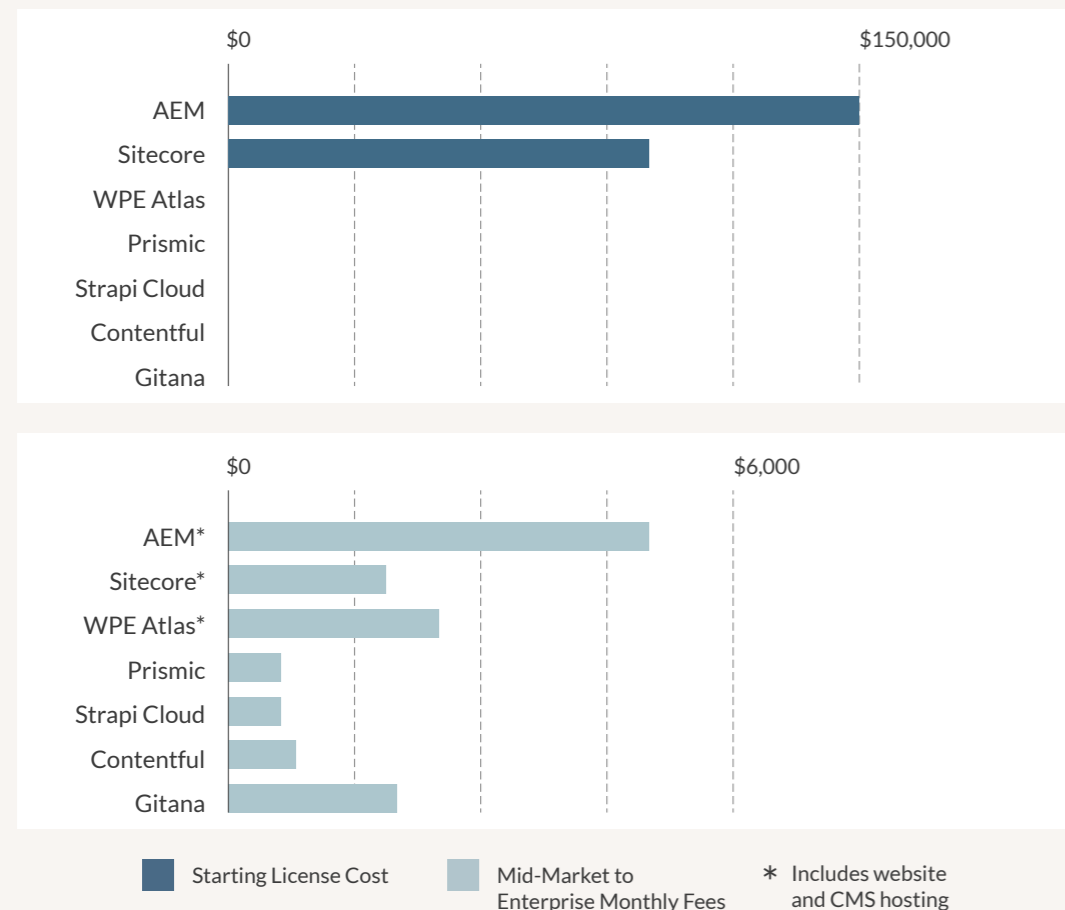
Cheaper licensing

Headless platforms can cost a fraction of traditional CMS platform licensing costs. Consider the enterprise cloud pricing tiers for top headless CMS vendors compared to Sitecore and Adobe Experience Manager (AEM). While prices can vary based on usage and media asset bandwidth fees, enterprise headless CMS vendor

monthly costs tend to start at $300 to $600 per month with no upfront licensing fees.

In contrast, while Sitecore and AEM don't offer standardized prices, typical implementations can range from $1,500 to $4,000 per month, with initial costs over $100,000 depending on features chosen and the size and type of the purchasing organization.

Comparison of headless CMS costs vs. traditional CMS costs

	$0					$150,000
AEM						
Sitecore						
WPE Atlas						
Prismic						
Strapi Cloud						
Contentful						
Gitana						

	$0		$6,000
AEM*			
Sitecore*			
WPE Atlas*			
Prismic			
Strapi Cloud			
Contentful			
Gitana			

■ Starting License Cost   ■ Mid-Market to Enterprise Monthly Fees   * Includes website and CMS hosting

Expanded talent pools

It's easier to find developers who can integrate a headless CMS, as they don't require specialized skills related to the nuances of a traditional CMS. Most headless platforms operate in a decoupled software as a service (SaaS) model and the skills needed to integrate with them are much more readily available than those required by traditional CMS platforms such as Adobe Experience Manager or Sitecore.

With a headless CMS, developers typically perform platform-agnostic data integrations, instead of specializing in specific technologies required by each traditional CMS platform.

Targeted feature set

While most traditional CMS platforms are evolving to follow a hybrid approach that offers both a traditional CMS and headless functionality, purely headless CMS platforms provide streamlined feature sets compared to their traditional counterparts. They have traded the massive platform that provides large feature sets for slimmed down offerings that specialize in content storage, management, and delivery.

Some use cases may have to live outside of the CMS (e.g., translation, digital asset management, search, personalization, etc.), but users achieve a much more performant platform that is cheaper, simpler, and easier to use.

Consolidation of marketing responsibility

In the pursuit of lowering content costs, many CMOs are choosing in-house content creation and production activities. These have historically been expensive, and by owning the end-to-end process, a CMO can be in better control of the costs (Digiday, AAR, Mediatool).

A headless CMS enables in-house ownership of each aspect of the process. Content authorship, design, and implementation workflows are enforced by enabling marketing to control content directly within the CMS and requiring designers to pre-create templates the content will fit into across each channel, without dictating technical implementation.

Tradeoffs of a headless CMS

A headless CMS lets organizations have full control over user experience, but the complexity of a headless CMS integration can eclipse traditional CMS solutions due to the many components involved.

Managing potential pitfalls from a technical and process perspective is critical to success. Many benefits of headless CMS platforms come with their own caveats:

- Speed to market is improved at the expense of design flexibility.

- Content can be published across multiple channels, but it might not go live as quickly as desired.

- Performance and SEO can be improved, but internal and external content organization can suffer.

- Costs can be cut, but analytics and security best practices can create unexpected work.

Organizations need to keep these constraints in mind when choosing to integrate with a headless CMS. We will cover each major area where common constraints occur:

1. **Design flexibility constraints**
2. **Publishing delays**
3. **Content organization**
4. **Measuring impact**
5. **Security concerns**

CONSTRAINT ONE

Design flexibility constraints

Headless CMS workflows fundamentally differ from traditional CMS solutions:

- Traditional platforms provide greater degrees of control for marketing to create their own design changes.
- Headless solutions move responsibility for the presentation layer to IT.

In a headless platform, designers and developers create pre-defined layouts and options for marketing content authors to adjust. While these templates can provide strong speed-to-market benefits when used as intended, they result in a smaller sandbox for authors to work in, with fewer layout options and a reliance on IT for novel changes. Requests for unanticipated changes can negate the time saving element that templates are intended to provide.

For example, IT and marketing might agree that a page component should be configurable to display an image, but a request to add a caption below the image would require an IT change if provisions for it weren't initially built into the CMS templates. This could delay desired content publication until after an IT code change is available in production, which can add significant lead time in some organizations.

Headless CMS templates must be well-defined

Attempting to predict potential changes can result in confusing templates that authors are not able to easily use. Defining what content should be allowed within the CMS is a challenging cross-organization problem to coordinate.

Previewing changes is more difficult

Marketing edits within the headless CMS platform don't immediately display the outcome of those changes. There is a disconnect between performing content edits and seeing the end result.

Marketing can't always drag and drop every component or type directly within an editor that looks like the final page. Headless CMS platforms encourage IT teams to integrate with preview functionality, but this can often be complex and not necessarily be reflective of final published content.

19   20

CONSTRAINT TWO

Publishing delays

Headless implementations involve multiple in-house and SaaS components to manage, which each add complexity. Coordinating them can cause a loss of control over the timing of content presentation as some components might not always be in sync. This can cause newly published content to encounter delays before being visible on user-facing channels.

Because the CMS lacks a head, it cannot control how soon others use its latest content.

Each system connected to the CMS requires special consideration for how quickly they can react to content changes without impacting performance. It's up to developers to find the right tradeoff between content liveliness and page speed. Content authors need to be aware of all timing constraints to ensure marketing campaigns and associated content pages are able to launch together.

CONSTRAINT THREE

Content organization

A headless CMS is a blank canvas requiring thoughtful content modeling to be successful. Upfront design is required to ensure content can be intuitively customized while meeting behind-the-scenes application needs.

Content visibility isn't just a concern for customers

Authors must find content within the CMS itself to know where to make changes. Headless systems are blank slates to impose organizational structures upon. Without careful consideration, it can be difficult to find the part of the CMS someone wants to change. Few guardrails exist to ensure content is discoverable for the editors themselves.

Precision marketing isn't free

A headless CMS itself won't have the information necessary to make targeted content decisions. It can play a pivotal part in delivering content, but it won't be able to determine what is relevant on its own. Separate tracking and profiling tools are typically integrated alongside the CMS to enable A/B testing and personalization.

SEO can suffer without proper planning

While performance improvements are a key component in improving SEO results, they're not the only factor. The key phrases search engines use to classify pages must also be accounted for. Templates don't ensure websites have all the required components necessary for SEO out of the box. The CMS won't ensure developers keep these invisible optimization components front of mind.

Search engines also expect an index of each page a website contains, but headless platforms do not provide this out of the box. Custom integrations are required to ensure this sitemap automatically updates to allow web crawlers to discover new marketing pages in a timely manner.

BACK TO CONTENTS
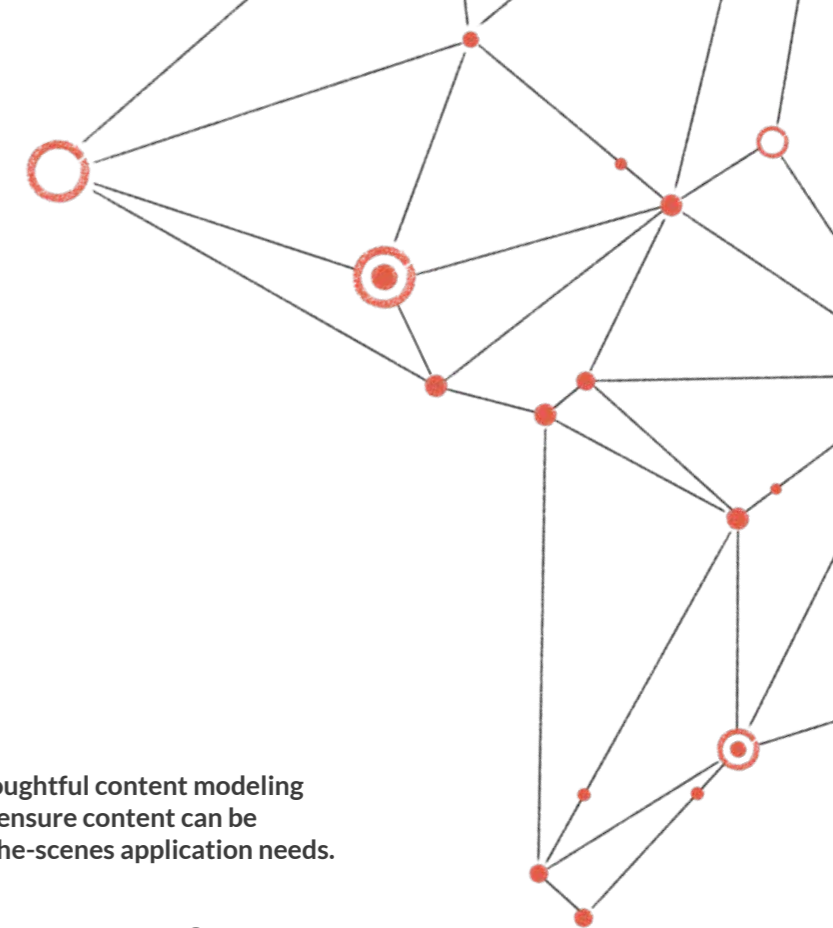
CONSTRAINT FOUR

Measuring impact

IT needs to know how users interact with webpages to prove return on investment and recommend improvements. Headless CMS platforms complicate this by their very design—authors can add page components and entire pages without developer involvement. Analytics solutions won't necessarily automatically capture all user interactions in an actionable way.

Consider a home page with an arbitrary number of call-to-action (CTA) buttons. Users see different content when clicking each one. Which CTAs result in higher conversion? Which are selected more often? How often are they actually seen? Since marketing can add new buttons on an ad-hoc basis, how can analytics know what to track when they're not consulted before changes are put into production? Solving this problem while retaining the ability for content authors to push changes at will adds complexity to successful implementations.

CONSTRAINT FIVE

Security concerns

Headless CMS solutions are often provided as SaaS offerings hosted externally. This can pose a risk of unauthorized content publication. Employees retaining access after separation or whose CMS credentials are compromised could cause immediate, highly visible brand damage. Mitigating these high-risk attacks may require additional cost to ensure authentication is centrally managed.

BACK TO CONTENTS

How to reap headless CMS benefits

Take advantage of the benefits of a headless CMS while avoiding the pitfalls with careful planning. Credera has helped organizations like Brinker International, NRG, a major pharmaceutical company, and others define reference architectures, create change management approaches, and perform technical implementation to ensure each risk is appropriately mitigated by taking the following steps:

A.

Pre-plan design flexibility requirements for templates

Content modeling requires careful structuring to ensure marketing has enough flexibility to create reusable content and influence its presentation without being overwhelmed with options or constrained by too many guardrails. Well-designed templates allow marketing to choose from multiple pre-approved designs and layouts developed ahead of time across multiple channels. Facilitating design sessions with stakeholders across marketing, design, and IT to create templates ensures each team has the flexibility to make desired changes independently.

B.

Implement technical strategies to mitigate content publishing delays

The technical strategies enabling highly performant presentation layers decoupled from content often result in tradeoffs where content isn't pushed to all channels the moment it should go live. This potential downside can be mitigated or eliminated with customized system integrations and data refreshing strategies unique to each presentation layer and organization.

C.

Define procedures for content organization and approval

Governance strategies need to be built into content models from their inception. Each marketing team's organizational structure differs, as do their needs for content accessibility, editing permissions, and publishing approval. Significant changes to content strategy and marketing operations are required to ensure that design work and compliance review are built into the content development process and timelines.

To enable efficient workflows, leverage iterative design sessions to ensure the structure of content authorship within the CMS accurately reflects the structure of the teams using it. Implementing a proficient change management program will support a smooth transition to new systems and processes.

D.

Have existing websites and apps without CMS integrations

Organizations face the same challenges integrating a headless CMS as with any large-scale technical and operational change. Stakeholders across analytics, security, and marketing each benefit from headless CMS integration into their respective tools and processes. Leverage a systems integration specialists to facilitate connecting disparate tools together from a technical and process perspective. They ensure analytics teams can accurately measure A/B testing and user engagement with CMS content.

In addition, integrating with single sign-on prevents unauthorized access and protects brands from inappropriate content publication. Creating custom integrations with CRM solutions to integrate with CMS content enables follow-up communications to create consistent brand experiences. We've seen these integrations provide the connections needed to ensure headless CMS platforms integrate smoothly across enterprise systems.
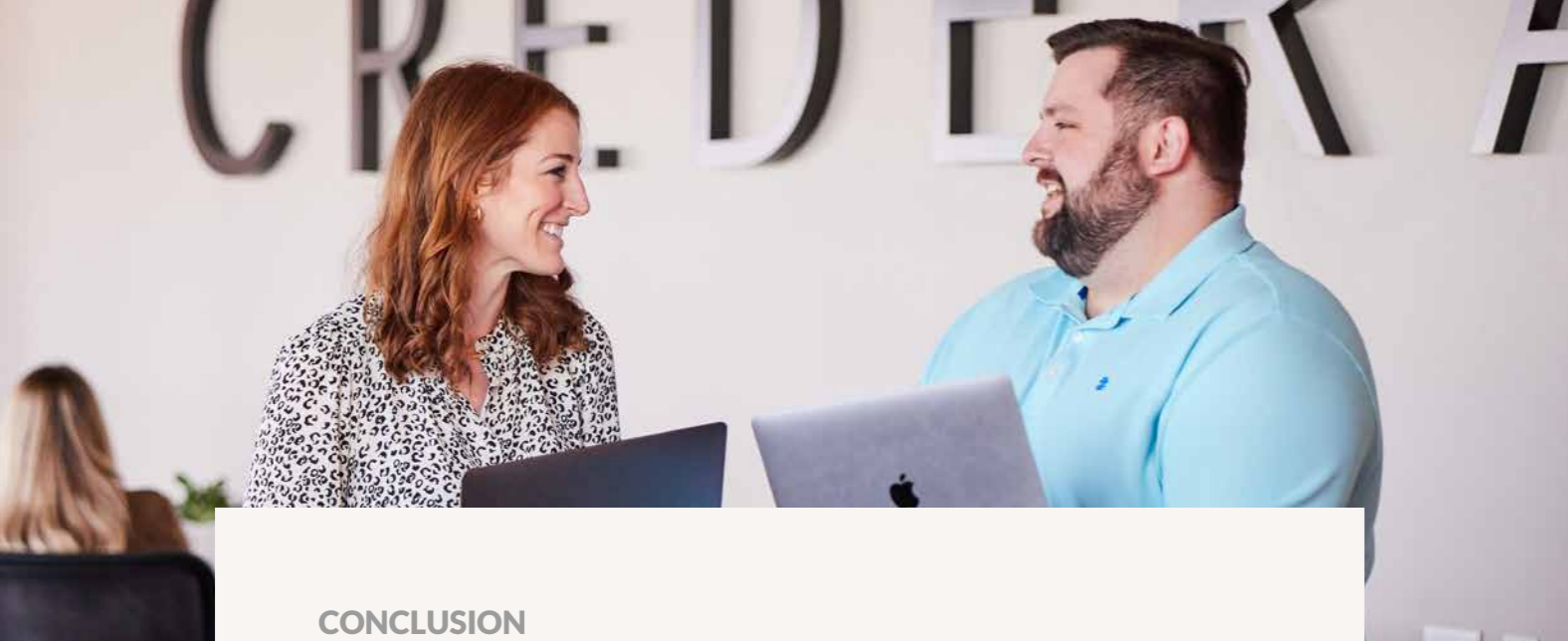
Implement headless CMS

Interested in exploring headless CMS platforms further and determining the best path for your organization? Credera has extensive experience helping clients, like the ones below, to assess and implement headless CMS platforms.

- A national casual restaurant chain engaged Credera to redesign their public website and increase conversion via improved performance, streamlined booking, and headless CMS integration. In the quarter after release, their website saw a 325% increase in revenue, a 74% increase in e-club sign ups, 68% improvement in banquet and catering reservations, and 25% faster page load times.

- At a major pharmaceutical company, Credera delivered a strategy to migrate their brand sites to a headless CMS to enable rapid content publishing while retaining existing web application architecture.

- At NRG, Credera delivered dynamic personalization to nrg.com through a headless CMS and realized an additional $41 million in revenue.
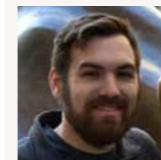
We'd love the opportunity to bring our experiences and partner with you on your headless CMS journey.

To find out how to do that, please reach out to us at **findoutmore@credera.com**
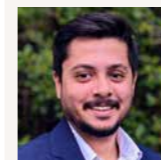
Meet the authors

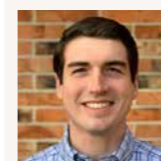Our people are our culture. Passionate, diverse, and caring, we work together to build a place where leaders thrive.
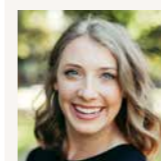
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BACK TO CONTENTS

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Case Studies

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