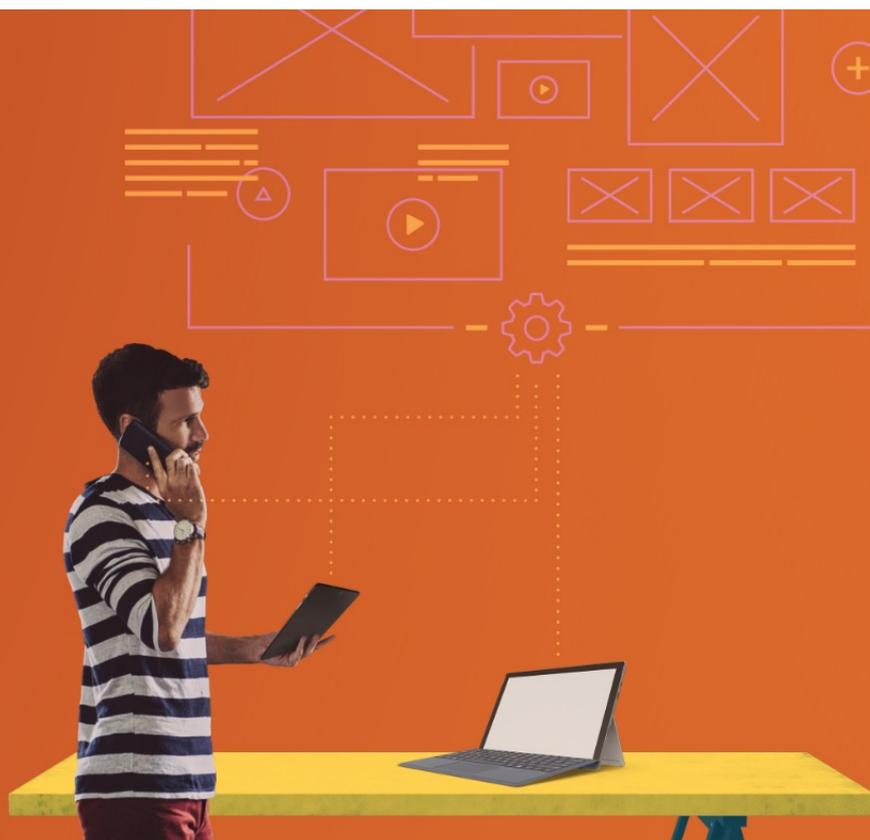# The CMS Evolution: Traditional, Headless, and Hybrid Demystified

Content is the foundation of every experience.

by **Adobe Enterprise Content Team**
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Adobe Products Featured

Consumers have countless choices when it comes to how they read, watch, or listen to content. No matter which they choose, you need to be ready to provide them with a steady stream of experiences they won't forget.

40%

of marketers say providing consistent experiences throughout the customer lifecycle is a top concern.

Source: Econsultancy

Because content is the foundation of every experience, you need the right systems in place to be sure you can keep up with growing demand, expectations, and channels. It starts with the content management system (CMS). Although a CMS is commonly known as a tool to create a website, today's modern content management systems have evolved to become the core of a brand's digital experiences.

A CMS provides the structure and interface that lets you create, manage, and deliver digital experiences to customers on any number of digital channels. But not every CMS is the same.

You may have heard terms like *traditional*, *headless*, and *hybrid* to describe the different CMS types. But you might not understand enough about them to have a meaningful conversation with IT about which would serve your needs best.

Here's a quick rundown of the different types of content management systems, and how to know which is the best choice.
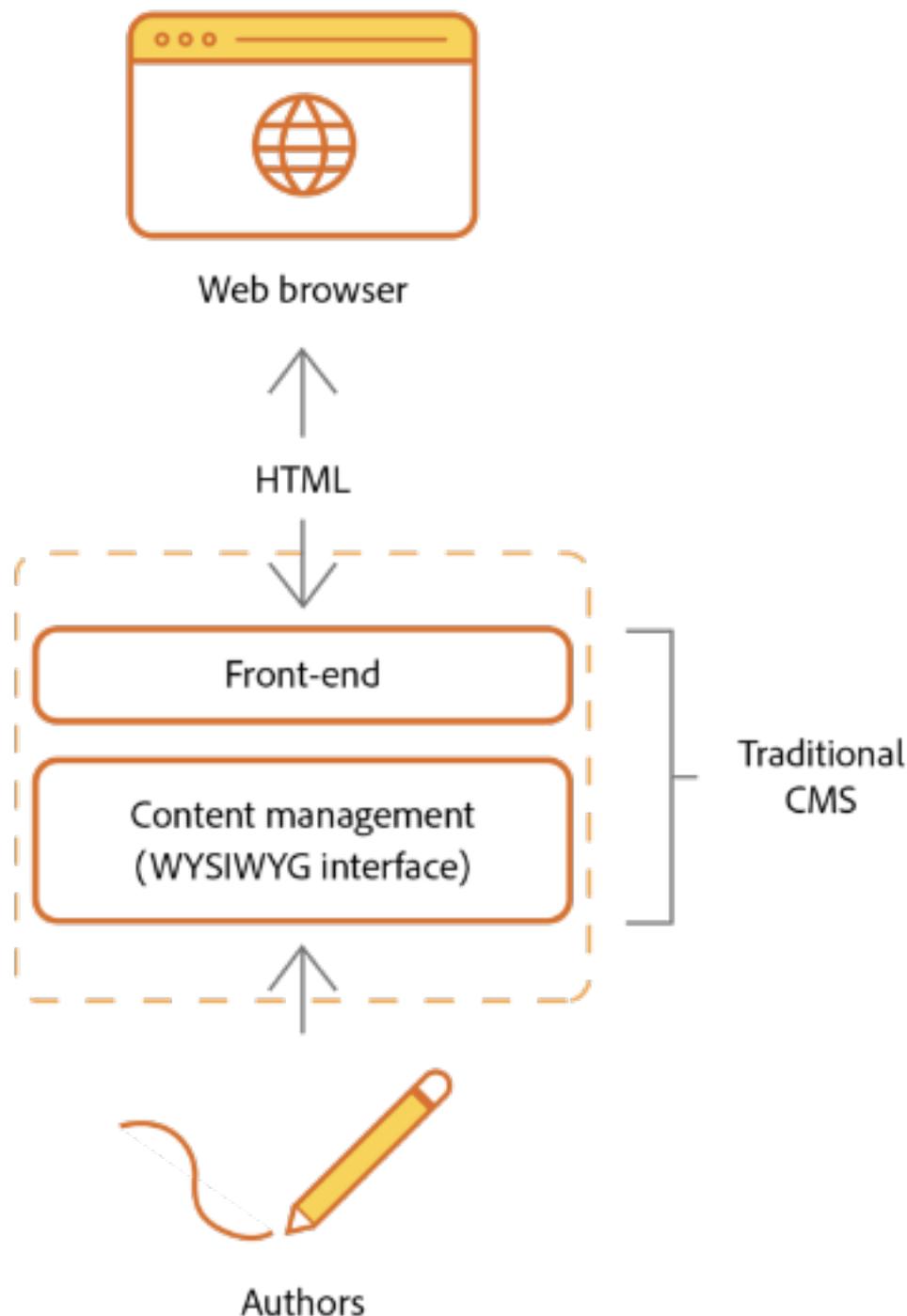
Traditional CMS

The CMS was primarily developed as a tool to create and publish HTML content directly to the web. This kind of system is called a traditional CMS.

It manages the entire process—from authoring the content on the back end to publishing the experience on the front end, which is what a customer sees in a browser. Any blog publishing platform is an example of a traditional CMS.

With this type of CMS, the front and back ends are tied together. The system used to store, author, and edit content is the same system used to publish. This makes it very easy for non-technical users to write text and headlines, or drag and drop content while being able to preview exactly what it will look like on the published page.

The traditional approach to content management.

Web browser

HTML

Front-end

Content management
(WYSIWYG interface)

Traditional CMS

Authors

Most marketers have used a traditional CMS at one time or another. That's because for many years, the web was the only game in town. But as newer technologies have emerged, the traditional CMS is no longer enough.

"The traditional CMS still works great for delivering HTML web pages. But now there are technologies like mobile apps, voice devices, or third-party applications like Facebook and other social media sites where brands don't own the publishing of that experience. The traditional CMS wasn't designed with these channels in mind."

Karthik Muralidharan

Senior Product Marketing Manager, Adobe Experience Manager Sites

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On top of that, the web experience is evolving, as new, faster-loading sites are introduced. Also known as "modern app experiences," they're built using different front-end frameworks, as opposed to the traditional CMS, which uses only one. An example of these quick-loading sites is a single-page application (SPA). These apps only require one HTML page to load into a user's browser, with subsequent clicks refreshing only certain portions of the page for faster performance.

Because a traditional CMS isn't designed to serve content to any other frameworks, front-end developers have limited options for customization. They're also restricted in the tools they can use to deliver digital experiences.

To ensure you can provide the dynamic, responsive experiences that customers expect across all channels, you'll need a different kind of CMS to manage them. Two options to consider are headless CMS or hybrid CMS.
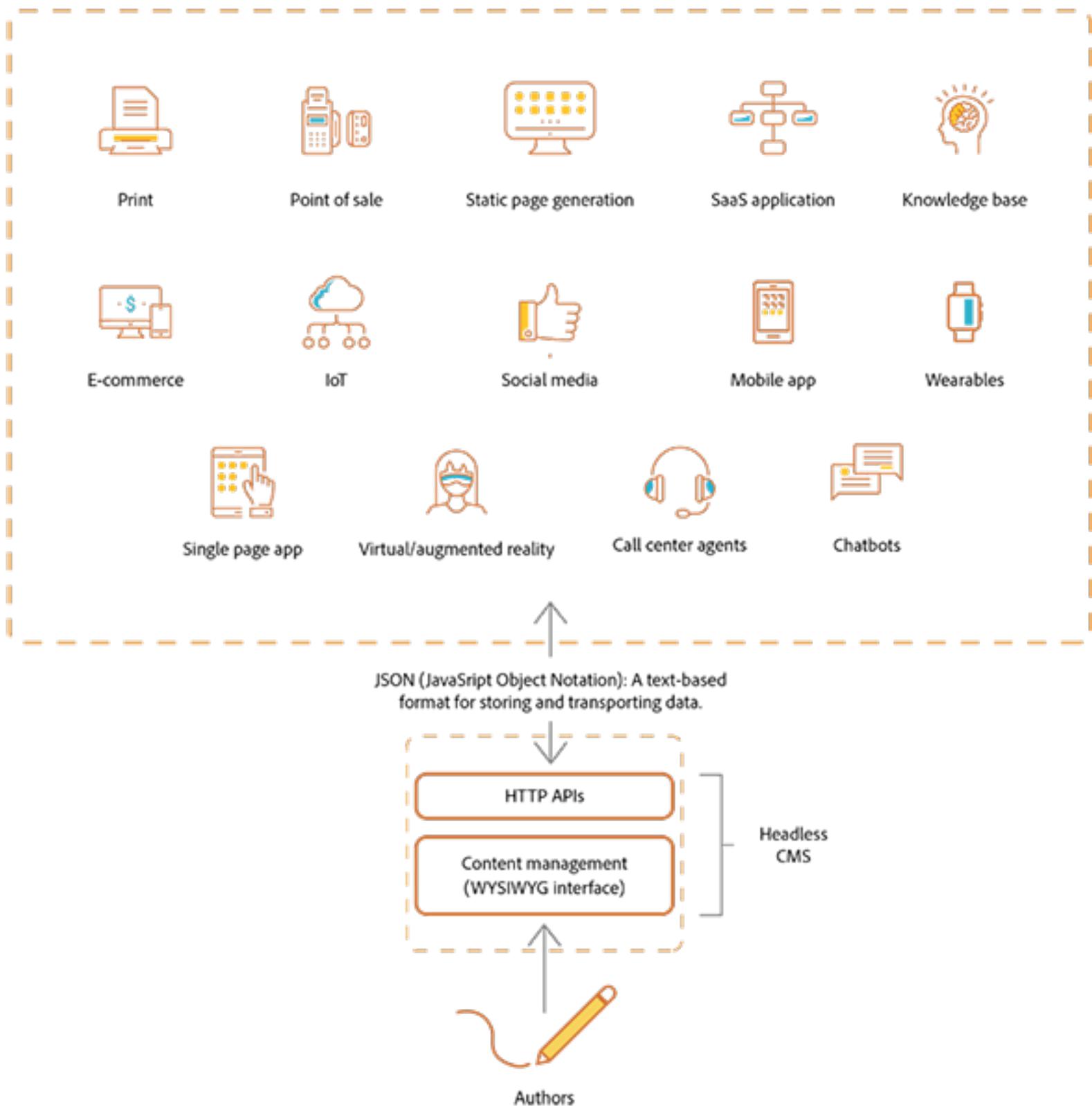
Headless CMS

With a headless CMS, content is created independently of the final presentation layer. This means that instead of being limited to web

publishing like a traditional CMS, content can be pushed to any end experience like a mobile app, SPA, or voice device.

Because headless uses a channel-agnostic method of delivery, it isn't tied to a specific front-end framework. Instead, it uses application programming interfaces (APIs), which allow channels or end points to access the data needed to present the content.

The front-end experience is managed by developers who assemble the layout and presentation of the content. And because the front- and back-end systems are decoupled—or separated from each other—you have endless options for delivering content.

The headless approach to content management.

Print   Point of sale   Static page generation   SaaS application   Knowledge base

E-commerce   IoT   Social media   Mobile app   Wearables

Single page app   Virtual/augmented reality   Call center agents   Chatbots

JSON (JavaSript Object Notation): A text-based format for storing and transporting data.

HTTP APIs

Content management (WYSIWYG interface)

Headless CMS

Authors

Benefits

- **Flexible delivery:** New channels are emerging quickly, and you need a CMS that's flexible enough to deliver to all of From smart watches to voice devices, a headless CMS lets developers work in any front-end framework they choose, allowing you to adapt experiences to any new channel or delivery mechanism.

- **Faster experiences:** New front-end frameworks like SPAs allow you to deliver faster, more responsive Take Gmail, for example. Instead of a traditional web delivery where, every time you click, the site has to make a request to the server and reload the page, the entire Gmail application loads at once. That means with every click, new content instantly appears.

- **Content at scale:** Headless provides a nimble way to deliver By separating the content from the presentation, you can serve up more channels, and more content because it's not all tied to one system.

Challenges

- **Reliance on IT:** Because there's no front-end WYSIWYG interface that allows you to manage content in context, or easily drag and drop things on the page, these new frameworks need to be supported by This means marketers can no longer make quick changes to their content. Even something as simple as changing a phone number requires a request to IT. So, moving to a headless model gives marketers less power and less autonomy when it comes to updating or managing content.

- **Increased complexity:** There are times when developers may want to use a front-end solution to help manage content With a headless CMS, that means seeking out other front-end technologies or third-party tools to address the gap. The result is increasing complexity and costs.

- **Slower time to market:** When marketing no longer has control over the presentation or management of content, it takes longer to deliver new experiences.

"Now you're creating this path where IT has to go back to marketing, figure out what needs to be changed, take those requirements, and then build it into that headless model. That whole process takes longer than if you had just given the marketing team the ability to change different aspects of the experience."

Karthik Muralidharan

Senior Product Marketing Manager, Adobe Experience Manager Sites
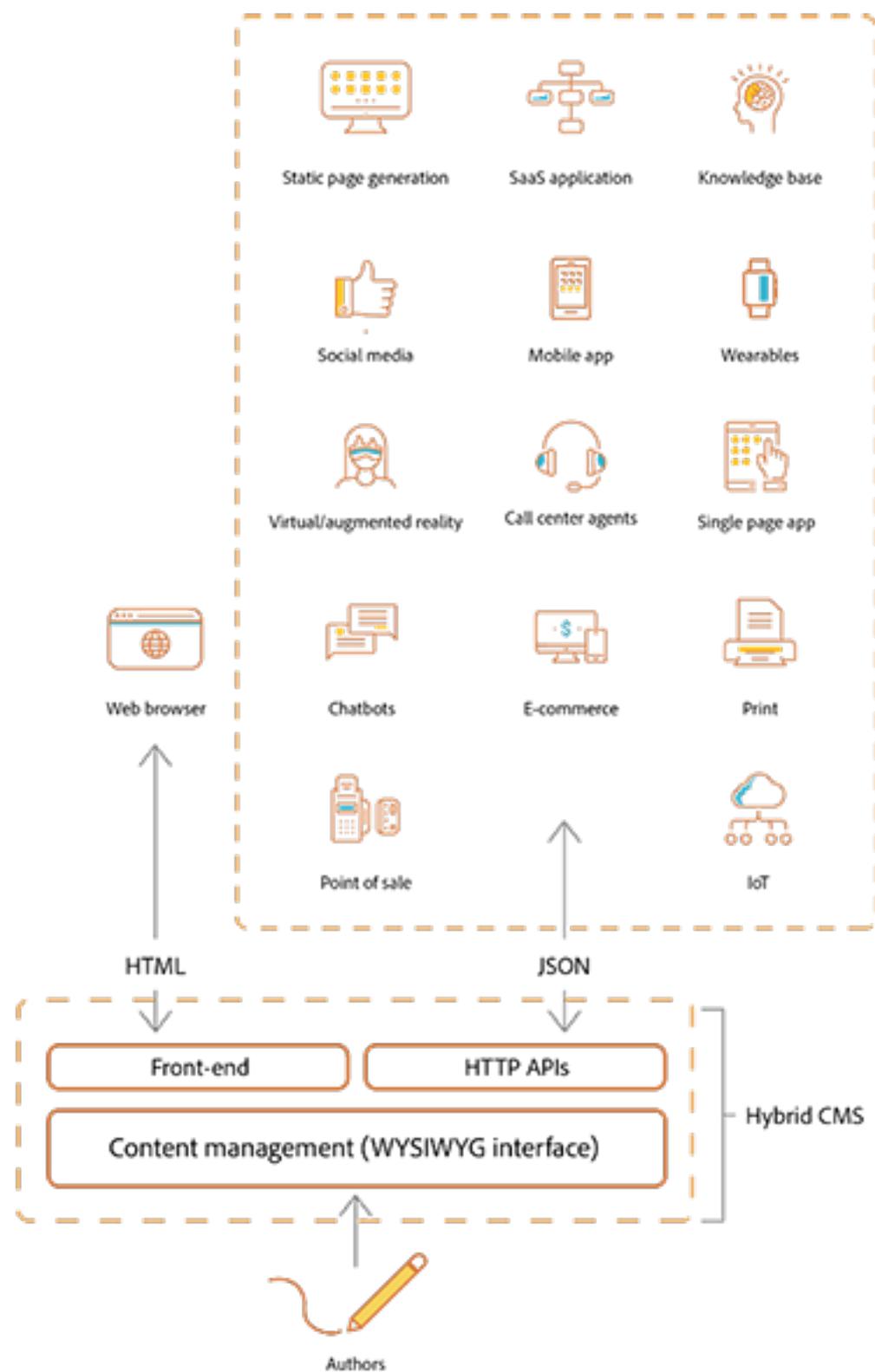

How to work with IT

To support the headless approach, you need a way to deliver structured content in a format that's easily consumable for IT to use across all delivery models. You should discuss with IT how you can achieve this using a headless CMS.

Hybrid CMS

A hybrid CMS provides all the benefits of a headless CMS—plus the ability for you to use simple tools for managing and updating experiences, such as editing SPA content in a WYSIWYG interface. Hybrid CMS also provides support for developers to build experiences on their own frameworks.

And, unlike using two separate content platforms—which can lead to inconsistent messaging, duplicated efforts, and wasted resources—a hybrid CMS is one system that includes a single source of truth.

The hybrid approach to content management.

Static page generation   SaaS application   Knowledge base

Social media   Mobile app   Wearables

Virtual/augmented reality   Call center agents   Single page app

Web browser   Chatbots   E-commerce   Print

Point of sale   IoT

HTML   JSON

Front-end   HTTP APIs

Content management (WYSIWYG interface)

Hybrid CMS

Authors

Benefits

- **Consistency across channels:** Deliver consistent experiences across web and emerging channels with the ability to edit and reuse content—all from one central And, because a hybrid CMS allows you to integrate with various systems, you can easily personalize these experiences with data from analytics and targeting tools.

- **Quicker content delivery:** Create context-rich experiences that scale across organizations, products, and regions, without relying on With a hybrid CMS, not only can you easily edit web experiences, but you can do the same for content that's delivered in a headless manner, like digital signage, wearables, and other IoT devices. For example, a CMS with a SPA editor

provides [in-context editing](#), which makes passing updates to IT simpler and publication faster.

- **More content control:** A hybrid CMS gives you greater control and input into the customer experience—from content development to some portions of its At the same time, developers can be more efficient using their preferred frameworks and tools.

- **Future-ready experiences:** Because the headless portion of this CMS allows brands to deliver to any endpoint, your content will be ready for any new channel that comes along in the

Challenges

- **Upfront development:** Although a hybrid CMS is flexible enough to deliver to various endpoints, each of those might need their own upfront development So you'll need to plan for extra developer resources, especially at the start.

- **SEO:** Newer front-end frameworks like SPAs could pose a challenge on the SEO front because search engine crawlers find it hard to index and rank But with a little help from IT, you can make your single-page applications SEO friendly.

How to work with IT

As with a headless approach, you should make sure you can easily pass content to IT so they can take care of the programming needed for headless delivery.

Also, ask about how you can work with IT to ensure that single-page applications meet SEO objectives.

Read NRG's story to learn how they work with a hybrid CMS to create content once and publish anywhere.

Read their story
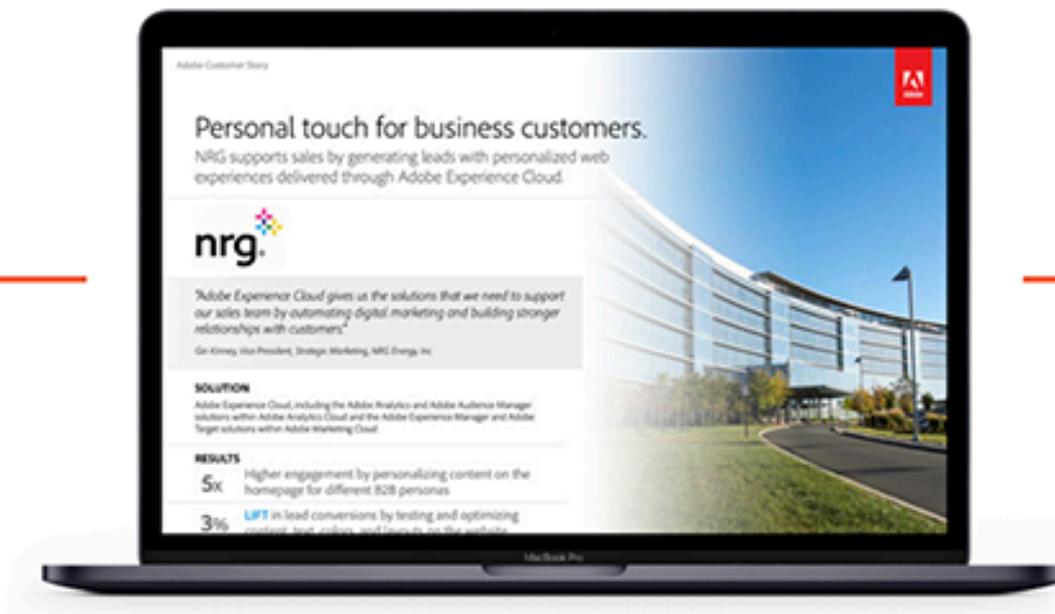
Make the right choice

As the digital landscape has evolved, so has the role of the CMS. Customers now expect to interact with brands on mobile, social, IoT, voice, and other channels outside of web. And dynamic, relevant content is at the heart of those interactions.

But a traditional CMS that doesn't easily accommodate multiple channels won't support your brand in a modern world. And while the headless CMS was developed to deliver content to all of these channels and more, it lacks a

user-friendly way for marketers to create and edit content for modern web applications.

It's time to find the middle ground. With a hybrid CMS, you can better manage your digital experiences by empowering both marketing and IT teams. Marketers will have greater input into content and presentation, while developers can use the right frameworks to deliver the best experiences to customers in every channel. And that's a choice everyone can agree on.

Adobe can help

Adobe Experience Manager Sites is a hybrid CMS that gives you the power to create and reuse content to quickly adapt to market demands and emerging channels. With the ability to integrate behavioral and customer profile data from Adobe Analytics and Adobe Target, you can create personalized experiences at scale, without worrying about the technical details.

Learn more about how a hybrid CMS can help you create and deliver digital experiences that delight, everywhere customers are.

Discover why Adobe has been named a leader in Gartner's Magic Quadrant for Web Content Management (WCM) for nine years straight.

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