

## Headless CMS - anything but headless

The abbreviation "CMS" stands for "Content Management System" and should be a term familiar to anyone who deals with website maintenance. Previous standard backends are Shopify, WordPress or Joomla. Via templates, layouts and other functions are firmly integrated and only optimized for the respective intended front end. The content can be designed specifically, images or videos can be integrated and the created content is then displayed on the Internet via the frontend used. However, this traditional approach couples all content to a common code base, creating a mutual dependency so that the content is prepared exclusively for one medium - usually the website. The classic CMS thus lacks flexibility and scalability.

In the meantime, however, such monolithic systems for content management are no longer up to date. The reason is that the same content is posted simultaneously in today's multimedia environment. In addition to their own website, almost all companies are also active on other communication channels - such as social media, magazines and blogs, as well as mobile apps, online stores or various point-of-sales systems. Via the headless CMS, the complete decoupling of back-end and front-end takes place. Instead, interfaces - so-called APIs - are used to feed content to a wide variety of marketing channels. These include IoT devices, so-called wearables - wearable technologies such as smartwatches, fitness wristbands or digital glasses - as well as AI-enabled voice assistants or VR headsets.

A headless CMS thus focuses specifically on the creation and presentation of content - regardless of the subsequent layout, as this depends on the publication channel. However, the later layout on the individual communication channels remains unaffected. Therefore, the headless CMS is also called a decoupled CMS. It offers only the rudimentary backend functions for authors and marketers. No landing pages can be built with the Headless CMS, nor is it possible to make changes to the layout or create approval processes. Instead, it is a content database with interfaces. In return, it is technically very flexible and efficient to use and makes it possible to create a holistic digital experience on all channels.

## How is a headless CMS environment built?

The architecture of a headless CMS is very flexible, making it excellent for dynamic data processing and content-as-a-service (CaaS) services. It can also be used to enrich and enhance product information and e-commerce sites for B2B and B2C markets.

The individual technical components that make up a headless CMS and their functions are explained in more detail below. The first core element is the backend itself. In it all contents are administered, which are entered in form form. They are basically maintained in a structured and format-neutral way. The structure is divided into titles, text blocks, individual photos, product names and descriptions, and links. Format-neutral means that all content is unformatted, i.e. it does not exist in a particular design or layout. They therefore do not exist as complete pages, but are only reassembled and formatted into a page in the respective front ends.

The second core element is APIs (Application Programming Interfaces or interfaces) - also called REST API or RESTful API. These APIs are programming interfaces that describe how networked resources in the network - for example, a cloud - are defined and addressed. The basic principle of the REST API is statelessness, which states that all information necessary to understand messages can be used anywhere. They are based on the paradigms and behavior of the Internet and describe an architectural approach to communication between client and server. With the help of the APIs, individual systems can always be programmed according to the same pattern.

Different frontends act as output - from normal web browsers to virtual reality glasses. However, the templates are developed separately from the CMS. Thus, they can be written in any programming language and use many different technologies. The templates themselves consist of containers that are filled with content. The respective frontend fetches the content from the containers and can be displayed through multiple channels. The template used determines the layout and design. Other backend systems can also be connected to a headless CMS via an API for data exchange. This allows, for example, products and videos to be integrated into the website.

Small software solutions - so-called microservices - can also be integrated into a headless CMS. For example, it becomes possible to integrate a credit card payment via an app in order to make a direct purchase. For users, the microservices fit seamlessly into the overall offering, but run completely separately from the company's own systems.

## When is the use of a headless CMS worthwhile?

Companies that use only a few marketing channels to communicate with their customers and do not plan to open up additional communication channels for themselves in the future do not need to consider the use of a headless CMS. However, companies that rely on multi-channel marketing are well advised to switch to this innovative, future-proof approach to content creation and management.

Headless CMS is all about the absolute return to content creation. Authors focus on creating and maintaining well-structured content about their company's offering, which is then used to populate websites, feed campaigns, and provide app content. The benefits of a headless CMS architecture make you sit up and take notice, and provide food for thought on how to use it:

1. decoupling front-end and back-end creates a higher level of stability. If maintenance work is carried out on the backend or technical problems occur, these are not displayed via the frontends.
2. by using APIs, developers can focus on developing intuitive apps. This content is subsequently displayed optimally on all output devices. This also provides design flexibility through the use of frontend framework.
3. those who create their content in a headless CMS can quickly and easily reuse the content entered. This saves time and promotes effective creation of new content. By focusing on the content, all integrated systems can perform optimally.
4. More security for the system as publishing is separated from the content database. This allows systems to be protected from cyberattacks. Looking to the future, the Headless CMS provides security as design changes can be made without adjustments to the CMS.
5. A headless CMS shortens time-to-market, as changes to content already created are automatically distributed to all digital channels set up. In fact, editors no longer have to deal with the layout.

A headless CMS also provides support in connection with search engine optimization for Google, as it ensures that all content is optimally displayed on the various end devices. This is an important ranking criterion for Google. Those who run a simple WordPress site can convert WordPress to a headless CMS by integrating the visual layout of GREYD.SUITE and make the transition easier.

## Where can a headless CMS cause problems?

Basically, the use of a headless CMS is associated with a high level of IT know-how, because it is a very technical approach. The reason is the high demands on the configuration of the APIs as well as programming knowledge in general. If a company does not have sufficient developer know-how at its disposal, it should find out in advance exactly whether the use of the Headless CMS is the right choice. The corporate philosophy can also preclude the use of a headless CMS, since a universal publication of content prevents a personal address of the addressees.

## Hybrid CMS - the best of traditional and headless CMS

Through a hybrid CMS, content can be managed via the traditional way, i.e. via the fixed integration of back-end and front-end, but can also deliver content via REST APIs. There are several hybrid CMS software products offered on the market, so companies thinking about using a hybrid CMS can pick the hybrid CMS that best suits their needs.

A hybrid CMS includes several features of a headless CMS, such as digital asset management, digital content editing and content delivery via APIs. But it also includes features of a traditional CMS, such as the continued use of layouts and styles that shape the look and structure of the eCommerce website. A hybrid CMS transfers all design elements automatically, without the need to program additional code.