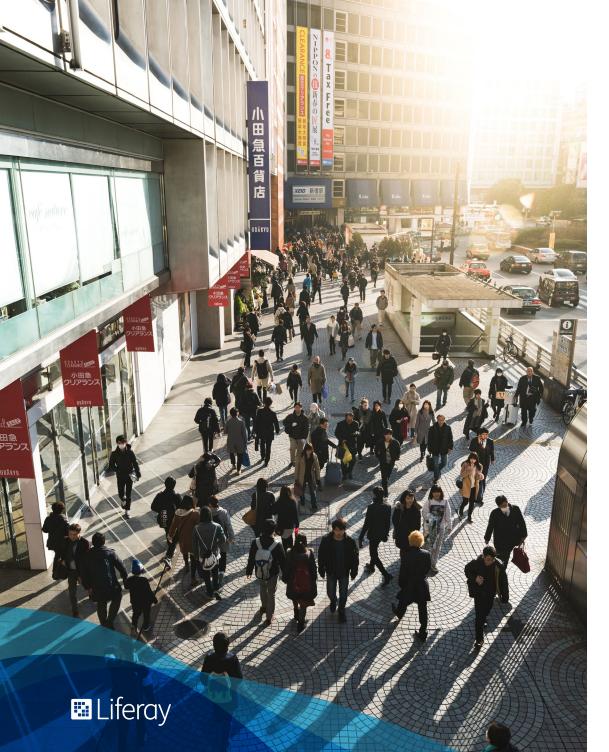


Introduction

In this eBook we will cover:

- What is headless architecture?
- How a headless CMS can improve the customer experience.
- The capabilities and limitations of headless technology.
- Why this may be your future-proof solution for leveraging content.





Competing on Great Customer Experiences

With an ever-increasing number of channels, it's easier than ever to reach customers — but how is the quantity of digital touchpoints affecting the quality of your customer experience (CX)? The competitive edge pushing companies to new heights is not technology alone, but the way it is leveraged to create powerful customer experiences.

Mobile devices, screens on refrigerators, smartwatches, in-store kiosks and voice-activated speakers are just some of the devices through which customers can be reached — but just because your marketing is reaching customers doesn't necessarily mean it's working. Research shows that the customer journey is now far more complex and it takes businesses longer to reach the coveted retention stage of a buyer relationship.

So how can businesses not only reach their customers across the myriad of digital touchpoints but engage them in a way that results in a long-lasting relationship?

The answer lies in a headless architecture and more specifically, in a headless content management system (CMS).



What is Headless Architecture?

The short version is this: headless architecture refers to a decoupled approach that separates the back end and front end management into separate systems.

Previously, most digital content was delivered through a browser. As more connected devices enter the scene this no longer makes sense from a development standpoint. Rather than writing new code every time you want your content to appear through different devices (such as mobile applications, smartwatches, refrigerators and whatever else the future brings), headless architecture decouples the content from its platform thereby allowing you to deliver content to multiple channels from a single back end using APIs.

Headless means that you can create and deliver your content effectively and rapidly, to more places.

Given the changing customer journey, headless eases the strain of getting your best content to all the places customers are looking. Headless also helps unite this increasingly disparate customer journey.

BUSINESSES CAN LEVERAGE THE FLEXIBILITY OF HEADLESS SO AS TO SCALE INTERACTIONS ACROSS DIFFERENT TOUCHPOINTS.

History of Headless: Rooted in Responsive

This concept is not new — headless was born from the ideas behind responsive web design.



Almost every new client these days wants a mobile version of their website. It's practically essential after all: one design for the BlackBerry, another for the iPhone, the iPad, netbook, Kindle — and all screen resolutions must be compatible, too. In the next five years, we'll likely need to design for a number of additional inventions. When will the madness stop? It won't, of course.

Smashing Magazine, January 2011

This article was right in its predictions, as we're now past the aforementioned five-year mark and there are infinitely more inventions in need of custom designs (although decidedly fewer BlackBerries).



Headless Has Evolved with the Customer Journey

The concept for responsive web design was both simple and revolutionary.

Rather than designing separate digital experiences based on the device, what if one design could adapt to them all?

Responsive web design introduced a new approach where flexible grids, layouts, images and "intelligent use of CSS media queries" allowed users to seamlessly move from one device to the next. This worked because the website itself was designed to automatically accommodate the necessary resolution, image size and scripting abilities.

As the devices through which we consume media have increased and changed, this approach acted as the building blocks for supporting a more complex digital landscape. Today, headless acts as an even more scalable solution for creating valuable customer experiences.



A centralized platform with a decoupled front end and API delivery of content will future-proof any business looking to expand their content portfolio to the masses. As we see the market moving towards microservices and integrating everything via APIs, having a singular content platform to manage everything across the board just makes sense.

Greg Luciano, Content Stack





How Do You Use Headless?

One of the most common applications of headless architecture is through a headless CMS.

More than just a content repository, a headless CMS is a back-end only content management system (CMS) built to make content accessible on any device via a RESTful API.

What makes a headless CMS different, and thus more ideally suited for personalization at scale, than a traditional CMS?

Let's take a look at the limitations of a traditional CMS, the features of its headless counterpart and use cases. You'll see how multichannel publishing and content aggregation are key components to a successful implementation that improves CX.

Limitations of a Traditional CMS for Scaling CX

When trying to scale customer experience across different digital touchpoints, limitations of the traditional CMS become evident.

LIMITED FRAMEWORK

With the traditional CMS, what you see is what you get. Front-end developers are limited to the technology and framework of the CMS, which is hardly a selling point in today's ever-changing digital landscape.



Should developers be constrained by frameworks, or be given the tools necessary to build the best-possible content delivery for your customers?

REWRITING CODE

Rather than building something great and then pushing it out to all devices, the traditional CMS calls for a unique code for each device. Given that the devices receiving these unique codes are no longer just mobile devices, this approach is no longer scalable. Rewriting code is a time-consuming and arduous process that costs developers precious time — meaning that projects take longer and there are fewer personalization options available.



Do you want developers spending more time rewriting code to hopefully reach new devices, or creating tools to improve your customer's experience?

Capabilities of a Headless CMS for Scaling CX

As a back-end only content management system, a headless CMS offers far more flexibility — giving you control and adaptability as you scale your CX and thereby sharpen your competitive edge. Here are some of its best features:

SO LONG, PRESENTATION LAYER

Without a predefined presentation layer, you can push optimized content to multiple customer-facing channels at the same time. Your customers consistently have access to great-looking, responsive content across digital touchpoints.

SPEEDY DELIVERY

Are your marketing and IT teams looking for a faster time to market? Headless can help. Its flexible architecture gives developers the ability to build better, faster. This same characteristic means that user experience updates are more easily achievable, too.

INTEGRATION-READY

What's in your toolbox today might not be the most useful tool tomorrow. Luckily, headless architecture can integrate with many other systems and technologies — protecting your hard work amid the shifting digital landscape.

ROOM TO ROAM

Developers have more freedom to build what you and your customers need. Refrigerator ready? Check. Smart speaker compatible? Check. The IoT is ripe with opportunities to engage and retain customers, and headless architecture can help ensure their experience with your business is a cut above.

SO, IS HEADLESS A PERFECT SOLUTION?

A drawback to a headless CMS is the potential loss of analytical information and thereby personalization options. The best way around this is to look into whether or not your vendor provides a solution out-of-the-box. This could look like a hybrid that retains some of the more useful tools from a traditional CMS.



How Headless CMS Can Improve CX

Putting a headless CMS into use will change the way your content is delivered, but it is important to know that the CMS itself is not directly delivering your content.



A headless CMS does nothing but manage content. It doesn't deliver content to humans at all. Rather, it 'delivers' content to an application of some type. Its immediate consumer is code, and it's assumed that code will reformat the content for final delivery to a human.

Gadetopia

This system is how your business' clever, impactful and well-branded content can adapt to whatever connected device the customer is using. With a headless CMS, customers experience your content at its absolute best no matter what platform or channel they choose for engagement — making it a critical tool in adapting your CX to the ever-changing digital landscape.

SEAMLESS INFORMATION WITH MULTI-CHANNEL PUBLISHING

Getting your content to the channels where your customers are spending their time is critical. Headless CMS enables your content to live on any number of connected devices, from customer's homes to their mobile devices. However, this doesn't necessarily mean that your marketing or content teams need to produce more. With a headless CMS, you can create incredible, customer-focused content once and use it in multiple places.

CONSISTENT CUSTOMER EXPERIENCES WITH CONTENT AGGREGATION

Does your content exist across multiple websites, applications or content management systems? Do you pull content from external sources such as other sites, RSS feeds, or APIs?

Content aggregation will help you manage all of this content regardless of the channel. By normalizing content into required formats and utilizing a headless CMS for distribution, you can more easily ensure customers get consistent information and give developers a single point of access.

Personalization at Scale

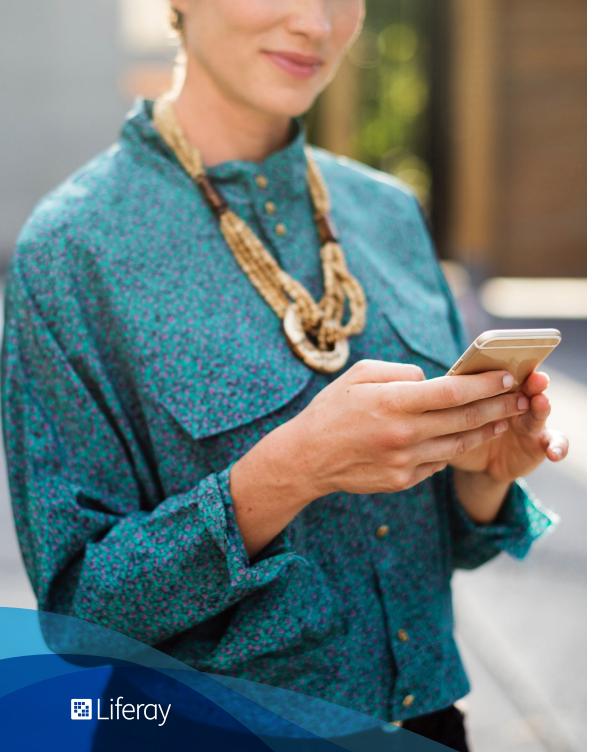
The biggest challenge for many companies is creating effective, personalized customer experiences at scale. Entertainment and shopping giants have raised expectations and set the bar high in this arena. Thanks to their finely-tuned process developed over years of experimentation and growth, today's customers have highly keen expectations when it comes to a company not only anticipating their needs and interests, but also the simplicity of their online experience.

To catch up to the giants and reach the CX bar they've set, companies must develop a strategy for personalization at scale. Without the luxury of years to fine-tune the customer experience it is imperative to use existing resources to the best of their ability.

Personalizing CX at scale is no small feat, but given the growing digital landscape, it is necessary. A headless CMS addresses this need by:

- Taking out the need to rewrite code, thereby making it easier and faster to get great content to any device.
- Aggregating content from multiple sources and storage solutions to create a single repository, empowering your team to do and make more.
- Turning the content you already make into adaptable workhorses capable of engaging customers uniquely based on their location, history, device and more.





Your Future-Proof Solution

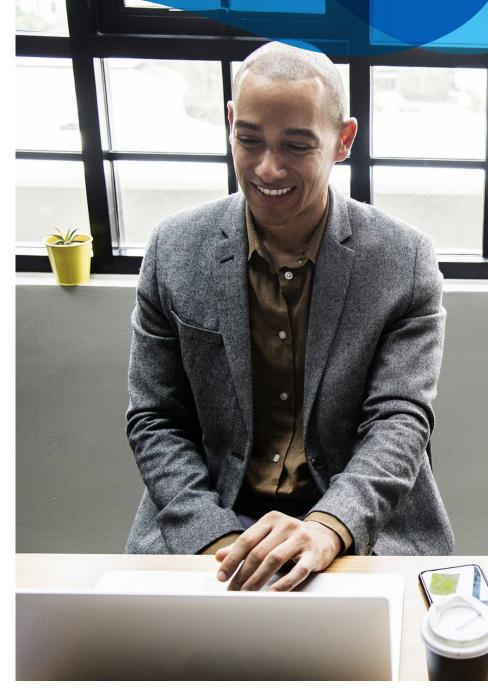
To say that a headless CMS is flexible is true, but that description doesn't tell the entire story. No matter what channels become popular and no matter how customer trends change, a headless CMS will enable you to deliver impactful and personalized experiences.

Conclusion

The competitive edge pushing companies to new heights is not technology alone, but the way it is leveraged to create powerful customer experiences. Leverage technology to get your message in front of customers in new and impactful ways through the use of headless CMS.

Moving Forward

To learn more about Liferay DXP visit liferay.com/products/dxp. Want to see how Liferay DXP can solve the business challenges you're currently working on? Visit liferay.com/products/request-a-demo.





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