# The state of headless: A global research report.

New, international study highlights a growing enterprise focus on powerful digital experiences and a strong belief that headless is the best way to deliver them.

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# What's inside.

Today, businesses of all sizes face a two-pronged challenge that stands between them and continued growth: the need to meet high customer expectations online while navigating an expanding ecosystem of emerging technologies.

For large enterprise businesses, this challenge is often compounded by cumbersome, legacy web infrastructures, and the inevitable difficulties that arise when forced to move quickly.

Traditionally, a content management system (CMS) that provides both robust functionality and a simplified user experience has proven valuable in meeting digital experience needs.

Increasingly however, enterprises, and particularly those who need to deliver a multi or omnichannel experience, are taking that content delivery model to an entirely new level by implementing headless web architecture across their digital properties. In doing so, many of these businesses are saving time and money while increasing agility, performance, and realizing higher ROI.

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# The pursuit of a superior digital experience.

Since the dawn of the Internet, businesses have grappled with the need to provide online audiences with engaging user experiences that are seamlessly fast, deeply intuitive, and visually breathtaking. While various trends and technologies have fulfilled this need over the years, few have had the impact or hold the potential to shape the future the way headless does.

At its core, headless is a type of web architecture that decouples the front end of a website (the graphical user interface or GUI) from the back end (where the code and data live). In this architecture, the front end and back end work independently. The system for sending content or, for instance, product information, consists of using an application programming interface (API) that can be connected to any channel, such as mobile apps, smartwatches, voice assistants or digital kiosk screens. On this front end, developers are free to create a user interface that can be tailored to each user, application, and screen.

While this may seem like an inconsequential separation of powers, headless architecture has seen rapid, prodigious adoption among enterprise organizations in recent years because it allows for faster performance, represents a more modern development framework, is more easily customizable, and offers greater flexibility. Headless approaches also offer an attractive opportunity for ROI by eliminating the need for re-platforming and allowing companies to keep their back end CMS while APIs navigate the various digital touchpoints on the front end that unify the customer journey.

The end result of all these benefits is an agile web configuration that allows for the creation of superior digital experiences, including lightning-fast web and mobile pages, enhanced security benefits, and a consistent content experience across all channels, built with the tools and solutions developers and content creators prefer to use.

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# The state of headless tech: a global research report.

This report, which is based on global research conducted by Vanson Bourne, an independent global technology market research firm, between January and February 2021, explores the current state of headless adoption among enterprise organizations while highlighting the way businesses are using headless to create powerful digital experiences.

While headless adoption is indeed surging, so too are the numerous choices available to those considering its use. To help you better understand those choices, this report offers insight into the most popular frameworks being used within headless configurations as well as headless use cases and common practices that are currently achieving success.

Headless is on track to become the future of the web, but the organizations that will truly reap its benefits are those that implement it in a modern, flexible way, empowering their internal teams to build fast, dynamic, content-rich websites. For those evaluating a headless approach, this report will provide key details that enterprises and agencies can use in their decision-making and planning processes.

Research was distilled from survey results of 400 IT or technical employees, with a knowledge of headless, in the U.S., UK, and Australia.  Respondents came from organizations with at least 1,000 employees and revenue that averaged out to $2.7 billion.

## SURVEY DEMOGRAPHICS

400 IT/technical employees, with a knowledge of headless technology were interviewed in January and February 2021. Here's how they breakdown:

### BY SIZE

154
141
105

- 1,000-2,999 employees
- 3,000-4,999 employees
- 5,000 or more employees

### BY FUNCTION

294
35
30
41

- IT
- Marketing
- Business Intelligence/Data Science
- Other

### BY REVENUE

80
86
41
77
62
54

- 250 Million-500 Million
- 500 Million-1 Billion
- 1 Billion-2 Billion
- 2 Billion-3 Billion
- 3 Billion-4 Billion
- More then 4 Billion
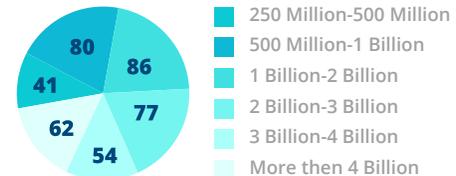
*U.S. (200) U.K. (100) AUS (100)*

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# The state of headless.

# Key findings.

**Headless is now well-entrenched within the majority of enterprise organizations.**

64% of enterprise organizations are currently using a headless approach, representing a nearly 25% increase from 2019.

Among enterprise organizations not currently using headless, more than 90% plan to evaluate headless solutions over the next 12 months—up 15% from 2019.

**Enterprise organizations increasingly see a direct link between digital experiences and the overall success of their business.**

92% of respondents see the importance of digital experiences in terms of their organization's success.

**Headless technologies are viewed as the most effective solution for delivering powerful digital experiences.**

92% of respondents say implementing headless technologies makes it easier for organizations to deliver a consistent content experience.
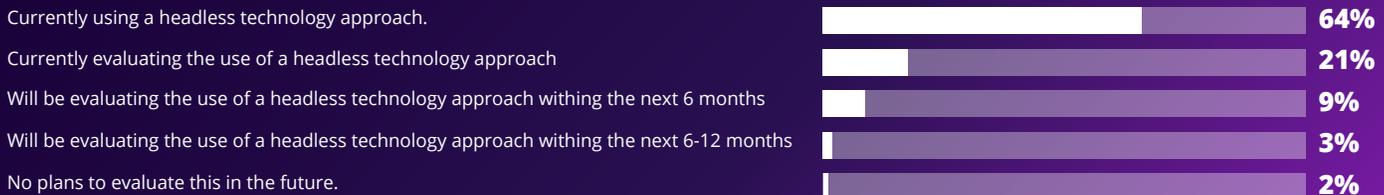
# Headless adoption surging in the enterprise.

Although headless is currently taking the enterprise by storm, this type of web architecture is by no means a new phenomenon among large-scale organizations.

Based on WP Engine's research examining the use of multi-CMS, WordPress, and headless in the enterprise, more than half (53%) of enterprise organizations were already using headless architecture to power their digital experiences in 2019, when the study was conducted.

Less than two years later, that number has jumped to 64%, reflecting an enthusiastic embrace of headless within the enterprise and an ongoing, upward trajectory that alludes to the all-out dominance of this type of web architecture in the coming years.

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**HEADLESS ADOPTION TRENDS**

| | |
|---|---|
| Currently using a headless technology approach. | **64%** |
| Currently evaluating the use of a headless technology approach | **21%** |
| Will be evaluating the use of a headless technology approach withing the next 6 months | **9%** |
| Will be evaluating the use of a headless technology approach withing the next 6-12 months | **3%** |
| No plans to evaluate this in the future. | **2%** |

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Even among respondents whose organizations aren't currently using a headless approach, a staggering 92% said they were planning on evaluating headless solutions within the next 12 months—up from 80% in 2019.

What's behind this meteoric rise in headless adoption? The pivot to a digital-first world due to the Covid-19 pandemic has undoubtedly played a role—a heavier reliance on technology may have even accelerated headless adoption for some.

But when it comes to digital experiences, the pandemic has mainly accelerated trends that were already there: the demand for fast-loading, responsive websites, the need for highly accurate personalization, and the ability to offer consumers a seamless omnichannel user journey.

As those (and other) trends have come to the fore, organizations are clearly making positive associations between the quality of their digital experiences and how well their organization performs, with 92% of survey respondents agreeing that the digital experiences they build are directly tied to their organization's success.

## 92% *of enterprise businesses agree that digital experiences are important to their success.*

Because headless approaches offer the most effective way for organizations to meet the growing demands of online audiences and build the digital experiences of tomorrow, it's unsurprising that this technology is experiencing such widespread adoption across the enterprise and beyond.

# The headless tech experience.

As enterprise adoption of headless has increased, so too have the benefits associated with headless architecture. The following section details the benefits survey respondents have seen after implementing a headless approach, the benefits they view as most important, and the challenges they still face during and after adoption.
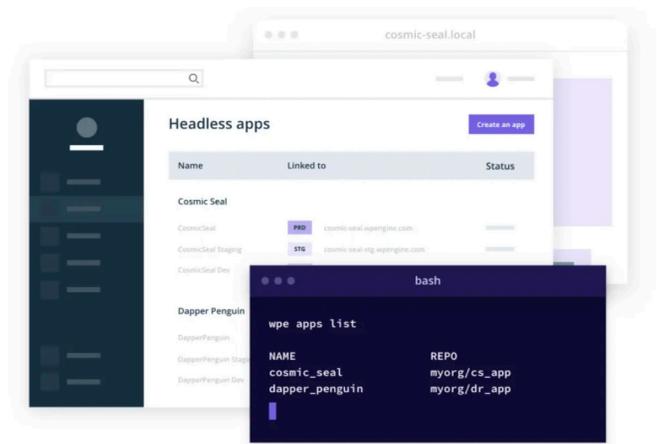


**Headless is overwhelmingly viewed as the best way to optimize digital experiences.**
As alluded to in previous sections, headless architecture allows organizations to attain a level of speed, security, and flexibility across their digital properties that is light years beyond traditional CMS use.

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Additionally, the heightened ability of headless solutions to deliver dynamic content across digital touchpoints makes headless a powerful, attractive option for large-scale businesses with complex digital needs.

As these organizations increasingly focus on the importance of digital experiences and the impact they have on their business, it's not particularly surprising that the vast majority (92%) of survey respondents agree that headless technologies and the ability to deliver a consistent content experience go hand in hand.

## HEADLESS BENEFITS

| | |
|---|---|
| Better overall performance/faster load times | **29%** |
| Quicker time to market | **28%** |
| Deliver omnichannel experiences | **27%** |
| Quicker times to innovate | **26%** |
| Faster time to value | **26%** |
| Deliver consistent, seamlessly connected experiences across digital touchpoints | **26%** |

Interestingly, respondents also gave nearly even weight to the benefits they looked to headless solutions for, including: better overall performance/faster page load times (29%), faster time to market with digital experiences (28%), the delivery of omnichannel experiences (27%), faster time to innovation (26%), faster time to value (26%), and the delivery of a consistent, seamlessly connected experience across all digital touchpoints (26%).

All of these benefits represent the promise of headless architecture, although, as will be covered below, it's not a guarantee that every headless solution will achieve them all.

### Enterprise organizations see clear value in headless technologies.
Organizations have, and are clearly willing to make a significant investment in headless.

On average, respondents' organizations spent $2.6 million on the implementation of headless architecture, a number that is likely to grow as more adopters—and vendors—enter the headless space.

# 2.6 MILLION

*Spent on **total implementation** of Headless technology architecture, on average. (USD)*

This eagerness to invest in headless, while encouraging, also speaks to the need for headless solutions to deliver on the promise of faster, more powerful digital experiences, and streamlined, agile workflows. With higher investment comes the challenge of higher ROI, and only through well-designed, optimized headless solutions will higher ROI be truly attainable.

### Headless users view their current technology provider positively.
Most survey respondents are net promoters of their current headless technology provider, and would recommend them to others. Generally, an NPS score above 30 is considered great, above 50 is excellent, and above 80 is world-class.

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| Position | Detractors | Passives | Promotors | NPS |
|---|---|---|---|---|
| Owner, co-owner, partner, CEO MD, Most senior | 2% | 41% | 57% | 55 |
| Board Member, CXO, Director, SVP, Senior Management | 8% | 46% | 46% | 38 |
| Department or intermediate management | 5% | 53% | 41% | 36 |
| Team or group supervisor | 9% | 64% | 27% | 18 |

**WHY CHOOSE HEADLESS**

| | |
|---|---|
| Performance | **41%** |
| eCommerce | **35%** |
| Scalability | **33%** |
| APIs and extensibility | **30%** |
| Ease of installation | **29%** |
| Support | **29%** |
| SDK Fatures | **27%** |
| Advance workflow management | **26%** |
| Search features | **26%** |
| Content governance | **25%** |
| Pricing | **25%** |
| Architecture | **24%** |
| Multi-site management | **23%** |
| Auditing | **21%** |
| Content previews | **21%** |

This suggests organizations are realizing their strategic goals for headless, and are quite satisfied with the current state and effectiveness of their headless solutions. Interestingly, respondents' seniority within their organization appears to correlate with increased likelihood to recommend current headless tech providers.

While many respondents remain flexible when it comes to headless implementations, particularly in the context of replacing their CMS or front end frameworks, much of this flexibility is simply the nature of headless architecture, in that it empowers the end-user with many choices they can use to (ideally) optimize their approach.

**Respondents select their current headless technology provider for a range of reasons.**
There are various reasons as to why organizations have chosen their current headless technology provider, with performance, eCommerce, and scalability among the key drivers.

While performance is an almost obvious leader, eCommerce is an interesting runner up, as headless eCommerce has become an increasingly popular type of headless implementation, particularly over the past year.

What's clear is that headless solutions have a wide range of applications, and can provide a powerful answer for the

myriad areas that all connect to the creation of powerful digital experiences.

**Headless is not flawless, with concerns around security, developer skills, and cost.**
Despite the massive opportunity headless architecture represents, like any technology or software, it's not without its challenges.

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Among survey respondents either using or considering the use of headless, security, overall solution management, and the need for new developer skills were among the top challenges or concerns cited.

Security is not a particularly surprising concern as it's generally an area with the most at stake, and new security factors such as securing APIs, can be a daunting proposition for potential headless adopters.

Solution management and developer skill are also understandable concerns, as the adoption of new technologies is always accompanied by a learning curve.

While being prepared for some of these challenges (and not caught off guard when they arise) is certainly important for those evaluating a headless approach, building a headless solution with its end-users top of mind can help reduce the uncertainty that accompanies adoption.

Another way organizations are alleviating the uncertainty associated with headless adoption, as well as the growing pains they may encounter along the way, is by utilizing a single headless solution with the frameworks and features of their choice, all built-in, under one roof.

# Looking to the future.

While the current state of headless is impressive, the future looks even brighter. As more organizations become familiar with headless and push the limits of what their solutions can do, expectations for headless architecture will also grow, as will its unique use cases.
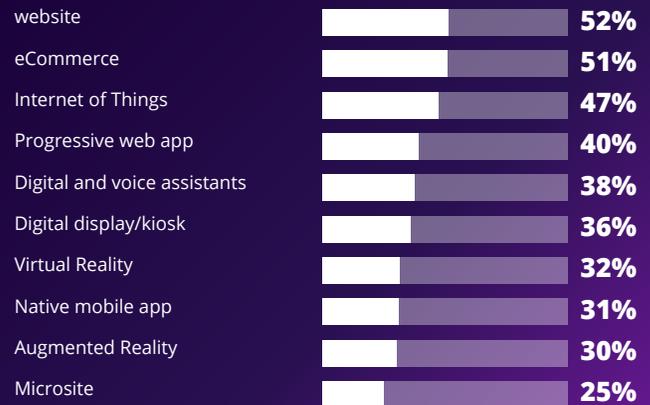
The following section explores some of those expectations, how they differ among headless users, and the way organizations will increasingly look to adopt headless solutions within their businesses.

**Expectations are high for headless to deliver on a wide range of digital experiences.**
Given the vaunted status headless architecture has already established, it's unsurprising that bullish expectations for headless implementations abound.

While respondents identified websites, eCommerce, and Internet of Things (IoT) as the main digital experiences and outputs they hope to deliver with their current and future headless architecture, other projects, such as digital voice assistants and augmented and virtual reality, also enjoy a healthy dose of interest.

**WHY CHOOSE HEADLESS**

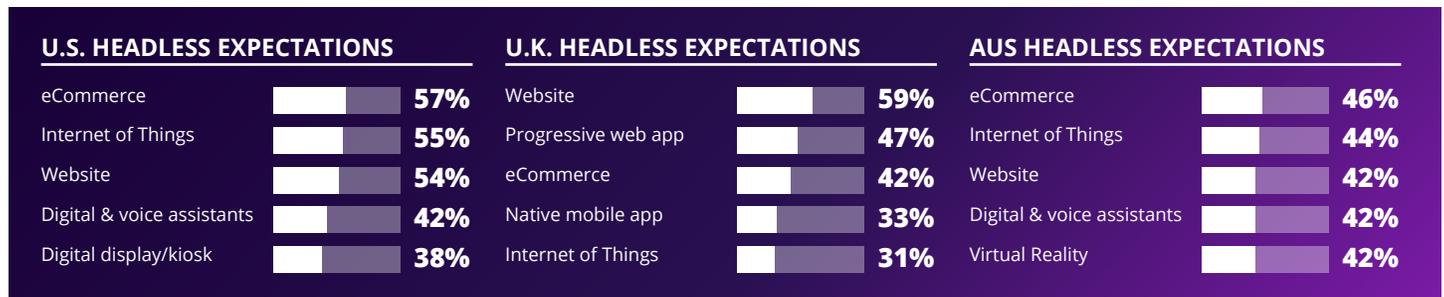| | |
|---|---|
| website | 52% |
| eCommerce | 51% |
| Internet of Things | 47% |
| Progressive web app | 40% |
| Digital and voice assistants | 38% |
| Digital display/kiosk | 36% |
| Virtual Reality | 32% |
| Native mobile app | 31% |
| Augmented Reality | 30% |
| Microsite | 25% |

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The interest in progressive web apps (PWAs) and native apps alongside digital displays and kiosks points to an increased interest in omnichannel investment, as organizations look to expand their footprint across mobile applications and in-store digital touchpoints.

**Expectations for headless vary by country.**
When it comes to regional differences regarding headless, respondents' expectations for headless solutions paint an interesting picture.

While the U.S. and Australia share similar priorities when thinking about the digital experiences they want to deliver with headless, the UK offers an outlier view, leaning more towards PWAs and responsive development than device-focused tech such as IoT or digital voice assistants.

While the three countries aren't on completely separate pages (eCommerce and IoT are still within the top five digital experiences for all), it's clear that expectations for headless in the UK are focused in a slightly different direction.

### U.S. HEADLESS EXPECTATIONS

| | |
|---|---|
| eCommerce | 57% |
| Internet of Things | 55% |
| Website | 54% |
| Digital & voice assistants | 42% |
| Digital display/kiosk | 38% |

### U.K. HEADLESS EXPECTATIONS

| | |
|---|---|
| Website | 59% |
| Progressive web app | 47% |
| eCommerce | 42% |
| Native mobile app | 33% |
| Internet of Things | 31% |

### AUS HEADLESS EXPECTATIONS

| | |
|---|---|
| eCommerce | 46% |
| Internet of Things | 44% |
| Website | 42% |
| Digital & voice assistants | 42% |
| Virtual Reality | 42% |

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**Use of third-party tools with headless differs based on adoption.**
When it comes to the tools and platforms organizations are using with their headless solutions, an interesting difference is apparent between those evaluating headless architecture and those who have already put it to use.

Among respondents currently evaluating or planning to evaluate headless in the near future, integrating analytics is a clear priority. Meanwhile, respondents that are currently using a headless implementation within their organization assign higher importance to security tools and eCommerce solutions.

These differences suggest that tracking the success of digital experiences—and ultimately, ROI—is top of mind for those who are or will be evaluating headless. Among users who are already familiar with the benefits headless is providing, functionality needed for growth, such as enhanced site security or added eCommerce functionality, appears to be a priority.
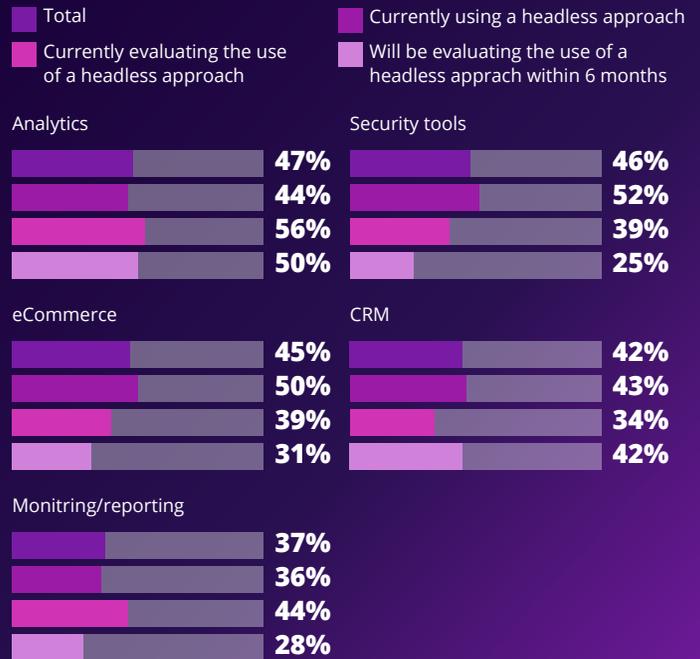
**A majority of enterprise organizations would look to an agency for headless implementation.**
As enterprise businesses evaluate the use of headless, the vast majority (68%) clearly desire external input and assistance with adoption.

While IBM iX and Accenture Interactive are the key market players organizations appear to gravitate towards, it's telling that 16% of respondents are undecided with regards to which external agency they would choose.

This presents a massive opportunity for specialist agencies looking to expand their portfolio of services, either with in-house headless developers or with a technology partner that can provide headless solutions at scale.
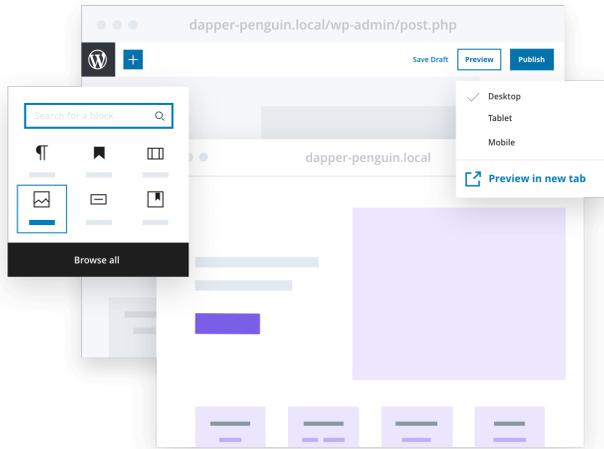
**CONCERNS WITH HEADLESS, BY ADOPTION LEVEL**

- Total
- Currently using a headless approach
- Currently evaluating the use of a headless approach
- Will be evaluating the use of a headless apprach within 6 months

Analytics
- 47%
- 44%
- 56%
- 50%

Security tools
- 46%
- 52%
- 39%
- 25%

eCommerce
- 45%
- 50%
- 39%
- 31%

CRM
- 42%
- 43%
- 34%
- 42%

Monitring/reporting
- 37%
- 36%
- 44%
- 28%

Regardless of the approach, now is clearly the time for agencies to build a coherent headless strategy in order to keep up with the demands of enterprise clients.

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# Headless WordPress, the future of headless.

Headless is emphatically here, and with the rapid rise in enterprise adoption from 2019 (53%) to 2021 (64%), it's likely to become the industry standard for large-scale organizations focused on building and maintaining a powerful, connected digital footprint.

And when it comes to delivering those digital experiences at scale, headless implementations are viewed as the most effective solution—another 92% of respondents say implementing headless architecture makes it easier for organizations to deliver a consistent content experience.

With more than 90% of non-headless users planning to evaluate these solutions over the next 12 months, a growing number of organizational leaders and IT decision-makers will be faced with crucial choices surrounding their own headless adoption strategies and the frameworks, features, and tools their headless solutions rely on.

Because it's already the most popular CMS in the world, used by many of the world's largest sites, and because it's highly compatible as a headless CMS, bringing flexibility, extensibility, and tons of features that content creators love, WordPress is a natural fit for headless configurations.

At WP Engine, we believe the future of headless is Headless WordPress, and WP Engine invites all developers interested in Headless WordPress to join the conversation at developers.wpengine.com, where they can access content featuring product documentation, best practices, tutorial videos, and more.

To learn more about WP Engine Atlas, the complete headless solution for WordPress, or to talk to one of our headless experts, please visit www.wpengine.com/atlas.

That's because enterprise organizations see a clear, direct link between digital experiences and the overall success of their business—92% of respondents tie the importance of digital experiences to their organization's success.

## About WP Engine

WP Engine, the world's most trusted WordPress technology company, powers the freedom to create on WordPress. We provide the most relied upon and trusted brands and developer-centric WordPress products for companies and agencies of all sizes, including Flywheel, Genesis, Local and more. Headquartered in Austin, Texas, WP Engine has o ices in Brisbane, Australia; Kraków, Poland; Limerick, Ireland; London, England; Omaha, Nebraska and San Antonio, Texas. Read more at www.wpengine.com

## Methodology

This report, which is based on global research conducted by Vanson Bourne, independent global technology market research experts, between January and February 2021, explores the current state of headless adoption among enterprise organizations while highlighting the way businesses are using headless to create powerful digital experiences. Research was distilled from survey results of 400 IT or technical employees, with a knowledge of headless, in the U.S., UK, and Australia. Respondents came from organizations with at least 1,000 employees and revenue that averaged out to $2.7 billion