


# FROM TRADITIONAL TO HEADLESS

STATE OF HEADLESS AMONG  
MAGENTO AGENCIES

PREPARED BY

^ KLEVU

 **Magento Association**

**GOMAGE**

2023



# Agencies Speak Out: Insights on Headless

**As the eCommerce industry evolves, businesses are increasingly turning to headless development to create flexible and modular solutions.**

In response to this trend, our report captures insights from **120 eCommerce agencies** of various sizes from **North America, Europe, and Asia-Pacific**. Most companies surveyed offer Magento development in their service line.

The report sheds light on agencies' perspectives on emerging eCommerce solutions, including MACH (Microservices, API, Cloud, Headless) technologies and composable architectures, in response to the growing demand for adaptable eCommerce platforms.

The survey revealed that **53% of agencies already offer headless development** to their clients.

Additionally, it provides valuable recommendations from eCommerce experts for agencies seeking opportunities to expand their service offerings with headless development.

The report will help you evaluate the state of the market and understand how your business can gain a competitive advantage in the upcoming years.

## Companies Behind the Report

**Magento Association** is a non-profit organization that fosters and supports the growth, education, and collaboration within the Magento community. It brings merchants, developers, agencies, and technology providers together to create a robust ecosystem around the Magento platform.

**Klevu** is an AI-powered and MACH-ready search solution designed for eCommerce platforms. It offers advanced search capabilities, personalized results, and product recommendations to improve online store navigation and boost conversions. By leveraging artificial intelligence and machine learning, Klevu enhances customers' shopping experience across various eCommerce environments.

**GoMage** is an eCommerce development agency specializing in Magento solutions. Since 2018, the company has been actively involved in headless development, leveraging its expertise to create innovative online stores, and has also developed a PWA storefront, **GoPWA**, built on the Magento PWA Studio.

*This report uses the term "headless" to refer to headless commerce technology. We recognize that there are various related terms, such as "composable," "PWA," and "MACH," and that these terms differ from each other. However, for the purposes of this report and to make it easier for readers to perceive the information, we have chosen to use the term "headless" consistently.*



# eCommerce Agencies' Readiness for Headless

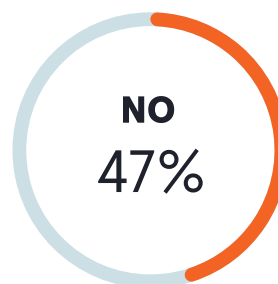
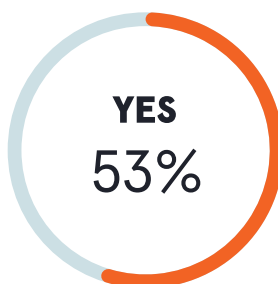
eCommerce agencies are well on their way to embracing the new direction. A remarkable **53% of surveyed agencies** reported **already offering headless development services** to their clients. 68% of

those agencies started headless development more than 2 years ago.

The numbers demonstrate a solid commitment to staying at the industry's forefront and providing clients with the most innovative

solutions. Furthermore, an additional **34% of agencies** have **recognized the growing importance of headless technology** and have plans to invest in it in the near future.

**Does your agency do headless development?**



YES	34%
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NO	66%
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**Do you plan to invest in headless or composable development?**

**When did you start offering headless development?**





# How Agencies Consider Headless for Future Business Development

While not all agencies offer headless development for their clients, they are heading in that direction. **75% of agencies that don't provide headless development plan to include headless technology** as part of their service line in the **2023-2024 timeframe**. This demonstrates a clear recognition of the value and competitive advantage that the adoption of headless technology can bring to both agencies and their clients.

The agencies that offer webstore development on multiple eCommerce platforms have shown a higher degree of openness to embracing headless approaches.

**79% of companies that work with two or more eCommerce systems** have either already implemented headless development in their service line or have plans to do so in the near future.

Agencies accustomed to working with a diverse range of eCommerce platforms are more inclined to adapt to the latest technologies and methodologies to stay ahead of the curve.

## When do you plan to include headless in your service line?

Within this year **55%**

Next year **20%**

In 2+ years **25%**

# Headless Tech Adoption Across the Continents

The survey data paints a picture of the global landscape regarding headless development adoption across eCommerce agencies.

Agencies catering to clients with a global presence are at the forefront of headless development. A striking 72% of these agencies have already

incorporated headless development into their service offerings, with an additional 11% planning to do so within the next two years.

The headless adoption rate is significantly **lower in Europe compared to North America and Asia**. 57% of companies in Europe

have either implemented or plan to implement headless – compared to 89% in North America and 92% in Asia.

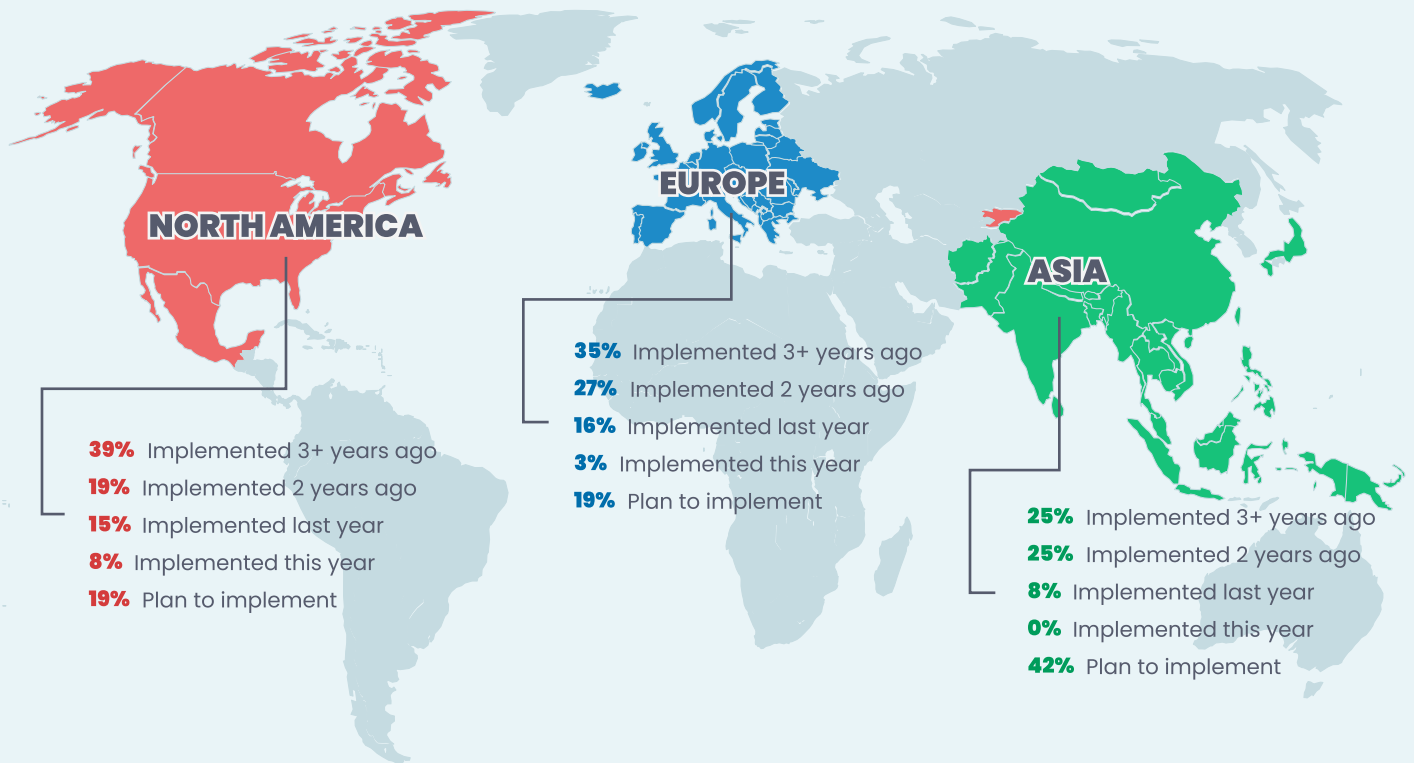
**North America has the most significant number of headless tech early adopters**. 55% of surveyed agencies from North America implemented headless more than



2 years ago – compared to 38% of agencies from Europe. Of those agencies in North America planning to implement headless tech, 60% want to do it within this year (compared to 30% of companies in Europe).

The companies headquartered in **Asia have slower adoption rates but** a higher number of those eager to implement headless development in their service line in the future. **92% of companies in Asia are headless tech promoters**, and 42% plan to start

headless development in 2023–2024. Unfortunately, the data available doesn't allow for analyzing other regions.



### Out of those who plan to implement headless:

	Within this year	Next year	In 2+ years
Europe	30%	40%	30%
North America	60%	20%	20%
Asia	80%	0%	20%



# How Agencies Handle Headless Development

As eCommerce agencies gear up for the headless future, they are keenly aware of the importance of developing the necessary expertise. In response to this challenge, many agencies are adopting a proactive approach to equip their teams with the required skills.

The leading strategy among these agencies is to **prioritize internal talent development**. 50% of eCommerce agencies concentrate their efforts on

training their existing personnel. This focus on in-house capabilities underscores the importance agencies place on nurturing their own experts.

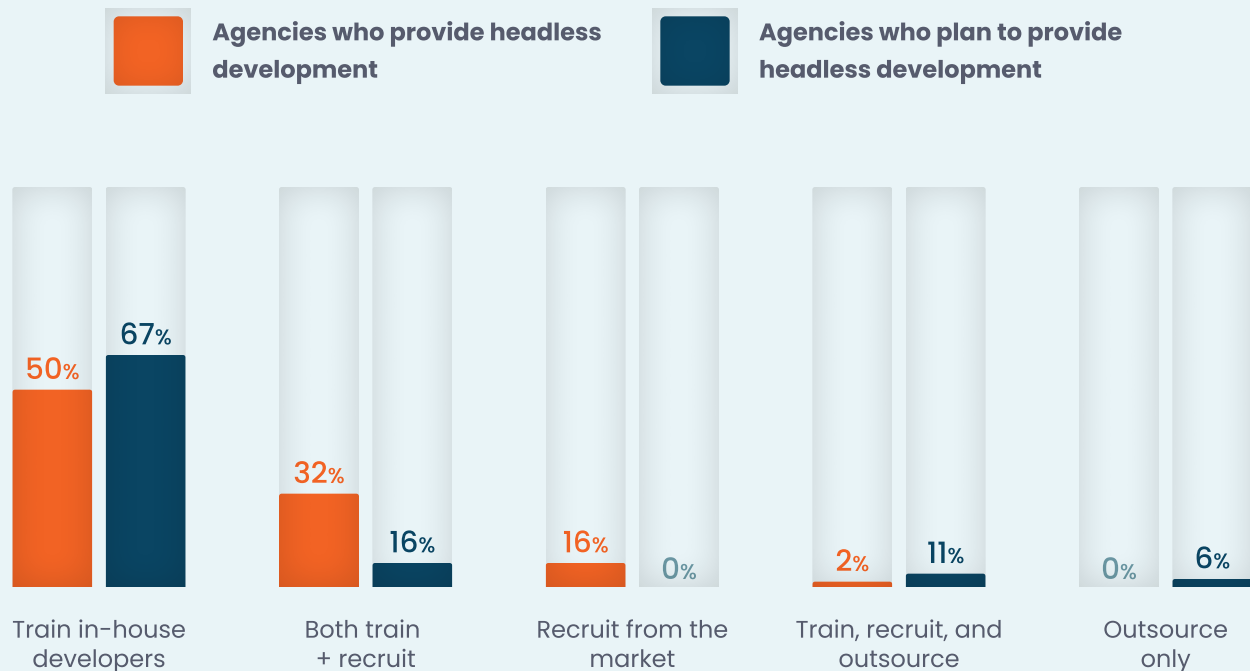
Furthermore, when considering companies aiming to pursue headless development, a remarkable **67% are committed to investing** in the training of their **current workforce**. This approach ensures that these companies have a solid foundation to

succeed in a headless environment.

However, some agencies recognize the value of diversifying their talent pool. As a result, the **second most popular approach** combines both the **development of in-house skills and the recruitment of external experts**.

By adopting this hybrid strategy, these agencies are well-equipped to tackle the challenges of the headless future with a robust blend of resources and expertise.

## How do you find headless specialists?





Preferences for headless development strategies differ across geographic regions. Agencies based in **North America** exhibit a strong

inclination towards **nurturing their in-house teams** for headless development. Companies headquartered in **Europe** prefer to

train **in-house employees and hire external talents** already experienced in headless development.

	Agencies headquartered in North America	Agencies headquartered in Europe
Train in-house developers	<b>30%</b>	<b>40%</b>
Both train + recruit	<b>60%</b>	<b>20%</b>
Recruit from the market	<b>80%</b>	<b>0%</b>
Train, recruit, and outsource	<b>80%</b>	<b>0%</b>
Outsource only	<b>80%</b>	<b>0%</b>

## Which Headless Technology Is the Most Popular Among Agencies?

The survey revealed interesting patterns in adopting headless solutions by eCommerce agencies. A majority, **60%**, **opted for a single** headless technology to offer clients, demonstrating a focused approach to mastering a specific platform. Notably, **Magento PWA emerged as**

**the top choice for this group**, with 57% of these agencies selecting it as their sole headless development platform. Diversification came into play for the remaining agencies, **as 30% chose to develop solutions on two different headless platforms**, balancing their capabilities across multiple platforms.

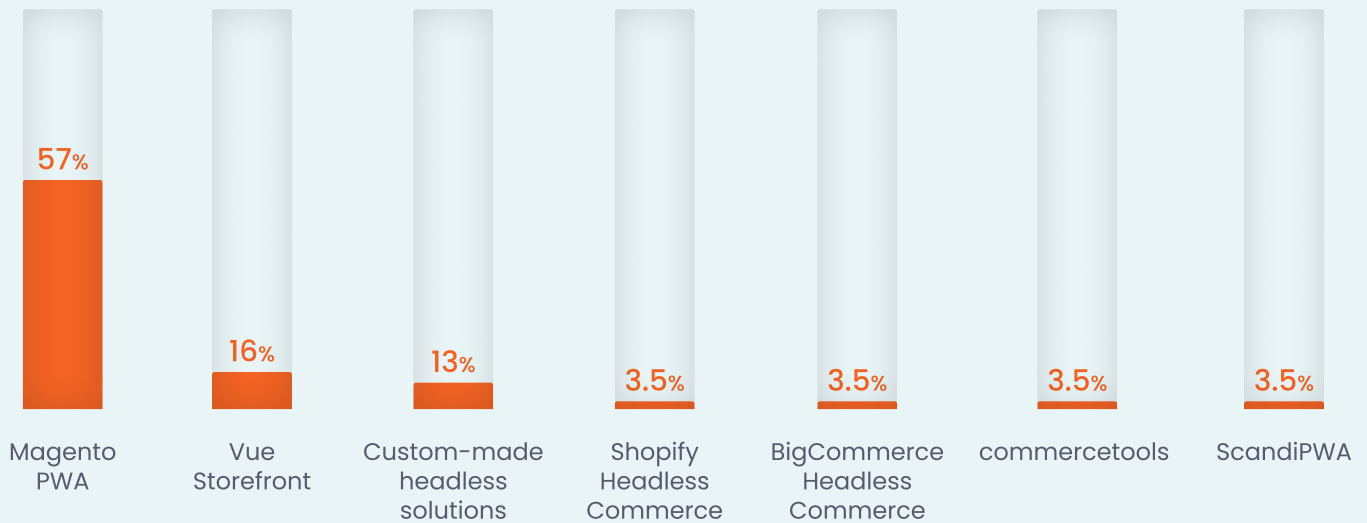
A smaller, more adventurous segment, constituting 10%, ventured into developing on three or more headless solutions, showcasing their versatility and wide-ranging expertise in the headless landscape.

### How many headless solutions do you offer?

We develop only on 1 headless solution	<b>60%</b>
We have 2 headless solutions to offer clients	<b>30%</b>
We offer headless development on 3+ headless solutions	<b>10%</b>



## Preferred Headless Solutions Among Agencies Developing on a Single Platform



# Impact of Agency Size on Headless Development Adoption

Agency size plays a crucial role in headless adoption rates. **Smaller agencies exhibit a considerably lower headless adoption rate**, up to

50% less, compared to their larger counterparts. This disparity highlights the influence of organizational size on the ability to embrace new

technological advancements like headless development.

## The % of agencies who either implemented or plan to implement headless development based on size

1-19 employees	48%
20-99 employees	78%
100-499 employees	93%
500-999 employees	100%
1,000 employees	100%



# Impact of Economic Factors on Headless Adoption

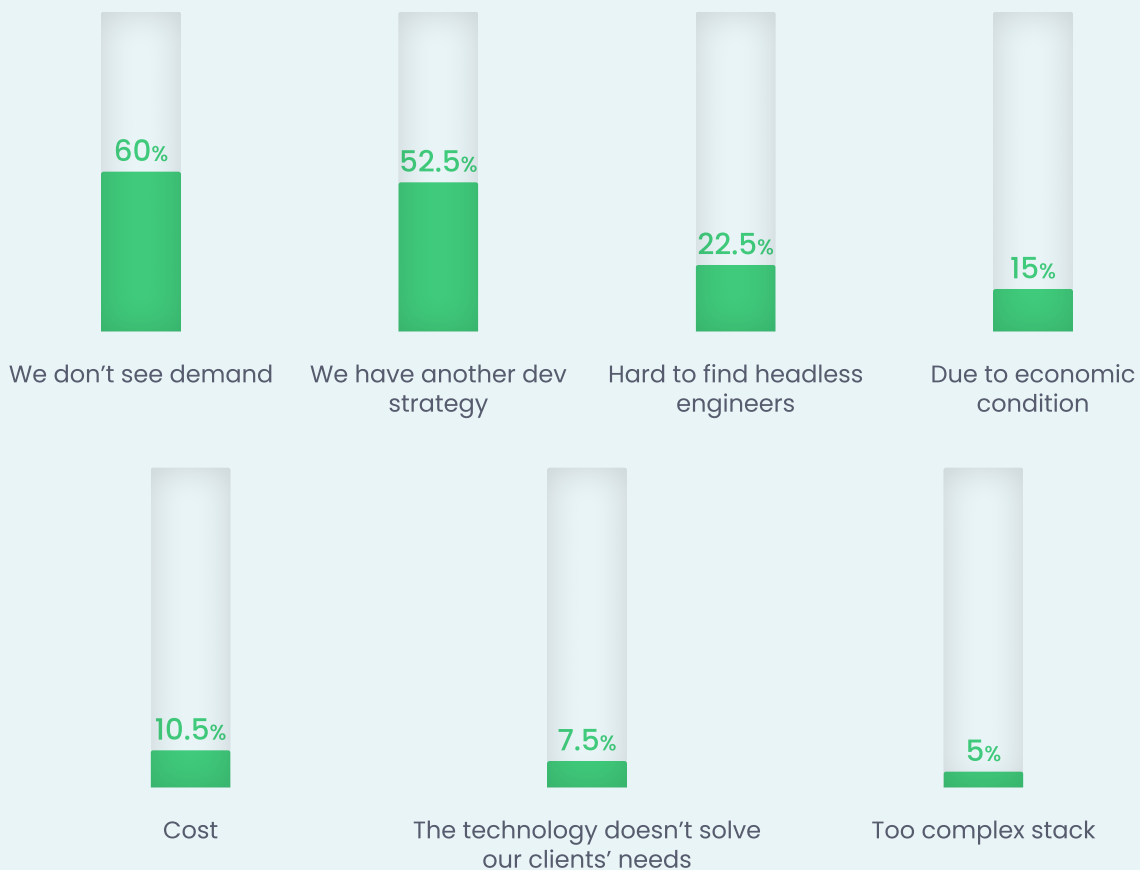
The survey highlighted that 15% of agencies cite economic conditions as a contributing factor for not having initiated headless development. Among these agencies, 75% are small-sized companies with fewer than 20 employees.

This underscores the **impact that economic constraints have on smaller agencies'** ability to adopt and invest in headless development.

Other factors that might contribute to agencies not investing in headless

development are low client demand, another business focus, and difficulties finding headless engineers.

## What are the reasons that made you decide not to invest yet?





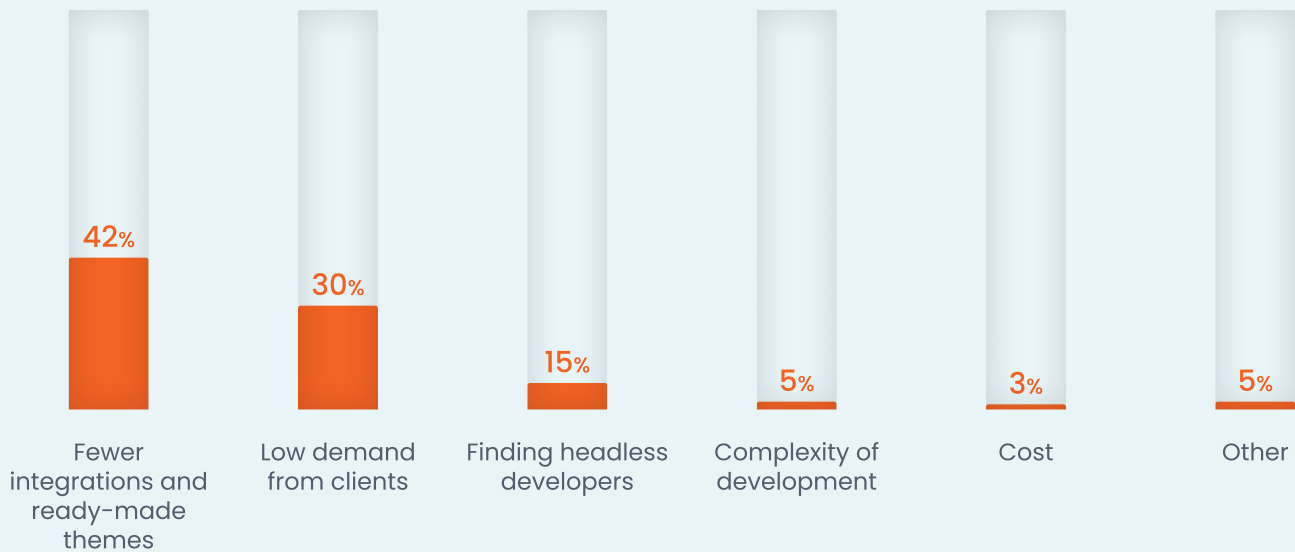
# Major Difficulties that Companies Face During Headless Development

Agencies encounter a range of challenges while developing headless solutions for their clients.

At the forefront, 42% of agencies face the constraint of **fewer integrations and ready-made themes**. Additionally, 30% name **low client demand** as a significant obstacle in

headless development. These challenges illustrate the spectrum of difficulties agencies must navigate to deliver headless solutions to their clients.

## What is the major issue you've faced during the headless development process?



Concerns surrounding headless technology vary between large and small-sized agencies, reflecting each size category's distinct challenges. **Low market demand** emerges as a

significant concern in adopting headless development for companies with **1-99 employees**. Conversely, **agencies with 100+ employees** emphasize the early stage of the

technology and the current scarcity of ready-made themes and integrations as their primary pain points.





	1-19 employees	20-99 employees	100-499 employees	500-1,000+ employees
Low demand among our clients	45%	30%	13%	15%
Very limited use cases of the technology	40%	15%	26,5%	0%
Too costly to build & maintain	17,5%	12,5%	0%	0%
The technology is too complex	12,5%	7,5%	13%	0%
Hard to find headless engineers	5%	15%	20%	7,5%
Early-stage tech with few integrations and ready-made themes	5%	25%	60%	54%

# Agencies' Perspective on Who Benefits Most from Headless Development

**In the survey, agencies from various regions and sizes share their perspectives on the ideal clients for headless development:**

1. Mature, multi-brand B2C, D2C, and B2B2C businesses will most likely adopt headless development.
2. Headless development is seen as valuable when combined with microservices and multiple integrations.
3. Agencies suggest that headless solutions are well-suited for clients with solid branding needs, internal frontend capabilities, or those seeking innovative approaches to commerce. However, they caution that it may require a higher initial investment and total cost of ownership.
4. Some agencies believe headless development is best suited for specific use cases, such as configurators, admin boards, and checkouts, rather than full-fledged websites.



5. Large enterprises with a need to support multiple channels are considered prime candidates for headless adoption, while small and medium businesses may find it less beneficial.
6. Agencies also point out that while headless solutions are gaining popularity, they still need to prove their cost-effectiveness and ability to impact businesses positively.

These diverse perspectives showcase the varying opinions on the types of clients that can benefit the most from adopting headless development solutions.

# Strategies for Building Headless Departments and Elevating Service Delivery

*Taking into account the various obstacles agencies must surmount while venturing into headless development, eCommerce experts have offered valuable insights. They share recommendations on how agencies can successfully introduce new services, acquire expertise, and strategically approach headless development.*

## Choose Technology Stack Wisely

The technology stack has a significant impact on the performance, scalability, and maintenance of your solution. The market is full of solutions that were

built wrong and, therefore, won't deliver the required results. Progressive web applications are a remarkable example. Businesses often build them using bloated JavaScript frameworks. Instead of the expected high speed and performance, they have to deal with slow PWA speed and create additional solutions to fix their own

mistakes. In conversation, **Erwin Hofman, an expert in page speed optimization**, shared his thoughts on the PWA technology and why sometimes PWAs can't deliver the required results. All the observations are backed by UX data of real users across PWAs and SPAs, collected using RUMvision (Real User Monitoring).

**- Know the technical characteristics of your audience:** eCommerce stores usually have a broad audience with customers using different types of mobile devices. To choose a technology stack, you need to know the technical characteristics of your client’s audience. Otherwise, you might build a PWA on a well-known JavaScript framework with a lot of client-side rendering, which will make it heavy and slow – especially on older devices with lower processing powers.

**- Consider average user session duration:** Customers visit eCommerce websites with one goal – to make a purchase and be done with it. Compared to social media websites like Facebook, a user session on online stores is shorter. Using feature-rich frameworks might be beneficial for social media web(apps) that typically have long-lived sessions, but end up shipping a lot of JavaScript and introducing a UX and conversion risk within eCommerce journeys. Instead of a fast PWA,

businesses get a solution that doesn’t meet customer expectations.

**- Remember about Google:** Customer experience is not the only thing that heavy front-end frameworks impact. Their use harms LCP, INP, and other metrics tracked by Google. Building a PWA on a bloated framework will lead to problems with Core Web Vitals and poor performance on Google. That’s another reason to choose the technologies for a headless solution carefully.



**Erwin Hofman**

Independent Pagespeed Consultant

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*“Some might say that PWAs are slow and don’t meet the performance criteria. I would say it’s not just the PWA but how we choose to build PWAs. Mixing the PWA technology with bloated frameworks leads to poor performance, especially on older devices. And then, we need to find solutions to fix our own mistakes. That’s why when choosing the technology stack, you need to keep the user journey and their technical characteristics in mind.”*

## How to Decrease Costs of Headless Solutions

As businesses continue investing in headless solutions, cost management becomes crucial in their decision-making process. While headless architectures offer a range of benefits,

such as flexibility, scalability, and improved user experience, the initial development and ongoing maintenance costs can be significant.



## Anjali Subburaj

Digital Commerce  
Architect and MACH  
Alliance Ambassador

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*“Headless is an ideal solution for businesses looking to adopt an omnichannel approach, as it allows for seamless integration across various touch points. While it can be expensive to implement, the MACH and headless approach enables businesses to start small with a minimum viable product and gradually add more functionality as they grow. Headless and MACH solutions can provide a more cost-effective strategy for businesses seeking to expand beyond a single channel.”*

- 1. Choose the right technology stack:** When choosing a technology stack for headless development, selecting the one suitable for your business goals and requirements is essential. Exploring and experimenting with different technologies is recommended before making a final decision.
- 2. Explore work cases by other agencies:** You can get new ideas and insights for reducing development costs by exploring how other agencies approach headless development. For example, some agencies don't use a specific solution. Instead, they downgrade brands from Adobe Commerce to Magento Open Source and combine it with a headless CMS such as Prismic or Contentstack. This approach helps decrease costs for clients and gives them more website management freedom.
- 3. Use open-source technologies and third-party services:** Several open-source technologies can help decrease the cost of headless development. For example, using open-source front-end frameworks like React or Vue can significantly lower development costs.
- 4. Build in-house expertise:** Having a team with deep knowledge of headless technologies can help reduce the time and cost of developing new features and integrations in the long run.
- 5. Avoid developing in a vacuum:** To prevent overspending on headless development, build solutions your clients need. Adding more features and integrations might make it look cool, but is it what customers need? Focus on building solutions that solve the problems of your target audience.



## Roman Tsehynka

Head of PWA Engineering  
at GoMage

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*“If any agency wants to build their PWA solution, I’d recommend using a pre-built adapter rather than building a custom connector to work with different eCommerce platforms. This will save development time and costs, as it will eliminate the need for developers to learn and integrate with multiple platforms,”*

## How to Train the Internal Team

It is essential to have a team with the necessary expertise and skills to successfully implement a headless solution. However, training your existing team members may be a challenging and time-consuming process.

1. **Provide training sessions:** This can be done through workshops, seminars, or training programs offered by experts in the field. These sessions should be interactive and hands-on, allowing the team to get practical experience working with the new technology.
2. **Encourage experimentation:** Encourage the team to experiment and try out different approaches to headless development. This will help them better understand the technology and how it can be used to achieve business objectives.
3. **Emphasize collaboration:** Emphasize the importance of cooperation within the team and other departments, such as marketing and sales. For example, a marketing team can do prior research from the perspective of what clients need and what solutions an agency can offer to them. Based on the results, the headless team makes the tech review and comes up with the best solution that targets business pains.
4. **Promote continuous learning:** Headless development is a fast-evolving field, with new technologies and frameworks emerging all the time. Encourage the team to keep up to date with the latest trends and technologies through online courses, conferences, and webinars.
5. **Seek outside expertise:** Consider bringing in outside experts to train the team. They can provide valuable insights and perspectives that may not be available within the organization.



**Yuriy Kuzminov**

CEO of GoMage

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*"Training Magento developers on how to work with React, GraphQL, and headless is much easier and more cost-effective than hiring a headless developer and educating them on Magento and Adobe Commerce. Magento is a complex platform with a multitude of functionality, and without expertise in it, developers won't fully utilize its potential when building PWA solutions. Instead, they might reinvent existing features (where it's not needed at all).*

*Training your internal team for headless development is crucial for the project's long-term success. It may take time and resources, but the investment is worth it. Not only will it save you money in the long run, but it will also create a more collaborative and knowledgeable team."*

## Should Agencies Consider Outsourcing & White Labeling?

When it comes to headless development, outsourcing and white labeling can be effective solutions to reduce costs and bring in additional expertise. According to the research, eCommerce agencies do not consider it as an option, probably because of the risks and lower profitability associated with the approach.

At the same time, in some cases considering the option of finding a development partner with headless expertise can be beneficial for an eCommerce agency:

- **Faster hiring process:** Outsourcing and white labeling can speed up the hiring process by providing you with an expert team that is already in place.

- **Learning from experts:** When you outsource or white label, you get the opportunity to work closely with experts who have extensive experience in headless development. This allows your internal team to exchange knowledge and learn from professionals well-versed in the latest industry trends and technologies.

- **Flexible terms:** You have flexibility in terms of contract length, work volume, and payment structure. Work with your partner to determine the most convenient terms that align with your business objectives and resources.

To make outsourcing and white labeling work for a business, an eCommerce agency should approach it just like the process of



hiring internal developers. Here are some key recommendations to help you find the right development partner with headless expertise:

- **Identify the specific expertise you need**
- **Determine what work terms will be best for your business**

- **Decide how your team will check the quality of delivered work**
- **Create a checklist with all the requirements and share it with potential partners**

Outsourcing and white labeling might not be suitable for all agencies, but it can help you provide customers

with the latest solutions while educating your team and gaining expertise.

## Implement Strategic Thinking

When it comes to headless development, only some eCommerce businesses are aware of its benefits and drawbacks. Thus, service

providers must know how to determine whether headless is a good fit for a particular client.



**Anjali Subburaj**

Digital Commerce Architect and MACH Alliance Ambassador

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*“Thinking long-term is important. Today, you may have a website. But in two years, your business might need a mobile app or a voice interface. Understanding your long-term strategy helps build a scalable solution today. In the long term, both monolith and headless solutions will coexist.*

*For example, Shopify is quick to start a website. Still, if you begin your eCommerce journey with Shopify or a similar eCommerce solution, your business may reach the ceiling way too fast. Another option is to invest a little bit more money, start with a basic headless solution and then grow it as the business grows.”*

# Conclusion



## Agencies are actively embracing headless development

eCommerce agencies are increasingly embracing headless development. Most of the agencies surveyed have either already added headless development to their services or have plans to do so in the next two years. Companies that work with multiple eCommerce platforms are more open to adopting headless approaches, demonstrating their adaptability to the latest technologies and methodologies.



## Finding the right expertise is still a challenge

Agencies are actively investing in developing the necessary expertise for headless development, with a focus on training their existing personnel. However, finding headless developers, fewer integrations, and ready-made themes are significant challenges agencies face.



## Headless is great, but not for all clients

Agencies have varied perspectives on the types of clients that can benefit the most from adopting headless development solutions. Mature, multi-brand B2C, D2C, and B2B2C customers with strong branding needs and internal frontend capabilities are most likely to adopt headless development.



## Headless is the future of eCommerce

Agencies' predictions for the future of headless development vary depending on their size, location, and revenue of their clients. While some see headless commerce as a niche technology, others view it as the future of website development. Nevertheless, agencies committed to staying at the forefront of the industry and providing the most innovative solutions to their clients demonstrate a strong interest in embracing headless development services.