

+ **PWA** + Ecommerce
+ **Ecommerce** + PWA

The winning formula

O2 Commerce

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INTRO
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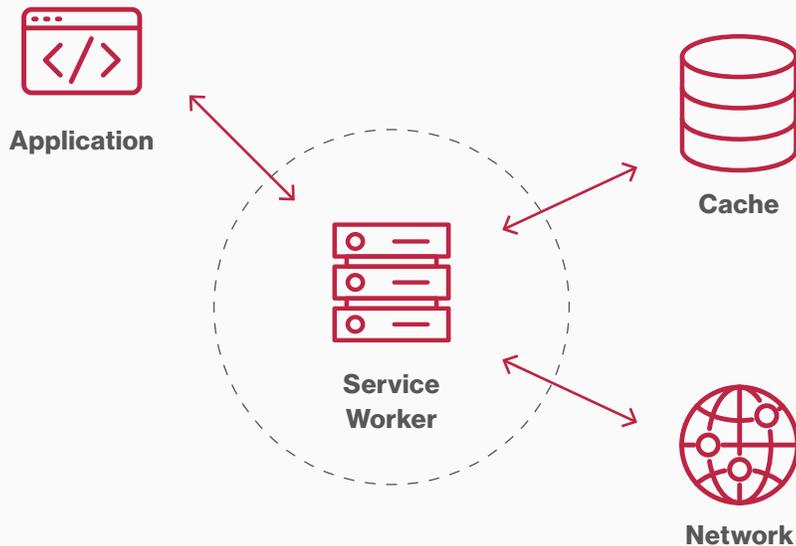
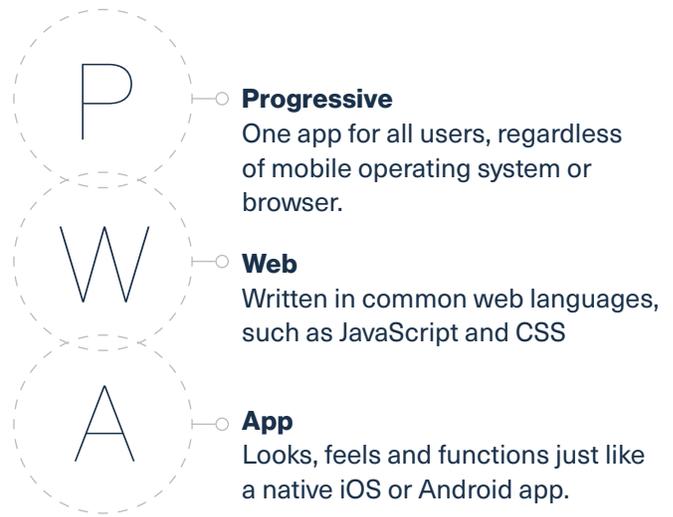
What is PWA?

To users, **Progressive Web App, or PWA**, sites look and feel just like an app. They can work offline, receive notifications, store information such as login credentials and favorite product pages, and even add an icon for the PWA site to their home screens in order to enable one-touch access. What's more, PWA sites eliminate the major inconveniences of native apps, such as visiting the app store, installing the app, and reinstalling it every time there is an update.

For brands, PWA offers the best of all worlds, including a suite of features that promote customer loyalty, but without the bother of building and maintaining separate apps for each environment, or going through the fuss of submitting apps to the app store.

It also helps brands streamline marketing. In a native app scenario, app publishers invest in user acquisition (UA) campaigns that lead users to an app store where they're encouraged to download the app -- a less than ideal scenario. By contrast, users simply visit a brand's PWA site and they're "in the app."

So what is PWA exactly?
It's a framework for building sites using common web technologies such as HTML, CSS, JavaScript, and Web Assembly -- skills that many developers already have.



PWA

PWA also makes use of aggressive caching, service workers that perform vital tasks in the background of the browser and other advances to enable quick and seamless user experiences.

Headless Commerce vs. PWA

We often hear the term “**headless commerce**” in connection with PWA. They’re different approaches to web development, but they often work hand in hand. A PWA site can be built using a headless methodology, and vice versa.

Headless commerce is when developers decouple the backend of an ecommerce site from its frontend. This means that all the backend functions -- order processing, customer records -- are separate from the user-facing elements, such as product images and descriptions, product configurators, and so on. What’s left is an ecommerce platform without a “head.”

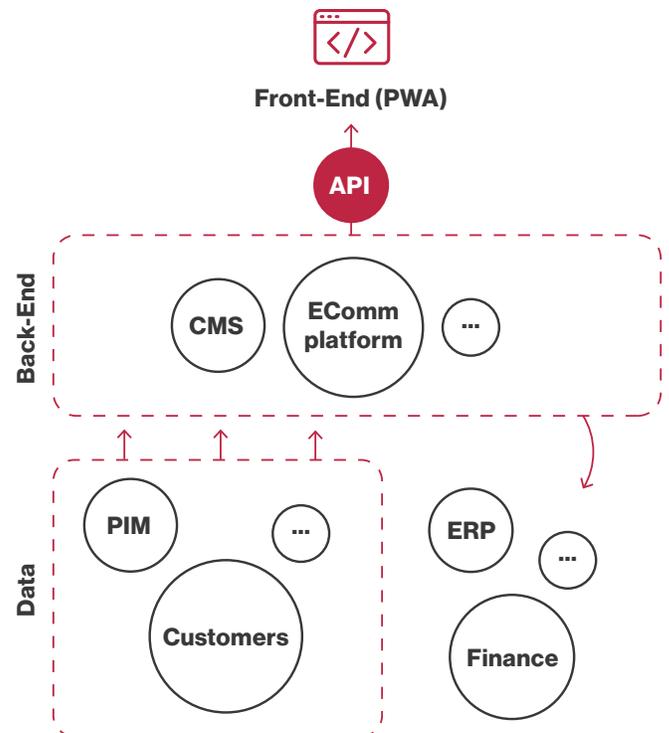
APIs connect all the user-facing frontend elements (aka the “presentation layer”) with all the backend processes required to display product information, receive and process orders, and send order confirmations.

There are many significant benefits to headless commerce. To begin, it allows for “commerce anywhere.” Let’s say your brand has a strong following on Instagram. With headless commerce your followers can buy products directly from your Instagram posts, bypassing the need to navigate to your ecommerce store.

Headless commerce plays a vital role in social commerce, which is now big business.

The global social commerce market size was valued at USD 727.63 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 31.6% from 2023 to 2030..

And because of the separation between the backend and frontend, brands have a lot more flexibility in terms of creating unique and highly personalized experiences for individual customers, as we’ll see in the next chapter.



State of the Art, Yet Market Tested

There is a bit of a myth that PWA is a new technology and, like all new technology, is a bit risky. Nothing can be further than the truth. First, it's not new; Steve Jobs introduced the concept of web apps that "look exactly and behave exactly" like native apps back in 2007.

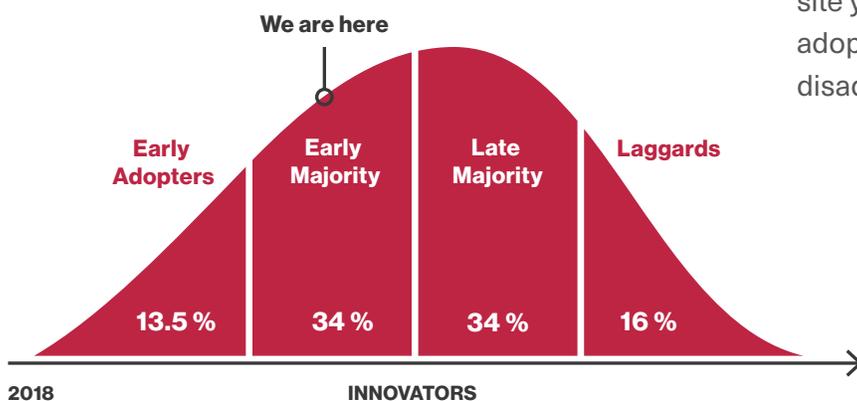
The actual term "progressive web app" was coined by Google engineers way back in 2015 (a lifetime in today's fast-paced development world) and by one estimate there are over 120,000 domains that have at least one PWA site.

Numerous big and global brands across all sectors of the economy have launched PWA sites, including Spotify, Uber, AliExpress, The Washington Post, Financial Times, The Weather Channel, Forbes, BMW, Adidas, Trivago, Pinterest, and Instagram. Smaller brands, like ELEMIS, have leveraged PWA sites to grow their customer base and increase conversions.

Innovation on the Horizon

Moreover, the next few years will see a plethora of new PWA sites and innovation driven by all the venture capital investment that's currently pouring into companies that specialize in PWA technologies.

But don't worry if your brand hasn't built a PWA site yet; we're still in the earlier stages of adoption so you're not at a competitive disadvantage.



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“ Back in 2010, “mobile responsiveness” was the Holy Grail of ecommerce. Speed and Experience is a must now. Welcome to the PWA Era! ”

- Charles Guimont, O2 Commerce CEO/CTO

We've come a long way since then! Shrinking a generic website won't cut it for today's consumers. They want a faster, more elegant and more relevant experience when they shop, and PWA enables retailers to meet those expectations.

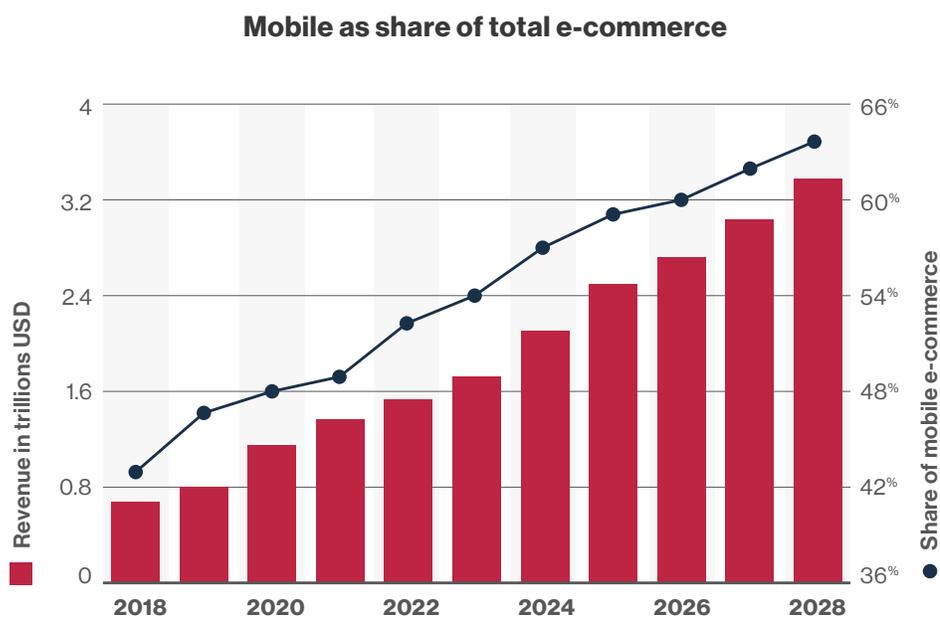
Speed and customer experience helps retailers attract and convert more consumers. It is the foundation to drive a **higher lifetime value (LTV)** and create unique experiences that resonate with shoppers and differentiate your brand.

Let's take a look.

Higher Conversions in a Mobile-Centric Retail World

While PWA works equally well in mobile and desktop environments, it is particularly helpful in **mobile commerce**, where small screens and “fat fingers” can put a damper on conversions. Until recently, most consumers preferred to research products via their mobile devices but convert on their desktops. That’s changing however in most retail sectors (but certainly not all).

Today, mobile commerce is quickly becoming the consumer’s preferred channel, and will account for 72.9% of all ecommerce sales in 2021. The consumer is clearly sending retailers a message: make it easy for us to shop with you from my mobile device and you will earn my business.



Mobile E-Commerce is up and Poised for Further Growth

Estimated mobile e-commerce sales worldwide

Source: eMarketer

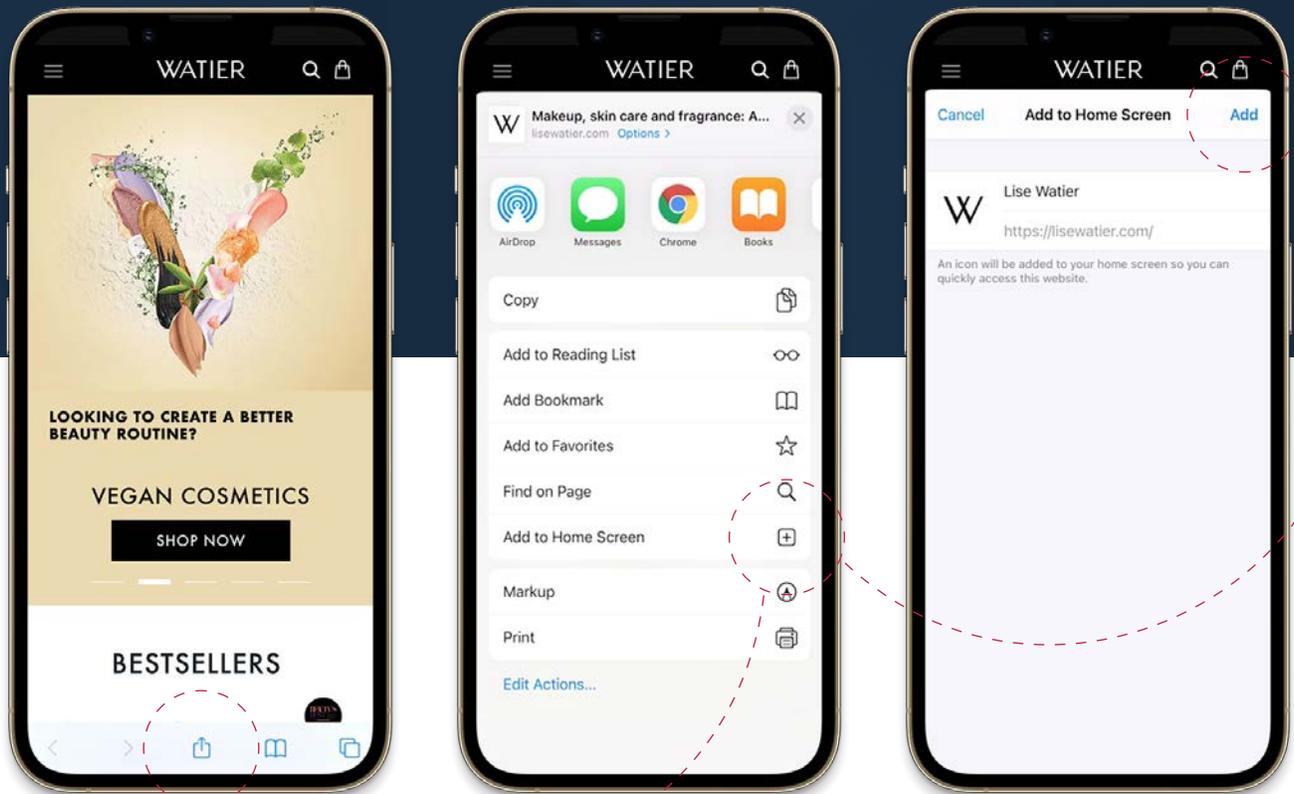
It's never been more important for retailers to eliminate barriers to conversion, and PWA does that in important ways, such as eliminating friction, speeding up mobile experiences, and delivering more relevant content.



The **impact of PWA on conversions** is real and impressive;

- Chicago's Best Western River North Hotel reported a 300% revenue bump and 500% boost in room nights after introducing their PWA site.
- Pinterest saw a 40% rise in the amount of time spent on their website, 44% revenue growth, and a 60% increase in core engagements.
- Vue Storefront reported numerous benefits following the implementation of its , including a 79% spike in revenue resulting from more organic traffic, 77% increase in conversion rate, and 57% reduction in the bounce rate.

[Source](#)



PWA Drive Higher Lifetime Values

There are several ways that PWA drives **higher LTV**, beginning with the add to home screen feature, which installs your website to the user's desktop or mobile device launcher. If access to your website is right there on their home screens, shoppers will visit it more often.

PWA will also make your site feel more like a native app, which, in turn, makes it easier and faster for the shopper to return to it frequently

without the bother of navigating a bunch of tabs, signing in, and so on.

PWA, like native apps, allows you to send push notifications, which you can deploy to re-engage visitors to your site. Additionally, you can push order status, tracking and updates, as well as promotional materials, to lure shoppers back to your site.



Create Experiences that Resonate with Customers

Until the advent of PWA and headless commerce, retailers had little flexibility in terms of creating unique customer experiences. This heavy burden stymied the retailer's ability to test new sales and loyalty tactics, as well as to create nuanced customer experiences.

Consumers want to know the origin story behind a brand and its products, and how the brand's values mesh with their own. But infusing the consumer journey with fresh and relevant content is difficult in the traditional ecommerce environment. Images, text and videos contained in a brand's **content management system (CMS)** are uploaded to the ecommerce platform, and then fed to the presentation layer.

In contrast, headless commerce, combined with PWA, lets you create highly personalized experiences quickly and more cost effectively. For instance, by connecting your frontend presentation layer directly to your CMS, you can easily customize what the end user sees, and engage in a deeper level of storytelling.

“ Nobody has time for bad user experiences, your customers and collaborators included. ”

- Ed Krol

«*Whole Internet User's Guide and Catalog*»



Delivery of Friction-Free Experiences

Consumers hate friction, and stay away from sites that make it difficult to complete a task at hand, whether that's discovering a new product, comparing options, or purchasing. Things that cause friction: clunky or confusing navigation and unnecessary barriers to conversion.

According to Google, "PWAs eliminate friction by using the web to deliver app-level experiences. There's no need for consumers to find apps in the app store and install them—they can just navigate to the site on any browser, including Chrome and Safari. PWA techniques focus on reliably loading faster (even working offline) and using less data."

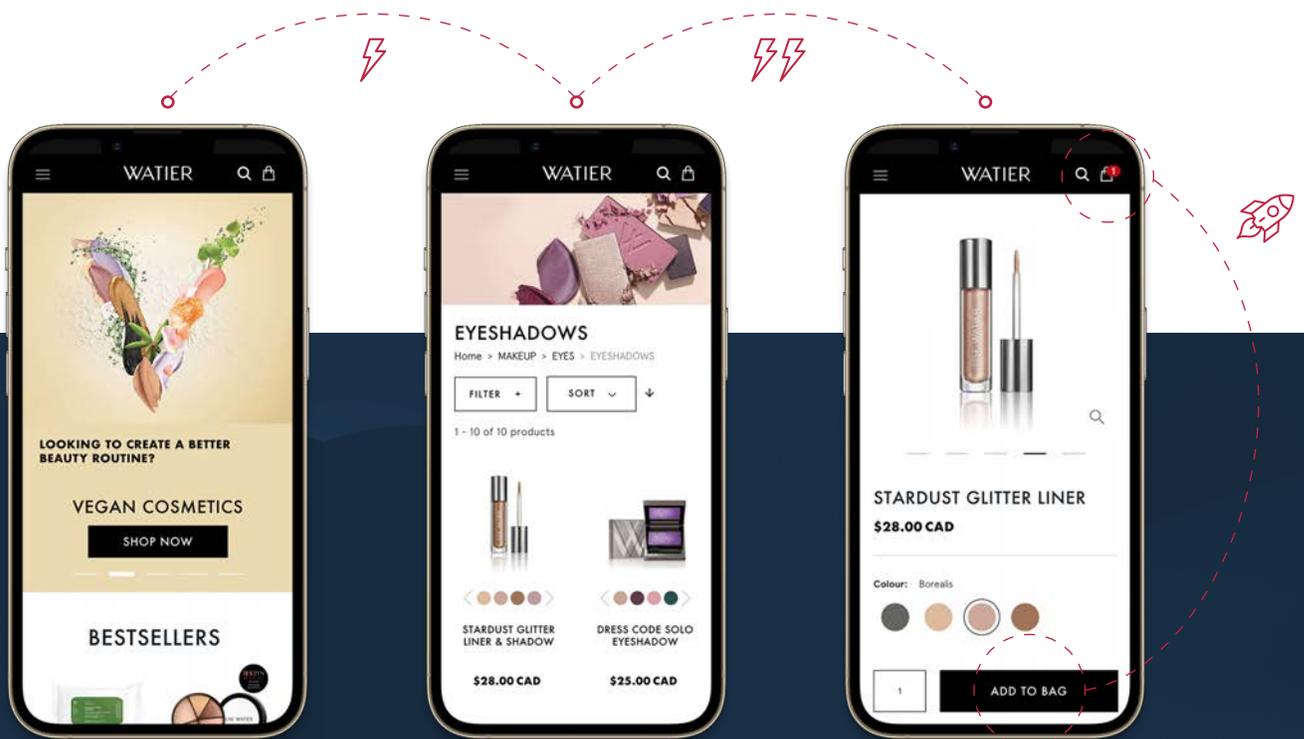
Speed up Load Times

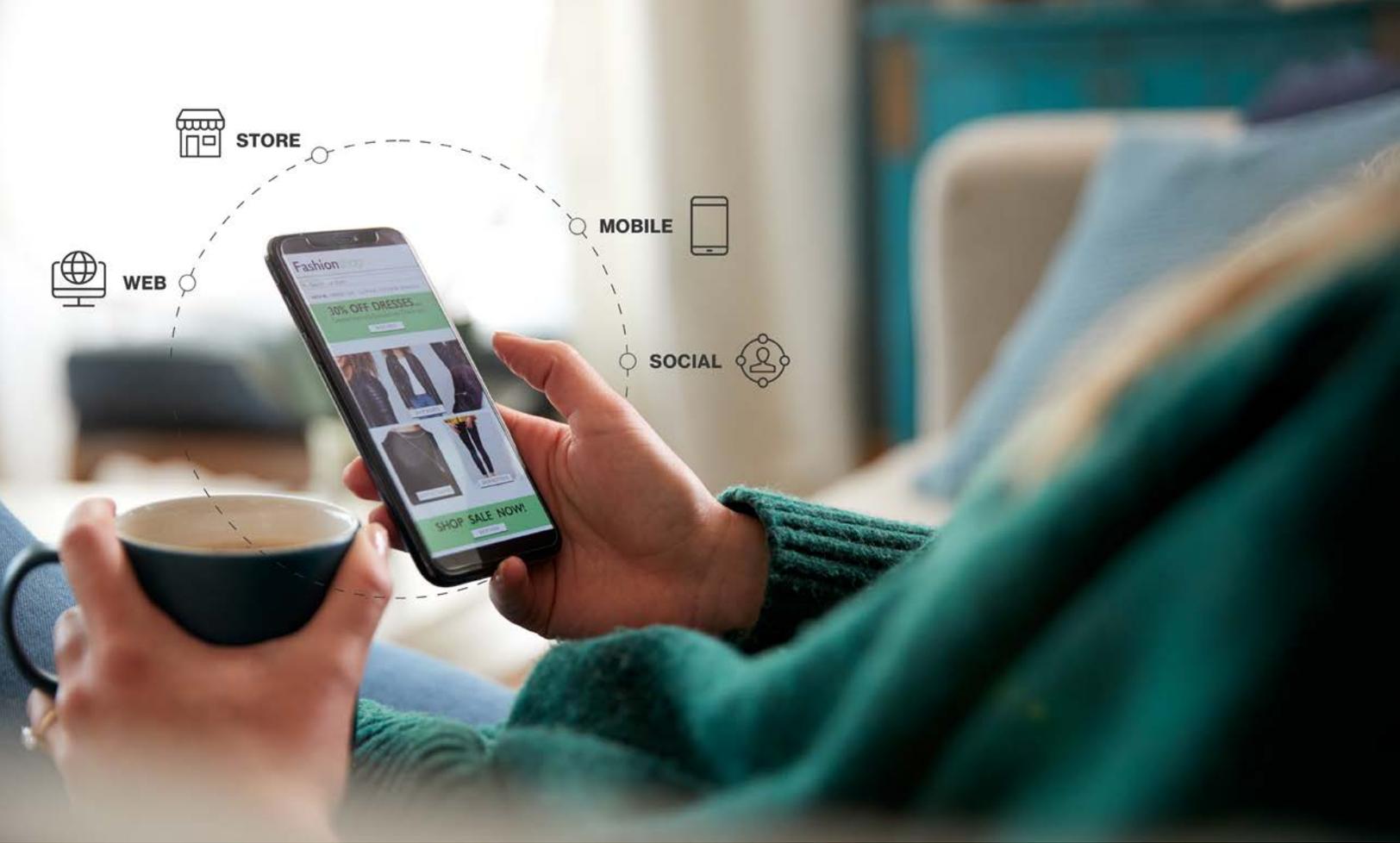
According to Google, slow page load times are the kiss of death. More than half of all users will abandon a mobile site if it takes more than three seconds to load, and every one-second delay can lower your conversion rate by as much as 20%.

Conversely, faster load times have a direct impact on conversion (according to Google, a 0.1-second improvement in mobile site speed will increase conversion by 8.4% for retailers,

and 10.1% for travel sites). Moreover, when pages load quickly shoppers are more willing to click on additional pages, which translates into more products viewed and upsell opportunities. Obviously, this can have a **positive monetary impact** on your business.

Users also benefit from a better, more seamless browsing experience, which may make them more willing to return to your site more frequently.





Truly Omnichannel Brand Experiences

Consumers expect a **unified customer experience** as they travel channels. If they expressed certain preferences when they engaged with your brand via their mobile devices, they expect to see those same preferences reflected when they visit your website via a work computer.

As mentioned early, PWA is “build once/deploy everywhere.” Your PWA site will work flawlessly in every mobile and desktop environment, as

well as in-store kiosks, delivering a truly omnichannel experience. What’s more, the shopper’s product, content and brand preferences, payment options and shipping information will be available on every device, ensuring a seamless experience.

Now let’s look at what it takes to create a PWA site.

Requirements for a Successful PWA Implementation

PWA allows retailers to create **bespoke digital experiences** for your customers, but to succeed you'll need to meet certain requirements.

Keen understanding of customer expectations

- Define your customers' expectations when they engage with your brand.
- E.g. If customers are making a complex purchase, do they expect live help? Access to a product configurator? Do they want robust search features?

Segment customer based on interests

- PWA allows retailers to cater the CX to the shopper's interests based on decision paths, but to do that, you need to define those interests and create segments.
- E.g. A company may have both B2B and B2C customers. The former may purchase a different set of products, or purchase in higher volumes and receive a volume discount. PWA makes it very easy to create multiple paths to support different segments, along with multiple product listing pages and product details pages that cater to each.

A well-thought out architecture that's aligned with your digital roadmap

- PWA is able to connect to any internal tool via an API. That tool can then be incorporated into the user's ecommerce experience, even if it has nothing to do with your ecommerce platform.
- Generally speaking, it's easier to connect multiple technologies using PWA, enabling you to leverage all of your internal tools and systems that will feed or be fed by your PWA site (advanced search technology, personalizations engine, CDP etc).

Usable product information and PXM road map

- Product information can be a sticking point in all web projects. There are three types of product information: basic product information typically stored in the ERP, usability information (use in X setting or best in Y conditions), and inspirational information (what you can expect when using this product). All three types are used at various points throughout the customer journey. Build a product information experience (PXM) road map!

The right partner for the job

- The right partner is critical to the success of your PWA project.
- Your partner should be realistic about the implications of PWA on your website performance and customer experience.
- Work with a company that has experience in all aspects of building a PWA, including helping you to understand your customer expectations, align your architecture to a digital road map, and build a PXM road map.

4 Reasons Why You Should Invest in PWA

1 Scalable and Sustainable

PWA is inherently scalable future-proof and sustainable. One PWA site can support all environments, allowing you to scale the site to meet all customers, regardless of how they choose to interact with your brand.

2 Flexible & Able to Support Personalized Experiences

PWA allows you to meet the consumer's demand for custom experiences and flexible user interfaces. Because PWA can connect to any system in your CX stack, you have maximum flexibility in creating experiences based on customer segments and interests.

3 Flexible & Scalable Maintenance

PWA delivers app-like experiences without any of the maintenance headaches. When you upgrade or maintain your PWA site it is rolled out automatically to all users in real time. No more re-submitting apps to the app store, and requesting users to install the latest version.

4 An Abundance of Quality Developers & Technologies Available

Finding talent to enhance your site is always a key concern. Both React.js and JS[f][g][h] attract a lot of developers who want to work with technologies, ensuring there will be an abundance of resources you can tap into. In fact, according to the [2021 Stack Overflow Developer Survey](#), React.js is the most popular web development framework among developers.





Facts & Recap

- Progressive Web App is a build-once/deploy everywhere approach to building websites that offer brands and users the best of all worlds.
- Speed and efficiency = More conversions
- PWA delivers an app-like experience without the bother of building a native app and submitting it to an app store. Not subject to Apple's App Track Transparency (ATT) as it is a website, not an app (all privacy regulations still apply).
- PWA lets retailers create highly custom experiences by linking the customer-facing elements to any system in their CX tech stack, no heavy lifting required.
- PWA enables retailers to meet the consumer's demand for a seamless, unified customer journey across devices and channels.
- There are four key reasons why all retailers should invest in PWA: it's highly scalable and sustainable, it's flexibility supports a high degree of personalization, maintenance is streamlined, and its popularity means that there will always be skilled developers available.

Let's talk!

O2 Commerce is a full-service agency specialized in the development and performance of integrated, scalable and innovative ecommerce solutions for B2B and B2C.

As an early adopter of PWA development in the ecommerce ecosystem, O2 Commerce works hand in hand with your team, to develop an evolving game plan, taking into account both the strategic vision and the technological development necessary for your PWA site.



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