



# The 5 criteria that will make or break your AR commerce success

A step-by-step guide for choosing  
the right 3D & AR partner

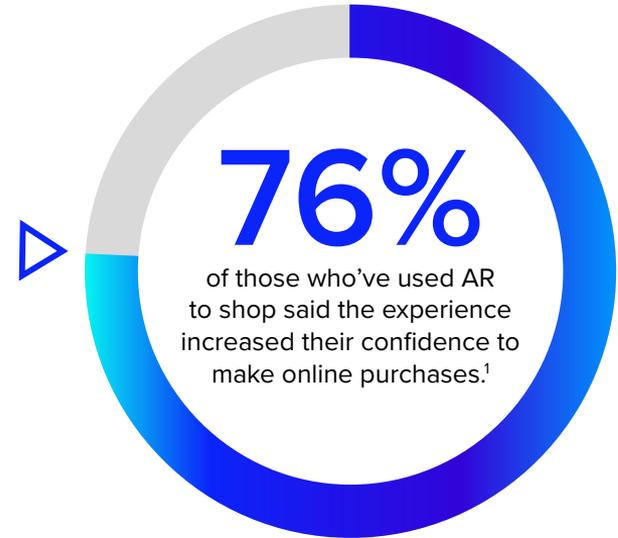
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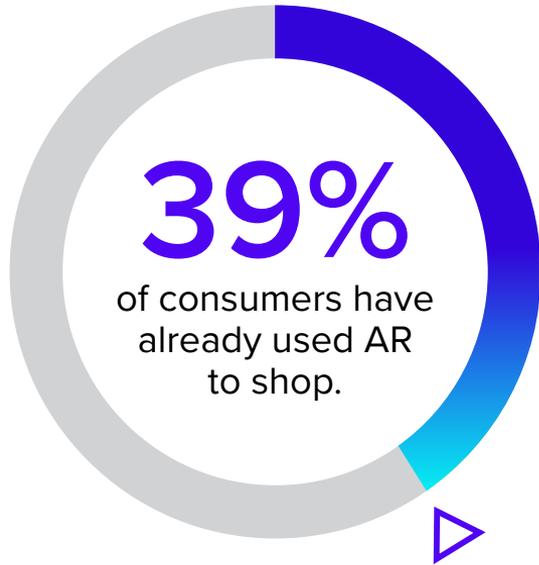
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The center of retail has shifted and more shoppers than ever are turning to the Web to buy everything from groceries to galoshes – and all indications point to these new behaviors and patterns becoming permanent, thanks to the convenience, costs savings, and variety of products to be found online.

As consumers flock to the digital realm, 3D & augmented reality (AR) shopping experiences are more popular than ever, and for good reason. Using immersive technologies, shoppers can place photorealistic virtual products at accurate size and scale, in real-life context, addressing key considerations such as fit, size, color, and style. A Vertebrae survey found that 76% of those who've used AR to shop said the experience increased their confidence to make online purchases.<sup>1</sup>





**Our study found that 39% of consumers have already used AR to shop. Technology researcher Forrester predicts that nearly half of U.S. online consumers will have used AR or virtual reality by year's end.**

As a result of this upswing in interest from both consumers and retailers, the vendor landscape in 3D & AR is growing more crowded. But not all offerings are created equally. To ensure their 3D & AR initiatives have the best chance of engaging shoppers, driving sales, and earning ROI, retailers need a robust solution — not a one-off feature.

**Vertebrae developed this guide with 5 criteria in mind to help retailers accurately and thoroughly evaluate potential vendors for a successful 3D & AR implementation:**



## Thought leadership:

As the Internet's biggest names, from Google to Snapchat, continue to evolve their immersive initiatives, it's crucial for retailers to partner with vendors that are cognizant of upcoming opportunities, if not directly involved in piloting them through partnerships and client beta tests. Standards are now emerging that will ensure consistent experiences across the Web, and solutions should be able to meet or exceed new industry-wide requirements and specifications as they're set.



## Launch momentum:

The pressure to prove return on investment (ROI) starts building the minute vendor contracts are signed, and savvy 3D & AR vendors will have the internal know-how and capacity, and the external connections, to speed clients through the potentially resource-intensive process of creating immersive experiences, whether from scratch or using existing assets. Automation of key developmental processes can compress timeframes from weeks into hours, helping retailers begin earning back their investment sooner.



## High-fidelity everywhere:

Vendors should have both the 3D & AR know-how and the eCommerce-focused experience to produce quality experiences that integrate with online selling wherever it occurs. Assets should be designed for

universal portability, while at the same time maintaining high fidelity to the physical objects being depicted to ensure accuracy of size, scale, and appearance. Shoddy immersive experiences can be off-putting to shoppers, and the lack of available content are the top barriers to wider AR adoption.<sup>2</sup> Consumers' expectations will only rise as more high-quality experiences become available.



## Mobile speed:

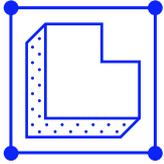
Even as vendors should obsess about quality, they must also give primary importance to latency and asset download speeds. As experiences are designed first and foremost for smartphones, 3D & AR are subject to consumers' stringent expectations for mobile speed: consumers are famously apt to abandon mobile sites that don't load after 3 seconds.<sup>3</sup>



## Commerce connections:

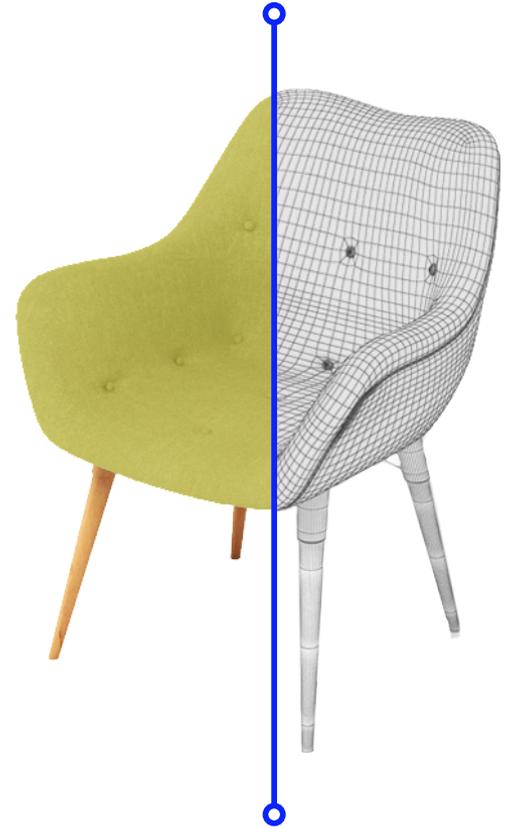
It may seem obvious, but industry-specific experience with online selling is critical to choosing a vendor that will understand the need for accountability when it comes to driving results. Technology vendors should have experience with commerce-specific priorities such as payment integrations or store kiosk experiences.

Even as 5G becomes more widely available across the U.S., retailers must offer experiences that are streamlined and seamless to use.



# 3D asset creation

3D goes beyond the plane of a static image to show the product in its entirety even when viewed on a flat, two-dimensional display (such as smartphones and computer screens). The process of 3D asset creation includes several variables, and the right choice for one product category may not apply to another, depending on the inherent physical characteristics of each. Options that savvy vendors can use to help retailers navigate 3D asset creation include:



## Convert, or start from scratch

A growing number of retailers have existing assets that can kickstart 3D asset creation – whether in the form of CAD product design files or previously-developed 3D renderings. But those files must reach baseline quality thresholds if they're to lay a strong foundation for a robust immersive commerce program.

Vendors that take a comprehensive approach can:



### **VET EXISTING ASSETS AND OUTLINE NEEDS ACCURATELY**

Frank analysis of incoming asset quality should be part of the scoping process. In addition, vendors should be able to articulate among different 3D options and explain what original assets are needed to pass muster for each. For example, even though “3D” and “360-degree view” are used interchangeably, 360-degree spin images are not the same. They are lighter-weight and omit views of product undersides and tops that are must-haves for full 3D & AR capabilities.



### **PROVIDE AUTOMATED TOOLS FOR RAPID CONVERSION AT SCALE**

A full catalog's worth of 3D-ready assets shouldn't take months to convert. When existing high-quality assets are available, vendors should offer conversion tools that can automate processing, speeding time to launch, and reducing or eliminating the need for dedicated staff.



### **OFFER CREATION SERVICES, OR OUTSOURCE TO PROVEN EXPERTS**

Retailers without existing assets shouldn't have to go it alone when it comes to finding the talent they need to get started. Vendors with deep 3D & AR expertise have experienced 3D artists on staff to handle 3D file creation, and can also offer retailers access to partner networks of freelance and consultant creators who can assist with asset development.

## Capturing 3D models

If retailers opt to build 3D assets from scratch, the first step is to collect data about a physical object. When selecting which method to use, the speed of the process is one consideration; quality of the result is another, with some types of products better suited to particular capture methods.



### PHOTOGRAMMETRY USES A COLLECTION OF PHOTOS TO GATHER DATA

Those photos can be taken by a camera array on a spherical rig that surrounds the object, or by using a single camera to shoot from multiple angles. While capture quality is high and proportions are depicted accurately, some product types aren't a good fit for photogrammetry, especially those with reflective or semi-transparent surfaces.



### LASER SCANNING

High-quality lasers can better capture object details, and processing of the scans happens in real-time so that technicians can immediately spot any errors or missing information. Scanning equipment is evolving quickly, and investments can quickly become obsolete.



### 3D MODELING

Suitable for all product types, 3D models can be adapted and optimized as the need arises. Creation is manual, not automated, which is slower than the other two methods and involves human skill, potentially introducing inaccuracy. But, even if retailers use photogrammetry or laser scanning for initial 3D renderings, 3D modeling could be used as well.

## Output and quality assurance

With foundational 3D assets in hand, the next step is for retailers to define the parameters of their immersive commerce offerings and begin building a library of files. AR & 3D shopping experiences are increasingly accessible directly via the Web. This is a benefit to retailers because no specialized application download is required – but also poses a challenge because the presentation and viewing experience is now highly variable depending on the device and browser type being used. In addition, a growing list of social, search, content, and marketplace destinations showcase 3D & AR – which means retailers must be able to generate assets that conform to a variety of requirements and are accessible using an array of viewers specific to individual platforms or devices.

Savvy vendors should not only offer tools that swiftly copy and convert 3D originals into Web- and app-ready immersive files; they should offer testing necessary to ensure that retailers know in advance what shoppers will see and how they can interact with the experiences.

**To do so, vendors should offer:**



### BATCH FILE GENERATION

Sellers should be able to process assets for multiple products at once using a single set of specifications, ensuring consistent output and a predictable experience for shoppers. An automated conversion process helps reduce production time and minimize investment in manual labor for processing files.



### STANDARD OR CUSTOM SPECIFICATIONS

Vendors should be able to provide guidance on emerging industry standards such as those being developed by the Khronos 3D Commerce working group,<sup>4</sup> as well as any best practices specific to individual product categories, such as footwear or furniture.



### BUILT-IN QUALITY ASSURANCE TESTING

Once generated, 3D & AR assets should be subject to rigorous testing to ensure that the experience loads correctly and smoothly on the appropriate viewers, poly count and shape, and overall file size should be vetted to ensure load times are kept to a minimum. Checking the size, position, and color fidelity of the assets ensures that the items are represented accurately.



### VIEWING SIMULATORS

As part of the QA process, vendors should provide tools that enable retailers to view assets through the eyes of their shoppers. Testing environments can provide valuable feedback about how immersive assets launch and operate, how well they interoperate with other site functions, and how they render on screens large and small.

## Commerce-centric UX

Lightweight, high-fidelity 3D & AR assets can only be effective if they're placed in the right context to drive engagement and sales. Early experiments were buried in retailer apps, which tend to reach a small sub-set of brand audiences – earning 3D & AR a reputation for being nice-looking but not hard-working. Now, however, retailers can use immersive assets as freely as traditional 2D images, which means their potential as a sales driver is significant.

To unlock that potential, retailers need vendors that understand eCommerce best practices and the complexities of existing online sales platforms.

To optimize the immersive experience for commerce, vendors should be able to lead the way when it comes to:

**eCommerce site accessibility. Assets should be available for Web viewing on small and large screens with smooth transitions to and from immersive experiences.**



### CODE INSERTION

Integrating assets into eCommerce templates shouldn't require a complete rewrite of page code.



### DEVICE-APPROPRIATE EXPERIENCES

Each immersive asset should be responsive, displaying at the right size for mobile devices as well as desktop computers. It should offer full capabilities regardless of how shoppers navigate through the 3D & AR experience so they don't lose their stride along the path to purchase.

## Design best practices

Usability studies prove that design isn't just about good looks; a combination of clean, intuitive presentation and speedy load times help build trust for website users. That trust is critical to convincing shoppers to buy online – and it's even more important when encouraging them to experiment with AR shopping.

Retailers should ensure 3D & AR experiences:



### FOLLOW BEST PRACTICES

Vendors should be knowledgeable about placement and labeling of assets, which can affect engagement, as can timing of pop-up text prompts. Buttons, icons, and calls-to-action (CTAs) can all be tailored and may vary according to product type.



### LOAD QUICKLY

Immersive integration should be structured for the fastest possible load time. On the product detail page (PDP), highlighting 3D & AR experiences with lightweight icons available immediately, can ensure that pages aren't bogged down waiting for immersive features.



### OFFER HELP ALONG THE WAY

Knowledgeable vendors can offer content to guide shoppers through what may well be their first interactions with immersive shopping content.

## Visibility on multiple paths to purchase

While the PDP is the most prominent location for 3D & AR assets, it shouldn't be the only option available. Vendors should offer best practices to guide retailers where to place immersive links at multiple points along the path to purchase. They should also integrate seamlessly with add-to-cart and payment options.

Among the key connecting points:



### FEATURED CONTENT ON HOME AND CATEGORY PAGES

Retailers should be able to highlight 3D & AR offerings in promotional positions.



### SEARCH RESULTS AND INDEX PAGES

Icons flagging availability of 3D & AR content should be visible at a glance.



### PRODUCT RECOMMENDATIONS CAROUSELS, CROSS-SELLS, AND UPSELLS

3D & AR links should integrate with personalization tools that power arrays of suggested products.



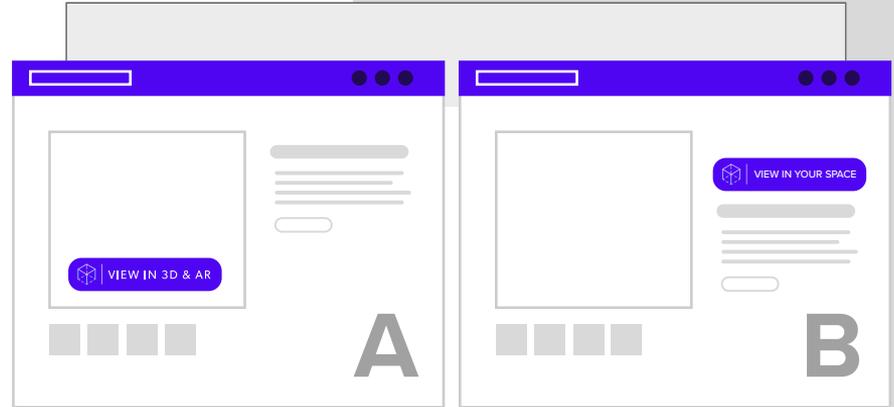
### CTAS, INCLUDING PAYMENT

Guideposts leading shoppers along the path to purchasing shouldn't disappear once they launch 3D & AR. Clear CTAs – from one-click purchase to setting in-store appointments – should be part of the immersive experience.



## User Experience A/B testing

Implementing industry-wide best practices for 3D & AR is helpful, but even more helpful is providing insight into whether those standards apply to retailers' specific situations and audiences. Vendors with built-in A/B testing capabilities offer merchants an easy way to track the impact of changes in the presentation of immersive features throughout the eCommerce site, enabling continual iteration and improvement. Savvy vendors also help optimize CTAs, user flows, and educational instructions to ensure the experience happens seamlessly and pushes users through the consideration cycle faster.



**FOR MORE INFORMATION:**

### **Web-based 3D & AR commerce**

See the following Vertebrae resources for more details on eCommerce website deployment:

[Bringing innovation to the aging product page](#)

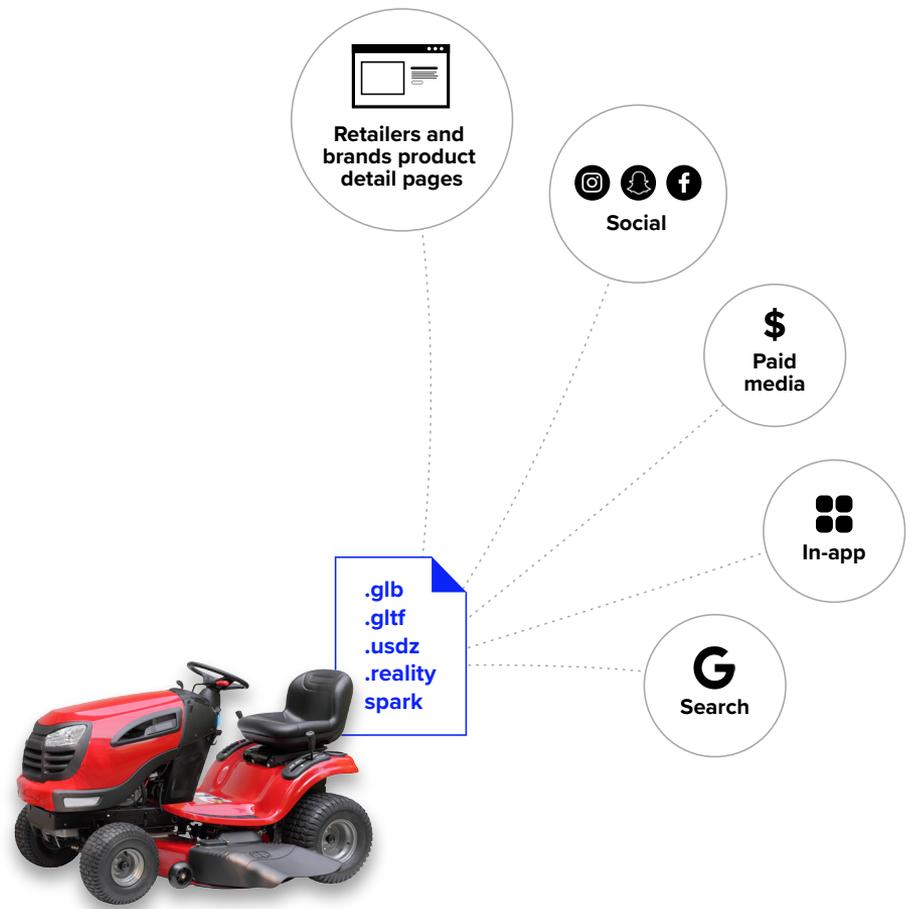
[A/B testing: Best practices for 3D & AR](#)



# Syndication capabilities

Perfecting deployment of 3D & AR capabilities on retailer eCommerce sites is just the beginning. To quickly grow ROI, retailers should also be poised to add their immersive assets to brand outposts on a growing array of platforms that are launching 3D & AR initiatives. In this fast-changing environment, retailers' agility is crucial when it comes to creating new 3D & AR experiences and connecting them to existing offerings.

Vendors with the right mix of experience and technology can offer:





## Access to new opportunities

Leading vendors should have existing relationships with major platforms, and the inside knowledge to guide retailers to the right pilot opportunities for their brands. To do so, vendors should thoroughly understand retailers' product categories and audiences, as well as have insights into online commerce and Internet trends.

## Rapid development capabilities for new formats

Using a retailer's high-quality 3D assets as a foundation, vendors should be able to generate new immersive assets that conform to platform file specifications, as well as any metadata and feed requirements.

### Potential syndication opportunities include:



**SOCIAL MEDIA**



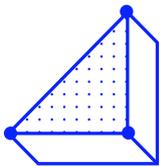
**SEARCH**



**DIGITAL ADVERTISING**



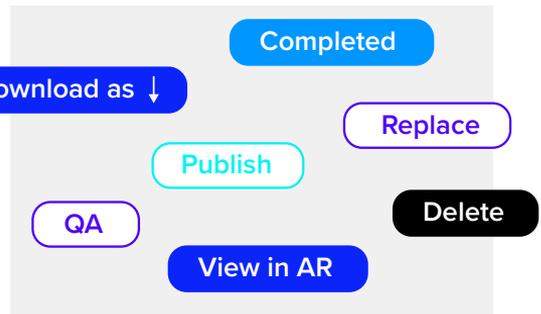
**MARKETPLACES**



# Asset management

Given the growing number of potential outlets for immersive commerce experiences and the differing file requirements for each, retailers need a robust back-end system for storage, organization, and status tracking of individual assets across all the touchpoints where they offer 3D & AR.

Among the functions an end-to-end administration console should offer:



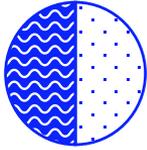
## 3D IMPORT MANAGEMENT AND STATUS INDICATORS

For those importing assets to kickstart their immersive initiatives, status updates for file conversion and QA status let users know which files are ready and which need a second work.



## BATCH OR SINGLE-ASSET UPDATE AND PUBLISHING CAPABILITIES

Retailers should have full flexibility when it comes to updating, publishing, or unpublishing 3D & AR files, and should have access to version controls to roll back changes if needed, and provide uniquely engaging experiences.



# Accountability

Even as adoption of immersive commerce grows, retailers are expected to justify new commerce initiatives like never before. Thanks to the big-data processing capabilities of modern analytics systems and the growing role of artificial intelligence in deriving behavioral insights at scale, expectations are high that the impact of new technologies will be immediately measurable from launch. New experiences can doubly benefit companies by not only boosting sales, but yielding new insights into how shoppers connect with the right products.

It's essential that 3D & AR vendors provide complete integration with existing website analytics, social media tracking platforms, and other reporting tools; they should also offer their own reporting techniques and even offer fresh insights based on the all-new ways consumers interact with virtual products through immersive experiences.

Among the reporting features vendors should offer:



## INTEGRATION WITH STANDARD ANALYTICS TRACKING PACKAGES

Retailers should be able to track interactions with 3D & AR assets using traditional eCommerce metrics such as engagement, conversion, and revenue per visit, and view performance as part of the sitewide path-to-purchase journey.



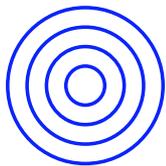
## ENHANCED OFF-SITE INSIGHTS

As social networks, search engines, and digital advertising media showcase immersive assets, retailers can gain new visibility into how consumers make their way to online products, heightening the accuracy of revenue attribution models.



## NEW GAZE AND INTERACTION METRICS

As shoppers flip, spin, configure, and zoom in on 3D models, and select products for placement in real-life context via AR, retailers can gain all-new insights into which product details and SKUs have the most traction. Such data can go on to inform future product offerings, as well as suggest ideal categories or items to spotlight through promotions.



## CONCLUSION:

# The right foundation for success

As 3D & AR shopping grows, retailers who launch immersive initiatives have a wider range of options than ever when it comes to technology partners. By seeking proof points around thought leadership, launch acceleration, asset quality and portability, and mobile site speed awareness, retailers can pick vendors who can not only provide immediate support, but grow as 3D & AR opportunities expand.





# About Vertebrae

3D & AR Commerce is here to stay because it's an effective utility for anyone selling products online. The end-to-end Vertebrae platform makes it easy for retailers and brands to succeed with 3D & AR across a complex and ever-changing ecosystem of formats and distribution channels.

Vertebrae offers simple solutions for small brands, and a full suite of tools for large enterprise retailers and platforms - including 3D workflow tools for internal and external teams, 3D creation, QA, auto-decimation & conversion, asset management, best-in-class 3D & AR Viewers, 3D API with syndication, and reporting. Customers choose Vertebrae because of its superior 3D & AR Viewer technology, robust 3D product content library, management tools, connections to key channels like Facebook, Instagram, Google, Snapchat - and full service support for everything 3D & AR.

When we started Vertebrae in 2015, we were driven by a passion for immersive media and a drive to make it more accessible to everyone. We believe that augmented reality (AR) is a truly transformative way to showcase digital products, leading to increased consumer confidence and trust. We built our Axis platform to make it easy for our partners to enable this powerful medium quickly and efficiently everywhere their customers shop. Today, as the leading technology platform for 3D & AR commerce our work has only just begun. As AR technology continues to evolve, we're busy building infrastructure to ensure ubiquitous access across distribution points, while establishing data-driven best practices for immersive shopper experiences across categories.

# Resources:

1. eCommerce evolves due to consumer demands: Immersive experiences with 3D & AR
2. <https://www.emarketer.com/chart/218133/primary-obstacle-mass-adoption-of-augmented-vs-virtual-reality-technology-according-us-augmentedvirtual-reality-professionals-jan-2018-of-respondents>
3. <https://www.thinkwithgoogle.com/intl/en-154/marketing-strategies/app-and-mobile/how-meet-increasing-mobile-speed-expectations/>
4. <https://www.khronos.org/3dcommerce/>
5. <https://sparkar.facebook.com/blog/getting-started-ar-commerce/>



Ready to get  
started with AR  
& 3D immersive  
experiences?

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Let's talk.