AUGMENTED REALITY IN SOCIAL MEDIA

It's Growing Up, and the Pandemic Is Playing a Role

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AUGMENTED REALITY IN SOCIAL MEDIA: IT'S GROWING UP, AND THE PANDEMIC IS PLAYING A ROLE

Augmented reality (AR) is becoming more common in social media. After Snapchat pioneered it, Facebook, Instagram, Pinterest and TikTok have launched their own lenses, filters and effects. In the process, AR is showing its value not only for branding and entertainment, but also for commerce.

How is the pandemic affecting marketers' interest in using AR in social media?

The shutdown of many retail stores spurred some marketers to invest more in AR as a way to offer virtual try-on and other experiences typically only available in-store. Several social media properties now enable try-on within their apps.

How many people in the US will use AR on social networks in 2020?

We expect that 43.7 million people will use social network AR at least once per month in 2020, representing 20.8% of social network users. Snapchat will be the predominant platform.

What new AR features are available on the social platforms?

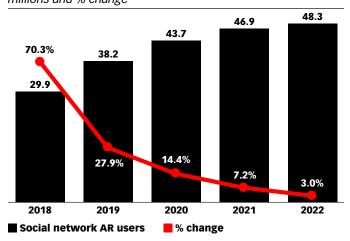
Snapchat introduced several updates in June, including machine-learning models and Local Lenses. Facebook is rolling out AR advertising, and Instagram is adding try-on features. While TikTok and Pinterest are very early in their AR development, they should not be ruled out as eventual competitors.

What are the main marketing use cases for social AR beyond entertainment?

The most prominent examples are to virtually try on makeup, sunglasses and shoes. It's also being used for cause-related awareness and location-based overlays that augment a user's real-world environment, though the pandemic has slowed progress on the latter front.

WHAT'S IN THIS REPORT? This report explores how consumers engage with AR on social platforms and why the marketing use cases are expanding.

US Social Network AR Users, 2018-2022 millions and % change



Note: individuals of any age who experience AR content within a social network at least once per month via any device Source: eMarketer, March 2020

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KEY STAT: There will be close to 50 million social network AR users in the US this year, according to our March 2020 forecast.

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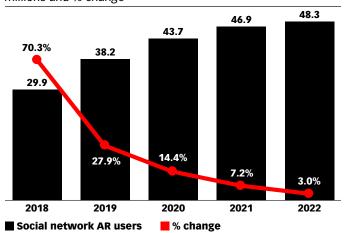
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CONSUMER USAGE OF AUGMENTED REALITY IS RISING

A small but growing number of people in the US currently use social AR. While gaming and entertainment are the most common use cases, more consumers are expressing interest in shopping-related AR activities.

According to our March 2020 forecast, there will be 43.7 million US social network AR users this year, representing 13.2% of the US population, 15.1% of internet users and 20.8% of social network users. This forecast was completed pre-pandemic and doesn't reflect any related usage changes. (See below for more information about the pandemic's effects on social AR usage.)

US Social Network AR Users, 2018-2022 millions and % change



Note: individuals of any age who experience AR content within a social network at least once per month via any device Source: eMarketer, March 2020

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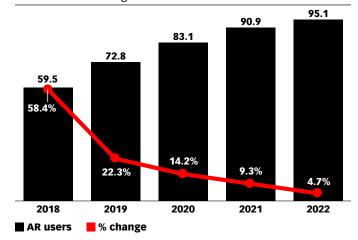
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Consumers can experience AR in many ways, including in apps, via headsets or glasses and in retail locations. But social media is one of the most common venues. According to our forecast, more than half (52.6%) of AR users in the US will experience social AR this year via things like Snapchat Lenses, Facebook Camera Effects, Instagram Filters, Pinterest Try on, AR-enabled social network advertising and other AR features.

Overall, 83.1 million people in the US will use AR on any device (including smartphones, tablets, desktops/laptops, head-up displays, glasses and headsets) at least once per month. By 2022, this number will rise to 95.1 million.

US AR Users, 2018-2022

millions and % change



Note: individuals of any age who experience AR content at least once per month via any device

Source: eMarketer, March 2020

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Definitions: AR and Social Network AR

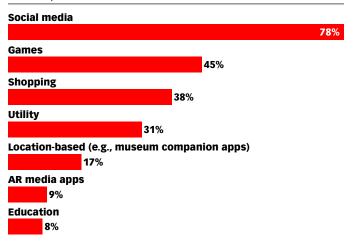
AR: Enables a user to interact with virtual objects and other types of digital information that overlay real-world views. AR experiences can be app-, web- or headset-/glasses-based or available through head-up displays and other specialized hardware. Examples of AR include overlays on videos and photos (e.g., Snapchat Lenses); games (e.g., Pokémon Go); shopping (e.g., Ikea Place app, Sephora Virtual Artist); navigation (e.g., via head-up displays); object interactions; 3D product demos and projections via headsets (e.g., enterprise applications).

Social Network AR: Enables a user to interact with virtual objects and digital information that overlay real-world views within a social network. Examples of social network AR include filters of videos and photos (e.g., Snapchat Lenses, Instagram Filters); games (e.g., Snapchat's Snappables, Facebook Messenger video chat games); and digital avatars that overlay the real world (e.g., 3D Bitmojis).

Our estimate that 52.6% of US AR users will use social AR this year is lower than a finding by SuperData, a Nielsen company focusing on the gaming market. In its October 2019 study, 78% of US AR users ages 13 and older used social media apps to access AR in the past month, well ahead of the percentage using game, shopping, utility or location-based apps for AR. It's likely our figure is lower because we include users of any age, which would factor in children who are not typically social network users and are more likely to experience AR in games.

Types of Apps Used* to Access AR Among US AR Users, Oct 2019

% of respondents



Note: ages 13+ who used AR apps in the last three months; *in the past month

Source: SuperData, "Augmented Reality Enters the Mainstream," Nov 2019

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A study from research firm ARtillery Intelligence and consulting firm Thrive Analytics showed a smaller percentage using social AR than both SuperData and our own forecast. In the firms' research published in June 2020, 40% of US AR users said they had experienced mobile social AR content. This study did not include teens and identified Snapchat Lenses as an example, potentially leaving other venues out of respondents' minds.

What Types of Mobile AR Content Have US AR Users Experienced?

% of respondents, 2018-2020

	2018	2019	2020
Games (Pokemon Go, NBA AR)	83%	82%	84%
Social (Snapchat Lenses)	36%	37%	40%
Visual search (using smartphone camera to identify items)	-	24%	37%
Furniture or car visualization (Ikea Place, BMW iVisualizer) 31%	25%	35%
Educational (Monster Park, Night Sky)	24%	24%	22%
Utilities (AR tape measure)	19%	15%	22%
Other	2%	2%	2%

Source: Artillery Intelligence and Thrive Analytics, "AR Usage & Consumer Attitudes, Wave III," June 9, 2020

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When asked about which types of AR experiences they were most interested in, 63% of respondents cited gaming, the top response. But that was down from a high of 75% in 2019. Meanwhile, interest in social AR has been growing, from 32% in 2018 to 39% in 2020.

What Types of Mobile AR Experiences Are of the Most Interest to US AR Users?

% of respondents, 2018-2020

	2018	2019	2020
Games (Pokemon Go, NBA AR)	72%	75%	63%
In-store retail assistance	33%	31%	43%
Educational (historical landmarks, museum tours)	40%	44%	40%
Social media (augmenting pictures and videos)	32%	36%	39%
City guides (menus, reviews, navigation)	39%	41%	38%
Visualizing large items in your home	38%	39%	38%
Visual search (using your camera to identify items)	-	29%	29%
In-home technical support	25%	25%	28%
Sports (live stats during events)	35%	33%	26%
Not interested in AR on my mobile device	3%	2%	4%

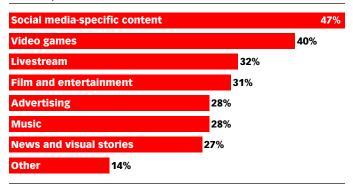
Source: Artillery Intelligence and Thrive Analytics, "AR Usage & Consumer Attitudes, Wave III," June 9, 2020

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AR usage growth is driving more AR creators to develop content for relevant platforms. This year, 47% of AR and virtual reality (VR) professionals are creating content for social media, according to February 2020 research by law firm Perkins Coie, the XR Association, which focuses on VR, AR and mixed reality (XR), and venture capital firm Boost VC. That's up from 31% in 2019.

What Types of AR/VR Content Are US AR/VR Professionals Creating?

% of respondents, Feb 2020



Note: respondents were 94% US-based Source: Perkins Coie, XR Association and Boost VC, "2020 Augmented and Virtual Reality Survey Report," March 30, 2020

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As AR becomes more widely available in social media, it's helping consumers become more familiar with the technology. Because social AR doesn't require users to download any new software, or wear glasses or other hardware, it's more easily accessed and experienced.

And playing with AR on a familiar device (the mobile phone) and in a familiar setting (social media) will help it gain more awareness and usage.

"By investing in AR on mobile, we can train the next generation of creators, businesses and consumers to become familiar with AR and understand its power by the time that future wearable devices become available," said Olivier Bouan, product manager for AR commerce at Facebook.

AR could use the help; outside of social media, the awareness, intent to purchase and ownership of AR devices like headsets or glasses has remained low in recent years. In CivicScience tracking studies performed between Q4 2018 and Q2 2020, awareness of AR among US adults stayed between 31% and 36%, while almost no respondents said they owned AR devices.

Awareness, Intent and Ownership of VR/AR Among US Adults, Q4 2018-Q2 2020

% of respondents

	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
AR							
—Awareness	33%	31%	33%	34%	32%	32%	36%
—Intent	5%	4%	5%	5%	5%	5%	5%
—Ownership	3%	3%	3%	3%	3%	3%	3%
VR							
—Awareness	72%	71%	71%	70%	68%	66%	68%
—Intent	8%	8%	8%	8%	8%	8%	8%
—Ownership	11%	10%	12%	9%	10%	9%	10%

Note: ages 18+

Source: CivicScience, "Trend Adoption Tracker," July 2, 2020

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THERE'S MORE AR ON MORE SOCIAL NETWORKS

On Snapchat, AR is a backbone for consumers and marketers. The app has trained its users to be familiar with AR (which it calls Lenses) and has sold AR ads for several years.

AR is less common on Facebook and Instagram, but both are slowly catching up. Pinterest and TikTok have also started ramping up their development efforts. All this combined activity is helping increase awareness and usage of AR among social media users and marketers.

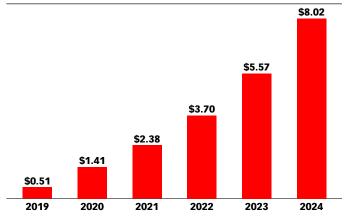
The growth of social AR is reflected in an ad spending forecast by ARtillery Intelligence and Thrive Analytics. Until Facebook started rolling out paid AR ads in December 2019, Snapchat was the only large player in the realm. Last year, marketers spent more than

\$509 million on mobile AR advertising worldwide, the two firms estimate, nearly all on Snapchat Lenses.

But mobile AR ad spending will increase 177% this year to \$1.41 billion, as Facebook AR advertising takes off and Snapchat increases its share. By 2024, AR ad spending is expected to surpass \$8 billion, with Facebook and Snapchat taking in the bulk of expenditures.

Mobile AR Advertising Revenues Worldwide, 2019-2024

billions



Source: ARtillery Intelligence and Thrive Analytics, "AR Usage & Consumer Attitudes, Wave III," June 9, 2020

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Here's a look at the status of AR on the main social platforms.

SNAPCHAT

Snapchat put social AR on the map, and it continues to be the main place consumers experience it. In its Q2 earnings, Snapchat said that 180 million users worldwide engaged with AR daily, amounting to three in four daily users.

Findings from SuperData's 2019 study also show the strength of AR on Snapchat relative to other social platforms. It found that more than half of Snapchat users said they used AR features on the app either "always" or "most of the time." On TikTok, Instagram and Facebook, AR usage was less frequent.

Snapchat is "the best when it comes to AR," said Matt Maher, founder of M7 Innovations, a technology consultancy focused on emerging media. "AR is inherent in the user experience. If you use Snap, you understand how AR works and how you can share it."

Recent advertising/marketing developments:

December 2019: Introduced McDonald's and The Coca-Cola Co. as the first marketers to use Snapchat Scan, a visual search and AR technology that lets users scan a logo or image with their phone to reveal additional AR content.

March 2020: Rolled out Lens Web Builder, a web-based way for marketers to create branded AR Lenses on Snapchat. It features a library of templates and 3D objects in the Snapchat Ads Manager that marketers can use to more easily create an AR experience.

June 2020: At its Partner Summit, Snap updated Lens Studio, its platform for developing AR experiences, with several new features:

- SnapML: Lets developers bring their own machine learning models into Lens Studio. For marketers, it means they have a ready-made list of partners to work with rather than create their own models. "We're opening up our doors to technology leaders to leverage our platform," said Carolina Arguelles Navas, global product marketing manager for AR at Snap.
- Local Lenses: Lenses that connect the physical and digital worlds using the Snap camera. With Local Lenses, friends can do things like play games together in AR while in the same location, Arguelles Navas said. "It's taking our mapping technology, which maps the world around you, and allows two people to enter the same experience and have a lot of fun together."
- **New features for Scan:** Building on visual search technology first released in 2019, Snap introduced additional Scan lenses with more utility, such as one that identifies plant types, another that recognizes dog breeds and a third that will rate the quality of a packaged food's nutrition. "That's an opportunity for brands to start owning the digital layer around their physical goods," she said. Snapchat's camera can not only identify a product or logo, but also provide content that appears when the user is in front of the product or an out-of-home (OOH) billboard.

July 2020: Introduced brand profiles, landing pages on Snapchat that include brand content, in-app purchasing (for brands that work with Shopify) and also serve as a home for all of a brand's Snapchat Lenses.

FACEBOOK AND INSTAGRAM

Facebook has been developing AR features for a few years, but they are not integral to the user experience on its social properties like they are on Snapchat.

Since the 2017 launch of Camera Effects (renamed Spark AR the following year), the rollout of AR has been slow. It's now fully available to anyone on Facebook. On Instagram, a closed beta test that began in 2018 was expanded to an open beta in 2019 that remains active as of August 2020, enabling anyone to develop an AR effect, which users can find in the effects tray in the Instagram camera.

On Messenger and Portal, only Facebook itself can publish AR effects, not third parties.

AR advertising is proceeding at a similarly slow pace. It was rolled out on the core Facebook app in December 2019, but it is not yet available on Instagram. And for now, Facebook's process to create AR ads isn't as easy as it could be, especially compared with Snapchat, which has built-in templates and other features that speed up the creation of Lenses.

On Facebook, a marketer must first develop the AR experience, then upload it to the Spark AR Hub, and from there, create a video ad featuring the AR experience in Facebook's Ads Manager. Currently, AR ads can only be used for four objectives: brand awareness, traffic, conversions or reach.

The slowness of the process sometimes leads companies to turn to Snapchat instead. "We've got someone on our team that knows how to build AR Lenses through Snapchat," said Shamsul Chowdhury, vice president of paid social at Jellyfish, a performance ad agency. "This person's able to hammer it out in a couple hours. On Facebook, it's a few days of work."

On the commerce front, Instagram's efforts to embed AR into the shopping experience show more promise. It has spent several years building out various shopping and checkout features, and incorporating AR into some of them makes a lot of sense. Instagram's relatively younger user base is also a plus compared with Facebook's: According to 2019 SuperData research, 46% of AR users are ages 13 to 24.

Recent advertising/marketing developments:

October 2019: Instagram began testing AR shopping in its Checkout feature with partners Warby Parker, Ray-Ban, MAC Cosmetics and Nars Cosmetics.

November 2019: Facebook expanded AR Target Tracking to Instagram. The technology allows developers to build AR effects that are linked to physical objects like logos or signs. The feature has been available on Facebook since 2018. Marketers can use the feature to build AR experiences linked to packaging, posters, outdoor boards and more.

December 2019: Facebook made AR ads available to all advertisers. Advertisers using Facebook's Spark AR—its technology for creating 3D models and AR effects across Facebook, Instagram, Messenger and Facebook Portal—can develop ads with AR features and distribute them across Facebook's apps with its ads manager.

February 2020: Facebook acquired Scape Technologies, a UK AR startup that does digital 3D mapping of the physical world. The goal is to create technology that can accurately locate someone within the world and deliver an AR experience tied to their location.

May 2020: Instagram added several features, including the ability to synchronize AR effects to music and add effects to previously taken photos and videos. The update also made it easier for accounts that create effects to see how users are employing them in their own Stories.

August 2020: Instagram launched Reels, a TikTok-like feature that lets users in more than 50 countries create and view 15-second multiclip videos. When creating a Reel, users have access to a wide range of video editing tools, including a full library of AR effects.

PINTFREST

With a focus on product discovery and a platform that's primed for shoppers, Pinterest is well-situated to be a strong destination for AR-related commerce. But so far, its offerings are limited to just two features: Pinterest Lens and Try on, the latter of which was just launched earlier this year.

Pinterest Lens is a visual search camera tool available since 2017. It powers Try on, which lets Pinterest users virtually try on products using the in-app camera.

Recent advertising/marketing developments:

September 2019: Launched improved Lens features, including the ability to save Lens photos and turn them into a Pinterest Pin, as well as the ability to focus on specific products or objects in fashion or home Pins and then see shoppable Pins that provide pricing information and a direct link to purchase.

January 2020: Launched Try on for lipstick, allowing users to test products from Estée Lauder, Sephora, Neutrogena, L'Oréal and others. Pinterest users test an average of six lipstick shades while using the feature, said Cindy Zhang, technical lead for Try on at Pinterest.

"Trying products on virtually helps Pinners evaluate them before making the decision to purchase," Zhang said. "As a result, Pinners are five times as likely to exhibit purchase intent on Try on-enabled Pins. We started with lipstick because it's one of the top categories on Pinterest, but we'll extend to more beauty products and other categories in the future."

June 2020: Launched a shop tab on Lens search results.

August 2020: Expanded the availability of skin tone ranges in beauty search results from the US to the UK, Canada, Ireland, New Zealand and Australia. Pinterest Try on users can customize their lipstick choices based on these skin tones. Pinterest also said Try on now offers more than 10,000 lipstick shades, including those from new partners Nars, Clé de Peau and Thrive Causemetics.

TIKTOK

Short-form video app TikTok is currently the biggest wild card in social AR. Although it's become extremely popular with young people, it is also embroiled in corporate drama surrounding its Chinese ownership and whether it will be banned in the US.

Given the uncertainty about TikTok's future, drawing conclusions about its AR marketing capabilities is difficult. But early indications are that it will put its own unique stamp on the idea rather than copy another platform's AR offerings.

In one recent example, cold-remedy brand Mucinex used a Branded Effect to place its spokescharacter "Mr. Mucus" into a **hashtag-challenge campaign**. The campaign inspired users to copy dance moves demonstrated by two influencers and create a TikTok video featuring the hashtag #BeatTheZombieFunk.



The campaign generated more than 1.7 billion views and more than 521,000 unique participants, according to Katie Puris, head of global business marketing at TikTok.

Recent advertising/marketing developments:

May 2020: Launched the Branded Effect ad format. Similar to the Hashtag Challenge, in which marketers team up with TikTok creators to invite users to create videos featuring the brand's hashtag, Branded Effects let users create videos that incorporate immersive sponsored 2D, 3D and AR elements, according to Puris. "Branded Effects make content creation fun and

empower users to tell new, creative stories," she said. Ecommerce brands can include coupons in their AR experiences, but the aim should still be brand awareness, she added.

June 2020: Introduced Branded Scan, which lets users use their TikTok camera to scan text, a logo or a real-world object and then trigger an effect that can be applied to their body or video.

July 2020: Introduced Gamified Branded Effects, which make the TikTok video shoot more interactive by letting users use facial expressions, body postures or other motions to control and interact with branded elements in a game-like experience. For example, they can use their nose to try to "catch" objects that drop from the top of the screen or move their body to match poses on-screen.

Getting Started with AR: Tips from the Experts

Want to get more serious about using social AR? Here's how to get going:

Put 3D on the development agenda. AR starts with 3D images. To prepare for future implementations of AR, companies need to create 3D images of their products. "You need to think about that 3D model for your product because that's the next format of how you showcase it and bring it to people no matter where they are," Snap's Arguelles Navas said.

Invest in the best 3D tech you can. Once you create a 3D model, it can be reused on social platforms, apps or a company website. On Snapchat, "you have to use Lens Studio to create a Lens for Snapchat. But if a brand has developed a 3D model of their shoe, then they can import that model into Lens Studio," Arguelles Navas said.

Don't overthink it. "Overbranding or overcomplicating features can discourage things like play time. Simplicity is key," said Courtney Christ, associate director of paid social at Mindshare.

Add internal resources for AR creation. Even with help from the social platforms, developing AR experiences involves specialized skills. Especially for business categories where AR is a bigger priority, such as fashion or retail, the right kinds of developers should be staffed up internally. "It's definitely a specialty that not everyone has, so it can be daunting for more traditional advertisers, but at the same time, I don't think it's going away," said Erica Patrick, vice president and director of paid social media at Mediahub Global.

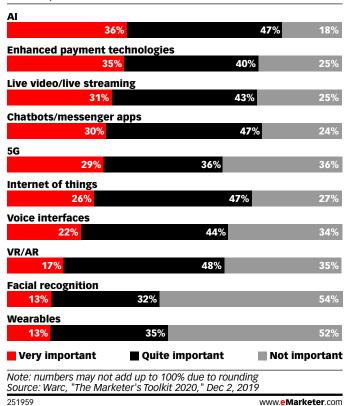
SOCIAL AR'S UTILITY TO MARKETERS IS GROWING

As the social platforms add new capabilities, the number of AR marketing opportunities continues to grow. And with those moves come new ways to get more utility out of AR, making it more valuable and measurable and bringing users closer to the purchase process.

AR "has become an incredible tool for utility and commerce," Snap's Arguelles Navas said. "Especially in verticals like beauty and retail, brands are still launching marquee Lenses that drive buzz and upper-funnel KPIs like engagement and awareness, but we're seeing them complementing those with always-on, lower-funnel activations that feature products and drive transactions."

Importance of Select Emerging Technologies in 2020 According to Client-Side Marketers and Agency Executives Worldwide

% of respondents

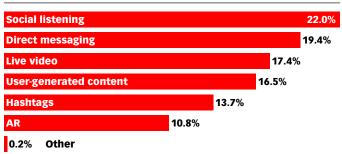


In research conducted last year, marketers' interest in AR was muted. Among client-side marketers and agency executives worldwide surveyed by Warc, just 17% said they thought that VR and AR would be "very important" emerging technologies this year, and 35% of respondents said they were "not important."

That lack of interest has extended to social AR. Even with increased availability, just 10.8% of marketers worldwide were using it as of December 2019, according to HubSpot research.

What Are the Tactics Marketers Worldwide Are Using for Social Marketing?

% of respondents, Dec 2019



Source: HubSpot, "Not Another State of Marketing Report," Feb 18, 2020
254136 www.eMarketer.com

But in industries like retail, accessories and entertainment, attitudes toward AR have started shifting in recent months. Pandemic-driven changes have given these companies new reasons to explore its benefits.

THE PANDEMIC ACTS AS AN ACCELERANT

In a March 2020 article, Nielsen called the coronavirus pandemic an "unexpected catalyst" for the adoption of technologies like AR and VR to assist with the shopping experience. It noted in its survey published in December 2019 that 51% of consumers worldwide were already willing to try AR or VR to check out products and services if those technologies were available to them in the next two years.

Some companies aren't waiting. "We've accelerated our thinking and planning for AR amid the pandemic," said Scott Nelson, vice president of marketing at fast-casual restaurant chain Panera Bread, which has done three social media AR executions in recent years. "The ability to showcase our menu items with AR in front of our customers, wherever they may be, is a powerful tool."

How Panera's Step-By-Step Approach Helped It **Learn Social AR**

Panera believes "AR will be more than just the cool new thing, but rather an immersive medium where we can create experiences that increase the craveability of our menu items," Nelson said. Each of its three AR efforts so far have been focused on different marketing objectives, netting the company a broad-based set of learnings.

Awareness: Panera's initial AR effort, "#YouMix2," unveiled at the South by Southwest conference in early 2019, let Snapchat users mash up various Panera menu items, such as macaroni and cheese with tomato soup. The experience was designed to support a broader marketing initiative showcasing eight actual menu-item mashups that were crowdsourced from members of Panera's loyalty club.

"We created an homage to our superfans, showcasing how the two items came together in an AR remix, paired with original music," Nelson said. The company added Snapcodes and instructions to tables in several cafes and promoted the Lens with additional paid advertising on Snapchat.

Awareness and Consideration: Later in 2019, Panera worked with Bleacher Report to create a masthead banner ad on the sports news publisher's mobile site that let users play with an image of its breakfast wrap. From there, users could tap a logo to share their AR creation on Instagram, Facebook and Snapchat.

Conversion, Sales and In-Store Foot Traffic: In January 2020, Panera launched its most successful AR execution to date on Facebook and Snapchat, which let users have fun by yawning into the camera to trigger a sunrise and cup of Panera coffee to pop up, and then learn more about Panera's breakfast wrap by flipping their phone around to see a virtual breakfast wrap on a tray.



This campaign, which cost \$100,000, was Panera's most successful because it drove in-store visits and conversions, according to Nelson. "On Facebook, one in four users who experienced our AR campaign followed up with a cafe visit. On Snapchat, 2.8% of users made a follow-up purchase on the Panera app," he said.

Most current AR executions are designed to work only on one social platform, but Panera decided that it was important to reach its customers on Facebook and Snapchat, where they were active. That involved some extra work to adapt the experience, Nelson said, since the two platforms offer different AR capabilities.

Moving forward, Panera has decided to embrace AR as part of its overall marketing strategy. "AR is one of the most dynamic and engaging ways to advertise on social media, so we no longer treat it as a bolted-on extension or one-off solution," Nelson said. "More and more, it's become part of our content and media mix."

Amid budget cuts and advertising pullbacks, the desire to show AR's utility has increased. "Advertisers may have historically thought about AR as the shiny object in the media plan—the tactic that is attention-grabbing or innovative enough to win an award, but not necessarily a business driver," Mindshare's Christ said. "But now more than ever, tactics and media dollars on social are being scrutinized. Brands are thinking about how AR can provide more utility."

Retail: According to research published in July 2020 by CommerceNext and Exponea, a customer experience company, more than 20% of US retailers expected to invest in AR or VR for their company's online store in June 2020, up from 8% in January 2020.

Coronavirus Impact: US Retailers Who Plan to Increase Marketing Investments in Select Emerging Technologies, Jan 2020 & June 2020 % of respondents

	Jan 2020	June 2020
Messaging/SMS platforms	51%	56%
Customer data platform (unified view of the customer)	57%	49%
Advanced attribution & measurement technologies	48%	43%
Al and other technologies (for personalization, customer service, etc.)	44%	43%
Alternative payments (Apple Pay, cryptocurrency, AfterPay, etc.)	52%	40%
Security/privacy compliance	50%	32%
AR/VR for your digital store (e.g., virtual product viewing)	8%	21%
Programmatic TV	31%	21%
Visual search	15%	16%
Voice-enabled search or voice commands, such as online personal assistant	8%	4%

Note: January 2020 n=111; June 2020 n=75 Source: CommerceNext, "The Big Pivot: How Traditional and Digital-first Retailers Re-prioritized Marketing Investments in the Wake of COVID-19" sponsored by Exponea, July 24, 2020

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And April 2020 research from TD Bank found that, among 102 US executives in the furniture retail industry, 41% had already incorporated AR, and 49% planned to in the future.

Some retailers had already been dabbling in in-store AR, offering things like 3D body scanning or virtual try-on mirrors. But with many stores closed or operating at reduced capacity, these businesses have had to pivot toward digital commerce and are now evaluating mobile-based virtual try-on and other AR features with new enthusiasm.

Some examples:

- In April 2020, jewelry retailer Kendra Scott launched a mobile browser-based virtual try-on experience for earrings.
- In May 2020, US and UK retailer Watches of Switzerland Group teamed up with watch manufacturer Grand Seiko for an Instagram AR filter that let people model a virtual wristwatch and share the picture with friends.
- In July 2020, PetSmart teamed up with Snapchat for an ad campaign that let users change their face into a reptile and offered a discount on reptile purchases. PetSmart said it turned to AR to partially replace the in-store experience. (The retailer said that it has had a 50% lift in reptile sales during the pandemic.)



AR is "becoming more important for our retail brands," Jellyfish's Chowdhury said. "The lockdown has resulted in a lot of people going to ecommerce vs. shopping in-store."

Accessories: Retailers aren't the only ones getting more involved. Companies that sell retail products like sunglasses, cosmetics and shoes are also emphasizing AR right now. They are realizing that it can help them achieve goals that the pandemic has made more challenging, and social platforms are a good way to experiment with AR.

"As soon as COVID-19 happened, people didn't want to go into malls and sunglass stores to try on glasses," said Chris Abbruzzese, vice president of trade marketing for sunglasses, goggles and helmet manufacturer Bollé Brands. "Who wants to touch something that was on somebody's face? I'm not supposed to touch my own face, let alone wear glasses that touched someone else's face."

That led the company to develop a try-on experience on Instagram that not only let the user see what its sunglasses looked like on them, but also let them experience their own environment through the polarized lenses of virtual sunglasses.

Sunglasses Maker Bollé Brands Uses AR on Instagram to Demo Lenses

If letting people try on your company's sunglasses is a good use case for AR, giving them a chance to try them *out*—and experience what the world around them would look like with them on—is an even better way to show how AR can be useful.

Bollé launched its first AR experience in June 2020. Using a combination of influencers, retail-trade partners and its Instagram account, the company sought to promote its Phantom sunglass lens technology and its Chronoshield frame by giving Instagram users an opportunity to see how the glasses would look on them, and then by turning their phone around, experience what their surroundings would look while wearing the glasses.



In the first seven days after launch, the AR experience garnered 470,000 impressions, according to M7 Innovations' Maher. The company, along with QReal, helped Bollé develop the demonstration. As followers shared the AR experience to their Instagram Stories, a total of 13,700 people clicked through to try the AR experience themselves.

Considering that Bollé is a brand that leans toward an older demographic and has just 26,000 Instagram followers, that's a significant response. We spoke with Bollé's Abbruzzese to learn more about why the company chose to use AR on Instagram.

eMarketer: What led you to develop this AR experience?

Abbruzzese: We were struggling to demonstrate the Phantom lens technology at point of sale, where people are picking out glasses, at events and trade shows and digitally. I thought if you could put this demonstration of a sunglass in the hands of anyone who has a phone, you could [potentially] reach billions of people. I was trying to democratize the experience or extend it.

eMarketer: How did the pandemic play a role?

Abbruzzese: When COVID-19 happened, people didn't want to go into malls and sunglass stores to try on glasses. Who wants to touch something that was on somebody's face? I'm not supposed to touch my own face, let alone wear glasses that touched someone else's face. So, we said, "Gosh, there's a convergence here. We're trying to demo our glasses, but we're also trying to reshape the shopping experience." It was timely.

eMarketer: Why was it important to not only show try-on, but try-out?

Abbruzzese: Try-on is not new. Try-out is, and we tell the customer, "This is a \$200 to \$300 pair of glasses, and they need to perform; they can't just look good on your face. Let's show you what light-adaptive [technology] is, what happens when your glasses fog up but your Bollés don't, and what contrast looks like in different settings and do it where you are, not where we are." It's meeting customers where they are and letting them discover what these glasses do.

eMarketer: What were your marketing objectives?

Abbruzzese: It was a brand-awareness play. Bollé is an older company that needs a resurgence in the US. There's new ownership; they're reinvesting in technology, and they're bringing some cool lenses and frames to market. We wanted to have the cool technology that goes along with that to demonstrate the product.

We've spoken to a lot of new dealers who haven't carried Bollé in the past, but are now interested in doing so because of this AR technology, and consumers who visit our site are spending six times longer on it because of the new AR experience.

eMarketer: How are you measuring the results?

Abbruzzese: We're measuring time on site, the number of people who opened the [AR experience] and the number of shares. Within two or three days, we had hundreds of thousands of people engaged, and we were shocked at the time they spent. We had people spending between 7 and 13 seconds, which is extraordinary if we can get somebody to stop for that long and try something out.

eMarketer: What have you learned about AR's role in marketing?

Abbruzzese: When you think about marketing generally and social media specifically, it's about being useful, relevant, lightly branded and providing utility. That's what I think AR can do.

The opportunity is also there for cosmetics marketers, some of whom have already been working in AR but now see additional benefits.

"As the world continues to navigate the pandemic, many consumers have shifted their spending habits to online marketplaces," said Patrick O'Keefe, vice president of integrated marketing communications at e.l.f. Cosmetics. "Our virtual try-on tool not only allows for consumers to better familiarize themselves with our products at home, it also allows us to familiarize ourselves with them and their needs."

Entertainment: AR has also struck a chord with musical artists who can't perform live shows during the pandemic. In August 2020, performing artist The Weeknd teamed up with TikTok for what was billed as TikTok's "first ever in-app cross-reality experience," which included VR and AR elements.

In June, musician Yungblud livestreamed a performance of a new single on Instagram and Snapchat that allowed users to place an AR version of the performer in their immediate environment.

"Recording artists are using AR as an extension of not just their brand, but of their music video, allowing fans to quite literally participate in their music," said Allison Ferenci, co-founder and CEO of Camera IQ, which helps marketers create AR experiences on Facebook, Instagram and Snapchat.

There's also some evidence that consumers are engaging with AR more often during the pandemic. In Q2, the number of people who played with Snapchat Lenses every day grew 37% year over year. In Q1, Snap reported a 30 times increase in downloads of Snap Camera, a desktop app that incorporates AR into videoconferencing services.

And when Camera IQ evaluated how its clients' executions performed in Q2 2020, the company found that median views (the number of times an AR experience is viewed) increased 1.4 times and median plays (the number of times an AR experience is interacted with) were up 1.9 times vs. Q1.

Marketers often think AR is "only going to be good when there's wearables," said Joe Williams, immersive lead at publisher LadBible Group. "Everyone's always looking around the corner rather than embracing the here and now of what people are doing, which is missing the point completely."

The more the social platforms can lean into use cases that are truly useful, the more likely it will be that marketers will adopt AR. There will always be a fun and entertaining aspect to AR, but experiences that are strictly playful with no bigger marketing payoff won't be prioritized in marketers' plans.

Instead, incorporating features that lead to harder metrics and business results will help companies understand whether AR advertising is truly beneficial to the bottom line.

THREE WAYS SOCIAL AR IS GETTING **MORE USEFUL**

In the rest of this section, we'll showcase three use cases that go beyond entertaining users and that we believe will gain additional traction in 2020:

- Shopping and virtual try-on
- Cause-related awareness
- Location-based information

Shopping and Virtual Try-On

Shopping and virtual try-on are two of the most exciting use cases for social AR. Thanks to some of the aforementioned new features, the social properties have emerged as key venues, in addition to brands' or retailers' own mobile apps, for exploring these capabilities.

Virtual try-on user experiences have improved a great deal. Once clunky and disappointing, with colors that weren't what they seemed and styles that didn't look as good in real life as they did online, try-on has become much more sophisticated thanks to improved face-mapping technology and better visual representation of colors. As Mediahub's Patrick put it, "it feels more like you're actually trying on the product."

Some of that capability comes from startups like Wannaby, an AR technology vendor that offers a virtual shoe try-on product that marketers, such as Gucci, have used on Snapchat. But the social platforms have also improved their own technology.

"Some of the most important updates are around expanding the ability to deliver hyperrealistic AR shopping and try-on experiences for brands," Snap's Arguelles Navas said.

On Instagram, try-on can go a step further and be tied to Checkout, the platform's in-app purchase technology, to help guide the path to purchase. In the test that began last October, users can go to a participating brand's Instagram shop, find products that are available for AR try-on and then go to a product detail page and purchase opportunity.

In the first two months of the test, Instagram found that 24% of US users who viewed an eligible product display page used the AR try-on feature and tried three different AR products on average during the pilot.

"This is going to become a new normal," Facebook's Bouan said. "When you shop online, you expect to see a photo of the product you're buying. And in a few years, you will expect that most products you buy online will have some virtual try-on capability."

In addition, there's a belief that the social aspect of shopping, which is often missing when buying online, can be recreated in certain ways with AR.

Bouan describes the potential for friends to share AR looks and fashion examples through Stories and the News Feed and to shop together in AR when they're not physically together. And Camera IQ's Ferenci believes that try-on can be an interactive brand-building experience and a time-saving utility.

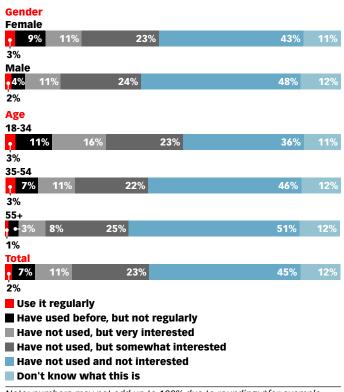
When a brand invites users to try something on, "they're also inviting a consumer to play," she said. "Even though that's still technically entertainment, you're starting to see entertainment and utility blend in a way that no other medium allows."

How Do Consumers Feel About AR Shopping?

Very few consumers have tried AR-related shopping. According to a June 2020 Bizrate Insights survey conducted for eMarketer, just 9% of US adults said they had used AR while shopping, while 45% of respondents said they neither used it nor were interested. Even among females (a prime target audience) and younger adults (again, a prime target audience), a significant portion of respondents were not interested in the idea.

How Interested Are US Adults in Using AR* and VR While Shopping?

% of respondents, by demographic, June 2020



Note: numbers may not add up to 100% due to rounding; *for example, trying on clothing or makeup by superimposing an image onto yourself Source: "The eMarketer Ecommerce Survey" conducted in June 2020 by Bizrate Insights, June 9, 2020

Pre-pandemic, some consumers were showing interest in using AR to try on cosmetics. In December 2019 GlobalWebIndex research, 26% of US beauty buyers and 19% of those in the UK said they were interested in using an AR app to try on makeup.

Types of Beauty Products/Services UK vs. US Beauty **Buyers Are Interested in Using in the Future, Dec 2019** % of respondents

	US	UK
Skin-scanning devices that customize skincare regimens	36%	31%
Smart mirrors	33%	26%
Personalized skincare recommendations (based on machine learning algorithms)	28%	21%
AR apps to try on makeup	26%	19%
Gender-neutral beauty products	25%	17%
Post-workout products	23%	16%
Monthly beauty memberships	23%	13%
3D-printed face masks	18%	14%
On-demand stylists	17%	12%
Voice technology offering beauty advice	17%	10%

Note: ages 16-64 who have bought beauty products in the past month Source: GlobalWebIndex, "The Beauty Industry," Jan 30, 2020

Despite lukewarm interest in AR shopping among

consumers, several brands in different product categories are leaning into AR experiences that can help drive purchases.

Examples

Gucci: The luxury brand teamed up with Snapchat in June 2020 for a pair of global AR shoe try-on Lenses. The ads each showcased two pairs of sneakers, allowing users to virtually try them on and then purchase directly via a Shop Now button. The ads used foot-tracking technology from Wannaby and represent an expansion of technology that Gucci previously made available through its own app. Users played with the ad for 22 seconds on average, Snap said.

L'Oréal: In an unusual example of AR on the desktop, rather than on mobile, the beauty marketer created eight branded Lenses that Snap Camera app users could try on and use while on video calls. The Lenses featured brands like Garnier, L'Oréal and Maybelline, and products for haircare, makeup and skincare. The company has been active in AR on Snapchat since it first launched Lens advertising in 2016.

Lego Group: In 2019, the toy marketer created a Snapchat Lens that provided a retail-like experience, allowing users to "step into" a virtual pop-up store featuring Lego-inspired fashions with a link out to make a purchase. According to partner We Are Social, the campaign sent more than 250,000 shoppers to the Lego Wear website in 10 days. The Lens was shared 37,201 times and had an average play time of more than 19 seconds.

MAC Cosmetics, Nars, Warby Parker, Ray-Ban: The four companies partnered with Instagram to launch AR try-on while shopping for products on the social platform. Users could virtually try on cosmetics or sunglasses after seeing them in a branded post, and then move on to purchase the product via Instagram Checkout.

Cause-Related Awareness

Another burgeoning area for social AR is in educating consumers on charitable causes or world events. These experiences seek to increase awareness of the issue and the marketer's involvement in it. They often contain calls to action meant to inspire users to do more than just watch and learn.

These experiences draw on AR's ability to create an emotional response.

"The fundamental reason we've been looking at AR is because of the emotional impact it can achieve," LadBible Group's Williams said. The media publisher has completed nearly a dozen AR experiences, most of them on Snapchat and many of them related to issues or causes that the publisher wants to educate its young audience about.

Examples

National Geographic: For Earth Day 2020, the publisher created an Instagram effect featuring an AR-enabled version of its magazine cover. The effect included a 3D globe that rises up and lets the user navigate through 12 different cities to see the effects of global warming in 2070.

LadBible Group: Shortly after the pandemic began, LadBible created four Snapchat Lenses with messaging around public health and staying home to stay safe, Williams said. Another execution a few years back sought to educate Snapchat users about elephant poaching. "We produced a short-form AR animal documentary, where you were turned into a proud African elephant, and then you were de-tusked," Williams said. The experience concludes by going back to selfie mode with an image of the user wearing an ivory necklace.

El Pollo Loco: To honor National Hispanic Heritage Month, the restaurant chain created a Snapchat Lens in September 2019 that restored five Los Angeles-area murals painted by Hispanic artists. The Lens let passersby of the mural walls see how the art originally looked.

LOCATION-BASED INFORMATION

This AR category provides information about the world around the user overlaid on top of maps or displayed when using a mobile camera to scan the current environment. Pokémon Go is the best-known example, but similar features are also becoming available on social platforms.

The pandemic and related shutdowns have slowed location-based AR's progress, but marketers preparing for the future should consider these early-stage opportunities.

Snapchat **Local Lenses** expand on technology that Snapchat introduced last year, called Landmarkers. Local Lenses use a variety of inputs, including 3D images and Snaps from the Snapchat community, to build a virtual representation of the physical world, such as entire city blocks.

Snapchat users in an area where a Local Lens is available can use their camera to experience a virtual world overlaying the physical one.

Snapchat Scan offers a variety of capabilities in partnership with third-party companies, such as the ability to solve a math problem (with partner Photomath), or identify a dog breed (using Dog Scanner) or plant (with PlantSnap). Users can also scan food items to learn about nutrition (with Yuka).

Facebook's recent acquisition of digital 3D-mapping firm **Scape Technologies** is another development to watch. Its goal of delivering an AR experience tied to a user's location makes it a direct competitor of Snapchat.

OVERCOMING CHALLENGES AND LOOKING AHEAD

Social media provides a relatively easy way for marketers to experiment with creating AR lenses and experiences, but it's not perfect, and there are drawbacks. Still, experimenting now can help prepare marketers to implement more sophisticated AR features in the future.

Here's a look at some of the main challenges, followed by our list of future developments to watch.

CHALLENGES

Some consumers need handholding. Snapchat users are very familiar with what to do with AR, but the learning curve will be higher for older generations. They will require more instruction on what to do with an AR experience and more enticement to check it out. However, they may also be more inclined to use AR that has a clear use case than simply to augment or change their face for fun.

Apparel try-on is still a work in progress. Although the ability to map faces and feet has improved, trying on clothing in AR is challenging because of the difficulty in analyzing body shape and type in an image the consumer took from a smartphone camera. In stores, this process is slightly easier thanks to AR mirrors that are more robust at capturing data. Until this improves, finding that perfect blouse or pair of pants at home will be a longer-term prospect.

Social AR isn't as robust as app-based AR. Dedicated apps can offer more robust AR capabilities than social platforms. For example, some retailers offer their own in-app virtual try-on experiences that can't always be replicated on social platforms. "I like to think of [social platforms] as AR lite," M7 Innovations' Maher said. "Facebook has a 4MB limit for AR executions. Instagram has a 2MB limit. Snap, a 4MB limit. When you think of in-app AR, you can do so much more."

Until more standards emerge, be prepared to adjust and modify your creations. In addition to having different file-size limitations, the social platforms' technologies for mapping or rotating AR assets may not match. And some mobile phones may have more advanced display capabilities than others. "Most platforms are realizing that there's a common incentive to simplify the onboarding process so that these assets can be used everywhere. That's something we've been working on," Facebook's Bouan said.

LOOKING AHEAD

Lidar (Light Detection and Ranging): The Apple iPad Pro now has a Lidar scanner, technology that makes determining distance and measurement more accurate. It's important to AR because it makes it easier to build a 3D model. And apps that are built on Apple's ARKit development platform will get improved AR features. "Think of Ikea putting different furniture in your room," Maher said. "The next generation of phones is going

to make AR even more powerful, which will translate to social."

5G: 5G mobile phones will make it possible to show bigger and more bandwidth-heavy AR experiences. "Throw those MB limits out the window," he said.

Glasses and head-up displays: Snap and Google have already experimented with AR glasses, and though those initiatives didn't take off, future ones might. Apple is scheduled to launch its AR glasses in 2022 and bring the technology out of the mobile phone.

Integration into web experiences: Eventually, AR could become as common a feature of websites as images or videos are. For ad creatives like Mo Said, founder and chief creative officer of agency Mojo Supermarket, that's a more compelling proposition than developing for social platforms or standalone apps. "The next step will be the technology that gets so small that it can live within a web experience."

KEY TAKEAWAYS

- The pandemic has spurred some marketers to look closer at AR. As consumers turn to ecommerce, trying on products virtually has renewed appeal.
- Social media is an easy place to test AR experiences. Led by Snapchat, the major social networks are adding AR features and creating new opportunities for marketers to use AR ads and commerce-related features.
- With wider availability of AR in social media, it's getting more useful. Fun lenses will still help drive brand engagement, but features like try-on and location-based AR will provide more utility.
- AR still has its challenges, but it's improving.

 Learning how to use it won't be intuitive for some
 (i.e., not young) consumers, and trying on clothing is
 still a work in progress. But 5G phones will allow for
 larger, more in-depth experiences, and advances in 3D
 modeling will create more realistic representations.

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eMarketer was founded on the idea that multiple sources and a variety of perspectives will lead to better analysis. Our interview outreach strategy for our reports is to target specific companies and roles within those companies in order to get a cross-section of businesses across sectors, size and legacy. We also look to interview sources from diverse backgrounds in order to reflect a mix of experiences and perspectives that help strengthen our analysis. The people we interview for our reports are asked because their expertise helps to clarify, illustrate or elaborate upon the data and assertions in a report. If you would like to be considered for an interview for one of our reports, please fill out this form.



Chris Abbruzzese
Vice President, Trade Marketing
Bollé Brands
Interviewed July 15, 2020



Olivier Bouan
Product Manager, Augmented Reality Commerce
Facebook
Interviewed July 13, 2020



Shamsul Chowdhury
Vice President, Paid Social
Jellyfish
Interviewed July 16, 2020



Courtney Christ
Associate Director, Paid Social
Mindshare
Interviewed July 22, 2020



Allison Ferenci
Co-Founder and CEO
Camera IQ
Interviewed July 20, 2020



Matt Maher
Founder
M7 Innovations
Interviewed July 13, 2020



Carolina Arguelles Navas Global Product Marketing Manager, Augmented Reality Snap

Interviewed July 9, 2020



Scott Nelson
Vice President, Marketing
Panera Bread
Interviewed July 17, 2020



Patrick O'Keefe
Vice President,
Integrated Marketing Communications
e.l.f. Cosmetics

Interviewed August 3, 2020



Eric Oldrin
Director, Emerging Platforms and Creative Shop
Facebook
Interviewed July 13, 2020



Erica Patrick
Vice President and Director, Paid Social Media
Mediahub Global
Interviewed July 22, 2020



Katie Puris
Managing Director and
Head of Global Business Marketing
TikTok

Interviewed July 24, 2020



Mo Said
Founder and Chief Creative Officer
Mojo Supermarket
Interviewed July 21, 2020



Sonia Tsao
Co-Founder and COO
Camera IQ
Interviewed July 20, 2020



Joe Williams
Immersive Tech Lead
LadBible Group
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