

MOBILE TRENDS 2020

10 Trends to Monitor As 5G Ramps Up and Privacy Battles Loom

2020 will be a pivotal year for mobile as the first 5G networks gain traction in some countries, including the US and China. But that will be just one story, as privacy regulations tighten, transparency tools become more widespread, and mobile video and audio grow more important. This eMarketer Report features 10 key trends that will affect mobile marketing in 2020.

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Dear eMarketer Reader,

eMarketer is pleased to make this report, **Mobile Trends 2020: 10 Trends to Monitor As 5G Ramps Up and Privacy Battles Loom**, available to our readers.

This report is a great example of eMarketer data and insights that looks at 10 key trends that will affect mobile marketing in 2020.

We invite you to learn more about [eMarketer's approach to research](#) and why we are considered the industry standard by the world's leading brands, media companies and agencies.

We thank you for your interest in our report and **Branch** for making it possible to offer it to you today.

Best Regards,

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MOBILE TRENDS 2020: 10 TRENDS TO MONITOR AS 5G RAMPS UP AND PRIVACY BATTLES LOOM

2020 will be a pivotal year for mobile as the first 5G networks gain traction in some countries, including the US and China. But that will be just one story, as privacy regulations tighten, transparency tools become more widespread, and mobile video and audio grow more important.

How will 5G affect the mobile landscape in 2020?

It's still too early to determine 5G's full impact, but sales in 5G phones will explode in the second half of the year. 2020 will be an opportune time for media companies, app developers and marketers to explore rich media experiences that take advantage of 5G's fast speeds and low latency.

How will privacy regulations affect mobile marketers?

Marketers will need to be more judicious about how they collect and use data. Regulations and operating systems restrictions, particularly Apple's Intelligent Tracking Prevention (ITP), will cut back available data, and should raise prices for premium third-party data and location-based advertising, increase the use of contextual ads and put pressure on companies to utilize their first-party data.

What other developments will impact mobile?

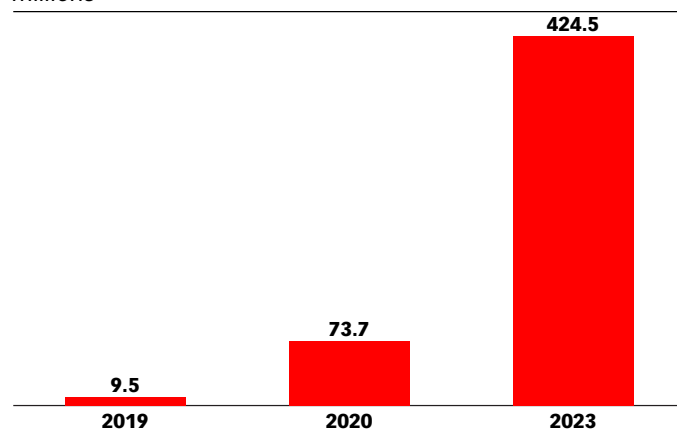
Wearables will continue to evolve and gain users, but many will remain tethered to smartphones. Hearables (earphones with internet connectivity) and augmented reality (AR) will gain strength. Connected TV (CTV) will also grow quickly, which will influence the mobile strategies of over-the-top (OTT) video providers.

Will transparency improve in 2020?

Yes, and the IAB has come up with new transparency tools over the past year, with app-ads.txt the most important. The tool verifies the legitimacy of sellers of an app publisher's ad inventory, but so far fewer than half of app publishers have appended the file. The pace should increase in 2020.

WHAT'S IN THIS REPORT? This report will look at 10 key trends that will affect mobile marketing in 2020.

5G Smartphone Shipments Worldwide, 2019, 2020 & 2023
millions



Source: IHS Markit, "5G Is here: Early insights from our experts," Aug 22, 2019

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KEY STAT: 5G networks launched in 2019, but only a few million 5G smartphones have been shipped worldwide since then. That will begin to change in 2020.

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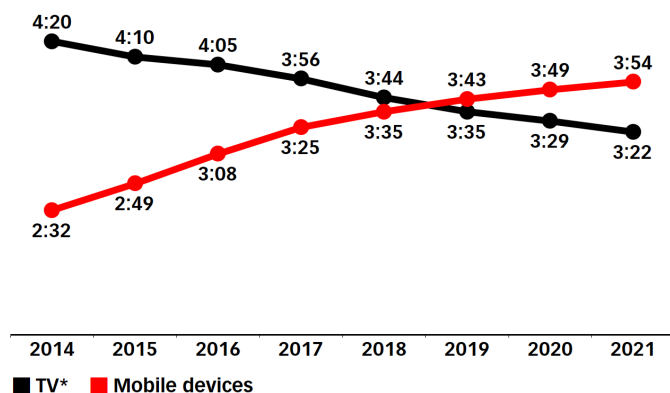
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TEN TRENDS THAT WILL SHAPE MOBILE MARKETING IN 2020

As much as consumers claim to want to cap screen time, time spent with mobile devices continues to rise. We forecast that US adults will spend an average of nearly 4 hours on their mobile devices in 2020, with more than two-thirds of that time (2 hours, 40 minutes [2:40]) on smartphones. Time spent on mobile devices will widen its lead over time spent with TV.

TV and Mobile Devices: Average Time Spent in the US, 2014-2021

hrs:mins per day among population



Note: ages 18+; time spent with each medium includes all time spent with that medium, regardless of multitasking; for example, 1 hour of multitasking on desktop/laptop while watching TV is counted as 1 hour for TV and 1 hour for desktop/laptop; *excludes digital

Source: eMarketer, April 2019

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It's no surprise then that mobile marketers continue to pour money into mobile advertising. We expect mobile ad spending to increase by more than 21% to \$120.37 billion in 2020.

US Digital Ad Spending on Select Channels, 2019-2023

	2019	2020	2021	2022	2023
Mobile*	\$99.21	\$120.37	\$138.43	\$152.93	\$166.67
Desktop/laptop**	\$23.20	\$22.03	\$23.04	\$22.34	\$21.04
Connected TV***	\$6.94	\$8.88	\$10.81	\$12.49	\$14.12

Note: *includes advertising that appears on mobile phones, tablets and mobile internet-connected devices; **includes advertising that appears on desktop and laptop computers and other nonmobile internet-connected devices; ***includes advertising that appears on connected TV (CTV) devices

Source: eMarketer, Oct 2019

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Clearly, mobile is an inextricable part of any marketing strategy. This report will look at 10 trends to keep an eye on as 2020 unfolds.

TREND NO. 1: 5G WILL START TO CHANGE MEDIA AND MARKETING (BUT NOT FOR THE REASONS YOU THINK)

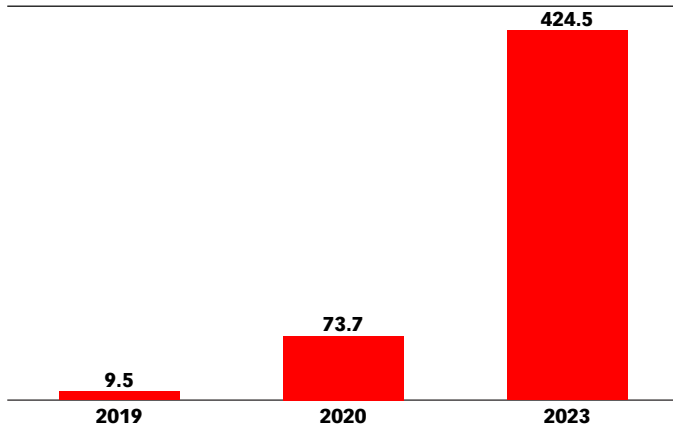
2019 was a big year for 5G. In the US, all four of the major mobile networks launched 5G service by the end of the year. Overseas, 5G networks are already running in South Korea, China, the UK, Germany and a handful of European countries. Additionally, the first 5G phones launched worldwide in the first half of the year.

Once telecom companies have fully deployed 5G networks, the impact will transform the mobile experience, and faster speeds are just one part of it. 5G also promises very low latency (i.e., near-immediate responsiveness) and much higher network capacity and reliability, which will let app developers shift a lot of intense computing from phones to servers.

But even with all the progress in 2019, 5G networks are still sparse, and few people actually connect to them. According to IHS Markit, only 9.5 million 5G smartphones will have shipped by the end of 2019. And for those who have bought the phones, early takeaways are mostly unimpressive improvements over existing 4G LTE networks due to very limited 5G coverage and bottlenecks in other parts of the mobile ecosystem, such as slow servers and a largely 4G core network (the infrastructure between transmitters). For consumers, the full impact of 5G will be gradual.

5G Smartphone Shipments Worldwide, 2019, 2020 & 2023

millions



Source: IHS Markit, "5G Is here: Early insights from our experts," Aug 22, 2019

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Even so, the marketing wave behind the launch of 5G networks and phones has clearly created interest. A Piper Jaffray survey published in September 2019 found that 23% of iPhone owners would upgrade to a 5G phone once it launches, despite being shown a hypothetical \$1,200 price point.

2020 promises to be a huge replacement cycle for phones. IHS Markit predicts the number of smartphone shipments worldwide to reach nearly 74 million in 2020. The big jump in sales will mostly come in the second half of 2020, when Android manufacturers release second-generation phones, and Apple reportedly will launch a 5G iPhone.

This influx of new, powerful phones, along with the continued buildout of 5G networks, will create opportunities for advertisers and publishers to develop new streaming media formats with greater capabilities based on 5G's low latency and fast download speeds. Video and audio could be higher definition, multichannel and interactive. And importantly, the owners of new 5G handsets will be looking for new experiences to justify their pricey purchase.

The biggest short-term change might be a push toward more computing from phones to servers. This will enable more mobile augmented reality (AR) and mobile gaming. Even under 4G LTE, many big tech companies are exploring streaming gaming platforms, such as Microsoft's xCloud, Google Stadia and Sony's PlayStation Now. All came out in 2019, but the big test will be whether gamers embrace them in 2020.

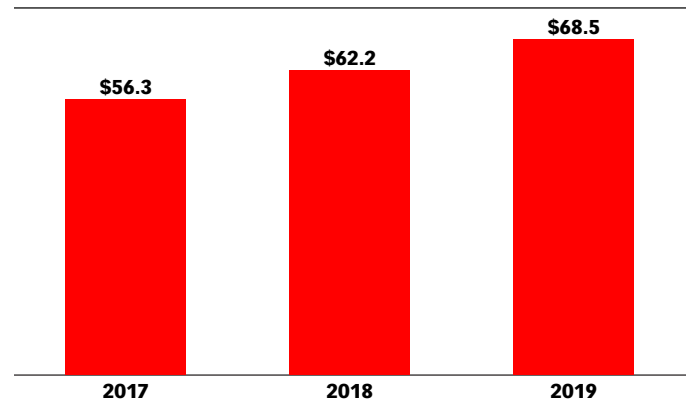
TREND NO. 2: BRANDS WILL WAKE UP TO OPPORTUNITIES IN MOBILE GAMING

5G is expected to make a huge difference in mobile gaming. Low latency, high-speed connections could introduce much more immersive multiplayer mobile games. But even before 5G really kicks in, brands may finally discover gaming in a big way.

Mobile games have traditionally made most of their money through app stores. Game installs, subscriptions and in-app purchases together approached \$70 billion in worldwide app store revenues in 2019, according to game analytics company Newzoo.

Mobile Game App Store Revenues Worldwide, 2017-2019

billions



Note: includes Apple App Store, Google Play and third-party app stores
Source: Newzoo, "Global Mobile Market Report," Sep 17, 2019

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But in-game advertising, already a multibillion-dollar industry, is growing rapidly. We forecast that in the US alone, in-game advertising will increase 13% to \$3.7 billion in 2020, and this likely underestimates the ads from the long-tail of game developers.

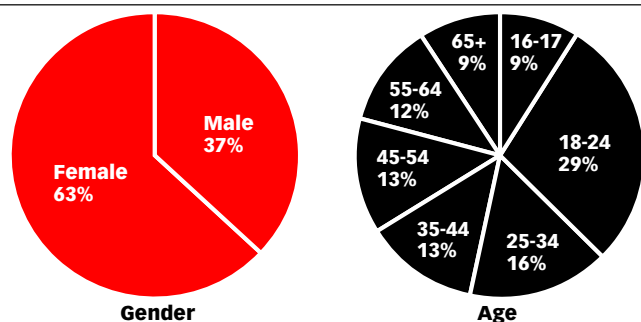
Most ads within games are for other games. According to experts who spoke with us for this report, 80% to 90% of in-game ad revenue is from ads promoting other games.

That may begin to change in 2020 for a couple of reasons. First, the scale of users is undeniable: Nearly half (44.8%) of the US population are smartphone gamers, which is equivalent to 149 million people, or two-thirds of smartphone owners.

The rapid growth of mobile free-to-play games—which includes hyper-casual puzzle games, card games, stripped-down arcade games, etc.—is broadening the appeal of gaming to nearly every demographic. According to a Q3 2019 survey of US mobile gaming app users by mobile advertising company Jun Group, nearly two-thirds of mobile gamers are female, and a third are 45 and older. Although the Jun Group numbers are on the high-end for female users, most research shows that women make up the majority of mobile gamers.

US Mobile Gaming App Users, by Demographic, Q3 2019

% of respondents



Note: numbers may not add up to 100% due to rounding
Source: Jun Group, "Mobile Gaming Audience Insights Study: Q3 2019," Sep 2019

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With this broad user base, just about any user or customer segment can be reached through games. As a result, gaming can be a good source of contextual ad opportunities.

Second, in-game advertising is increasingly being transacted programmatically, as many large game makers are offering their own automated platforms with a brand-safe environment. This should attract brands who have stayed away from gaming due to concerns about lack of transparency in the ad supply chain (which, to be fair, was a legitimate fear in the past). Unlike the large game makers with the scale for private marketplaces (PMPs), smaller developers will most likely need to enter open exchanges and embrace more transparency to attract brands. Ad companies have also developed standardized ad formats, including banner ads that can appear in the background of games or rewarded videos, which give brand advertisers more creative options. Additionally, some larger gaming companies are working directly with brands to create branded experiences.

As game developers adopt transparency features, such as app-ads.txt (an IAB-coordinated standard for signaling the legitimacy of the sellers of an app's inventory), brands will follow their consumers into gaming environments.

However, a lot will depend on how fast the long tail of game developers adopt these standards and offer automated and measurable ad buying experiences. So far, many have been satisfied with CPI-driven campaigns for game app installs and have lagged other publishers. "I think the only big driver for [gaming developers] to adopt [Open Measurement and app-ads.txt] is their desire to attract more brand budgets," said Paulina Klimenko, senior vice president at digital ad tech company PubMatic.

TREND NO. 3: INTERACTIVE FEATURES WILL BECOME MUCH MORE PREVALENT IN MOBILE VIDEO ADS

In 2020, more mobile video ads will have interactive features. Several things are driving this.

First, mobile video advertising overall is growing at a very rapid clip. We forecast that mobile video ad spending in the US will increase 24.6% to \$28.52 billion in 2020. This flood of ad dollars will breed more innovation in the mobile video ad space, including more interactivity.

Second, new technology standards should alleviate some of the problems of running interactive in-app video ads. Currently, video players can add interactivity to video ads with a script called Video Player Ad Interface Definitions (VPAID), but this java-based standard doesn't work well on mobile because of slow load times on mobile web and inoperability in a lot of native environments.

Advertisers are now getting better at stripping down mobile ads to run efficiently in a VPAID environment. More importantly, in June 2019, IAB released a new version of the Video Ad Serving Template (VAST), which includes the Secure Interactive Media Interface Definition (SIMID), a replacement for VPAID that is much slimmer and better suited for mobile environments. This should also enable advertisers to increase interactivity of mobile video ads in 2020.

Lastly, OTT video services are exploding. We expect that the average US adult will watch 42.6 minutes of subscription-based OTT video per day in 2020 across all devices. Many of these services, such as Hulu and Vudu, have shoppable ads. Although CTV is the prime location for viewing OTT videos, the interactivity of these ads works best in mobile environments.

TREND NO. 4: LOCATION-BASED ADVERTISING WILL BECOME MORE EXPENSIVE

Marketers have embraced location data for several reasons: It can help personalize experiences for customers, better isolate customer paths to purchase, create better customer segments and identify opportune moments to target potential clients. But new restrictions on collecting location data will make it more costly for advertisers in 2020.

Verified location data already carries a premium, partly because many consumers aren't keen on sharing their location data. Only 35% of mobile device users worldwide surveyed by location services company HERE Technologies in August 2019 reported that they are willing to share location data to get more personalized advertising.

Mobile Device Users Worldwide* Who Are Willing to Share Personal vs. Location Data for Select Potential Benefits, Aug 2019

% of respondents

	Personal data	Location data
Increase safety/security	76%	75%
If necessary to enable a service	70%	75%
Saves money	70%	74%
Gives me financial benefits such as discounts and rewards	68%	71%
Makes my life more convenient	66%	69%
Gives me additional useful and relevant information	63%	68%
Saves time	63%	67%
Gives me additional functionality of service	61%	65%
Enables a personalized service	57%	60%
Enables personalized advertising	37%	35%

Note: respondents answered "likely to share" or "very likely to share";
*Australia, Brazil, China, France, Germany, India, Japan, Netherlands, UK and US

Source: HERE Technologies, "The Privacy Paradox Reloaded: Changes in Consumer Behavior and Attitudes Since 2018," Sep 11, 2019

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With regulations and operating systems exposing data collection and very likely reducing the amount of companies with permission to gather location data, the supply of verified, opt-in location data will go down even further, which has led many advertisers to take a cautious approach. "I'm definitely sensing [advertisers] pumping the brakes and really doing some extra homework before leveraging location data," said Jenna Umbrianna, general manager at Anagram, the agency division of Diligent.

This environment will become even more restrictive in 2020. Starting in September 2019, iOS 13 changed the way users opt in to sharing their location data. iPhone users now see periodic reminders that apps use their location data, and they have the option to allow it once, allow whenever someone uses the app, allow it always, or never allow it.

This added transparency has led to a steep reduction in background location data (from apps that are allowed to track location even when not in use) coming from Apple products, according to preliminary data provided to us by Location Sciences, a location verification service. Location Sciences found that 70% of iOS users it tracks downloaded iOS 13 in the first six weeks after its release, and 80% of those have turned off access to all background checks.

Additionally, the California Consumer Privacy Act (CCPA) will create greater potential for limited use of location data. Much like Europe's General Data Protection Regulation (GDPR), CCPA gives consumers greater control over the use of their personal information and data. Under CCPA, if a consumer doesn't want a company to use, keep, share or sell their personal data, they can opt out.

In 2020, marketers who want to continue using location data will need to make the case that consumers will get something of value in return. If not, they risk the likelihood of users exercising their right to opt out of location data tracking and collection.

Despite these restrictions, location data isn't going to disappear. Companies should still have no problem gaining access to location data gathered by their first-party apps if they can make a compelling case that the user experience is enhanced with that data.

With the supply of premium data going down and demand still strong, prices will have only one way to go: up.

TREND NO. 5: PRIVACY CONCERNS WILL DRIVE INNOVATION IN CONTEXTUAL ADVERTISING

A good portion of programmatic advertising has been built on users' personal information and data. But with more government regulations—and with major browsers like Apple's Safari and Mozilla's Firefox restricting the use of some of that data for tracking and targeting purposes—there is a resurgence of interest in sophisticated contextual advertising, i.e., using the context of the app or web page to infer the interests of the user instead of gathering historical behavior to gauge those interests.

"The majority of conversations [in the wake of cookie restrictions] has been based around the shift of audience-based strategy to strategies that put contextual elements at the forefront," said Emily Anthony, director of media services at data and analytics company Merkle.

Contextual advertising isn't new by any means, but it is evolving. Analytics firms are starting to look at audiences for pages within an app, rather than the overall app visitors, to better differentiate ad calls and ad creative in ways that reflect what might interest users at that moment.

"In reality, the app or content that somebody is using is probably one of the things that's most indicative of the kind of moment that person is having," said Scott Swanson, CEO and co-founder of Aki Technologies, a mobile marketing intelligence company. "As we think about the future where we've got smaller datasets for location ... we're thinking a lot about which app you're using, and then, which page you're on in that app."

In games, which have long emphasized contextual advertising, analytics companies are looking at the points within games that have the most impact. They're also starting to use behaviors within a game to segment players based on in-game activity.

Although seemingly straightforward, there are challenges to contextual advertising. Recent moves by Google encapsulate some of them. In November 2019, Google announced that it will stop including contextual content categories, such as "news" or "sports," in its bid requests for its ad network starting in February 2020. Google cites that these app categories could be appended to individual people, which impinges on user privacy. Most demand-side platforms (DSPs) rely on third-party suppliers for contextual information, so this move won't have a major impact on them. But it does highlight that some forms of contextual advertising could still reveal personal behavior.

Google is also testing its own variant of pure contextual advertising. During Advertising Week 2019, Google announced that it was working with UK publisher The Guardian to see how artificial intelligence could be used to interpret the image, video and textual content of individual pages, which in turn determined which ad was shown. The creative for the ads was built dynamically based on the information gathered from the site.

As privacy controls tighten, expect more companies in 2020 to experiment in this way to develop new contextual ad formats and targeting.

TREND NO. 6: MORE TRANSPARENCY WILL PUT PRESSURE ON MOBILE AD NETWORKS TO ADOPT MORE INDUSTRY-STANDARD PRACTICES

In 2020, 89.8% of total mobile display ad spending in the US will run through programmatic channels, we estimate. This will total \$57 billion in ad spend, a 21.7% increase over 2019.

A majority of this spend will go through the fully automated ad platforms of companies such as Facebook or YouTube, which let advertisers big and small buy ads through an API.

While social and other non-auction-based buys account for most mobile programmatic ad spending today, 28.8% of mobile programmatic ads will run through real-time bidding (RTB) platforms in 2020—either PMPs or open marketplaces. But beyond that, a lot of ad buys still go through partially automated ad networks that work on some variant of an ad waterfall.

The traditional system of buying and selling has been filled with inefficiencies and lack of transparency that's allowed for arbitrage, where some ad networks try to buy ad inventory from each other to sell it at a higher rate. This, in turn, has increased the number of intermediaries, which often obscures whether a site or service provider is legitimate, leading to increased opportunities for fraud and decreased clarity on where the ads appear.

Many ad networks have moved beyond this system and become much more transparent; some have even become PMPs or have started to plug into the APIs of open marketplaces. But others remain less transparent and will face increased pressure in 2020 to move to a clearer set of operations.

For one, the tools required to provide transparency will be easier to access. Some of the transparency tools developed by the IAB are now available for app advertising. These include the Open Measurement SDK (which can aggregate measurement of app performance for a whole range of measurement companies), app-ads.txt (which publishers can implement on their sites to show that they're legitimate and working with select supply-side partners), and sellers.json (which effectively does the same for exchanges and supply-side platforms [SSPs]). IAB also introduced Open RTB Supply Chain Object, which shows all the different steps between a bid and a sale.

Sellers.json and Open RTB Supply Chain Object are new, but app-ads.txt has been around since March 2019. Klimentenko of PubMatic estimates that about 30% of the top 1,000 iOS and Android app publishers around the world have adopted an app-ads.txt file, which represents a slower pace than was the case for the web equivalent, ads.txt. Although uptake among publishers is still slow, it looks like many publishers will add the file in 2020.

"I do expect wider adoption in Q1 as budgets go down and people can be a bit more aggressive with their supply targeting as they have less budgets to deliver," said Karim Rayes, chief product officer at RhythmOne, a multiscreen digital ad company.

These new tools should make RTB more transparent and will likely force ad networks to either integrate these tools or cede business. This may not happen until late in 2020, but expect these pressures on mobile ad networks to increase throughout the year.

TREND NO. 7: AS CTV GROWS IN IMPORTANCE, THE BATTLE AMONG OTT PROVIDERS FOR ATTENTION WILL SPILL OVER TO PHONES

OTT networks continue to grow rapidly. In 2020, the average US adult will watch 1:48 of digital video per day, up from 1:20 in 2017. Subscription OTT services alone will attract 43 minutes of time spent in 2020, up from 28 minutes in 2017. In 2020, 42 of those digital video minutes will be on mobile devices, up from 34.5 minutes in 2017.

The battle among OTT providers continues to intensify, with Disney+, NBCUniversal's Peacock and WarnerMedia's HBO Max joining Netflix, Hulu, Amazon Prime Video, Showtime and dozens of smaller OTT platforms fighting over audiences. While some of the largest OTT providers, such as Netflix and Hulu, come with a pre-installed presence on CTV, most need new ways to find a place on CTV home screens.

There are a few ways to do this that should become more prominent in 2020.

First, deep links that connect mobile sites or apps to specific places in other mobile apps can also be used to direct a user to a specific place on a CTV device, where the bulk of subscription OTT video viewing takes place. For instance, someone reading a story on ESPN.com or the ESPN app could see an option to seamlessly download the ESPN+ app on a Roku device. This capability doesn't currently exist, but it's not a big technological leap to get there. We expect that more OTT companies will use advertising on their own mobile properties to push people onto CTV apps in the coming year.

Second, smaller OTT companies may decide that the best strategy isn't promoting a CTV app but instead, using their mobile app to cast videos via a set-top box or streaming stick such as Chromecast. "The penetration to the television will not be via an app but via casting," said Tal Chalozin, CTO and co-founder of video ad platform Innovid, who has noted increased interest in video-casting strategies.

Related to this, many OTT services are offering the option to download videos through their apps, so users can watch those videos on their phones when service is spotty or more expensive. According to a December 2019 study by Penthera, which provides downloading capabilities for video publishers, 28 of 80 major OTT services offer a downloading option in their mobile apps.

There is another option as well, which is to go mobile-first with content and leave the others to fight over CTV time. Some of the social networks have tried this, notably Snapchat with its Originals programming and Facebook with Watch and IGTV. But none are pursuing a high-budget, subscriber-based system when compared with that of Quibi, which will launch in April 2020. Quibi will have high-production value videos no more than 10 minutes long and directed by premier directors such as Steven Spielberg and Sam Raimi. The service will have an ad-free version for \$7.99 and a version with ads for \$4.99. As of October 2019, it had already sold out ad placements in its inaugural season for \$150 million.

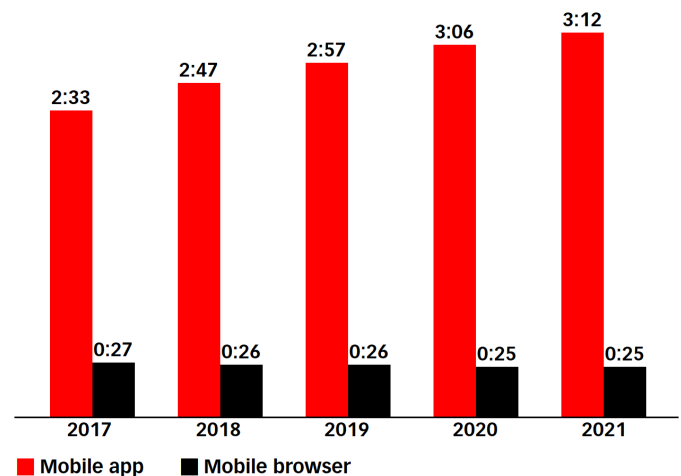
Expect the rest of the OTT landscape to watch Quibi's progress. If its high-budget, mobile-optimized experience is a hit, it's likely that others will follow suit.

TREND NO. 8: THE LINE BETWEEN MOBILE WEB AND APP WILL CONTINUE TO BLUR

Consumers have made it apparent that they prefer experiences based in apps. We have estimated time spent in mobile web vs. apps for years, and the trend has been clear: Time spent on mobile web is gradually declining, while time spent in apps is steadily increasing. By 2019, about 87% of time spent on mobile devices (including tablets) was in apps. Smartphone users are even more focused on apps, with 90% of smartphone time spent in-app.

Mobile App vs. Mobile Browser: Average Time Spent in the US, 2017-2021

hrs:mins per day among population



Note: ages 18+; includes all activities on tablets and all mobile phones (smartphones and feature phones), except for voice calls on the cellular network; includes VoIP apps or video chat apps such as Skype; includes all time spent with nonvoice mobile activities, regardless of multitasking
Source: eMarketer, April 2019

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The difference is a bit smaller for share of ad spend. In 2019, 82.5% of mobile ad spending went to in-app ads, while 17.5% went to web ads. In part, that reflects the outsize impact of in-stream advertising on YouTube, which is often on the web. But it also reflects that many apps open web browsers for content. For instance, Facebook's app will often open web browsers for news stories or shopping sites.

The overall distinction between apps and the web, however, is starting to fade. Advanced web formats, such as progressive web apps, use web coding to produce app-like experiences. These are often preferable over real apps since they don't require a large download, which can be a more attractive option for users who have less powerful smartphones with smaller memories. These formats are also often favored by developers because they work across devices and can create a better experience than standard websites for users who have limited commitment (i.e., for retailers).

Within apps, progressive web app technology will make it easier to create "native" ad experiences, and for advertisers to buy ads that run across operating systems. "Progressive web apps will increase 'in-app inventory' even though they're still mobile web," said Kurt Donnell, president of Freestar, an ad solutions company for app developers. "That will increase just the availability of in-app inventory ... [as] the pipes start to look more the same vs. mobile web and in-app being separate."

Moreover, some of the time seemingly spent in-app is within web browsers. For instance, about 15% to 20% of time within the Facebook app is spent reading text-based articles in webview, according to Harry Kargman, CEO and founder of mobile advertising company Kargo. The advertising within these articles will all be web-based advertisements—many of them sophisticated outstream video or takeover ads.

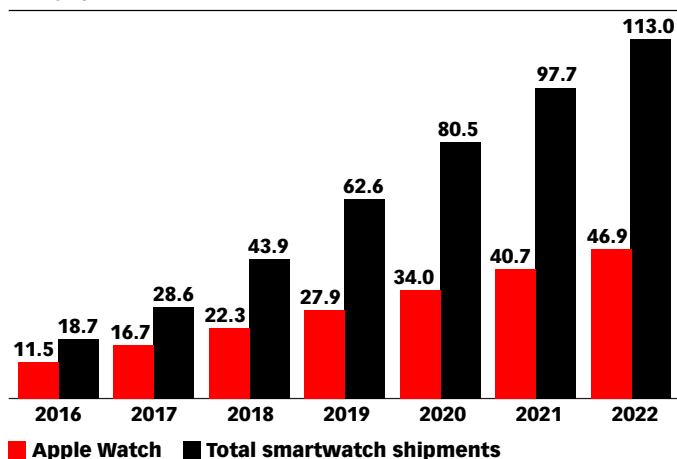
In 2020, it's likely that more immersive ads designed for a web browser that look like native ads will emerge.

TREND NO. 9: THE BATTLE AMONG BIG TECH WILL BOOST THE WEARABLES MARKET

We forecast that the number of adult smart wearable users will increase 6.6% in 2020 to 62.8 million. Of this group, 41.7 million will be smartwatch users.

Among smartwatches, Apple Watch still dominates. According to Trendforce, smartwatch shipments worldwide will hit 80.5 million in 2020; 34 million of those shipments will be Apple Watches. By 2022, smartwatch shipments will hit 113 million. IHS Markit is more conservative with its overall estimate, but it expects smartwatch shipments to triple between 2019 and 2023, from 30.7 million to 92.8 million.

Apple Watch and Total Smartwatch Shipments Worldwide, 2016-2022
millions



Source: TrendForce as cited in press release, Sep 25, 2019

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Samsung's Tizen and Google Wear OS also are major operating systems for watches, but together, they account for fewer smartwatches than Apple produces. Google never seemed to fully focus on the smartwatch category, though that could change with Google's November purchase of Fitbit, for which it outbid Facebook. Google seems ready to challenge Apple more directly in the wearables market.

According to Strategy Analytics, Fitbit had 11.3% of the market share for smartwatches in Q3 2019. With the acquisition (assuming it's approved), Google will both manufacture one of Apple Watch's main competitors and provide the operating system (Wear OS) for a slew of smaller competitors. With the playing field slightly more level than it has been for years, it's likely that both Google and Apple will drive the smartwatch market to more innovation.

Digital audio is another area that should push the development of wearables. We estimate that the average adult in the US will spend 1:16 per day listening to digital audio on their mobile devices in 2020, compared with 51 minutes spent on social networks and 42 minutes spent watching video.

Mobile Internet: Average Time Spent in the US, In-App vs. Mobile Web, 2017-2021

hrs:mins per day among population

	2017	2018	2019	2020	2021
Mobile apps					
Audio	0:46	0:50	0:53	0:55	0:57
Social networks	0:37	0:40	0:43	0:45	0:47
Video	0:29	0:32	0:34	0:36	0:38
Mobile browsers					
Audio	0:14	0:18	0:20	0:21	0:22
Video	0:06	0:06	0:06	0:06	0:06
Social networks	0:05	0:06	0:06	0:06	0:06

Note: ages 18+; includes all time spent with mobile apps, regardless of multitasking

Source: eMarketer, April 2019

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This vast chunk of mobile audio minutes has boosted the market for increasingly sophisticated earphones, many of which now have advanced capabilities, including connecting to voice assistants. These advanced earphones, called hearables, connect to the internet via the phone. We forecast that the number of hearable users in the US will increase 16.4% to 111.5 million in 2020.

According to November 2019 reporting by Bloomberg, Apple's AirPods shipments were expected to double to 60 million in 2019 over the prior year. AirPods are currently the leader in hearables, but Amazon recently introduced Echo Buds, which includes a connection with Alexa, at a lower price point than AirPods. It joins a host of other hearable makers, including Microsoft, Google and Samsung. As with Google's more aggressive entry into the smartwatch world, Amazon's introduction of Echo Buds will likely add new pressure on Apple, which will only increase competition, innovation and sales in the hearable market.

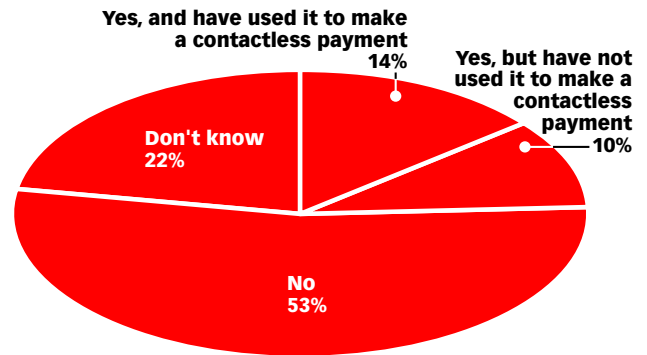
In 2020, smartglasses, which remain niche products, may also undergo active innovation. The current crop of smartglasses in the market include Spectacles by Snap, first released in 2017 and currently on its third generation, and a second version of Google Glass for enterprises such as factories or warehouses. But more are likely on the way, including a rumored version from Apple. It likely won't enter the market in 2020, but if history is a guide, other companies will explore the area while Apple hones a more refined version. Expect 2020 to see the release of more of these early generation smartglasses.

TREND NO. 10: INFLUX OF CONTACTLESS CARDS WILL HELP DRIVE THE MOBILE PAYMENTS LANDSCAPE

The US has been relatively late in introducing contactless cards, which are credit or debit cards that include a near field communication (NFC) chip that can complete a transaction simply by tapping on a reader. But those cards are starting to arrive in the US now that most point-of-sale (POS) systems in the US have the NFC capabilities to accept them.

In a July 2019 survey from CreditCards.com and YouGov of respondents who had credit cards with rewards on them, 14% said they had used contactless cards to make payments.

US Rewards Credit Card Users Who Have Contactless Credit Cards, July 2019 % of respondents



Note: ages 18+; numbers may not add up to 100% due to rounding
Source: CreditCards.com, "Rewards Cards" conducted by YouGov, Aug 15, 2019

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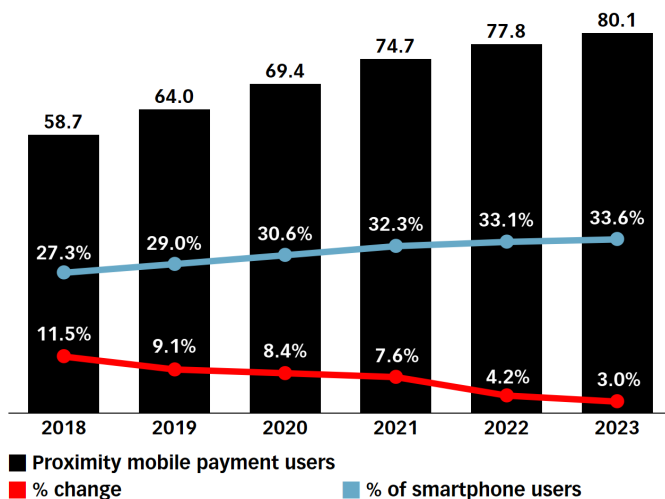
In markets where contactless cards were introduced early on—such as in Canada, the UK and France—the spread of these cards has impeded the growth of mobile payments. This largely has to do with the fact that contactless cards preceded the introduction of mobile payment platforms such as Apple Pay and Samsung Pay. Consumers had already moved to the more convenient (relative to existing credit cards) system that already worked in public transit and vending machines, for example, and so far have been less inclined to shift to yet another new system.

Though it's possible the same scenario could play out in the US, we anticipate the opposite effect. The spread of contactless capabilities will make it easier to make mobile payments as well. The reason is that contactless cards work on the same NFC system that many of the major mobile payment platforms already use, including Apple Pay, Samsung Pay and Google Pay. The planned introduction of contactless cards has led most major retailers to update their payment systems to include NFC readers, and it's also enabled transit systems, such as New York's subway system, to begin testing contactless payments. Early reports from the transit system suggest that 80% of taps have come via mobile wallets.

Unlike in the UK, where these changes led to a mass switch to the use of contactless credit cards, the switches are happening after mobile payment platforms have already been introduced. The result is that one of the major roadblocks to consumers using mobile payments—lack of compatible point-of-sale systems—is no longer an issue. It's a much more level playing field between contactless cards and mobile payment systems in the US.

The greater acceptance of these systems in retailers and elsewhere has led to the recent growth in mobile payments. We forecast that mobile payment users will account for 30.6% of US smartphone users in 2020, or nearly 70 million people who will make a proximity mobile payment at least once over a six-month period in 2020.

Proximity Mobile Payment Users in the US, 2018-2023
millions, % change and % of smartphone users



Note: ages 14+; mobile phone users who have made at least one proximity mobile payment transaction in the past six months; includes point-of-sale transactions made by using mobile devices as a payment method; excludes transactions made via tablet
Source: eMarketer, October 2019

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That's still a relatively small number, but as contactless options for transit and shopping increase, expect this number to continue to show healthy increases in 2020 and beyond.

RECAP OF LAST YEAR'S PREDICTIONS

How did we do last year?

- **Mcommerce will continue to expand rapidly.** Nailed it, but it was a gimme. Retail mcommerce sales grew to \$264.33 billion in 2019, a 27.5% increase.
- **5G will loom over mobile investments.** True, but a little premature. 5G networks have expanded faster than anticipated at this time last year and there have been a lot of investments in media and cloud services, but it's hard to attribute it directly to 5G. There's no question that 5G will expand more emphatically in 2020.

- **High-quality vertical video will take off.** Mixed. Vertical videos and vertical video ads have become more common, especially with the rise of TikTok and continued growth in Snapchat, as well as rewarded video in games, which is often vertical. Most advertisers now have inventory in vertical formats, but premium vertical video is still a minority of video. And with OTT on the rise, this will remain the case.
- **Nonskippable interactive ads will replace static display ads.** Mixed. Nonskippable ads haven't replaced skippable (YouTube and Twitter have gone the opposite direction) except on premium OTT services, but ads have become more interactive, especially due to the spread of MRAID (Mobile Rich Media Ad Interface Definitions), an IAB standard that has made rich media with interactivity a lot easier to build across platforms.
- **Mobile AR will become commonplace.** Not yet. Visual search, social media lenses/masks, and shopping overlays have increased, but it's still probably a year early to say that mobile AR is commonplace.
- **Voice will enmesh smartphones even deeper into our lives.** Yes, although this was an easy one to predict. We forecast that 103.1 million US smartphone users will connect to voice assistants with their phones in 2020. One area that still hasn't arisen is voice search ad products, which are likely to come at some point.
- **In-app header bidding will gain steam.** Mixed. In-app header bidding did grow significantly in 2019, but it still represents a small part of the ecosystem (single digits of programmatic for sure). Other forms of real-time mediation between ad networks, however, have also grown, so the idea of parallel bidding is growing, albeit more slowly than we expected.
- **Consumers will demand and get more control over their mobile data.** Mixed. They're getting more control over their mobile data through the location controls in iOS 13 and the oncoming CCPA, but it's unclear how much of this is coming from consumer demand. It's possible that serious reservations about data use are still to come—or the whole privacy debate will die down. Likely, it's the former, and more controls will come.
- **Location will be more about analytics, less about real-time targeting.** We missed the mark on this one. Real-time targeting is still very important.
- **Consumers will try, but mostly fail, to reduce screentime.** Yes, mobile minutes continue to rise. The only question is, were they really trying?

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2020 Mobile Marketing Priorities:

Branch
together
web and
app.

Build an
attribution
model we
can trust.

Connect
the **dots** of
fragmented
user
journeys.

Increase
apps user
acquisition.

Learn how. Let's chat. **branch** 



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