



# **IAB EUROPE'S GUIDE TO IN-APP ADVERTISING**

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## Section 1. Introduction

Mobile apps have evolved drastically in the last decade, going from simple tools integrated into the first smartphone device to essential, ubiquitous applications that are integral to our everyday lives. Whether we need to order food to our doorstep, communicate with our friends, book travel, or entertain ourselves, there is an icon at our fingertips to deliver whatever we need in the moment. It's no wonder that people are now devoting a [third of their waking time](#) to mobile apps - an average of 4.8 hours a day.

Where people are spending more time in apps, app advertising spend follows. Global spend topped \$295bn last year, suggesting that mobile advertising is having a resurgence and that in-app advertising presents a huge opportunity for brands to reach engaged audiences.

This Guide has been written by experts of IAB Europe's Programmatic Trading Committee. It provides an overview of the in-app marketplace, the ad formats available, supports key changes and challenges we are seeing in the industry with in-app advertising, and provides key considerations for buyers in this space.

## Section 2. The Evolution of the In-App Marketplace - Stats & Facts

The mobile app industry has come a long way in the last decade. From simple, functional, nice-to-have tools that were integrated into the first Apple iPhone to a fundamental part of everyday life for communication, entertainment, retail, gaming, and more. Today there are millions of apps available across mobile devices. In fact, according to eMarketer, 89% of mobile usage time is now spent in-app.

The COVID-19 pandemic has contributed to the tremendous growth of digital and in-app in multiple verticals like grocery, food delivery, health, fitness, and more. Although growth has slowed with vaccination rollouts and economies returning to normal operations, it is still visible in multiple verticals.

2021 also brought its own challenges with all eyes focusing on privacy; Safari removed third-party cookies, by setting removal as a default. Apple's in-app experience now also reflects a shift towards increasing users' privacy. This means to reach users that have opted-out of consent advertisers have to rely more on publishers' first-party data.

Yet despite all of these challenges, mobile ad spend continues to grow in many European and Global markets. In fact, according to [IAB Europe's 2020 AdEx Benchmark report](#), more than 50% of digital ad spend is now allocated to mobile. Where desktop spend has seen a decline, mobile advertising has seen double-digit growth.

**Mobile Ad Spending**

UK, 2021-2025



Source: eMarketer, March 2021 (see below for notes and methodologies).

eMarketer | InsiderIntelligence.com

With consumers now spending an average of [4.8 hours per day](#) using apps on their smartphones, this brings additional opportunities for publishers and marketers alike, which we will explore in the following sections.

## Section 3. Overview of In-App Advertising

In-App advertising refers to ads and ad campaigns that are delivered within mobile applications, including smartphones, tablets, or wearable devices.

There are several advantages to in-app advertising:

### 1. Enhanced User Experience and Engagement

It is not a new concept that placing the right ad in the right context at the right time can encourage users to engage with it. As a less distracting, highly interactive, highly engaging, and better-controlled format, in-app advertising provides opportunities for advertisers and brands to deliver an engaging advertising experience.

### 2. Attractive Format for Brands

Along with the growing army of app users, advertisers' interest and willingness to invest in in-app ads keeps increasing, too.

In-app ads are a great solution to address various goals including increasing conversions, user retention and engagement, brand awareness, and drive overall revenue generation. Plus, in-app ads fit nearly every vertical, from social media, news, and entertainment apps, to shopping, education, fitness, healthcare, banking, messaging apps, games, and beyond.

### 3. Key Revenue Stream for the App Market and Publishers

For app developers as well as end-users, in-app ads are a great way to offer services either free of charge or at prices significantly lower than any subscription or pay-as-you-go model would allow. [Advertising essentially funds the free and open internet](#) that we know today.

Additionally, in-app provides an effective monetisation strategy for mobile publishers, in which app developers get paid to serve advertisements within their mobile app. This helps publishers keep their content free for users and boosts downloads, whilst enabling them to earn scalable revenue.



## Section 4. In-App Formats

Apps offer a dynamic environment to seamlessly integrate advertisements with in-app content, turning mobile ads into relevant suggestions that can enhance users' in-app experience. When choosing the right ad formats for an in-app advertising campaign, advertisers should consider how consumers use their device, and how they will experience the ad.

Here are some examples of in-app ad formats:

## ADVERTISING FORMATS

### VIDEO ADS

- Minimum 24 fps
- 15 sec max length for animation
- 30 sec max length for video (unlimited user-initiated)
- 2.2 MB additional file size for host-initiated video (unlimited user-initiated)

#### BENEFITS

- Short, informative video ads provide great user experiences
- Video ads tell brand stories better than other formats
- Video is an excellent format for informing and education



### REWARDED VIDEO ADS

Rewarded video ads offer users a value exchange – a free in-app reward for watching a video ad.

#### BENEFITS

- High engagement
- High completion rate
- High viewer satisfaction, as users get prizes after watching the video



### STANDARD BANNER ADS

- 320 x 50 or 300 x 250 banner ads; static or animated, usually clutter the top of bottom of the screen

#### BENEFITS

- Available on all screens
- Can be executed in large volumes
- Very quick to deploy
- Easy to integrate



### INTERSTITIAL BANNER ADS

Interstitial banner ads are visuals that cover the entire mobile screen

- 320 x 480

#### BENEFITS

- Large space
- Broader message, exposure, and recall
- Visually compelling
- High impressions and high conversions
- Can offer animated and interactive rich media content
- According to many experts, [interstitial ads are best placed within games and levels](#)



### EXPANDABLE ADS

Expandable ads are rich media ads

- 320 x 50 banner that increases in size usually at 320 x 480 following a tap

#### BENEFITS

- More information opportunities with the expansion unit – i.e. videos and interactivity
- Obtain valuable traction – through action-driven expansion where you can measure the number of times users view the ad content



For in-app advertising success, combating “banner blindness” is key. **Splash Ads** are full-screen interstitials that pop up when a user loads an app. For marketers, this gives a big opportunity to catch users while they are fresh and engaged, and the splashy full-screen ad means lots of room to show off the creative. For publishers, splash ads can help drive eCPMs without disrupting the user experience. They offer a great way to monetise mobile apps without compromising the user experience.

**Native Ads** also tend to be high performers. Because they fit seamlessly into the surrounding content, users get an unobtrusive ad experience. Native ads, whether video, image, or rich media, also offer contextually-relevant creative opportunities. As a result, engagement rates are much higher, and brand sentiment can also improve for both publishers and advertisers.

Innovative and interactive ad formats can also help. Interactive ads are, by nature, more enticing to users, and garner strong engagement rates. Two such examples would be playable ads and rewarded video ads.

**Playable Ads** come without any commitment: users can test out a game before downloading it. Not only do these ads enjoy strong engagement (after all, they help users more actively participate in their ad break), but also help improve click-through rates, and the odds that a user will convert.

Meanwhile, **Rewarded Video Ads** are well-liked by users, because these incentivised video ads give players a chance to earn more lives, points, coins, or new levels to explore. Because users opt into watching the ads, they pay more attention to the ad content and are more likely to click through. Video completion rates are also higher since users only get rewards by watching the ad to completion. For marketers, there is another key advantage: cost-effectiveness. Advertisers only pay for ads that are watched all the way through. Since users would much rather opt into a video ad than pay to unlock gaming levels or to make in-app purchases, brand sentiment improves, too, for publishers and marketers alike.

These formats can help drive higher engagement rates, conversion, and ultimately eCPMs.

For more information on In-App Advertising and Gaming, [IAB Europe's Guide to In-Gaming](#) provides definitions for In-Gaming advertising plus insight into how it works in the in-app environment, the ad formats available, and key considerations and best practices for buyers.

#### **4.1 Coalition for Better Ads: A Consumer-Centric Methodology to Avoid Bad Ad Experiences in In-App Environments**

Whilst in-app offers a dynamic environment to seamlessly integrate advertisements, and there are a number of innovative formats in this space, it is integral to ensure that consumers continue to receive a positive experience when navigating mobile apps.

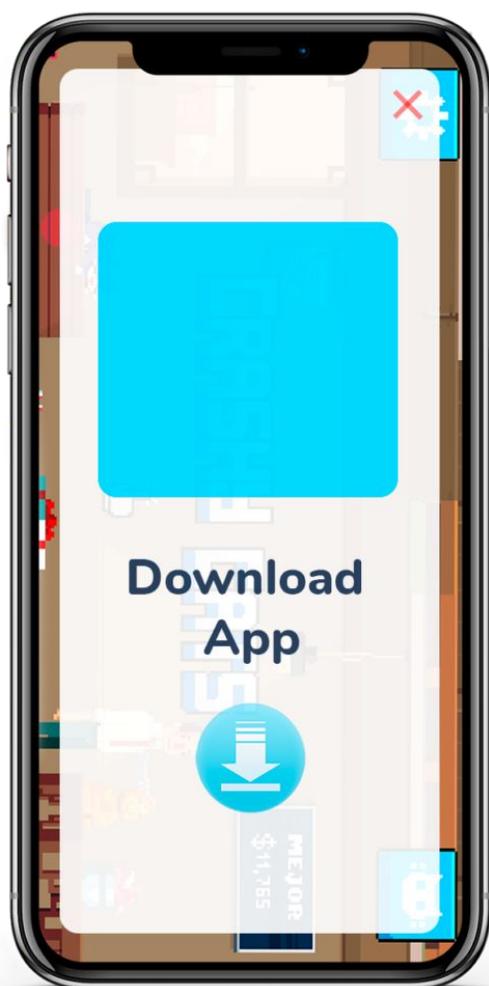
Leading international trade associations and companies involved in online media, formed the [Coalition for Better Ads](#) (CBA) to help improve consumers' experience with online advertising. The CBA leverages consumer insights and cross-industry expertise to develop and implement new global standards for online advertising that address consumer expectations.

In a new study, carried out in 2021, the CBA evaluated ad perceptions in an app environment. They utilised ads that were in common placements and formats in the casual gaming landscape. The study utilised the same approach as previous CBA studies with adaptations to evaluate the perceptions of 31 in-app ad experiences in a casual game environment, where participants played three levels. Each level contained a different ad experience. The overall game experience and each ad were ranked on various dimensions. The last task was for participants to rank the three ad experiences based on their preference within the game.

CBA discovered clear differences between the ad experiences. The ads found to be most interfering by respondents were those that interrupted the consumer's experience in unexpected places or failed to give them control of their experience (e.g., long, non-skippable ads). The least interfering ads were those that minimised interruption and maximised consumer control.

This research suggests that app developers can utilise the preferred ad experiences to monetise their app but also highlights the negative consumer perception of those that disrupt the main task.

Further details on the research, and the stack rank referring to all of the tested ad experiences, can be found [here](#).



## Section 5. Measurement - Now and the Future

Impression quality is essential and should be a prerequisite to measuring the performance of an in-app advertising campaign. As in any other advertising environment, brands should always optimise their advertising towards impressions that are fully viewed, by a real person, in a brand-suitable environment, within the intended geography. Only those impressions that meet this standard of quality have the potential to perform.

With Apple's recent Identifier for Advertisers (IDFA) restrictions, it's going to be important for verification technologies in-market to pivot to more privacy-friendly approaches. Some companies have already anticipated the rising importance of privacy and do not rely on trackers such as IDFAs to enable quality authentication.

Advertisers will increasingly depend on multiple data sources in order to make sense of their ads' performance. This includes determining the quality of individual ad impressions as well as leveraging APIs, such as [SKAdNetwork](#), aggregated data, and first-party data. Advertisers could, for example, optimise their branding campaigns for viewability and later on leverage other data sets in order to quantify the relationship of better impression quality with an overall return on ad spend. With less directly observable conversion data there will also be a surge of data modeling, meaning that ad networks and advertisers may apply [advanced machine learning techniques](#) in order to estimate "missing" conversions.

## 5.1 Leveraging Privacy-Friendly Attention Metrics to Measure Performance

The implementation of Apple's [AppTrackingTransparency](#) (ATT) policy signaled a sea change in mobile advertising – making it more difficult to target users and measure attribution on Apple devices. Furthermore, for users who [opt-out of Ads Personalisation in their settings on Android](#) 12, the Android Advertising ID will be replaced with a string of zeros. Outside of these technological changes, legislation is also advancing globally. Europe's General Data Protection Regulation (GDPR) was first implemented in May 2018 and [enforcement by legislators has picked up over the years](#). [Brazil](#) and [California](#) are probably the most well-known examples of regions following Europe's lead, with many more either implementing or drafting their [own legislations](#). These industry dynamics are reducing the efficacy of various existing measurement solutions and impacting how advertisers can rely on them. Multi-touch attribution tools, for example, can no longer measure all advertising touchpoints, and dynamic creative optimisation tools cannot conduct proper A/B testing if they are not able to track and segment audiences. As a result, privacy-friendly attention metrics are gaining importance. In fact, 98% of marketers believe that by looking at deeper attention metrics, they could improve campaign performance and advertising outcomes, according to eMarketer.

Attention metrics go beyond traditional KPIs such as viewability and clicks to provide granular insights into user presence, user engagement, and ad presentation. Advertisers can use privacy-friendly attention metrics to improve campaign planning and forecasting as well as to measure and optimise performance.

## 5.2 OM SDK and the Value of it

### Checking in on OM SDK Adoption

It's been three years since the [Open Measurement Software Development Kit](#) (OM SDK) was released by the IAB's Open Measurement Working Group, and there's been healthy adoption by the ecosystem since. In 2020, there was a 347% increase in Open Measurement Interface Definition (OMID) Video impressions compared to 2019. It's clear that the ecosystem – from developers to advertisers – understands the value of OMID and why it's critical to include it.

Support for OMID for Web Video is also going to be released soon, and adoption will ramp up quickly in 2022, creating a much bigger pool of measurable Web Video impressions without dependency on VPAID.

### **What is the OM SDK?**

The Open Measurement SDK (OM SDK) is a set of software tools designed by IAB Tech Lab to facilitate third-party viewability and verification measurement for ads served in mobile app environments, and it's being deployed among hundreds of thousands of apps. The tools were made widely available in 2018 and include viewability trackers from multiple vendors in one handy SDK, thereby alleviating many developer pains. Rather than integrate with multiple vendors, developers can now adopt a single standardised SDK, and buyers can finally get a true picture of whether their ads are being seen.

Additionally, in 2019 IAB Tech Lab launched [app-ads.txt](#) – the app equivalent of ads.txt - making the app ecosystem a safer and more transparent place for buyers. While adoption of both these measures was initially slow in-app, they're now gaining traction as awareness grows on both sides of the ecosystem.

OM SDK is particularly important to app developers moving into programmatic, as brands and agencies cite viewability and measurement challenges as a key issue of in-app advertising. If an app developer overlooks integrating a measurement SDK, then their advertising clients will struggle to accurately measure the app's ad viewability. And viewability impacts how campaigns get billed - mainly because advertisers use their programmatic buying platforms to selectively spend on inventory that is highly viewable.

Some managed in-app header bidding solutions that control creative rendering have the capability to pre-integrate OM SDK (like OpenWrap), which ensures that all display and video impressions served by the SDK are viewability measured. It is important for app developers to look for solutions that have these capabilities. Also, if you're looking to widely activate brand dollars, it's important to choose a setup that includes OM SDK support.

The OM SDK is the catalyst needed to help brands engage with confidence - a simplified route to integrating verified partners frees up both buyers and sellers to move faster, with flexibility and transparency. It also allows us to ensure brand safety while focusing our efforts on increasing performance and delivering results that drive action.

This SDK collects a common set of data that can determine performance against existing and future standards and, because the data is driven by a single source, discrepancies among publishers, advertisers, and vendors will be significantly reduced. Additionally, advertisers can now measure and transact with their preferred vendors and not be forced to disqualify desirable publishers from their media plans.

What's great about this project is that measurement vendors, publishers, agencies, and advertisers alike are committed to the OM SDK as a vehicle to support all measurement types moving forward, and not just viewability.

We will not go back to a world of numerous, disparate proprietary measurement SDKs that cause friction for the involved parties. This project's mission is in support of all measurement scenarios in this single universal SDK, along with future support on the web and other environments.

### **Why OM SDK?**

By introducing OMID into the in-app environment, app developers no longer have to rely on video protocols such as VPAID in order to enable measurement. The OM SDK provides a way for app developers to enable clear viewability measurement of their in-app video ads – which remain their most valuable inventory. Further OM SDK adoption will continue to reduce measurement inconsistencies for mobile and video apps by ensuring consistent media quality signals across environments. This means that metrics are held to a singular standard, which makes it much easier to measure performance.

As quality verification grows in importance – advertisers will want to optimise towards inventory they can actually measure, which will behoove app developers to ensure that their apps can confirm in-app viewability via the OM SDK.

The breakout and fragmentation of ad viewability technology mean that today, viewability is often measured by multiple independent systems. Furthermore, because these systems are not connected to ad serving technology, app developers are forced to deploy additional code in order to facilitate viewability measurement.

This is not scalable, nor does it necessarily produce accurate insights as it requires manual integration of siloed data sets. A collaborative solution is required in order to make measurement solutions more effective and easier to implement.

### **5.3 VAST 4. x and the Deprecation of VPAID**

A central hurdle for the holistic measurability of video advertising is the communication between player and ad server. In contrast to standard forms of advertising that are delivered via an adslot on the ad server, video advertising must be started via a player. At this point, the visibility measurement can fail due to the lack of a standard. In most countries, the VPAID standard has been used for visibility measurements since 2008. After 13 years and strong development in video advertising, however, VPAID no longer meets today's requirements.

In order to avoid disruptions and security risks for incorrect payouts and to improve the verification of video advertising material, the IAB Tech Lab has been promoting the use of the [VAST 4.x video standard](#) for several years. Included in this is the [Secure Interactive Media Interface Definition](#) (SIMID), which was introduced towards the end of 2020 by the Digital Video Technical Working Group to replace VPAID with a set of more focused standards and to provide a solution for buyers that want to bring in more creative interactive elements.

VAST 4.x adoption is growing to replace the older VAST and VPAID standards. In addition to the improved display of advertising and control over the video inventory, VAST 4.x offers the best prerequisites for the visibility measurements and, thanks to the ongoing development of the associated Open Measurement Software Development Kit (OM SDK), an increasingly simple and transparent verification of video advertising.

Based on OM SDK, a central component for the verification of in-app advertising with VAST 4.x is created. For the first time, advertisers receive a uniform in-app video measurement application for Android and iOS environments - including an interface for communication with measurement provider scripts. The new OM SDK supplements the in-app measurement with the measurement of all web video ads. For advertisers, this means: in order to fully check their video campaigns for all verification metrics, only a single day is now required for all platforms - regardless of whether desktop, mobile web, or mobile in-app. And: On this basis, all measures in video advertising can finally be measured uniformly and, not least, optimised much more consistently and efficiently. In terms of value, this is a real milestone for the industry.

## Section 6. Other Industry Changes and Challenges

### Alternatives to Engaging with Consumers

With less ability to rely on identifiers such as Apple's IDFA, advertisers will increasingly depend on the data they collect about their users and customers directly, without depending on ad networks. This type of data is often referred to as first-party data and it is usually connected to customer relationship management, meaning that it represents CRM data. [Survey data](#) from the US suggest that email addresses are most likely to replace third-party data. More recently this type of data is also often referred to as "[zero-party](#)" data. Not every business has access to this kind of data, however. Therefore, we can expect advertisers to start engaging with their users in different ways, even going as far as adapting their business model more around building direct relationships with their customers, meaning that more companies are likely to explore certain user benefits such as loyalty programmes, discounts or even loyalty rewards in order to collect better data ([emarketer - source 1](#), [source 2](#)).

Contextual targeting also offers a solution to audience targeting. As we move towards a post third-party cookie world, it provides one such alternative approach to reaching and engaging users online. Contextual targeting doesn't need to track any device in order to work, and when it works properly, it can be very effective. According to a survey conducted by Sapio Research in collaboration with DoubleVerify:

- 69% of consumers would be willing to view ads that were relevant to the content they were viewing
- 67% of consumers would be willing to view ads from a new brand as long as they were relevant to the content they were viewing
- 44% of consumers have tried a new brand because they served a relevant ad to the content they were viewing

As we move towards a privacy-first world, the industry will continue to explore and experiment with alternate solutions, in order to reach and engage with users in the digital world.

## **Estimation and More Reliance on Conversion Modeling**

More data being unobservable does not mean that advertisers are unable to determine the effectiveness of their campaigns. It just means that estimation techniques will be of more importance. Using samples in order to estimate total viewership or audience sizes is nothing new. It is basically how relevant metrics were [calculated for linear TV](#) since long before the internet even existed.

What is new is the amount of data that can be collected as well as the unbelievable high computing power that is accessible through cloud solutions. These trends allow for much more sophisticated data modelling techniques compared to the era of linear TV.

Examples of players in the field who are adopting Machine Learning in order to model unobservable conversions include [Google](#), [Meta](#), and [Nielsen](#).

Here we need to encourage and educate publishers on the importance of implementing the OM SDK and updating it to the latest version, as mentioned in section 5 of this guide above, in order to ensure a uniform approach to measurement and a more consistent and efficient optimisation of campaigns overall.

## Section 7. Succeeding in the Post-IDFA Era

Apple's iOS 14.5 update sent advertisers and other platforms scrambling to figure out how to track users who block the Apple ID for Advertisers (IDFA).

The new features will have an impact on several areas of in-app monetisation including ad serving (e.g. frequency capping), addressability (e.g. third-party data targeting), and attribution (e.g. app install campaign tracking). Many targeting types (including retargeting to users based on device-level targeting) will no longer work for users that have opted out of sharing their IDFA.

According to [PubMatic's data](#), however, these choices around IDFA could well be a boon that delivers higher value audiences for advertisers. Over the past few months, PubMatic assessed the impact of the IDFA policy changes by studying some 1 trillion daily programmatic bids, including ancillary information such as impressions, revenue, and eCPM data.

Were buyers rushing to shift programmatic advertising to Android devices because of new IDFA restrictions? The numbers say yes. From May to July, the share of mobile app spending on Android rose from 54% to 63%, while ad spend share on iOS fell from 46% to 37%.

But the road to privacy protection is still changing.

The initial impact of the iOS 14.5 roll-out lowered IDFA presence in ad requests by 30 percentage points. As the adoption of 14.5 iOS has grown, making restrictions more widespread, roughly two-fifths of these same users embraced opt-in ad requests, and is continuing to expand. Sure, iPhone customers want their data protected; they are also open to receiving ads under app-tracking restrictions when they can receive some sort of return for watching ads.

iOS 14.5+ adoption is growing

SHARE OF TOTAL IOS APP AD REQUESTS BY OS VERSION



Source PubMatic

Apps themselves contain behavioural and contextual data on audiences and individuals, and the opt-in choice sustains accurate targeting.

Every advertiser knows that consumers who grant permission to be served ads are more valuable than those who accept volumes of unfettered messages. Opt-in App Store customers are even more so because iOS users tend to spend higher in verticals that correspond to their app usage and interests.

Just because App Store users must now grant permission to be tracked, doesn't mean there aren't a myriad of ways for advertisers to reach and engage with them. It is, therefore, critical to understand which consumers want to engage and how.

For example, users who download commerce, business, and gaming apps from the App Store are more likely to opt-in to receiving ads, according to PubMatic's analysis. These audiences want to know about new products, the latest news, and game titles, and so they will allow targeting. Conversely, users of personal finance apps on iPhone tend to want to keep that information private if they are using apps to manage budgets, investments and track credit scores.

**COMMERCE, BUSINESS AND GAME USERS MORE LIKELY TO OPT IN**

**APP CATEGORIES WITH THE HIGHEST IDFA PRESENCE IN IOS 14.5+\***

	Shopping	79%
	Automotive	79%
	Business	79%
	Games	75%
	Health & Fitness	74%

**APP CATEGORIES WITH THE LOWEST IDFA PRESENCE IN IOS 14.5+\***

	Education	19%
	Food & Drink	26%
	Personal Finance	45%
	Community	51%
	Technology & Computing	51%

\*Categories are based on a 4-week sample dataset from June 27 to July 24, 2021. Games are based on a sample dataset on July 26, 2021 for the top 500 games.

Source: PubMatic

Making optimal use of information obtained from users who opt-in to tracking is a no brainer. The window for capitalising on these targeted opportunities from low-cost, high-value impressions won't stay open indefinitely.

Advertisers, their agencies, and publishing partners soon will get smarter about new approaches to mobile engagement.

In the short-term, advertisers will need to update their measurement SDK to the latest version to ensure proper tracking on iOS devices. Going forward, we'll see more industry collaboration like the recently announced [Post-IDFA Alliance](#).

This shift essentially makes audience targeting less reliable for marketers who are now turning to first-party contextual targeting to ensure their campaigns are impactful. Advertisers will go beyond audience data and build new contextual strategies that reach the right audience efficiently and effectively in mobile environments.

## Adapting to the Post-IDFA Era

In order to succeed in a post IDFA era, business models will have to adapt, measurement strategies will need to be more complete, and digital marketers' skill sets will have to become more diverse. Companies that are able to directly engage with their user base will have an edge since they are in a [good position to collect first or zero-party data](#) directly. Measurement strategies that rely on multiple sources and metrics will improve decision-making. And marketing staff who are well versed in statistics, KPI definition, and even data modeling will be in a position to better decipher ad networks conversion modeling techniques, as well as data platforms collection techniques.

Some companies naturally collect first-party data, for example through subscription services, newsletters, or online checkout systems, meaning that there is a vast pool of data ready to be used. For others, this is not as straightforward. Well-known brands have already started to adapt their techniques and strategies to engage more directly with their customers. Some successful examples include Nike, PepsiCo, and Walmart. [Nike](#) has been growing their direct-to-consumer business significantly during the past years. This combined with an advanced data strategy enables them to [connect with their consumers in more meaningful ways](#). PepsiCo includes loyalty programmes into their strategy in order to build direct relationships with their customers. This enables them to better understand their users and engage with them in a more personalised manner. This customer-centric, data-led approach has increased media efficiency and, for some campaigns, resulted in 3X ROI improvement. Similarly, Walmart launched Walmart+ to give benefits to loyal shoppers, which contributed to strong growth in online sales. Loyalty programmes and direct-to-consumer sales are just two out of many ways in which companies can [collect better first-party data](#). Starting to invest in first-party data can be as simple as offering an email newsletter. The predicted success of different strategies in this field will depend not only on the business model or strength of one's brand, but it will also depend on understanding the own user base. Different generations value incentives differently as [eMarketer reports](#).

Leveraging first-party data will not be enough to close measurement and targeting gaps though. This also requires a more complete measurement strategy and data modelling.

A more complete measurement strategy focuses on incorporating different KPIs and data sources. Successful marketers thereby leverage proxy events such as micro-conversions to fill gaps and improve decision-making. Events that can be tied directly to an ad offer fast feedback and are often more likely to be observable. Viewability is a metric that can be observed immediately while the impression is being served. After recording a `first_open` event using Apple's SKAdNetwork, app developers are allowed to use a rolling 24-hour window to [update conversion values](#). This makes it increasingly important to understand how users engage with an app during the first 24 hours of first opening it.

Marketers need to ask themselves questions such as:

- Do we understand how proxy events correlate with our user's lifetime value?
- Which micro-conversions are good at predicting purchases or churn?

Defining a measurement or conversion funnel should therefore be part of every business's marketing measurement. Tools like Google Analytics for Firebase can help to better analyse these types of [user funnels](#).

### **Conversion Modelling and Viewability**

Machine learning is not only the buzzword of the decade, it also helps to close gaps in measurement and improve overall targeting. One such method is [conversion modelling](#), the use of machine learning to assess the impact of marketing efforts when a subset of conversions can't be directly linked to ad interactions. It helps create a more complete and accurate picture of your ads' [performance](#). Generally speaking, modeling techniques do one of two things, depending on what kind of data is available. If data is available on aggregate only, conversion modeling can help to break this data down to more granular levels, making it more actionable. If data is only available for a sample of users, it can be used in order to estimate conversions for the overall population of users.

Targeting can also be fueled by machine learning in multiple ways. This includes creating forward-looking [audiences](#) that try to predict desired user behaviour.

Both, conversion modeling and viewability, offer great ways to look at performance at a more granular level. Advertisers will have an advantage if they can understand how such metrics correlate for example with aggregate sales. Understanding how viewability ties back to aggregate sales would allow advertisers to rely more heavily on a metric that offers direct feedback for the effectiveness of placements and assets.

Previous sections discussed the increased importance of and reliance on first-party data, data platforms (e.g. APIs such as SKAdNetwork), aggregated data, conversion modelling, and proxy events. This means that marketing teams will have to adapt to an increasingly complex environment.

Every data source will differ in the way data is collected, aggregated, modified and cleaned. Different data sources focus on solving different challenges. While self attributing networks will mostly try to answer which creatives drive most conversions, viewability helps to prevent ad fraud on top of providing information on how users engage directly with an ad.

As a result, marketing teams need to be well versed in analytics, data collection, data modeling, and statistics so that they are in a position to succeed in this more complex world. Viewability, as a metric, will help them to make better comparisons between different ad networks, however, focusing on viewability alone will not suffice.

## Section 8. The In-App Opportunity for Brands

### Engaging Ad Experiences

We hear a lot of misconceptions around in-app marketing, especially around delivering experiences that are easy or intuitive for audiences. In the past, app advertising would focus solely on driving installs; but now, with the use of matching creatives with deep links, savvy advertisers are driving customers to specific places inside their app — creating an effortless route to purchase. The app ecosystem especially has proven how new companies who understand the advantages of mobile can disrupt existing verticals — from games, to finance, to retail, and beyond. Using the right ad format is vital for engaging with the target audience. Rich media banners are commonly used by media buyers in in-app environments, but interest in in-app video is on the rise. Media buyers need to ensure they use a range of ad formats and take advantage of this engaging media with a variety of different creative assets.

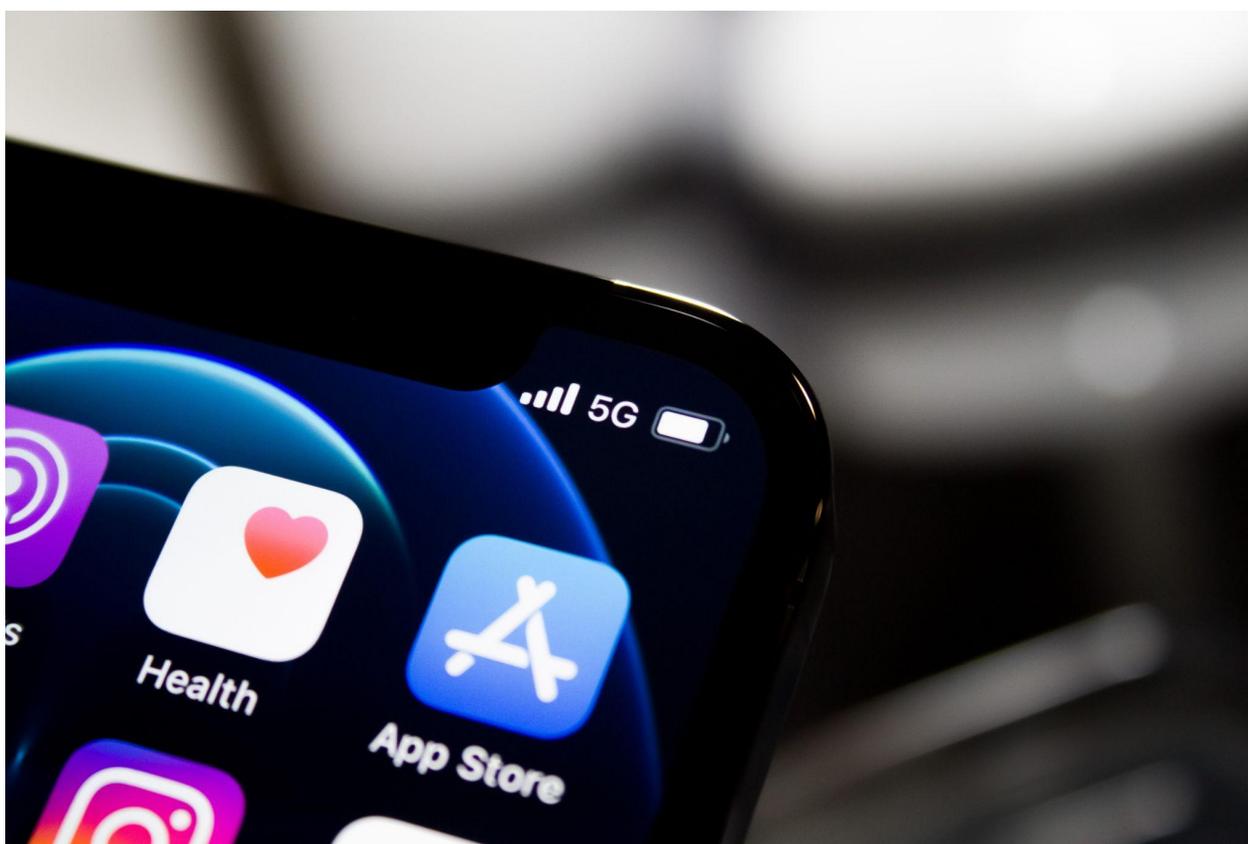
### The 5G Era

Mobile in-app advertising is about to get a huge boost from advances with 5G. [By 2023, global 5G smartphone shipments will reach over 424 million](#) (compared to 73 million in 2021). 5G phones are expected to represent a major performance leap for user experience on mobile, particularly with high-definition media and interactive technologies, such as mobile gaming and mobile video streaming spaces. These developments present a whole host of new opportunities for advertisers, giving them greater room for creativity, and opening the door for them to deliver high-quality interactive ads on mobile devices.

### Quality

Traffic quality concerns have alarmed some media buyers, causing them to take the white-listing approach of largely accessing mobile inventories via Private Marketplace (PMP) deals. With much COVID-related content having been hit by keyword blocking, publishers, especially news outlets, have felt the impact of brand safety filters on their revenues, and saw lower CPMs. Unlike open auctions, PMP trading offers more control due to its exclusivity and, as such, inventory here is considered premium.

PMPs provide greater transparency and control for all parties involved, providing a clear look at the inventory being bought, what CPM needs to be paid, and the types of creatives being displayed. It also gives advertisers access to premium inventories before they are made available for open auctions. Lastly, PMPs are a way to lock up inventory that's absolutely working for buyers, to bring in first- or second-party data sets that can't be released into the open markets, and to try and avoid some of the ad quality issues that often curb spend in open markets (such as fraud and brand safety). In a PMP environment, deals can be created from a curated list of publishers that have deployed the OM SDK across EMEA. This tactic allows the brand to buy with confidence across a quality, measurable inventory pool using their verification vendor of choice.



## Section 9. The In-App Opportunity for Publishers

In the era of 3G with small-screen phones and before the game-changer that was HTML5 - enabling responsive web pages - consuming content on the web was a poor experience for audiences and fraught with challenges for publishers.

Mobile apps represented an exciting new channel for publishers to expand their footprint and solve a specific challenge. Mobile apps meant reaching audiences in a more controlled way with a product designed specifically with a mobile device and user in mind.

### **A Highly Desirable Audience in a Premium Environment**

As opposed to more casual, promiscuous browsing on the web, mobile apps require users to actively choose to install the product on their device - a true signal of intent to engage with a publisher brand.

Let's look at some factors that contribute to making in-app a highly desirable and differentiated product in the publisher mix:

- As this audience is highly comprised of heavy smartphone users they tend to trend younger and more affluent than traditional web users
- Publishers often see higher levels of key engagement metrics in-app (i.e. bounce rate, pages per session, time spent on page, etc.)
- Due to a lack of standardisation across apps, ad product opportunities tend to be more limited to standard ad units (typically MPUs and Small Banners) with fewer opportunities for non-standard and high-impact formats. This leads to a cleaner more premium environment and experience for users

## **Complexity and Technical Challenges**

Despite the opportunity that in-app offers to advertisers, publishers do face some technical challenges and additional complexity which need to be considered:

- The display ad ecosystem was built for web pages with publishers generally following a similar page layout. Integrating ad technology into apps is more complicated (for example there is no <HEAD> tag for header bidding) and requires bespoke tech and work.
- Often integrations and technical updates need to be done at the developer level which can require new releases of the app to be released.
- Gathering user data becomes harder and more restricted since the release of IOS14.5 requiring user permission through the App Tracking Transparency Framework.

## Section 10. In-App Advertising and CTV

Connected TV (CTV) has skyrocketed in recent years. Where the worlds of TV and digital have been gradually merging over time, more and more consumers have been tuning out of traditional Linear TV options and moving into online streaming, paving the way for the CTV phenomenon. This includes CTV apps on our smart television screens, tablets, and mobile devices, including apps like Netflix and Hulu. CTV presents a huge opportunity for advertisers looking to reach engaged audiences in an in-app environment. But to reach its full potential there are still many challenges to overcome.

### CTV in Europe

After a period of rapid growth, CTV is now officially the consumers' preferred streaming device and IAS's recent [study](#) found that YouTube tops the list of ad-supported streaming services that people watch on CTV. This comes as no surprise when more than 500 hours of content are uploaded every minute on YouTube.

The biggest drivers of CTV adoption are audience migration and consumer viewing habits, alongside its ability to provide advertisers with enhanced targeting and richer data insights.

However, with a number of options - including direct-to-publisher, multi-channel platforms, and aggregator platforms - media buying across CTV can also become complex.

CTV in Europe is also a unique challenge. While US publishers have prioritised inserting digital ads into CTV and even linear TV feeds and supporting digital measurement, traditional EMEA publishers have yet to invest in digitising their CTV/linear TV ad environments. At this point, digital CTV advertising in EMEA is heavily focused on digital/US entrants such as Roku and YouTube.

As traditional EMEA publishers do invest in supporting digital ads and measurement in CTV and linear TV, verification partners have made it known that they can provide reliable measurement of inventory quality to meet digital advertiser's expectations. For example, DoubleVerify has worked with broadcast partners in Australia to implement measurement tags into their CTV/linear TV feeds, which allows the verification provider to measure inventory quality and reassure advertisers of their media investments.

Looking to leading markets such as the US, where programmatic CTV ad spend is due to top [\\$6 billion in 2021](#), it's clear there is a huge potential for Europe to follow suit. Industry standards will be crucial to future-proof video inventory and swift adaptation should be an urgent priority for broadcasters. To begin preparing for their programmatic transition, broadcasters should follow three core steps:

1. Tech set up: Lay the necessary foundations for quick and efficient deals by ensuring verification calls from tags are correctly executed, and all inventory is trackable with the open measurement software development kit.
2. Buyer connection: Simple as it sounds, communicating upgraded capacity to buyers is paramount. Aside from building awareness of available programmatic options, it's essential to set the tone for further engagement to understand and meet advertisers' needs, such as which other data points or standard elements are most useful.
3. Desktop fine-tuning: From a wider digital video standpoint, media owners must offer support for open measurement in desktop browsers to facilitate interactive ads. It's also a wise step for broadcasters to plan how they will enable in-app, page-level brand safety by coordinating testing with a verification provider.

The potential rewards of CTV and digital video as a means of reaching highly diverse and engaged audiences can no longer be ignored. Fortunately, there are simple steps that can be taken now to prepare for the fast-approaching programmatic wave. For broadcasters, universal standards will be vital to tackle their lack of coordination with sellers, particularly when it comes to serving and measuring video ads. Only then will they be able to effectively monetise their work with advertisers and transition to reap the programmatic rewards.

### **The Measurement Challenge**

What makes CTV advertising more challenging to advertisers is that it's difficult to measure performance. Digital advertisers are used to having device identifiers and cookies to target users or attribute conversions towards specific ads. TV advertisers are used to having demographic reach data, which is also not generally available. On top of that, most publishers and platforms haven't released video/program-level data to advertisers and vendors to date to offer contextualisation measurement.

It goes without saying that transparency in CTV is an issue, but one that's being challenged by players in the space in order to create a more trustworthy ecosystem. For instance, building effective brand suitability on CTV is going to depend on verification vendors accessing program-level data.

There are steps being made to provide the kind of measurement advertisers require in order to justify more CTV spend. For TV-like reach and demographics, platforms and publishers are increasingly working with measurement companies – e.g. Roku partnering with Nielsen to offer an analog to "TV Ratings." Sellers are also working towards utilising more of their first-party data, which offers the potential to create more transparency into the content as it relates to contextualisation. Finally, attention metrics are expanding into CTV environments, which enables advertisers to deeply measure how engaged their audience is with their ads, providing necessary insights to optimise the type of media buys they'll make on the platform.

For more information on CTV measurement capabilities, download the IAB Europe Guide to CTV Targeting and Measurement [here](#).

## CTV Fraud

Increased fragmentation across the different CTV platforms and devices, plus a lack of industry standards for measurement, and the draw of high CPMs have made CTV a ripe opportunity for ad fraud. In many cases, fraudsters have found an entry point via the Server-Side Ad Insertion (SSAI). SSAI is responsible for stitching ads within the content stream to make the viewing experience seamless. However, this technique can also make it more challenging to identify ad fraud in CTV.

This fraud is the reason the majority of ad buys in CTV are still being transacted via private marketplace (PMP) deals and not within the open exchange – or open marketplace (OMP), as it is more commonly referred to – because advertisers think that the open marketplace is murky at best and fraudulent at worst.

As CTV becomes even more mainstream this year, brands need to ensure return on their investments. For marketers, this means considering the right technology and partner that can help them to mitigate the risks of ad fraud in CTV environments.

Brands can think of this as a two-part strategy:

1. Contextual targeting presents additional opportunities in CTV to engage the right audiences. Consumers prefer contextually relevant ads near premium content when consuming content on CTV. Integral Ad Science conducted [research](#) to dig deeper into consumer viewing habits and found that contextual targeting helps to drive ad completion, with over half (54%) of UK consumers willing to view an ad to completion if it's relevant to the content that they are watching.
2. Finally, as the CTV ad market grows, collaboration between marketers, publishers, CTV device-makers and independent measurement providers will be critical to accountability, measurability and strong results for campaigns. Many publishers have already been working to support ad verification for their CTV inventory to make sure their inventory is free from invalid traffic (IVT), Brand Safe and viewable. Marketers should encourage CTV publishers and platforms to support third-party measurement capabilities to ensure their campaigns are hitting the mark.

With the growth of programmatic buying in CTV, advertisers have an opportunity to capitalise on new inventory alongside their wider programmatic buys to maximise the CTV opportunity.

IAB Europe has produced a number of Guides on CTV to help buyers navigate the landscape and take advantage of the opportunity in Europe, which you can find below:

- [Guide to Connected TV](#)
- [Guide to the Programmatic CTV Opportunity in Europe](#)
- [Guide to Brand Safety in CTV](#)
- [Guide to CTV Targeting and Measurement](#)



## Summary

In-App Advertising is an exciting growth area and provides many opportunities for advertisers today. But as with any new or emerging channel or format, there are still barriers to overcome, including fundamental industry changes that are affecting digital advertising - and the in-app advertising market in particular - such as Apple's IDFA.

As we move into 2022 and beyond, consumer privacy will play a more prominent role in ad targeting that is based on user data collection, and advertisers will continue to look for more control; buyers worldwide are already utilising PMPs to help them protect their branding and avoid ad fraud and this will continue to form a fundamental part of the planning process.

On the other side, online publishers with their own mobile apps will be able to make use of first-party data, leveraging it to build audiences, and media buyers can really start to take advantage of the rich data points that mobile inventories can offer in terms of targeting, ROI, and customer experiences. Video ads will also continue to lead in this space.

The contributors of this Guide have developed a concise guide for advertisers and publishers to understand the in-app opportunity, the key barriers that need to be addressed, and how to tap into its potential. IAB Europe will continue to work with its members to provide additional insight into the in-app advertising landscape and to work collaboratively to seize the opportunities that it brings.



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