

**Q1**  
2019

**QUARTERLY  
MOBILE INDEX**



**PubMatic's Quarterly Mobile Index (QMI) report was created to provide both publishers and advertisers with key insights into the mobile advertising industry.**

#### **ABOUT PUBMATIC'S QUARTERLY MOBILE INDEX**

By analyzing over 13 trillion advertiser bids flowing each month through PubMatic's platform, we can observe real-time developments in the mobile space that may allude to broader digital industry trends. We can then compare this information to other published data to further understand changes in the mobile landscape. At PubMatic, we are committed to providing best-in-class mobile tools and services, and believe that information sharing is crucial in aligning the digital industry towards best practices and, ultimately, growth in mobile advertising.

Note that directional data might not be comparable with prior reports.

# IN Q1 2019, THE FOLLOWING KEY TRENDS EMERGED

KEY TREND

01

Thanks to video, mobile advertising spending growth is accelerating

KEY TREND

02

Marketers flatten the mobile waterfall and move into in-app header bidding

KEY TREND

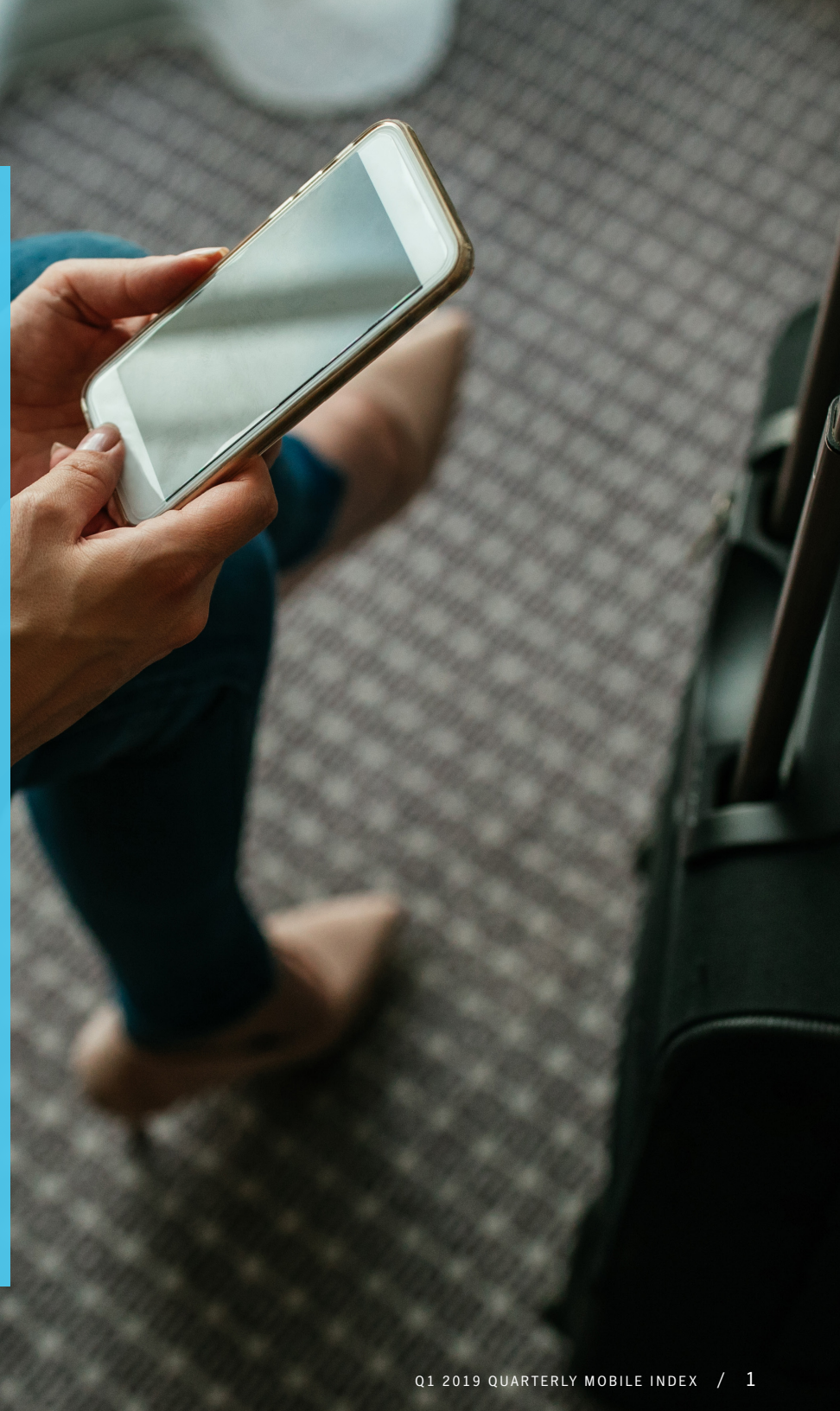
03

Advertisers are gravitating towards private marketplaces for Android inventory

KEY TREND

04

APAC leads the surge in global mobile programmatic media buying





# WHAT DOES THIS MEAN FOR PUBLISHERS AND ADVERTISERS?

## 1

### **2019 will mark another “year of mobile” milestone and serve as an inflection point for future growth.**

For the first time, mobile devices will overtake televisions in the amount of time spent in 2019.<sup>1</sup> It is no surprise that video content consumption is driving this behavioral shift in devices. As a result, marketers are expected to spend more than \$29 billion globally this year on mobile video advertisements. Industry experts forecast that this amount will grow roughly 23% annually until 2023.<sup>2</sup> It is critical for publishers to ensure quality inventory regulation for video ads to maintain their market share, as well as, entice incremental advertising dollars. For advertisers raising brand awareness and driving sales, it is important to note that mobile video ads are not a one-size-fits-all solution despite the swift and sizable swing in consumer trends. Advertisers need to tailor campaigns to the desired level of ad engagement and the target market dynamic.

## 2

### **Mobile in-app header bidding still needs time to marinate and grow.**

Mobile is undergoing an evolutionary transformation towards greater transparency and returns which is a win-win for publishers and advertisers. However, the lack of industry knowledge around the benefits of in-app header bidding creates an obstacle to its adoption. While many app publishers are experimenting with it for the first time, it is important to consider how this is inherently different from desktop header bidding in this “header-less” scenario, and how it will impact the implementation efforts on their development teams.

<sup>1</sup> “US Time Spent with Media 2018,” eMarketer, October 23, 2018

<sup>2</sup> “Cowen’s Inaugural Midyear Ad Buyer Survey—Ahead of The Curve Follow Up Series,” Cowen and Company, July 2018



## 3

### **Shore up safety practices as fraud rises.**

Global programmatic spending will reach \$84 billion this year, according to Zenith, with mobile leading the bulk of this investment.<sup>3</sup> eMarketer predicts that the majority of additional programmatic display dollars over the next year will go to private setups like PMPs.<sup>4</sup> While overall mobile volume is up across all programmatic strategies, PMP's provide some shelter from the sharp increase in fraudulent apps, and sophisticated invalid traffic (SIVT) impressions popping up in apps last year.<sup>5</sup> Advertisers and publishers alike need to be proactive in fighting against fraud and spoofed domains by implementing ads.txt and app-ads.txt initiatives, as well as consider protective measures with PMP ad placements.

## 4

### **There is a massive opportunity brewing in APAC.**

Many marketers around the world struggle to balance and transition their ad strategies from desktop to mobile, but their APAC peers are just growing programmatic knowledge in parallel with general digital advertising practices. Marketers need a mobile first strategy to follow consumer device usage, liberated from the confines of a desktop screen and related usage behavior. With 359 million new mobile users coming on over the next 5 years, there is a greater urgency to adopt automated ad buying strategies in APAC than other parts of the world.<sup>6</sup>

<sup>3</sup> "Programmatic Video and Mobile Grow Up," Magna, October 16, 2018

<sup>4</sup> "More than 80% of Digital Display Ads Will Be Bought Programmatically in 2018," eMarketer, April 9, 2018:

<sup>5</sup> "DoubleVerify Reports 159% Increase in Fraudulent Apps," MarTech Advisor, April 16, 2019

<sup>6</sup> "The Mobile Economy," GSMA, 2019





KEY TREND

01

## THANKS TO VIDEO, MOBILE AD SPEND GROWTH IS ACCELERATING

Video consumption is driving time spent with mobile devices, data usage and ad spending growth. In fact, mobile devices are expected to overtake desktop in digital video ad spending this year. With the promise of 5G technology at our heels, consumers, advertisers and publishers alike can look forward to reduced page latency, and more powerful, interactive ad content and experiences. Experts are dubbing 5G as a “game-changer” for the digital world, and operators around the world have already started flipping the switch from 4G.<sup>7</sup>

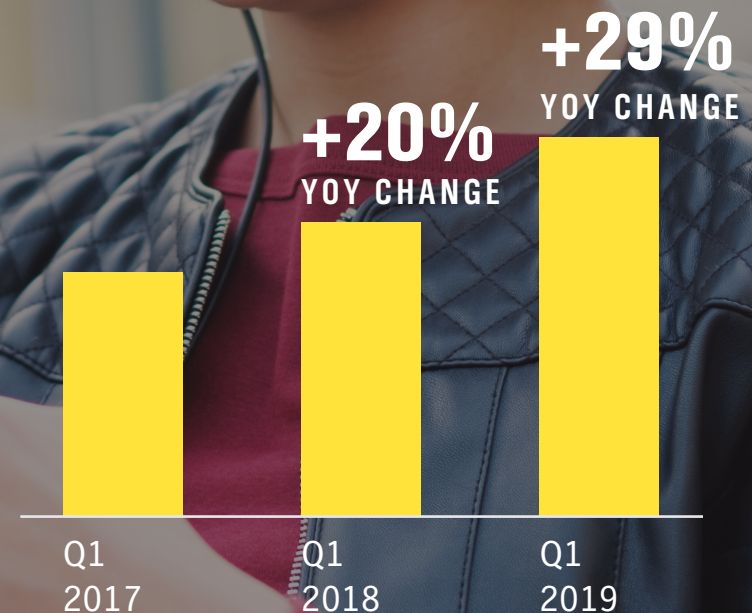
<sup>7</sup> “Superfast 5G promises to be a game-changer for humanity,” Financial Times, February 6, 2018



# MOBILE AD SPENDING ACCELERATED OVER LAST YEAR

Total mobile ad spending flowing through the PubMatic platform grew 29% year-over-year in Q1 2019, much faster than the 20% growth between Q1 2017 and Q1 2018. Mobile impression volume grew at an even faster rate (+35%) last quarter. As a result, we have seen mobile eCPMs decline as rates are stabilizing.

## MOBILE PLATFORM SPEND

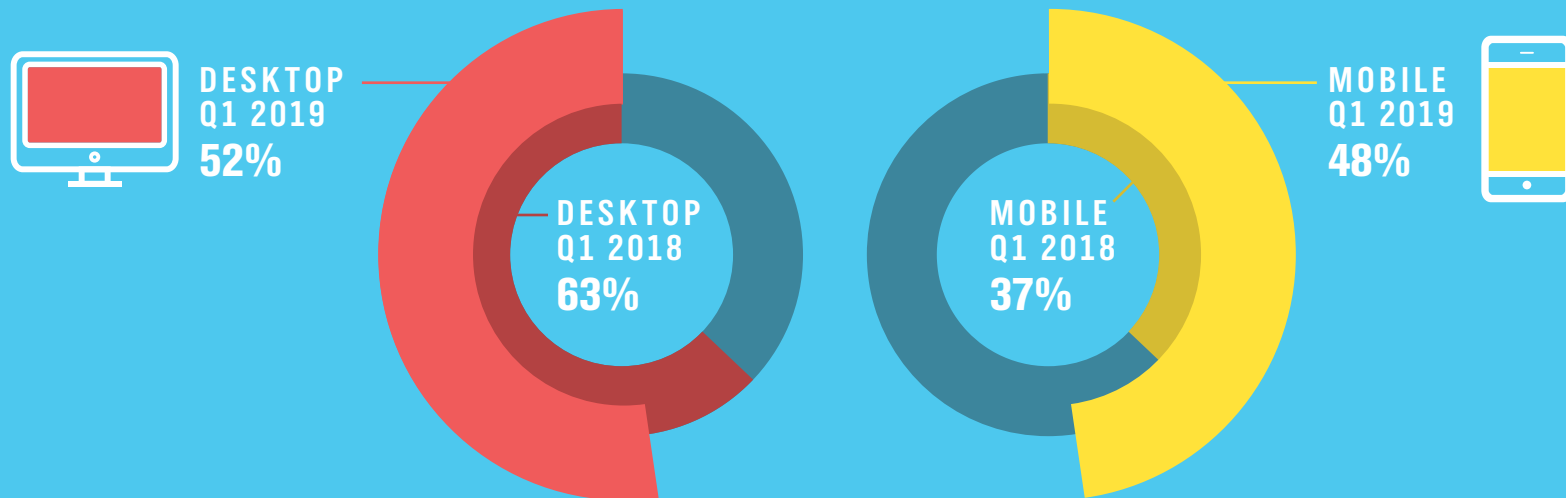




# VIDEO ADS REACH NEW MILESTONES WITH MOBILE

Nearly half of all video impressions served by PubMatic were through handheld devices in Q1 2019, up from about 4 in 10 last year. By the end of this year, we expect mobile devices to be the preferred platform for video ad placement. Following the uptick in impressions, the share of video ad dollars monetized on mobile devices grew at similar pace - from 31% in Q1 2018 to 43% in Q1 2019.

## SHARE OF VIDEO IMPRESSIONS, BY DEVICE

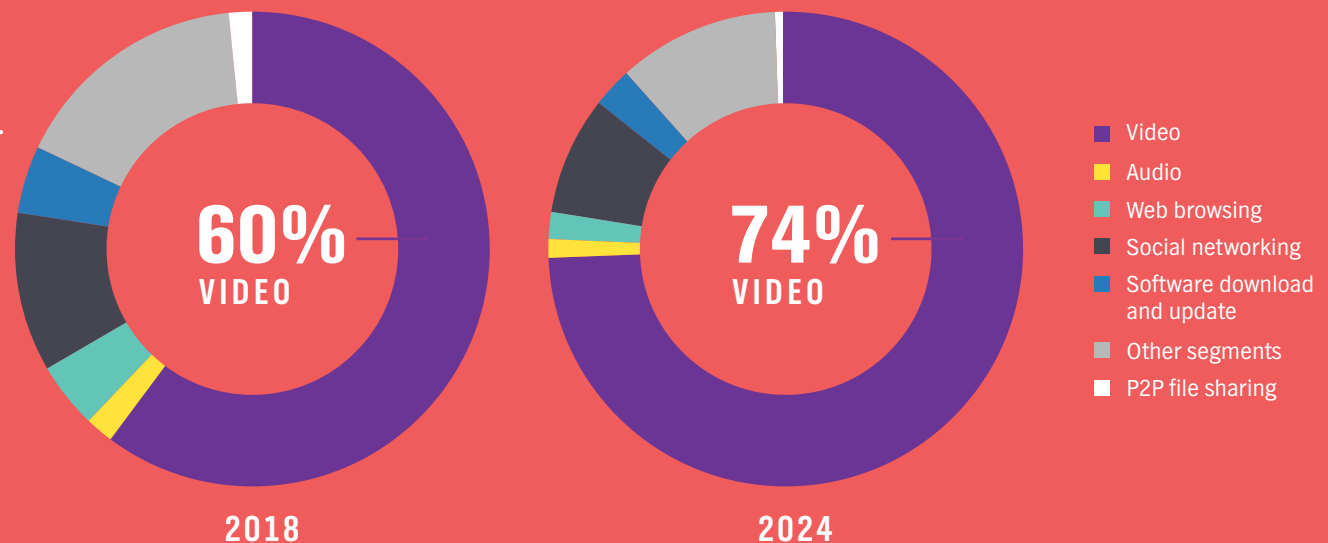




# 5G INTERNET SPEEDS WILL USHER IN A NEW WAVE OF MOBILE VIDEO ADS

Mobile devices account for two thirds of total digital video time spent today, and is expected to capture even more screen share.<sup>8</sup> According to Ericsson, video accounted for 60% of all worldwide mobile data traffic in 2018, and will rise to 74% by 2024.<sup>9</sup> The global race to launch 5G connection speeds will not only enable higher resolution, interactive mobile streaming experiences for consumers, but allow marketers to deliver more seamless, complex video ad experiences to mobile users.

MOBILE DATA TRAFFIC BY APPLICATION CATEGORY PER MONTH<sup>9</sup>



<sup>8</sup> "Online Video Forecasts 2018," Zenith, 2018

<sup>9</sup> "Ericsson Mobility Report," Ericsson, November 2018

A woman with dark hair, wearing a yellow ribbed sweater and large hoop earrings, is looking down at a smartphone in her hands. The background is blurred, showing what appears to be an indoor setting with warm lighting.

KEY TREND

# 02

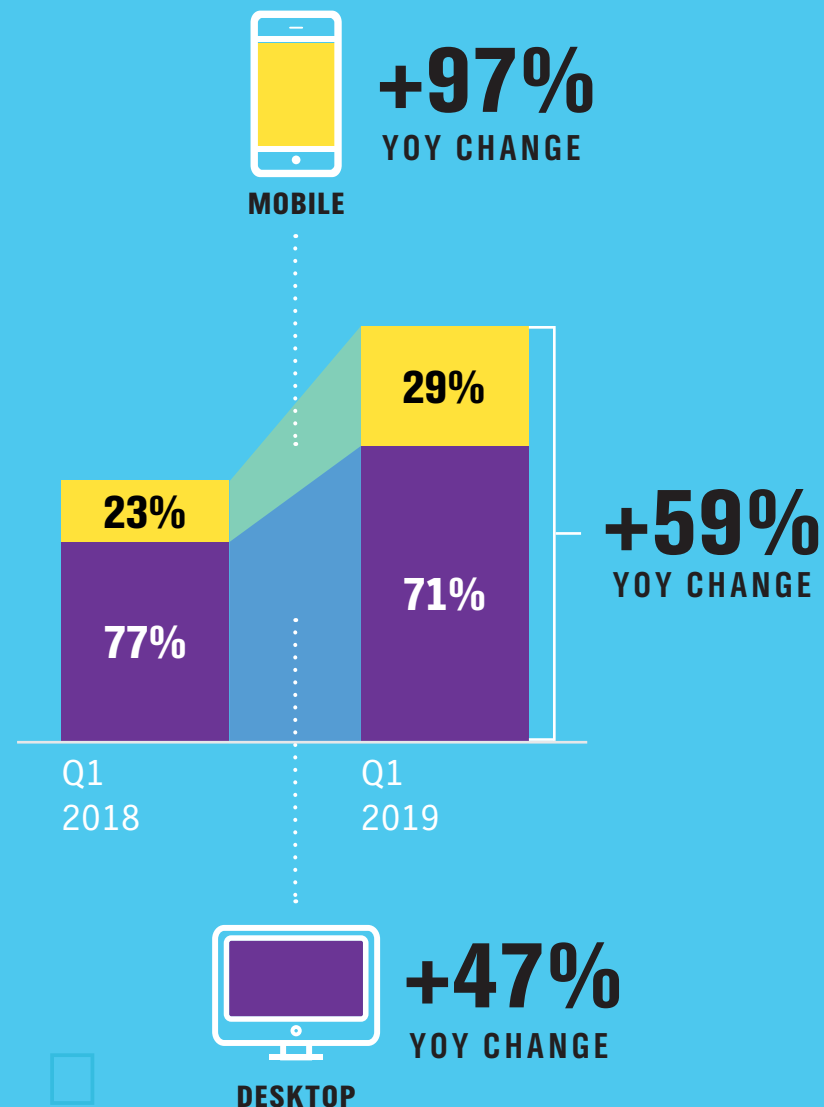
## PUBLISHERS CONTINUE TO FLATTEN THE MOBILE WATERFALL AND MOVE INTO IN-APP HEADER BIDDING

In-app header bidding garnered much of its popularity in 2018, but it is still in its early days. Publishers are moving fast in hopes of optimizing their ad monetization strategies, but the biggest obstacle to the shift is the moderate to poor understanding of the technology. A significant number of publishers are still using the waterfall methodology, but data indicates that the market is quickly changing.



# MOBILE DRIVING OVERALL HEADER BIDDING GAINS

PubMatic's mobile header bidding volume doubled over each of the past two years, driving much of the growth in total header bidding impression volume. Mobile devices account for almost a third of all header bidding impressions in Q1 2019, rising from less a quarter a year prior.



# MAJORITY OF PUBLISHERS LEAP INTO IN-APP HEADER BIDDING FOR THE FIRST TIME

Mobile web continues to play a starring role in mobile header bidding, but in-app is where we are seeing the strongest growth. Over a third of publishers were using in-app header bidding in 2018, and another third plan to adopt into this year.<sup>10</sup> New products, such as PubMatic's OpenBid, have streamlined the technology to deliver the efficiency and performance of unified auctions in a single SDK, which will further encourage adoption in-app header bidding.

## SHARE OF PUBLISHERS USING IN-APP HEADER BIDDING, 2018<sup>10</sup>



<sup>10</sup> "Header Bidding Research Report 2018," InMobi, December 2018



# APPS DRIVE MOBILE HEADER BIDDING GROWTH

This net new wave of publishers is driving mobile in-app header impression volume to increase 12-fold over the last year. Meanwhile, mobile web header bidding grew 80% in volume during the same time period. Publishers are improving their ad monetization strategies at a tremendous scale. Therefore, we expect in-app to continue outpacing both mobile web and desktop growth rates, and driving a greater mobile share in overall header bidding impressions.

MONETIZED HEADER  
BIDDING VOLUME YOY  
CHANGE, BY PLATFORM,  
Q1 2018 VS. Q1 2019  
.....





KEY TREND

03

## ADVERTISERS ARE GRAVITATING TOWARDS PRIVATE MARKETPLACES FOR ANDROID INVENTORY

The mobile app market saw higher invalid traffic (IVT) rates in 2017 and 2018, calling for a concerted industry-wide effort to reduce fraud.<sup>11</sup> Following the heels of ads.txt for desktop websites, which reduced IVT by 23%, IAB released an authorized sellers list for apps in March 2019, called app-ads.txt.<sup>12</sup> Meanwhile, marketers found tactics to protect their branding and from further pilfering through PMP ad placements.

<sup>11</sup> "Mobile Ad Fraud Is Surging as Scammers Get Smarter, According to New Report," AdWeek, May 24, 2018

<sup>12</sup> "Ad Fraud Trends Report Update, Q4 2018," Pivalate, March 2019








# MARKETERS SHIFTED ANDROID INVENTORY TO IN-APP PMPS

Overall spend for Android apps is down 17% year-over-year, while iOS is up 68%. This reflects the market's intrepidation after a string of ad fraud schemes targeting GooglePlay apps surfaced last year.<sup>13</sup> This spurred overall in-app PMP to rise 51% year-over-year. Android in-app PMP impression volume is up 58% while the open market is down 16% year-over-year.<sup>14</sup> While iOS devices are not fraud-free, their invalid traffic rates are significantly lower than Android devices. Marketers are less concerned about iOS open market buys than with Android ads. PubMatic's iOS in-app PMP usage is up 31% while the open market is up 92%.

IN-APP IMPRESSION VOLUME YOY CHANGE,  
BY PLATFORM, Q1 2018 VS. Q1 2019

	OpenRTB	PMP
 IN-APP TOTAL	<b>+8%</b>	<b>+51%</b>
 ANDROID	<b>-16%</b>	<b>+58%</b>
 IOS	<b>+92%</b>	<b>+31%</b>

<sup>13</sup> "Apps Installed On Millions Of Android Phones Tracked User Behavior To Execute A Multimillion-Dollar Ad Fraud Scheme," BuzzFeed News, October 23, 2018

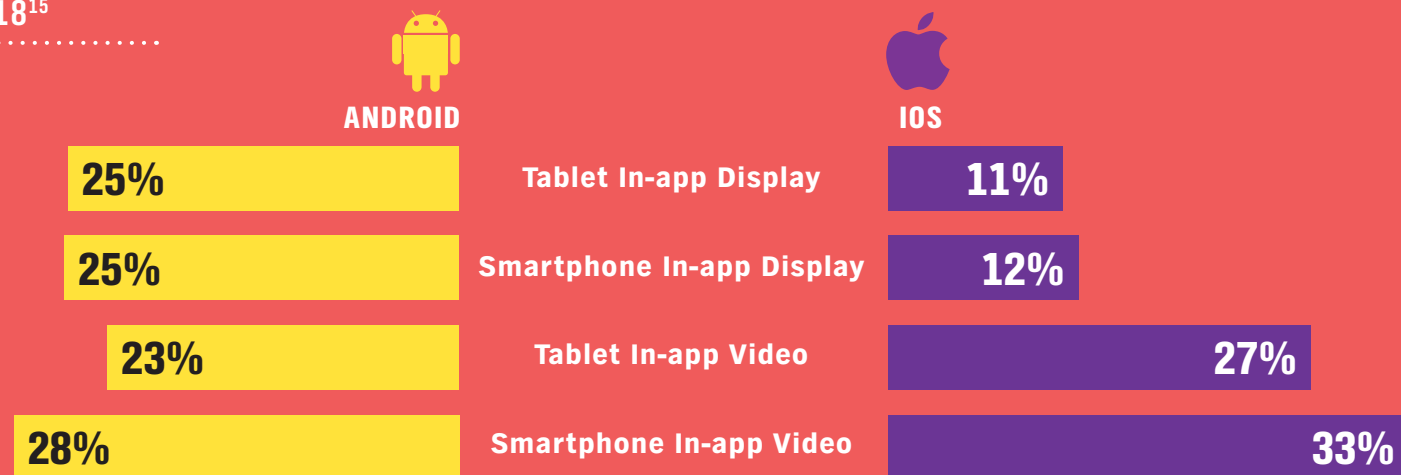
<sup>14</sup> "The Mixpanel mobile study: What the world's phone usage looks like in 2018," Mixpanel, August 16, 2018



# IN-APP VIDEO ADS SEE HIGHER IVT RATES THAN DISPLAY

While iOS apps are generally considered safer, video IVT rates are actually higher on iOS devices than on Android. Video ads on iOS have invalid traffic rates 2x-3x higher than display ads.<sup>15</sup> This is important for advertisers as video doubled in volume over last year and is significantly outpacing the growth of mobile display.

## GLOBAL PROGRAMMATIC IN-APP INVALID TRAFFIC RATES, Q4 2018<sup>15</sup>



<sup>15</sup> "Ad Fraud Trends Report Update, Q4 2018," Pixalate. March 2019



KEY TREND

04

## APAC LEADS THE SURGE IN GLOBAL MOBILE PROGRAMMATIC MEDIA BUYING

While programmatic is an embedded advertising principle in parts of North America and Europe, general industry understanding and acceptance is still lacking in the Asia-Pacific region. The fragmented ad tech market is further complicated by sub-regional industry misconceptions and market needs to propel a consistent programmatic roll out. However, Asia-Pacific advertisers and agencies are starting to see the benefits in targeting mobile-first consumers through automated media buying.<sup>16</sup>

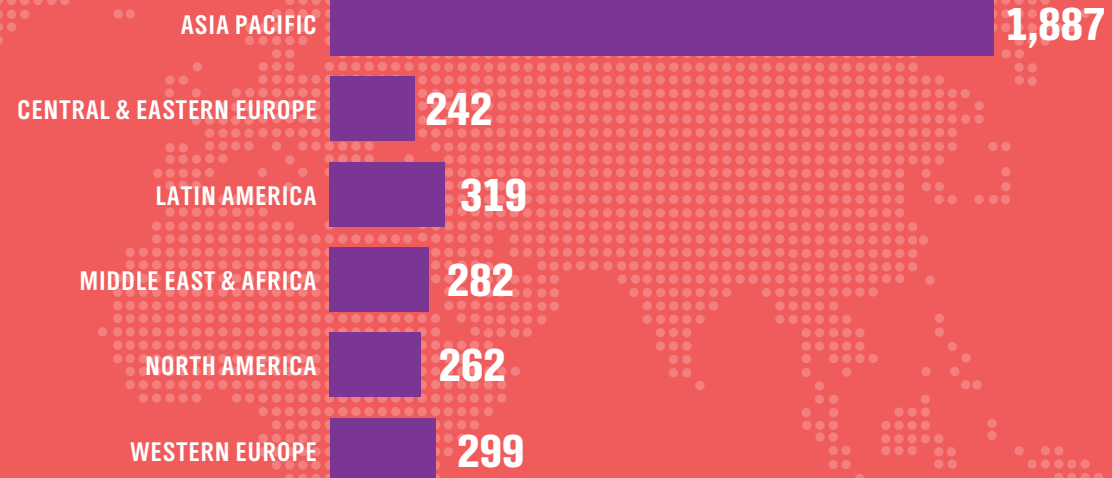
<sup>16</sup> "The Rise of Programmatic Guaranteed Advertising in Asia-Pacific," BCG, February 7, 2018



# THE RISE IN MOBILE CONNECTIVITY AND ADVANCED MOBILE DEVICES

The APAC programmatic ad market is still lagging the rest of the globe—7% of its current digital advertising dollars flow through programmatic channels compared to 11% and 10% in the US and worldwide, respectively.<sup>17</sup> However, its recent dramatic uptake in mobile ad volume is linked to the rise in smartphone sophistication and an urgency to reach mobile-first customers, where a smartphone is the chief means of internet access for many users.<sup>18</sup> Therefore, time spent online is much more concentrated on mobile handsets than other parts of the world.<sup>19</sup>

## MOBILE PHONE INTERNET USERS, 2019 (MILLIONS)<sup>20</sup>



<sup>17</sup> "Programmatic Marketing Forecast," Zenith, Fall 2018; "Digital Ad Spending 2019," eMarketer, March 28, 2019

<sup>18</sup> "The Global Mobile Report," ComScore, September 12, 2017

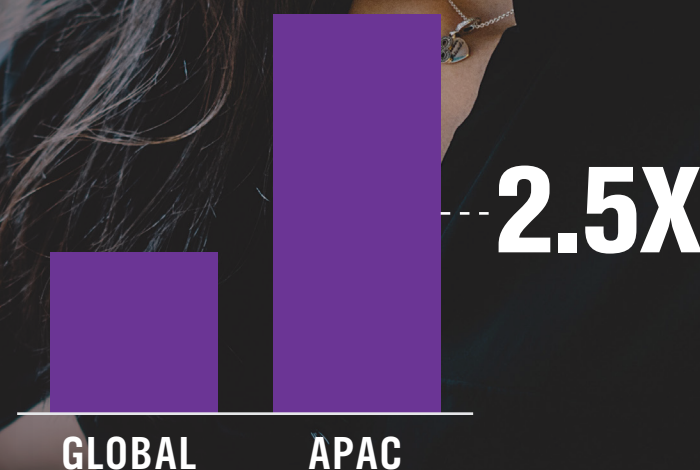
<sup>19</sup> "The State of Mobile in 2019—Spotlight on APAC," App Annie, February 2019

<sup>20</sup> "Mobile Phone Internet Users, by Country," eMarketer, April 2019

# APAC ADVERTISERS LEVERAGE PROGRAMMATIC IN-APP STRATEGIES

The incredible rush in connectivity and app usage is causing some advertisers to leapfrog basic digital advertising altogether in favor of programmatic methods to better reach, and target customers. Not surprisingly, APAC advertisers' foray into programmatic media spending is much more weighted in mobile apps, and it continues to outpace mobile web and desktop growth. In-app ads tripled in platform spending and impressions over last year, driving overall regional growth in mobile programmatic ads.

MOBILE IN-APP IMPRESSION  
GROWTH, INDEXED





## **QMI Methodology**

PubMatic's yield and data analytics team analyzes over 13 trillion advertiser bids on a monthly basis, utilizing the company's best-in-class analytics capabilities. The Q1 2019 QMI incorporates impressions, revenue and eCPM data from these reports to provide a high-level analysis of key trends within the mobile advertising industry. Analysis is based on PubMatic-sourced data except as noted. Percentages in some figures may not sum to 100% due to rounding. "Monetized impressions" or "paid impressions" are defined as impressions that were sold through the PubMatic platform, and "eCPM" is defined as the cost per one thousand impressions.

**Disclaimer:** This QMI may include inaccuracies or typographical errors, and is based on operational data that has not been audited or reviewed by a third party. It may contain forward-looking statements about future results and other events that have not yet occurred. Actual results may differ materially from PubMatic's expressed expectations due to future risks and uncertainties, and past performance or trends are no guarantee of future results. PubMatic does not intend to update the information contained in this QMI if any information or statement contained herein later turns out to be inaccurate.



## About PubMatic

PubMatic is a digital advertising technology company for premium content creators. The PubMatic platform empowers independent app developers and publishers to control and maximize their digital advertising businesses. PubMatic's publisher-centric approach enables advertisers to maximize ROI by reaching and engaging their target audiences in brand-safe, premium environments across ad formats and devices. Since 2006, PubMatic has created

an efficient, global infrastructure and remains at the forefront of programmatic innovation. Headquartered in Redwood City, California, PubMatic operates 13 offices and six data centers worldwide.

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