

PubMatic

# 2019 GLOBAL DIGITAL AD TRENDS



Innovation is a constant force driving the evolution of the digital media ecosystem. Digital channels are expected to provide nearly all incremental spend flowing into global ad budgets through 2020, and programmatic will account for most of that growth. Publishers and media buyers must understand the nuances and key trends impacting the market in order to capitalize on the vast opportunities available.

In such a fast-evolving industry, reliable data is the foundation of good business decisions. We have put together a compilation of key metrics, charts and insights to inform your 2019 strategies. This guide includes global advertising forecasts, growth trends for emerging and evolving formats, trends in header bidding, fraud protection, and more!

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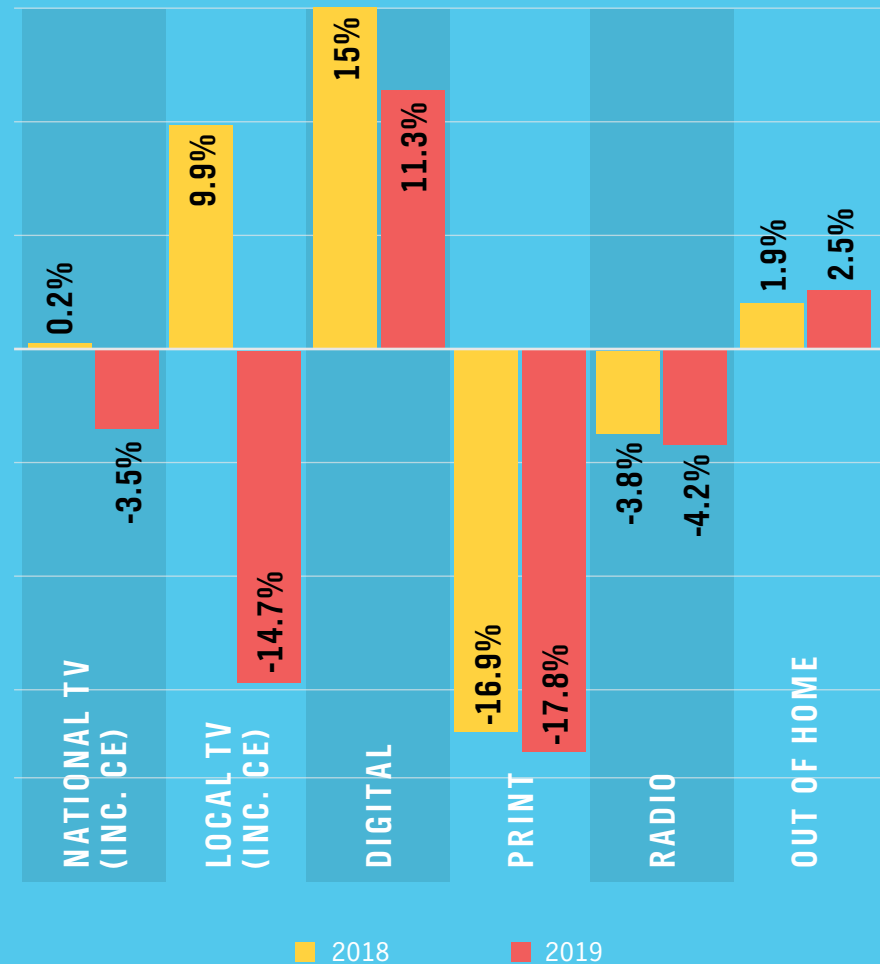


# US DIGITAL & PROGRAMMATIC MARKET

# PROJECTED AD REVENUE GROWTH IN NORTH AMERICA, BY MEDIA TYPE

Digital media will account for nearly all advertising growth momentum in 2019.

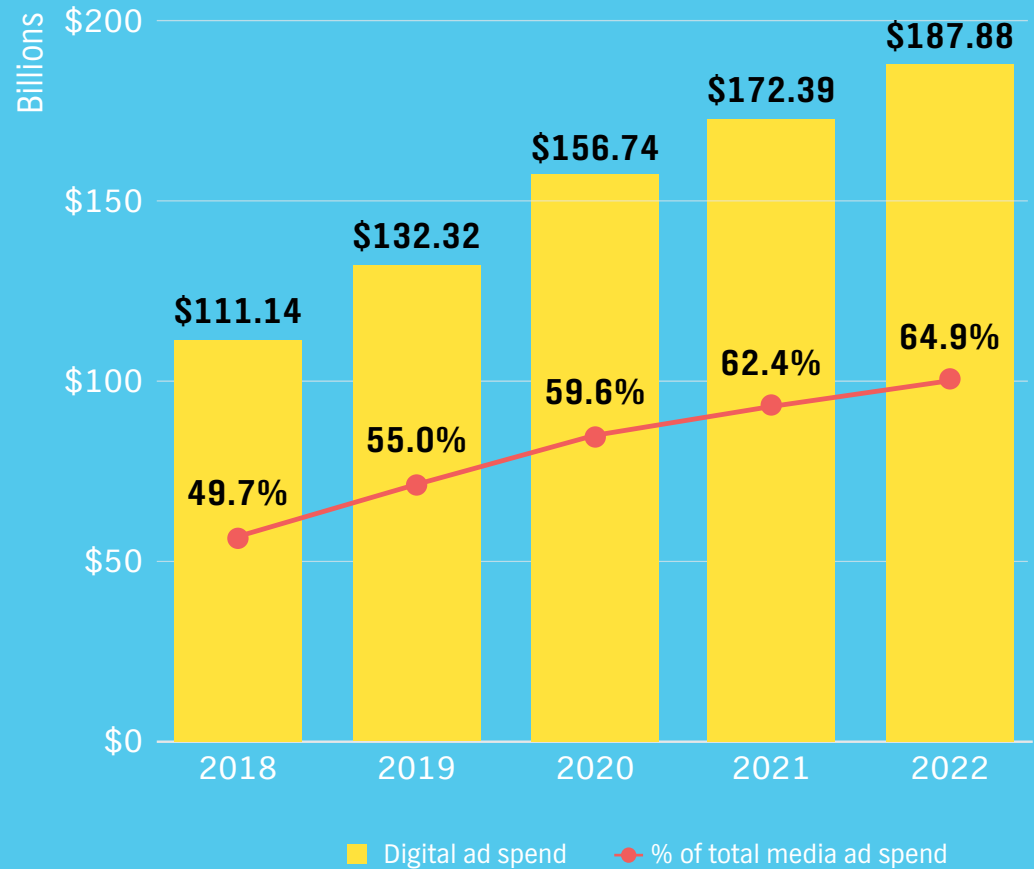
Following a positive growth year, boosted by the World Cup and the midterm elections, Local TV is expected to experience double digit declines in 2019. Out of home is the only traditional media type forecasted to grow next year.



Source: Magna Global

# PROJECTED US DIGITAL AD SPEND

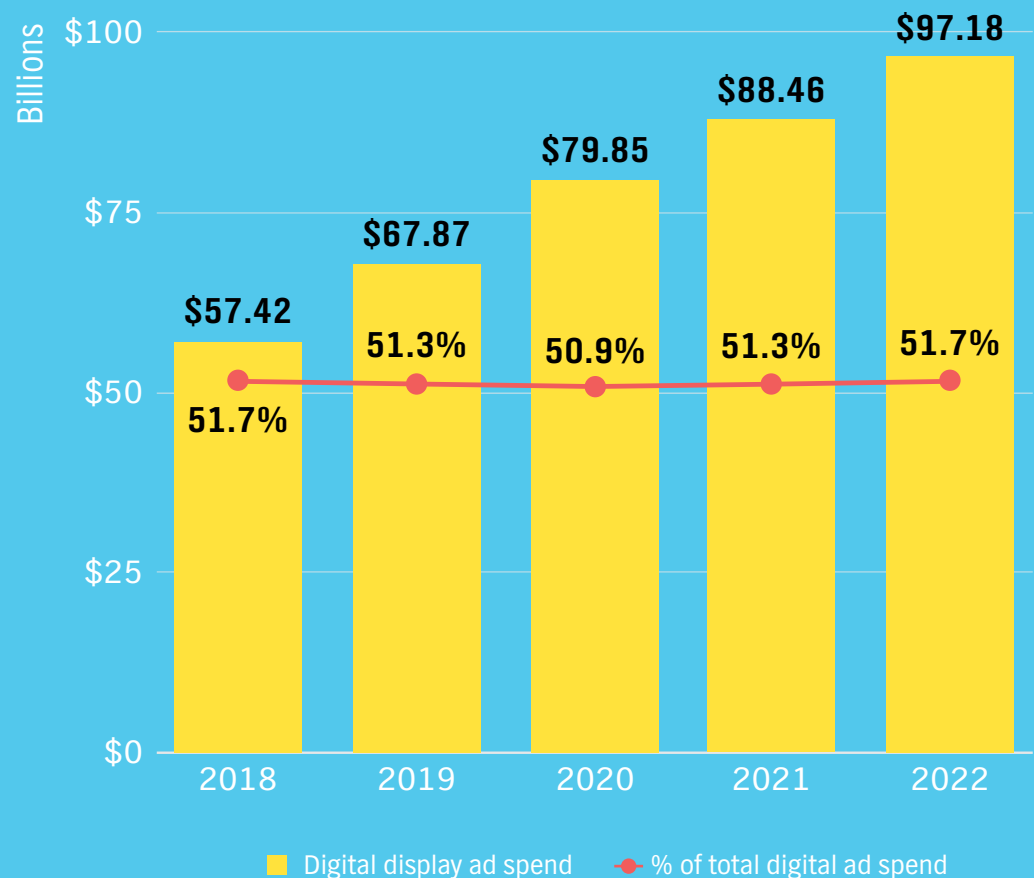
Digital ad spend growth remains strong in the US, where over half of total media ad spend will be devoted to digital in 2019. That share is projected to rise to nearly two-thirds by 2022.



Source: eMarketer

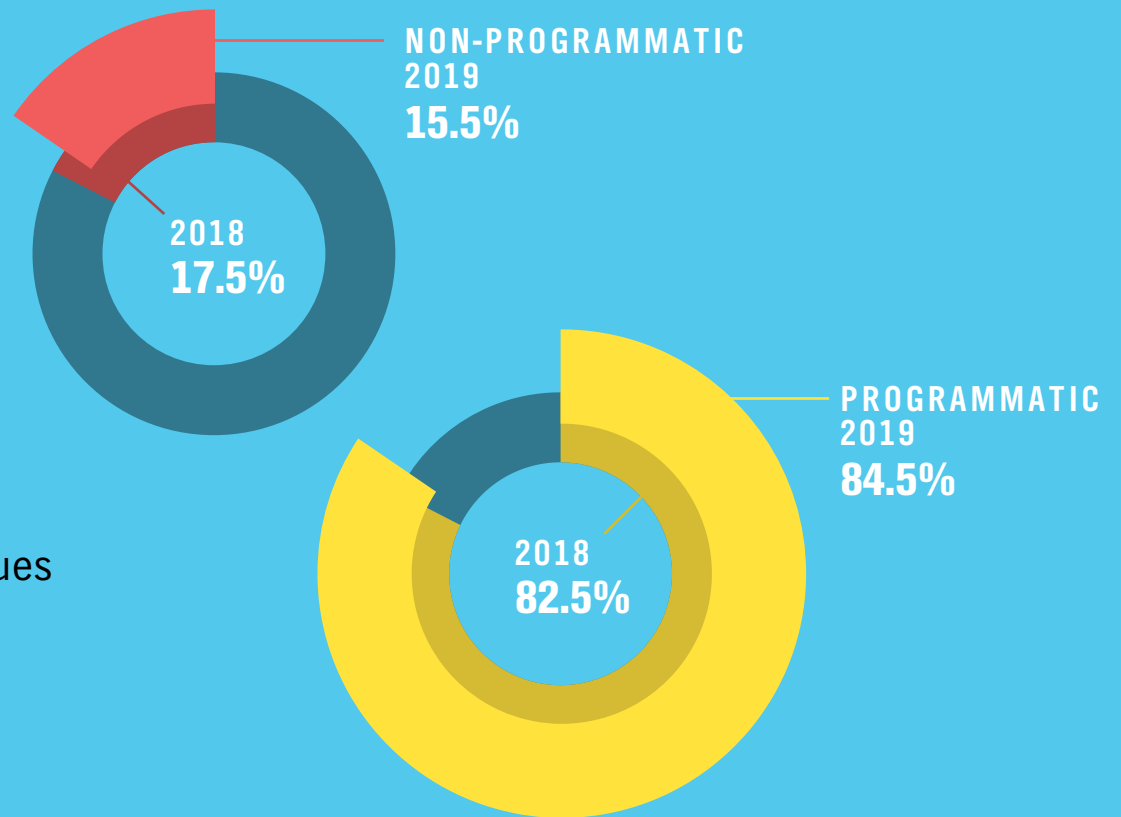
# PROJECTED US DIGITAL DISPLAY AD SPEND

The share of digital spend allocated to display advertising is expected to remain flat over the next four years. However, as digital advertising as a whole rises, display ad spend is projected to nearly double in the US between 2018-2022.



Source: eMarketer

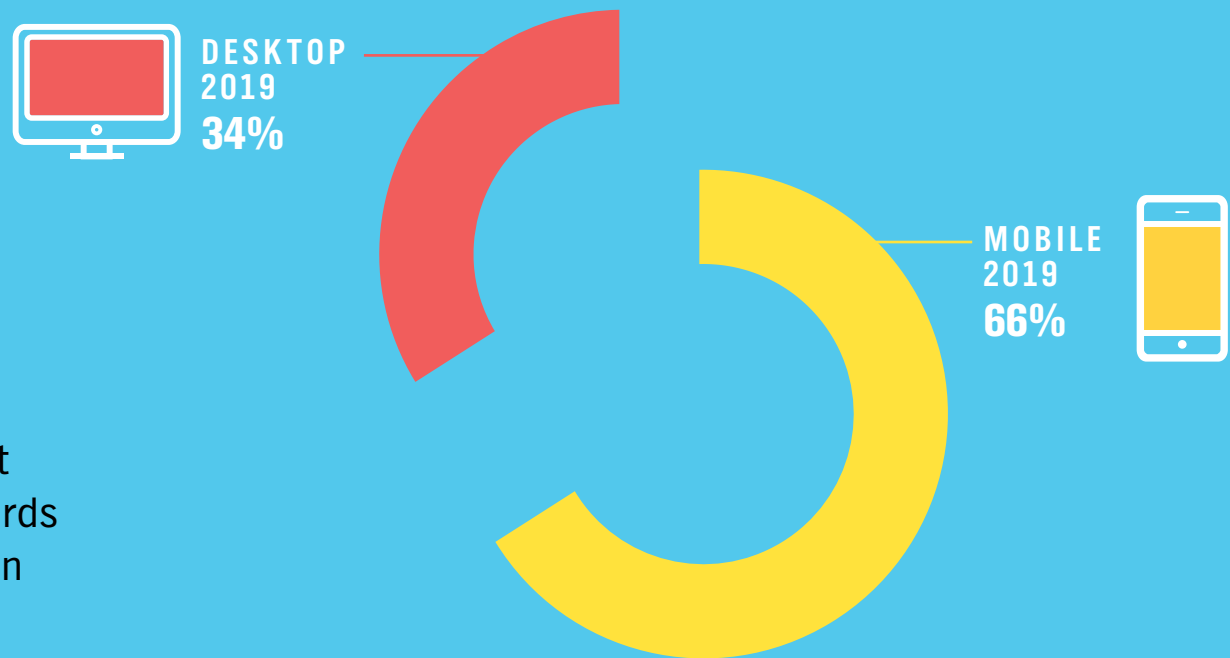
# PROJECTED SHARE OF US DIGITAL DISPLAY AD SPEND, BY PURCHASE METHOD



Already the norm for digital display ad spend in the US, programmatic transactions will gain further market share as automation innovation continues to expand into new environments including in-app and video.

Source: eMarketer

# PROJECTED SHARE OF US PROGRAMMATIC DIGITAL DISPLAY AD SPEND, BY DEVICE



Mobile growth will outpace that of desktop to represent two-thirds of programmatic transactions in the US come 2019.

Source: eMarketer



# LEADING PRIORITIES OF US COMPANIES' MEDIA SPENDING OVER THE NEXT YEAR

% of Respondents, November 2018

Efficiency, measurement and attribution represent the leading priorities for US media buyers in 2019. Publishers and technology vendors alike can provide valuable tools and insights to support the continuation of advertising budget flows toward digital channels.

Source: Xaxis

Increase efficiency

53.3%

Demonstrating that marketing strategy aligns with business objectives

42.0%

Effective allocations of resources

40.8%

Improving ad viewability levels

34.7%

Establishing effective benchmarks in measuring campaign success

31.1%

Gaining full transparency of campaign performance

23.6%

Ensuring that all ad campaign run in brand-safe environments

16.6%

Linking digital media with offline

16.1%

Other

0.2%

No top priorities

1.6%

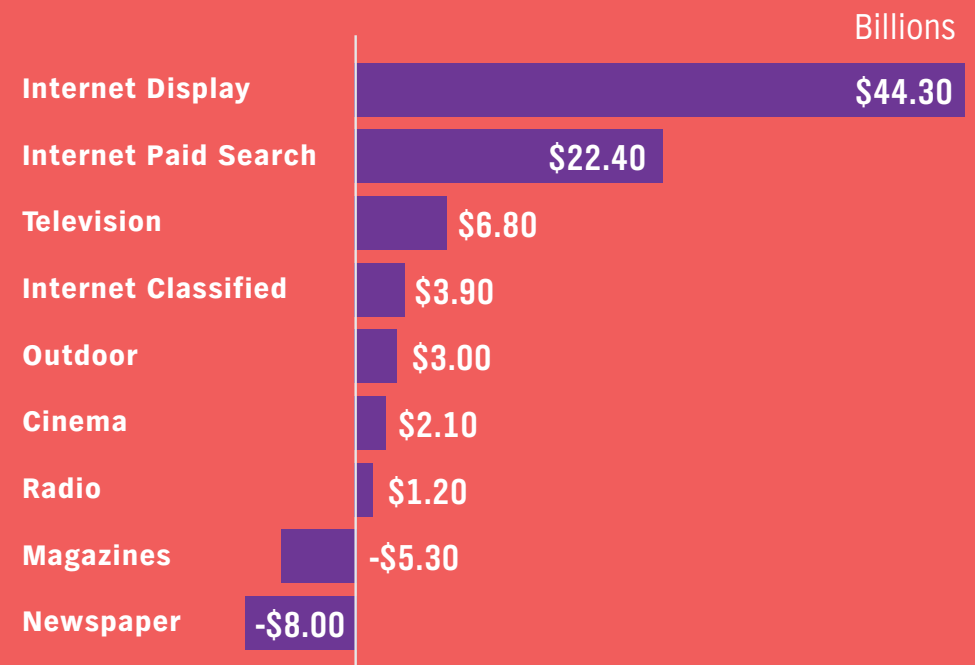


# GLOBAL DIGITAL & PROGRAMMATIC MARKET

# PROJECTED AD SPEND GROWTH WORLDWIDE, BY MEDIA TYPE/FORMAT, 2017-2020

Digital display formats, including video, will contribute over half of incremental ad spend dollars projected for the 2017-2020 period. Display will represent over half of digital ad spend by 2019.

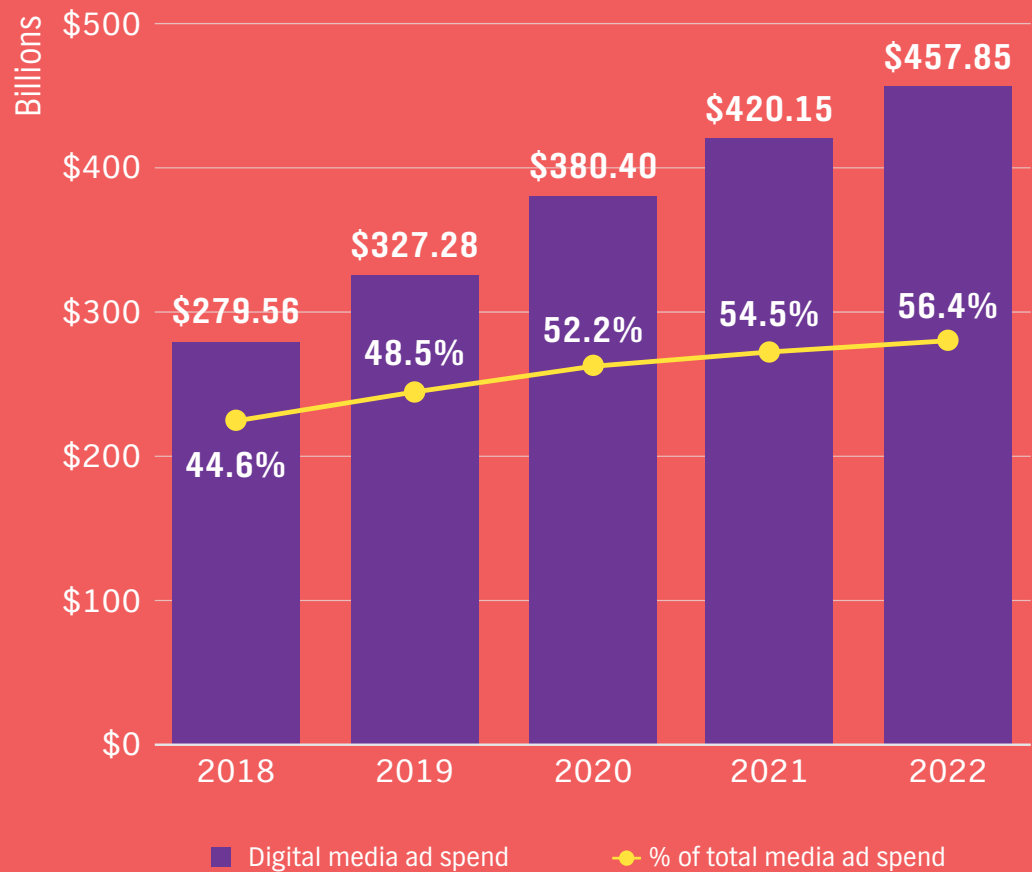
Digital as a whole will provide nearly all the projected growth for the global advertising market through 2020.



Source: Zenith

# PROJECTED WORLDWIDE DIGITAL AD SPEND

Global digital ad spend growth rates remain strong. By 2020, digital advertising will represent that majority of total media ad spend worldwide.

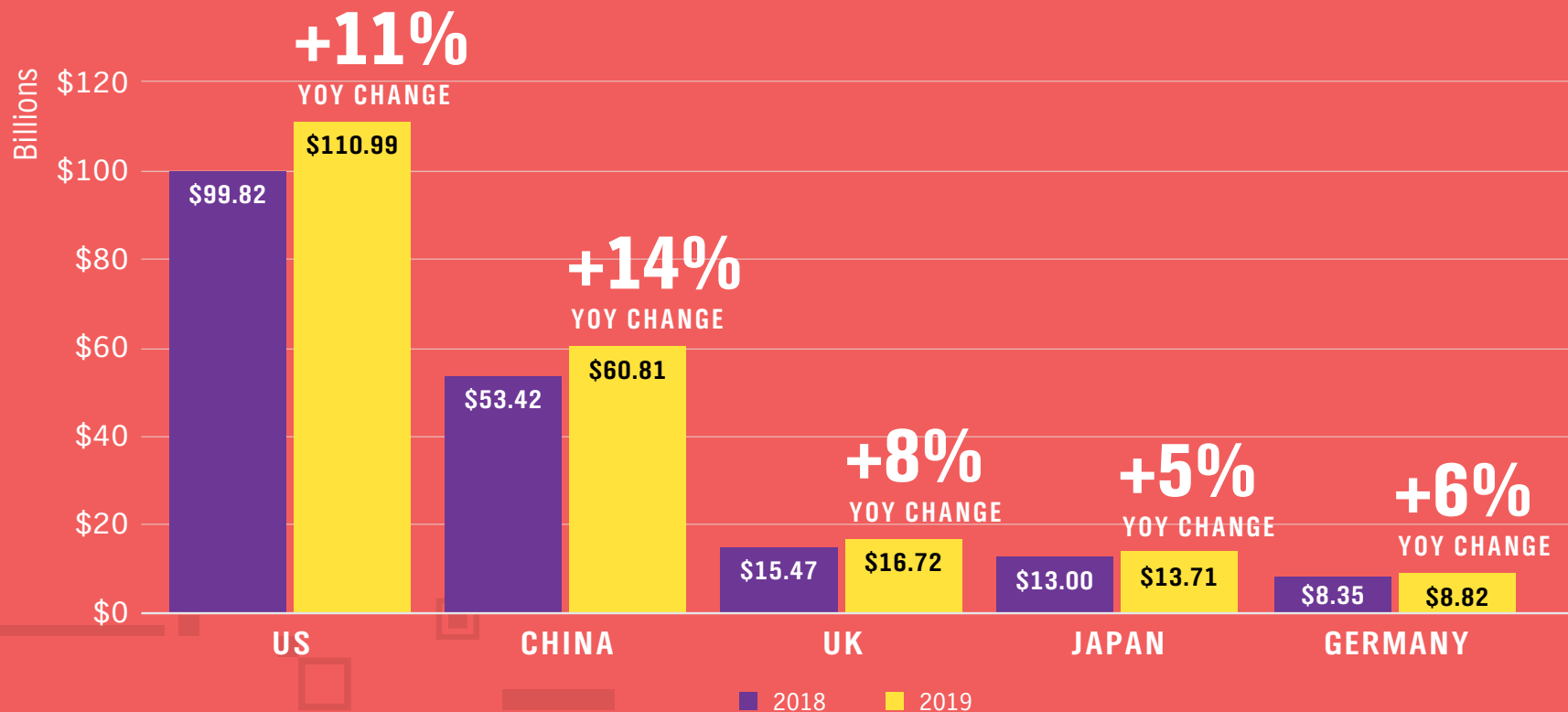


Source: eMarketer

# TOP 5 DIGITAL AD SPEND MARKETS WORLDWIDE

\$ billions and % YOY change

China and the US are the only markets with over \$10 billion in digital ad spend projected to grow at double-digit rates in 2019, expanding their lead as the largest digital ad markets in the world.

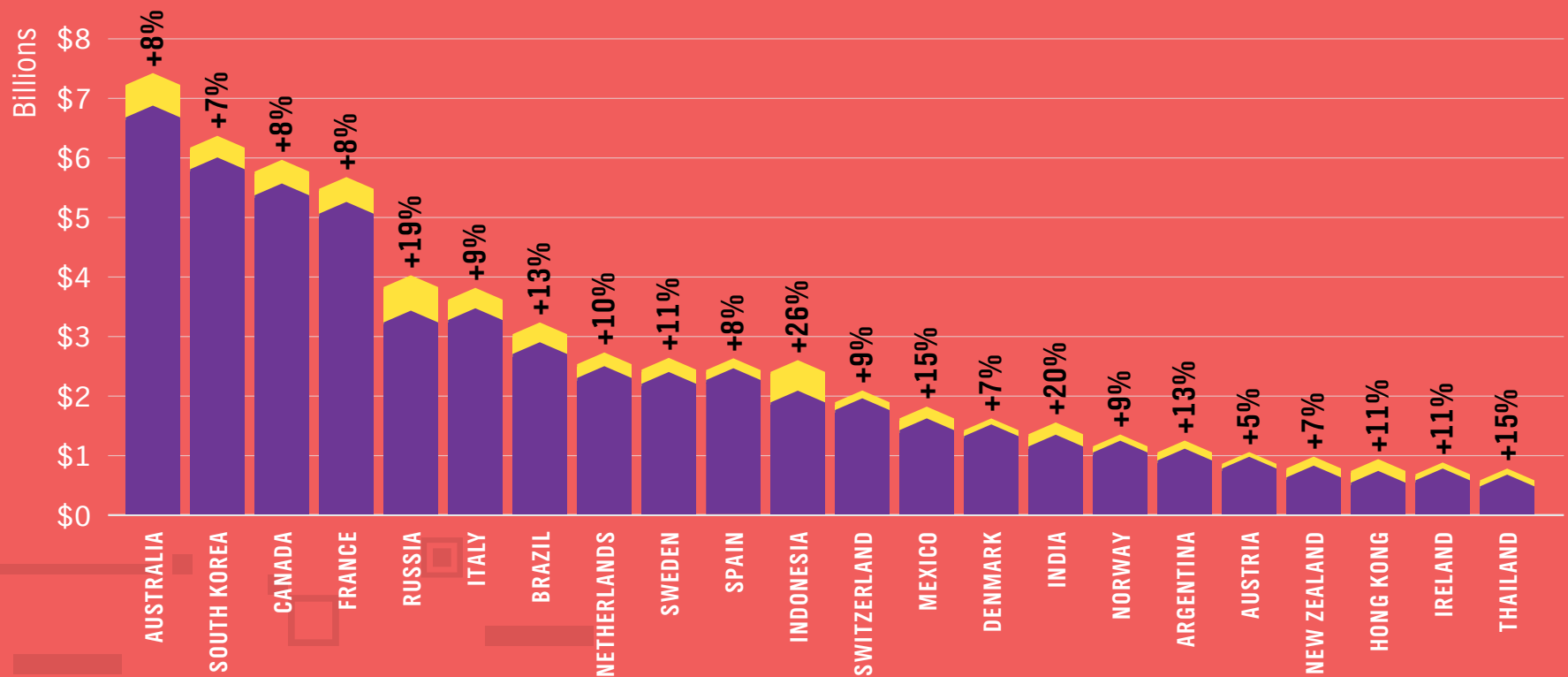


Source: PricewaterhouseCoopers; PubMatic calculations

# MAJOR DIGITAL AD SPEND MARKETS WORLDWIDE

\$ billions and % YOY change

Indonesia is the fastest-growing digital advertising market in the world, followed by India. Both are home to large populations of increasingly digital and mobile users.

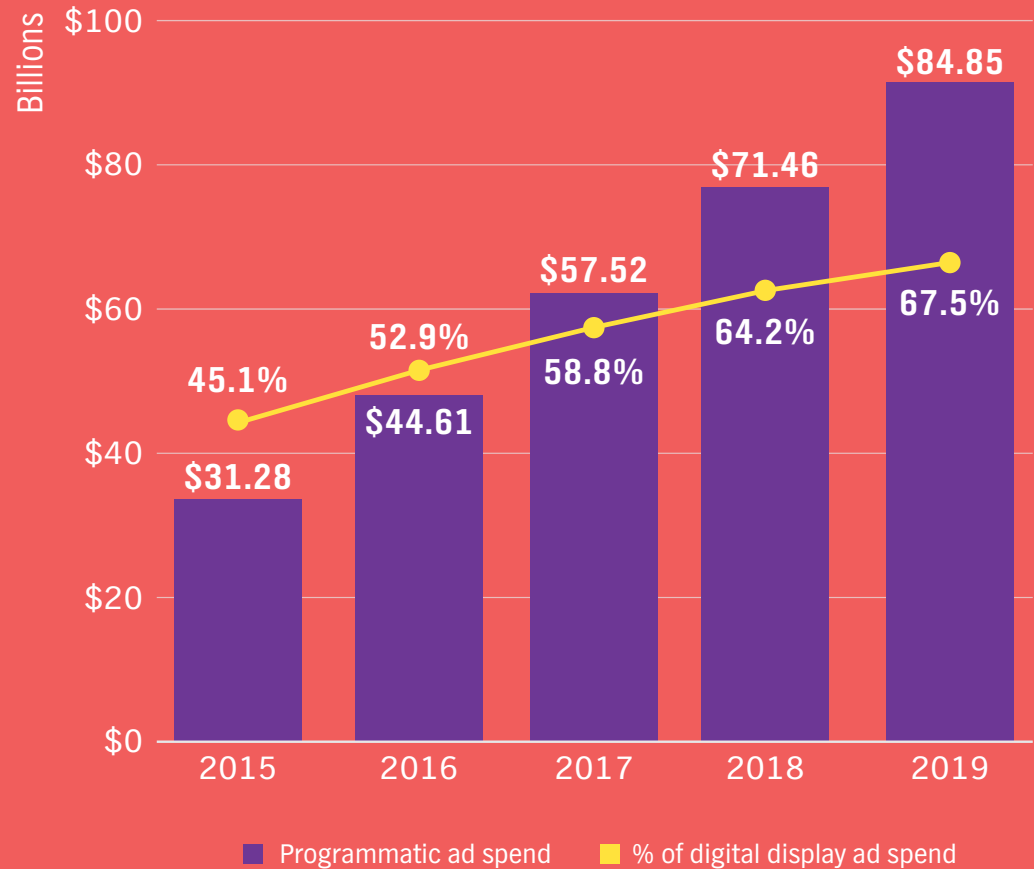


Source: PricewaterhouseCoopers, eMarketer; PubMatic calculations

■ 2018 ■ 2019

# PROJECTED PROGRAMMATIC AD SPEND WORLDWIDE

Programmatic transactions will represent more than two-thirds of digital display ad spend around the globe in 2019.

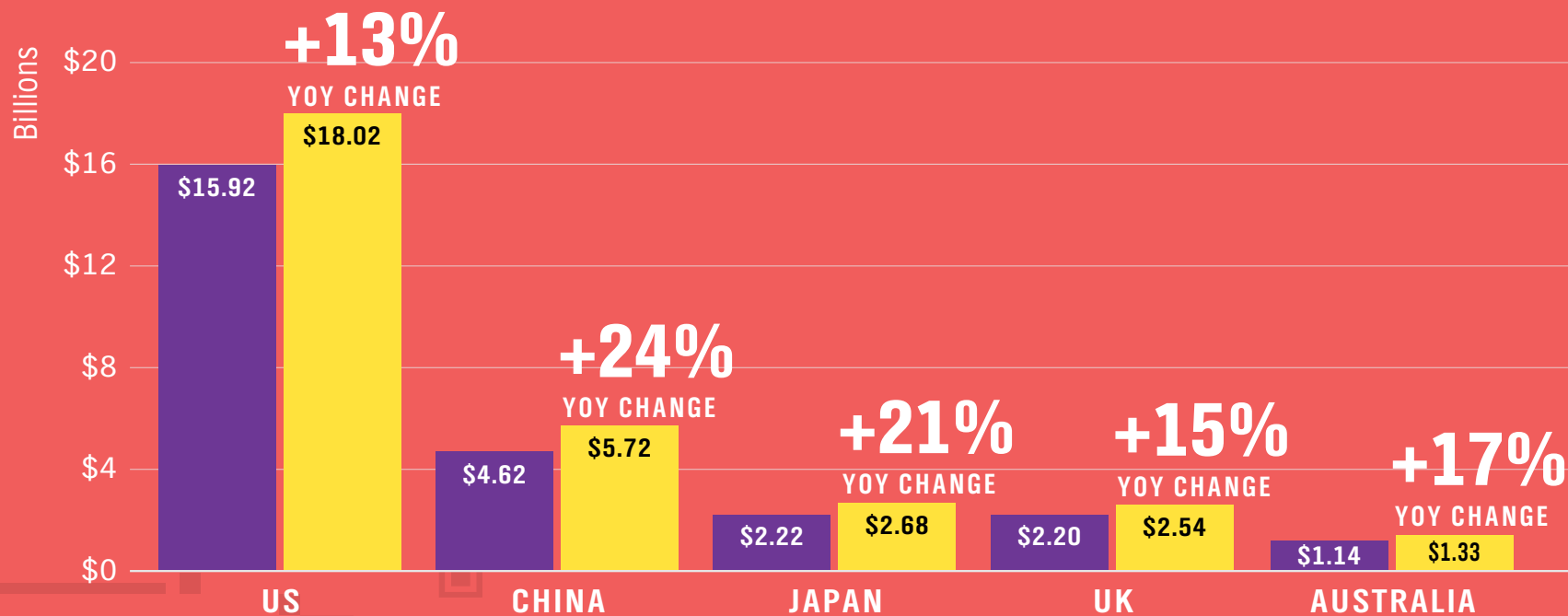


Source: Zenith

# TOP 5 PROGRAMMATIC\* DIGITAL AD SPEND MARKETS WORLDWIDE

\$ billions and % YOY change

Double-digit YOY growth rates remain the norm among the largest programmatic advertising markets in the world. China, Japan and Australia stand out, however, underlining revenue growth opportunities for APAC publishers prepared to offer inventory through automation technology next year.



Source: Magna Global; PubMatic calculations  
\*excludes search and social media

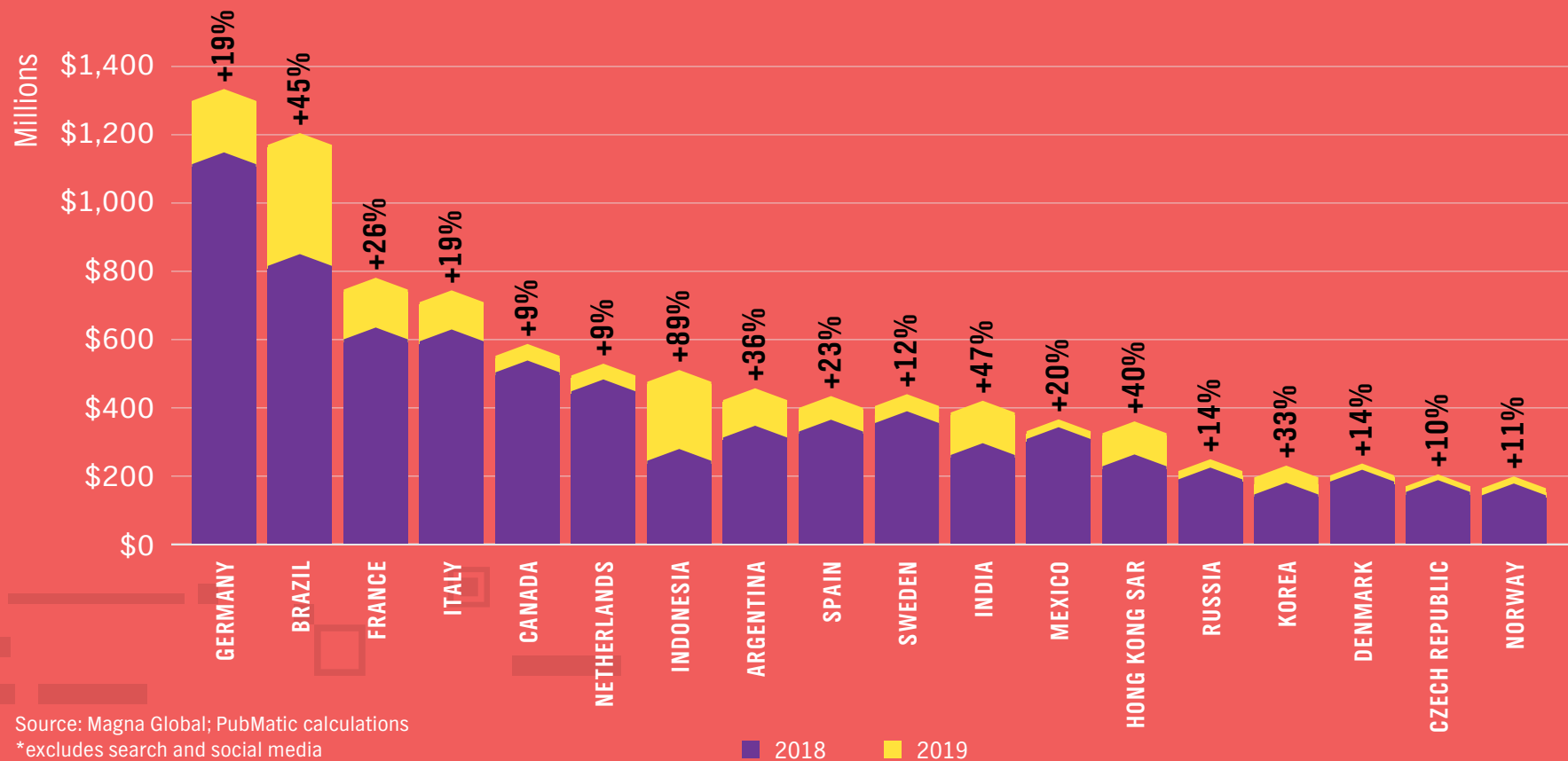
■ 2018 ■ 2019



# MAJOR PROGRAMMATIC\* DIGITAL AD SPEND MARKETS WORLDWIDE

\$ millions and % YOY change

Indonesia, India and Brazil will be the fastest-growing programmatic digital ad markets in annual terms in 2019. Brazil will become only the seventh programmatic market to reach a billion-dollar valuation next year.



Source: Magna Global; PubMatic calculations  
\*excludes search and social media

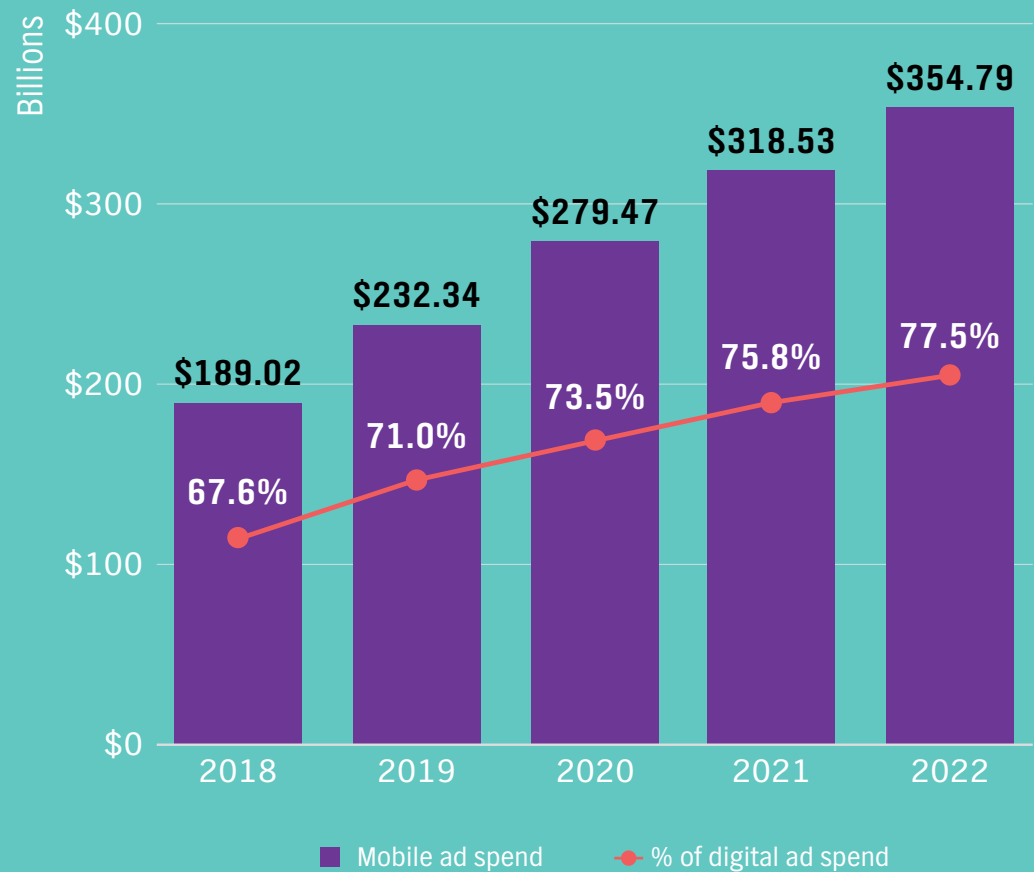
■ 2018 ■ 2019



# MOBILE ADVERTISING

# PROJECTED MOBILE AD SPEND WORLDWIDE

Mobile advertising will surpass \$200 billion worldwide in 2019. Growth rates will remain in double-digit territory through 2022, at which point mobile is projected to represent more than three-quarters of global digital ad spend.

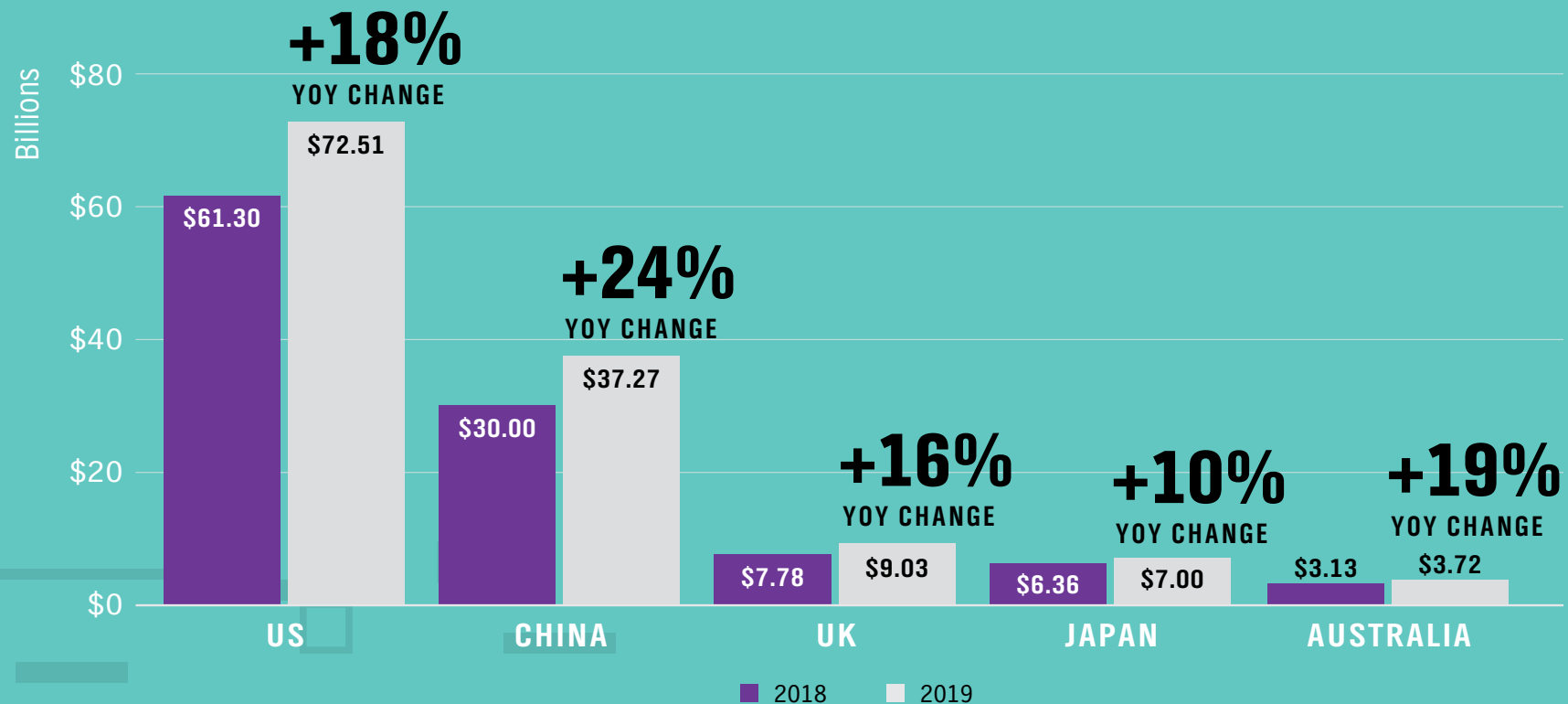


Source: eMarketer

# TOP 5 MOBILE AD SPEND MARKETS WORLDWIDE

\$ billions and % YOY change

US mobile ad spend will expand most in absolute terms, raising the value of the US market by more than \$11 billion in 2019 compared to a year prior. China is expected to experience the largest growth as a percentage of spend among the five largest mobile advertising markets.

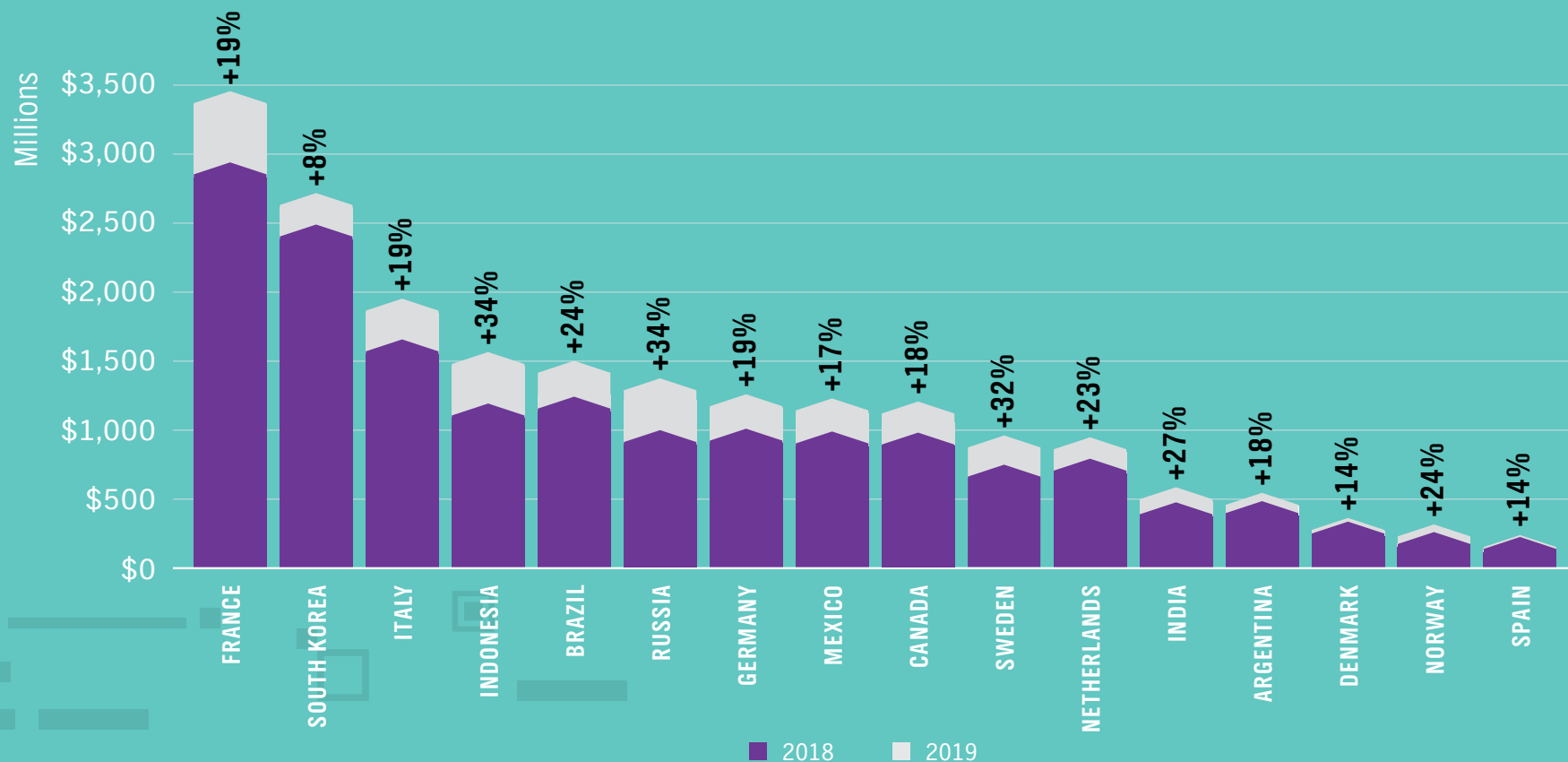


Source: PricewaterhouseCoopers; PubMatic calculations

# MAJOR MOBILE AD SPEND MARKETS WORLDWIDE

\$ millions and % YOY change

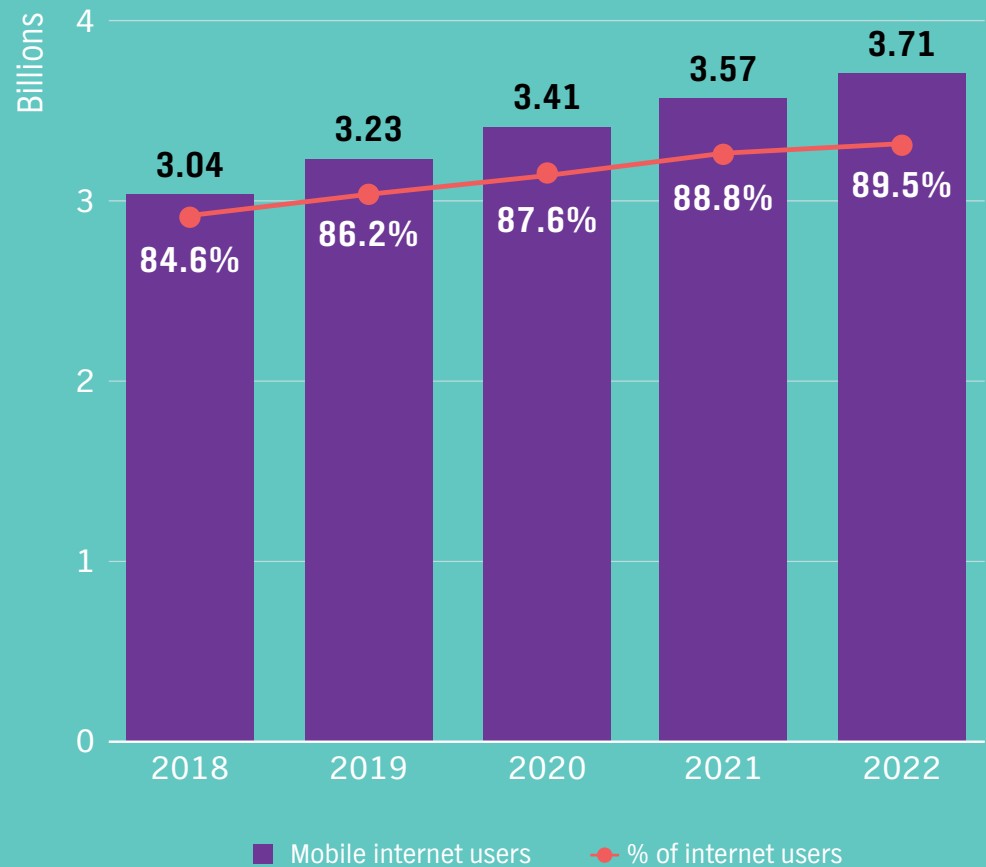
Indonesia and Russia are expected to experience the fastest mobile advertising growth in 2019, with each market rising 34% year over year. Additionally, Russia, Germany, Mexico, and Canada are projected to surpass \$1 billion in mobile ad spend for the first time in 2019.



Source: PricewaterhouseCoopers; PubMatic calculations

# MOBILE INTERNET USERS WORLDWIDE

Mobile internet uptake has reached critical mass among consumers, with over 85 percent of internet users accessing the web via handheld devices. This provides advertisers and publishers alike with a strong incentive to increase investment in mobile strategies.



Source: eMarketer

# MOBILE WEB VS. IN-APP

Mobile internet uptake among consumers is increasingly driven by apps, where users spend considerably more time per day. For advertisers and publishers, apps are a fundamentally different environment that brings new challenges and opportunities to the fore.



## MOBILE WEB



## IN-APP

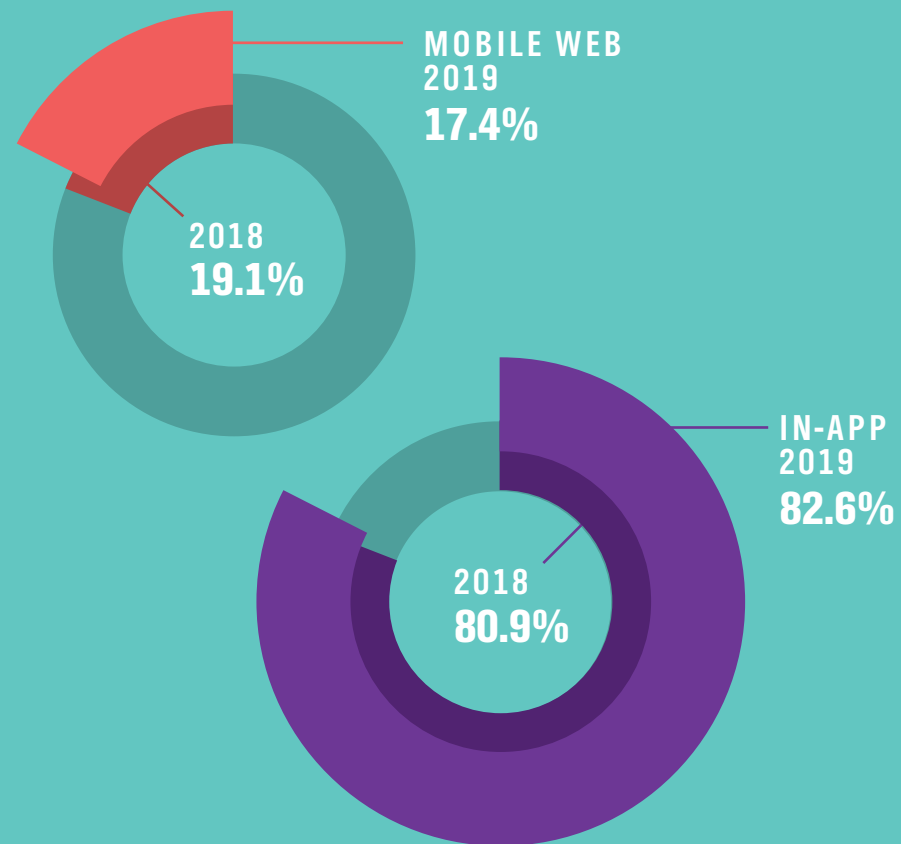
Cookies	TRACKING METHOD	Device ID
Web activity (e.g, shopping habits, favorite websites)	AVAILABLE USER DATA	GPS location, device type, OS, gender, age, wireless carrier
Vulnerability to in-browser ad blockers	AD BLOCKING	Ad blocking technology has not advanced to universally block in-app ads
33 minutes	AVERAGE DAILY USAGE	3 hours 8 minutes

Source: Smaato

# PROJECTED SHARE OF US MOBILE AD SPEND, BY PLATFORM

In-app environments are driving mobile ad spend growth to approach \$80 billion in the US in 2019. More than eight-in-ten mobile ad dollars in the US will be allocated to in-app advertising next year.

Similar estimates are not yet available worldwide, but growing app adoption among global consumers is likely to spur in-app ad spend around the globe next year. In Q2 2018 alone, nearly 30 billion apps were downloaded worldwide.\*



Source: eMarketer; \*App Annie

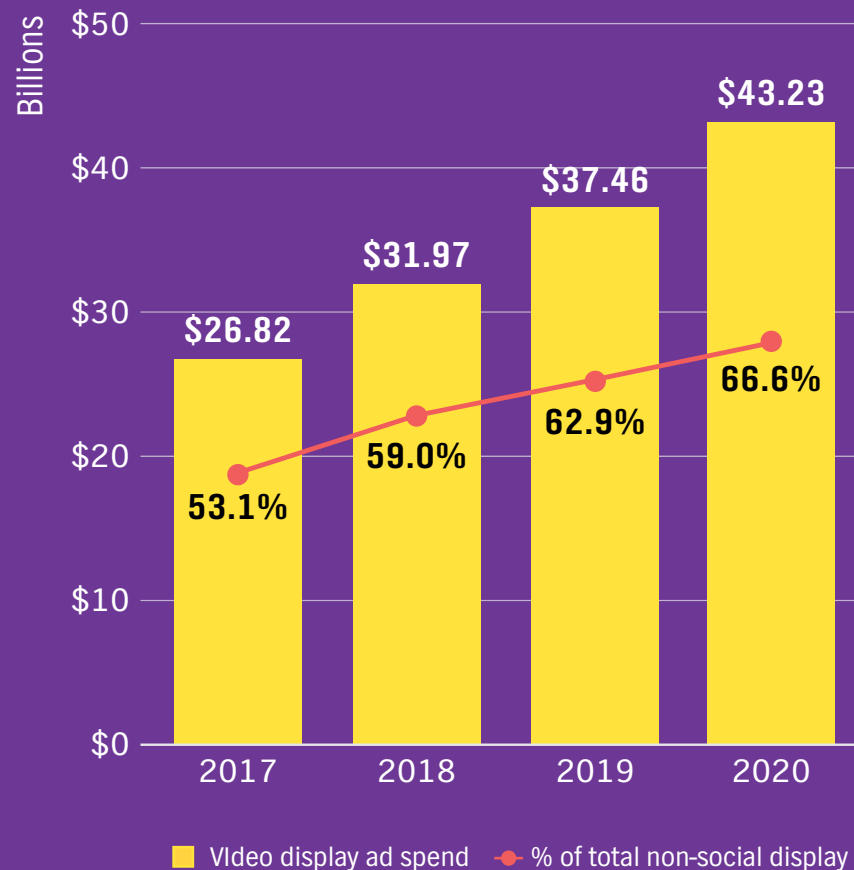




# VIDEO ADVERTISING

# PROJECTED DIGITAL VIDEO AD SPEND WORLDWIDE

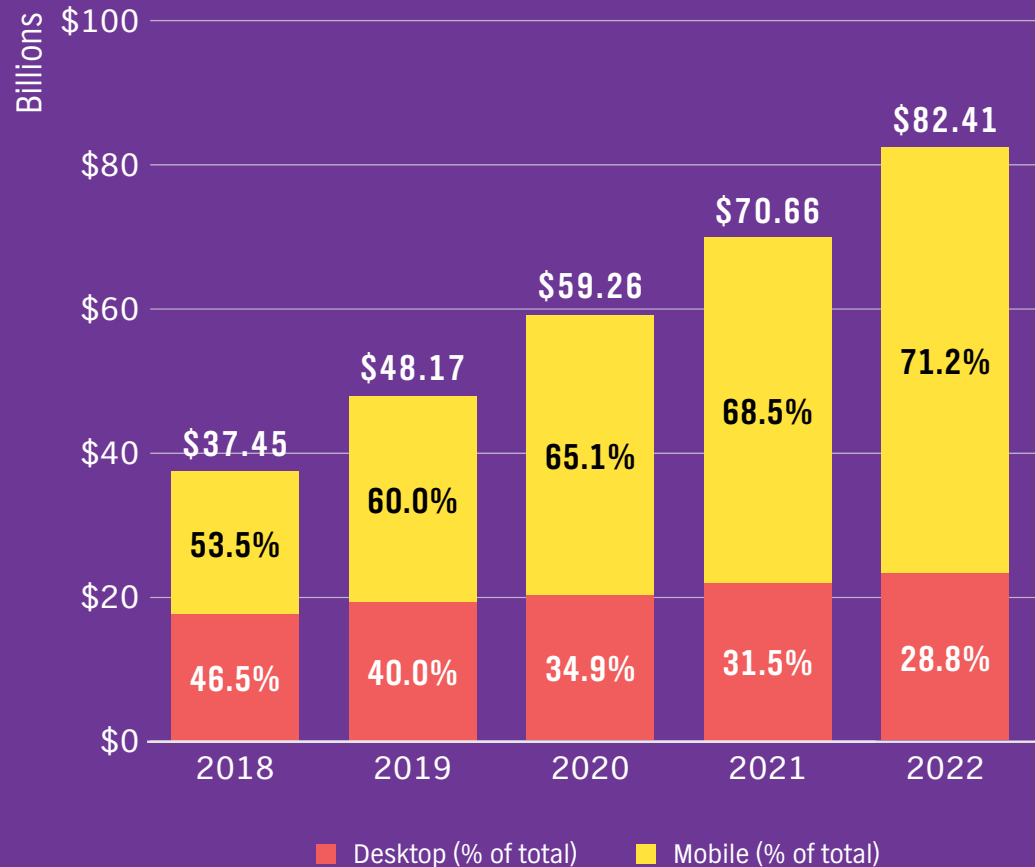
Video is expected to remain a key driver of advertising expenditures on display, projected to represent nearly two-thirds of non-social display ad spend next year.



Source: Zenith; PubMatic calculations

# PROJECTED DIGITAL VIDEO AD SPEND WORLDWIDE, BY PLATFORM

Global video ad spend is quickly shifting toward mobile with the share of handheld devices rising from half to more than 70% in four years.



Source: Cowen and Company; PubMatic calculations

# DIGITAL VIDEO METRICS WORLDWIDE

Although mobile video ad spend has gained a strong footing, representing the majority of digital video spend, the portion of video ad budgets allocated to handheld devices still trails mobile's penetration of digital video viewership globally.



DESKTOP



MOBILE

	2018	2019	2018	2019
<b>Video ad spend (\$ billions)</b>	\$17.4	\$19.3	\$20.0	\$28.9
<b>% YOY change</b>	16%	11%	54%	44%
<b>% share of digital video ad spend, by device</b>	47%	40%	53%	60%
<b>Viewership (billions)</b>	0.51	0.49	1.87	2.04
<b>% YOY change</b>	-4%	-4%	12%	9%
<b>% penetration of digital video viewers</b>	21%	19%	78%	81%

Source: eMarketer, Cowen and Company; PubMatic calculations

# MOBILE VIDEO AD SPEND INTENT IN THE NEXT 12 MONTHS AMONG US AD BUYERS

% of Respondents, May 2018

Nearly 60% of digital ad budgets were allocated to video, totaling more than \$10 billion in 2018. Although desktop video ad budget allocation remains strong, positive advertiser sentiment toward mobile platforms should fuel further growth for the coveted format via handheld devices.



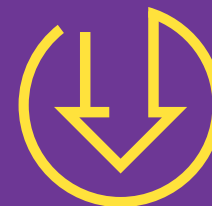
INCREASE  
AD SPEND

**51%**



MAINTAIN  
AD SPEND

**46%**



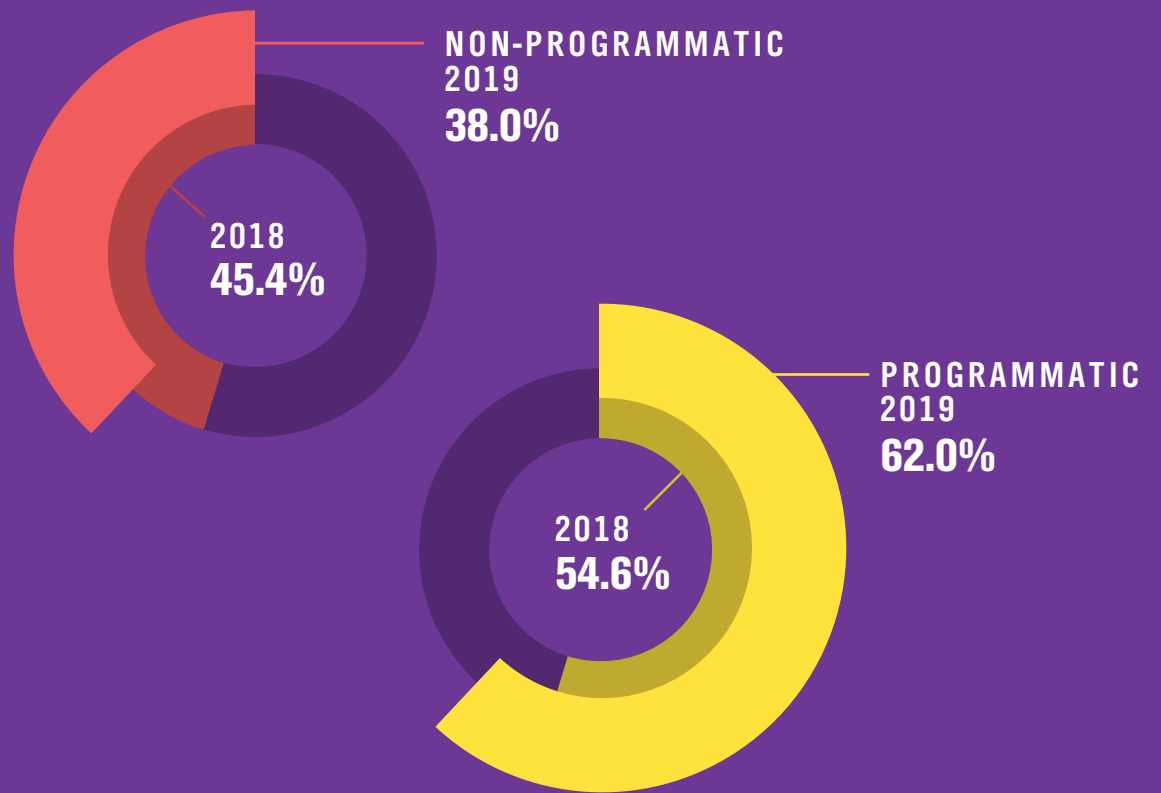
DECREASE  
AD SPEND

**3%**

Source: Interactive Advertising Bureau

# PROJECTED DIGITAL VIDEO AD SPEND SHARE WORLDWIDE, BY PURCHASE METHOD

Just over half of digital video ad spend outside the walled gardens of social media was transacted programmatically in 2018. The programmatic\* share worldwide should rise above 60% in 2019.

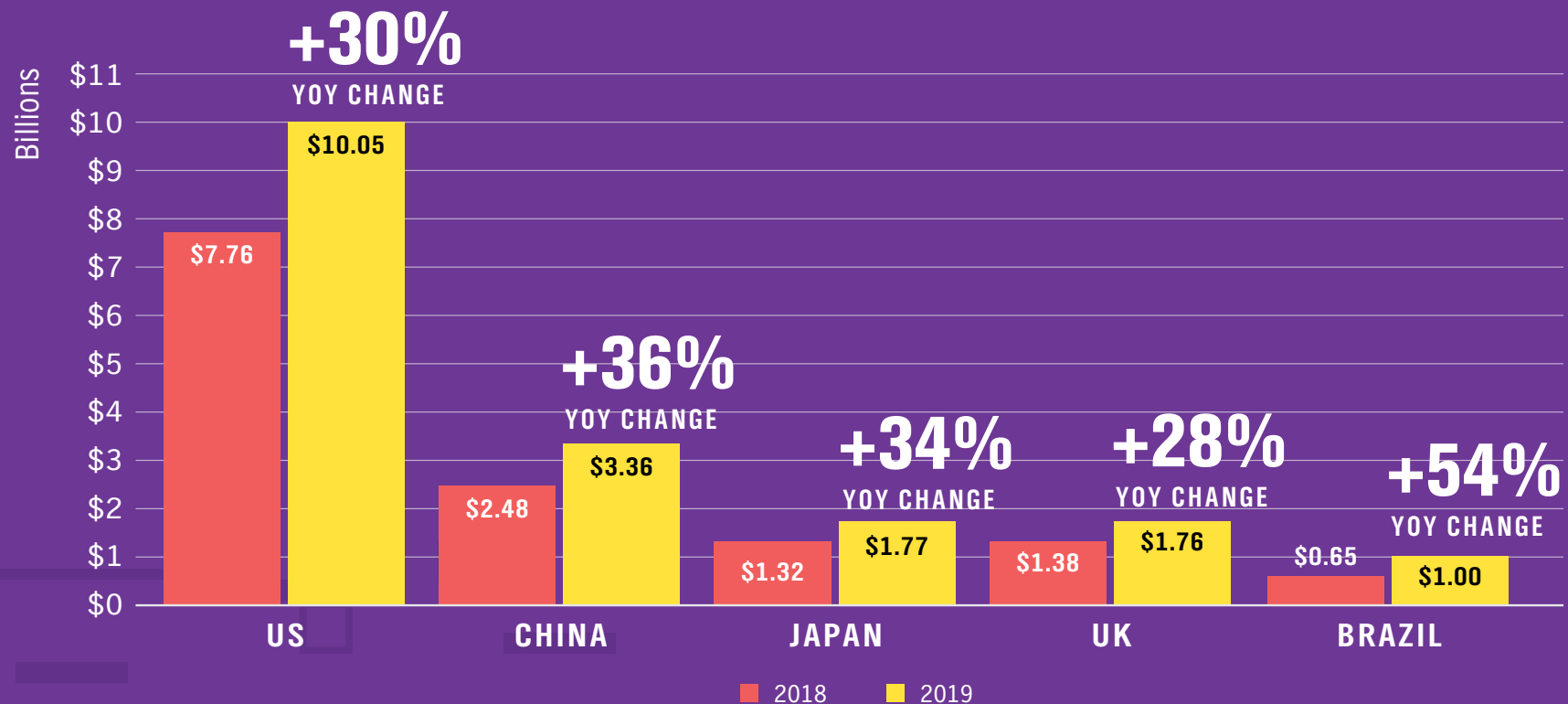


Source: PubMatic calculations based on Zenith and Magna Global estimates; \*excludes search and social media

# TOP 5 PROGRAMMATIC\* VIDEO AD SPEND MARKETS WORLDWIDE

\$ billions and % YOY change

Automation technology is only beginning to gain traction for video monetization and robust double-digit growth rates remain commonplace even in the US. Brazil will be the fastest-growing market in this group, rising 54% to approach \$1 billion in 2019.

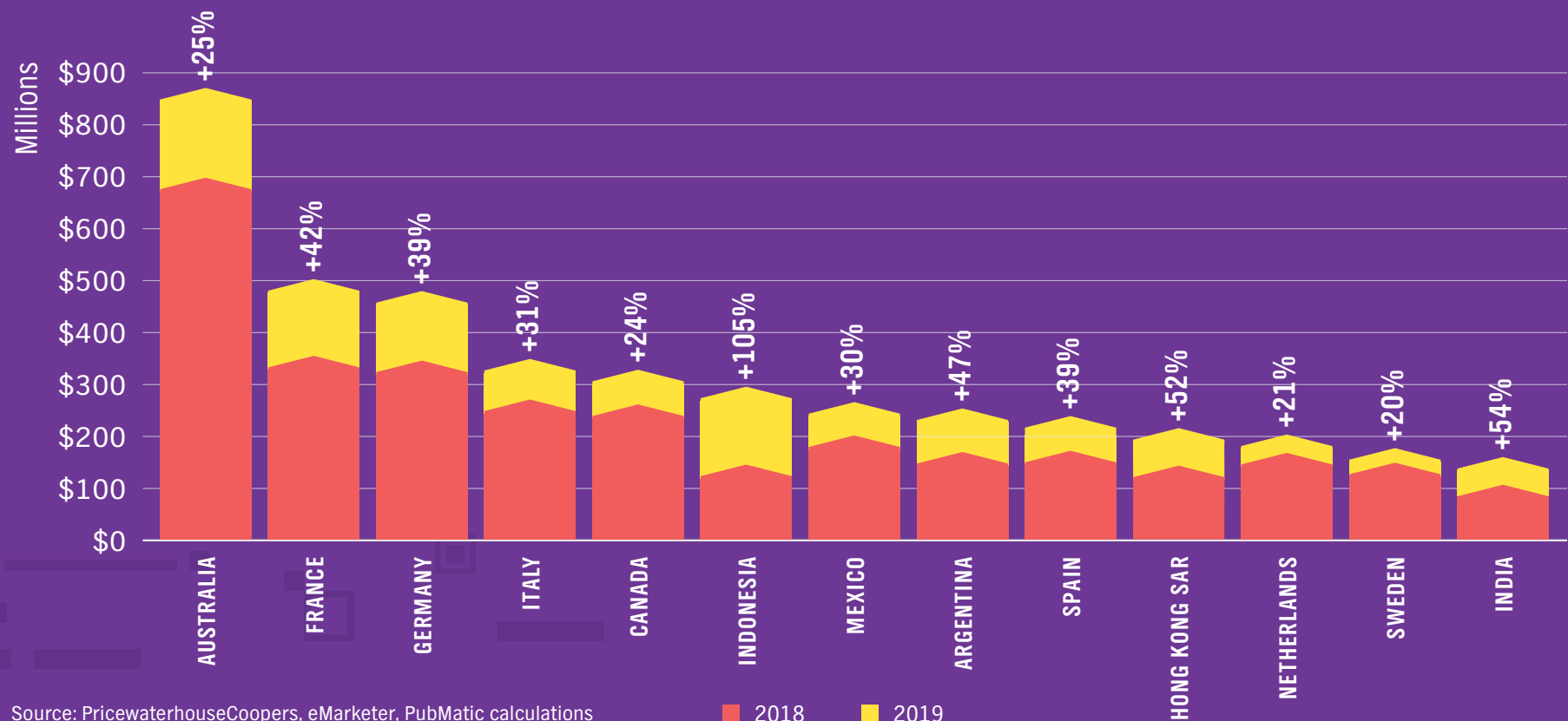


Source: Magna Global; PubMatic calculations; \*excludes social media

# MAJOR PROGRAMMATIC\* VIDEO AD SPEND MARKETS WORLDWIDE

\$ millions and % YOY change

Indonesia will see programmatic video ad spend double in 2019, making it the fastest-growing market for the format in the world. India and Hong Kong are projected to expand more than 50% YOY during the same period.



Source: PricewaterhouseCoopers, eMarketer, PubMatic calculations

2018 2019

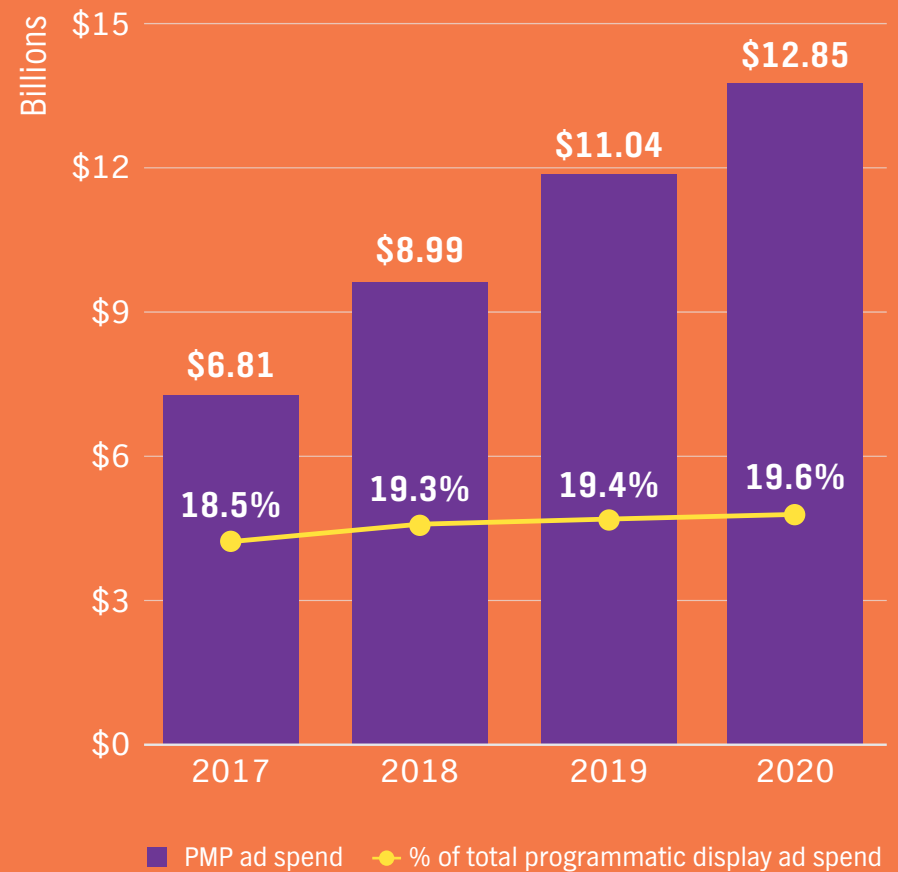


A man with a beard and glasses is sitting at a desk, working on a laptop. He is wearing a green button-down shirt over a white t-shirt. The background is a blurred outdoor setting with a building and greenery. The image is overlaid with orange geometric shapes and lines on the left side.

# PRIVATE MARKETPLACES

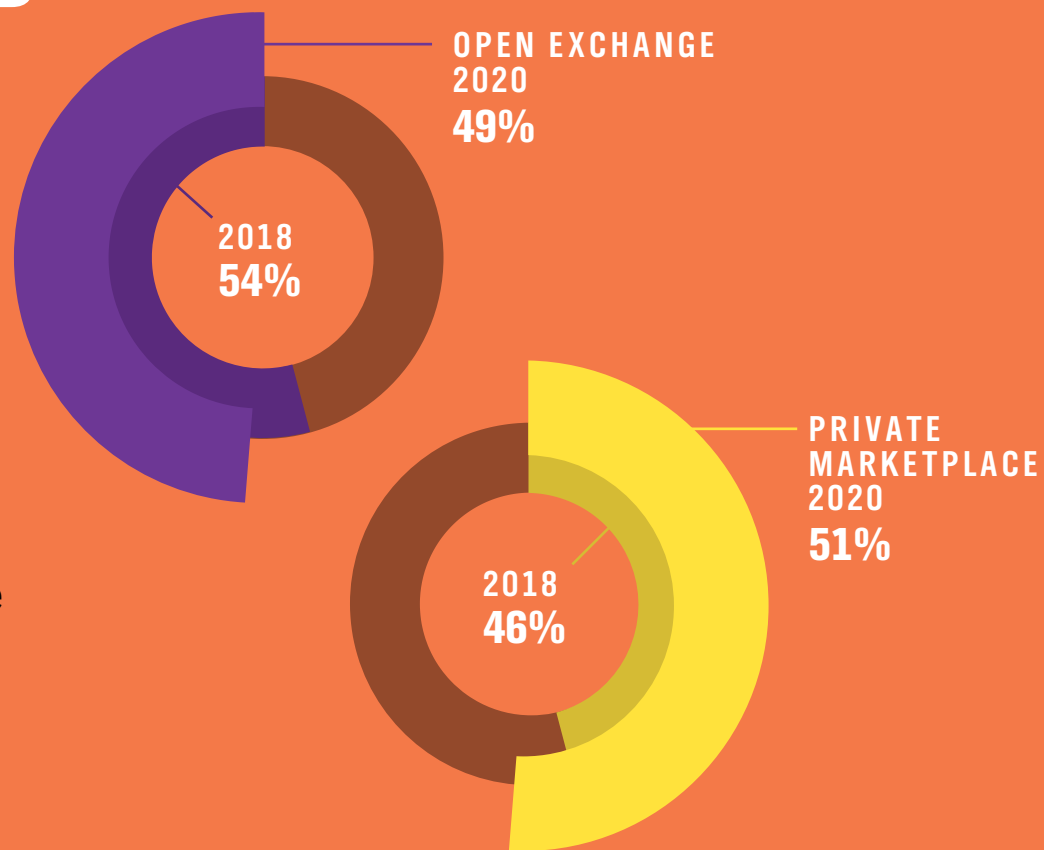
# PROJECTED US PRIVATE MARKETPLACE DIGITAL DISPLAY AD SPEND

US private marketplaces (PMPs) will continue to grow at double digit rates through 2020 as buyers and sellers of digital impressions seek more control over their transactions.



Source: eMarketer

# PROJECTED SHARE OF US PROGRAMMATIC\* DIGITAL DISPLAY AD SPEND, BY TRANSACTION METHOD

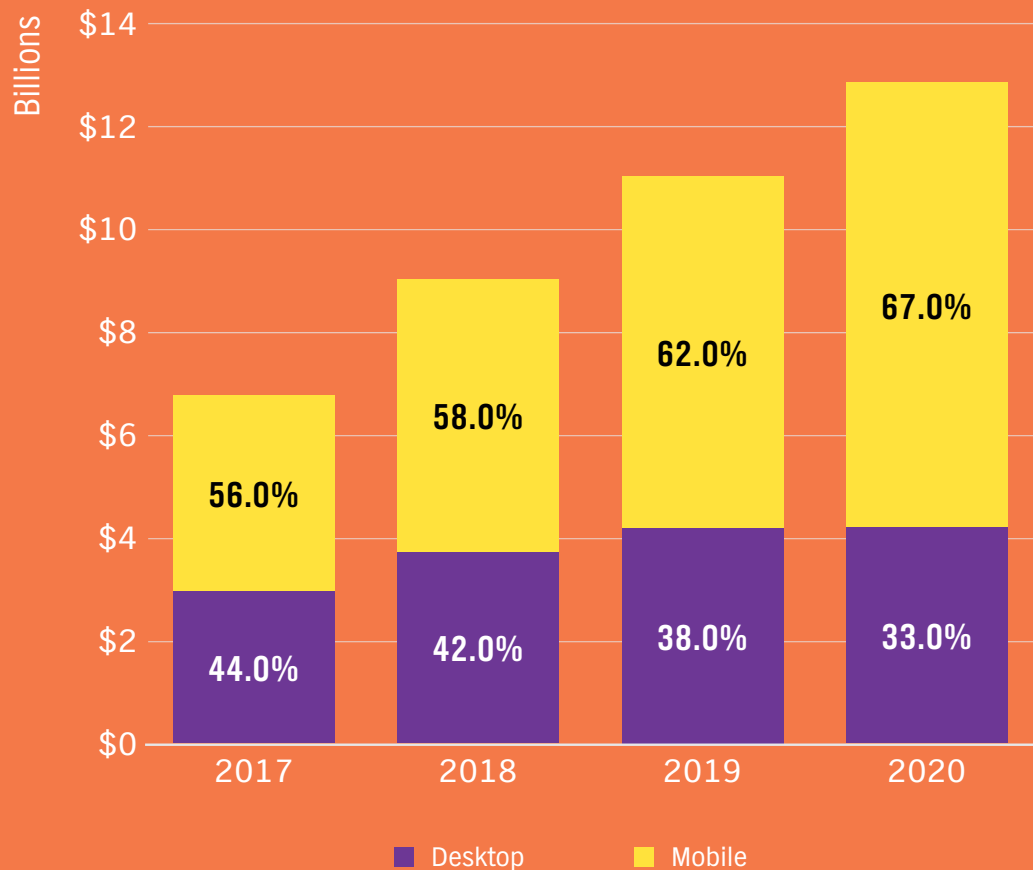


More than half of all US programmatic digital display ad spend will be transacted by private marketplaces by 2020.

Source: eMarketer; \*excludes programmatic direct

# PROJECTED US PRIVATE MARKETPLACE AD SPEND SHARE, BY DEVICE

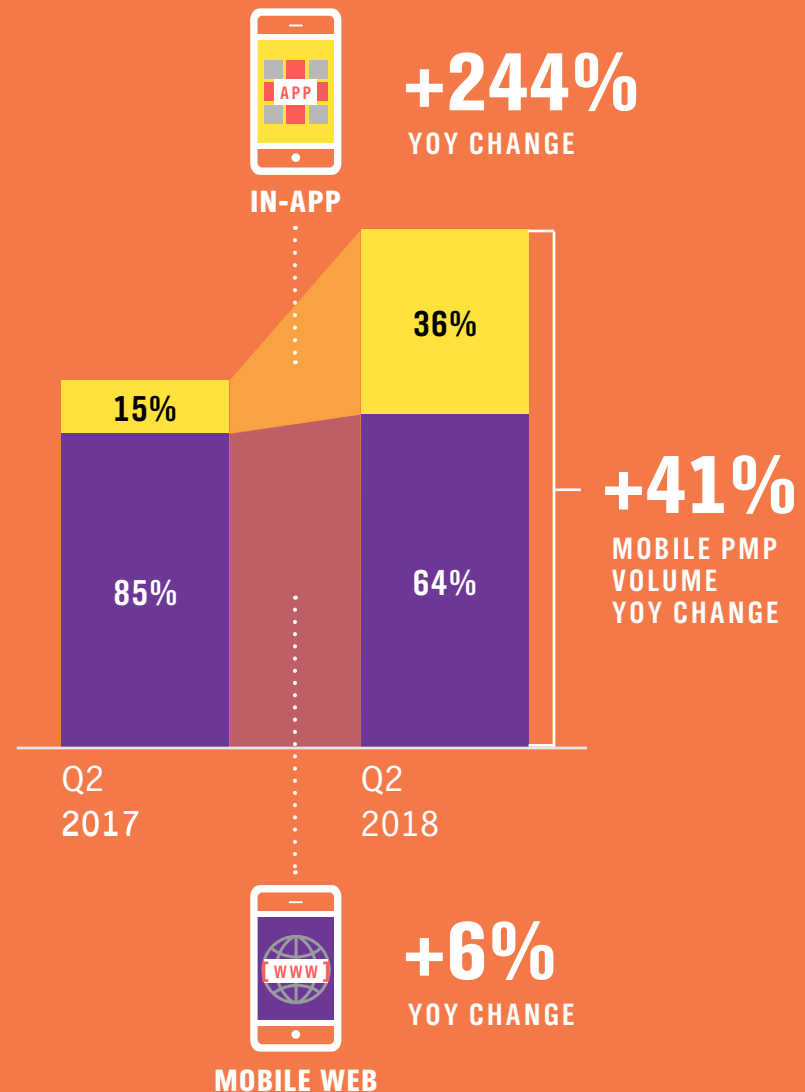
Mobile will account for over two-thirds of all US PMP ad spend by 2020. However, it will continue to trail the share the device achieves of overall programmatic ad spend.



Source: eMarketer; \*excludes programmatic direct

# MONETIZED MOBILE PRIVATE MARKETPLACE VOLUME, BY PLATFORM

Globally, the expansion of mobile private marketplace volume has been fueled by growth within in-app environments.



Source: PubMatic

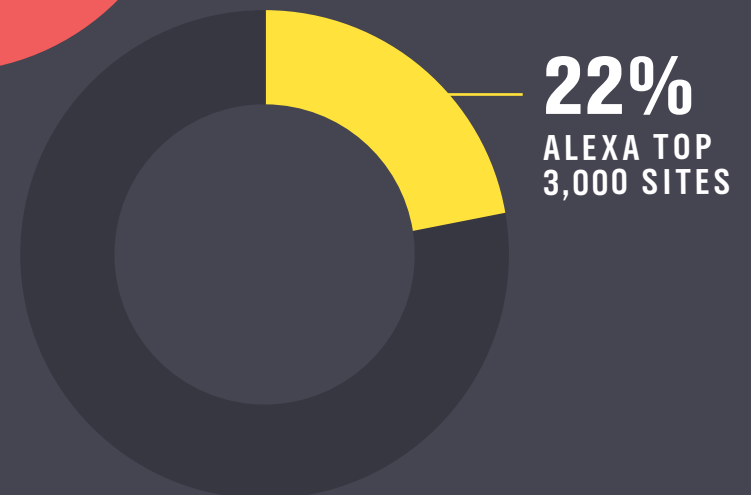
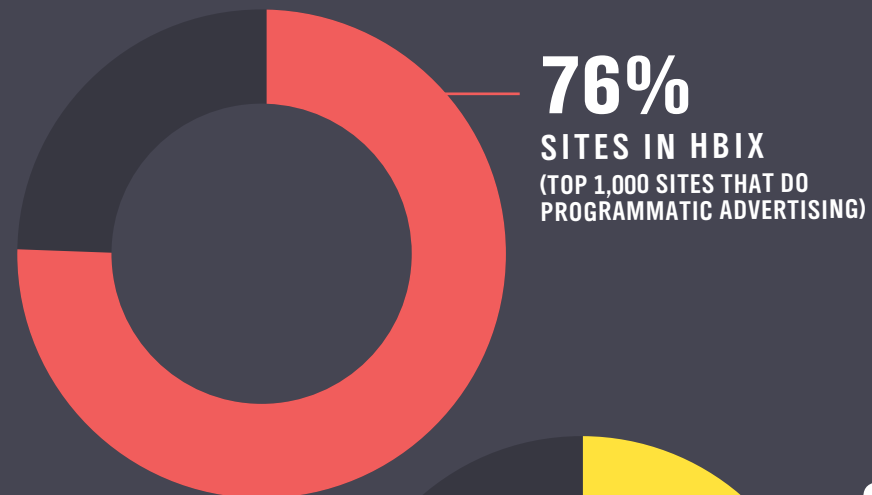


# HEADER BIDDING

# HEADER BIDDING ADOPTION

July 2018

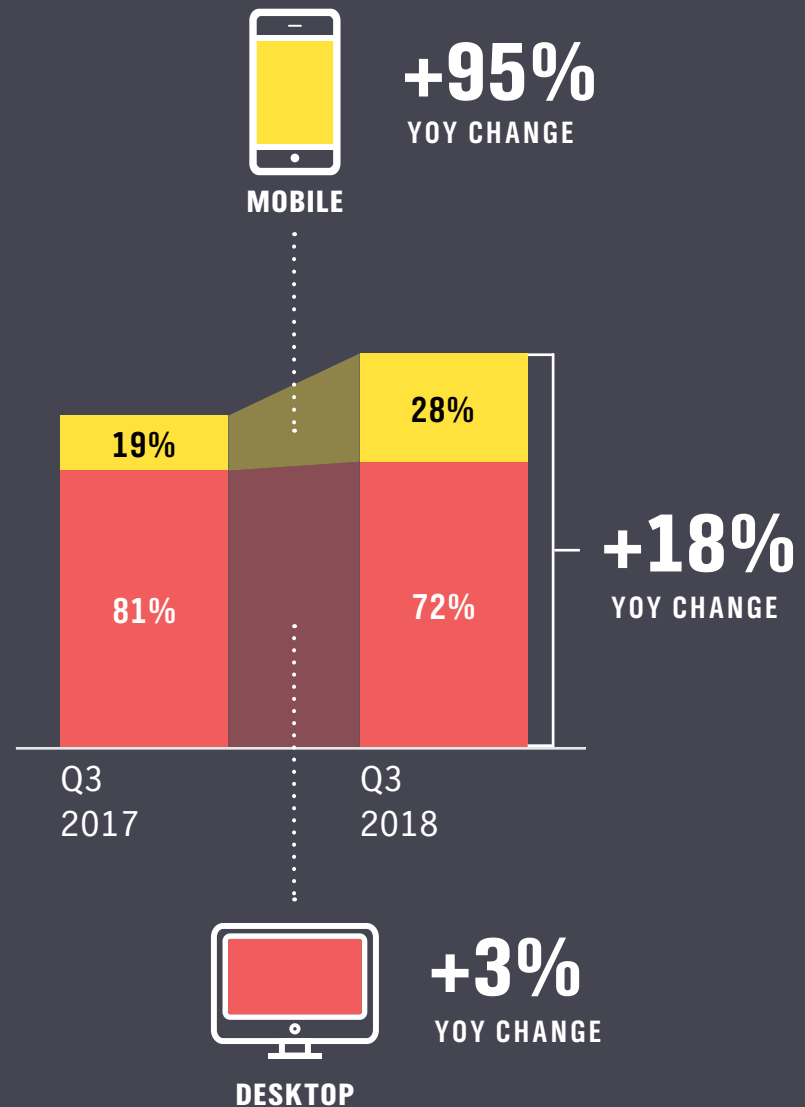
Over three-quarters of publishers that have embraced programmatic advertising have adopted header bidding. However, the technology remains in the early stages among the majority of the Alexa Top 3,000.



Source: Adzerk

# SHARE OF MONETIZED HEADER BIDDING VOLUME WORLDWIDE, BY DEVICE

Header bidding is considered a mature browser technology, including both desktops and the mobile web.

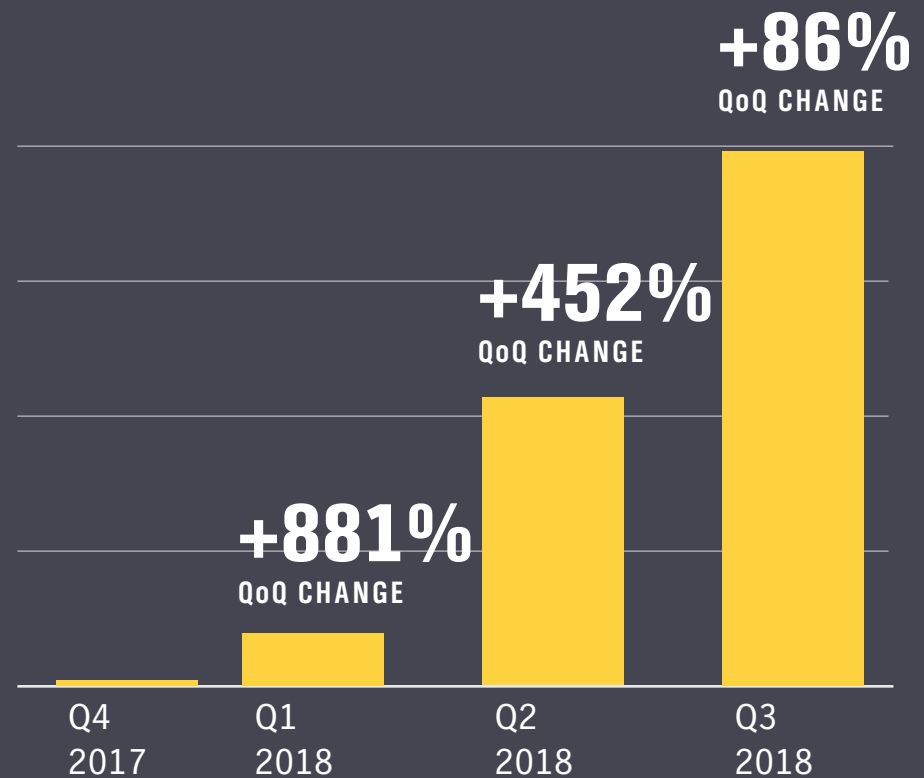


Source: PubMatic



# MONETIZED IN-APP HEADER BIDDING VOLUME WORLDWIDE

Triple-digit quarterly growth rates have been the norm in the early days of in-app header bidding adoption in 2018. Expect further gains in 2019 as current SDK drawbacks are addressed with server-to-server setups.



Source: PubMatic

# MAIN FACTORS PREVENTING APP PUBLISHERS IN NORTH AMERICA FROM USING IN-APP HEADER BIDDING

For in-app header bidding adoption to become widespread, ad tech providers must ensure the technology is understood by publishers.

Limited understanding of technology

31%

Implementation issue

23%

Few programmatic deals/mostly direct deals

14%

Difficulty scaling PMP deals

11%

Latency

11%

Compatibility issues

10%

Source: InMobi

A professional man with glasses and a dark sweater over a collared shirt is seated at a desk, looking intently at a large computer monitor. The background shows a modern office environment with large windows. The image is overlaid with blue geometric shapes and lines, and the text 'INVENTORY AND AD QUALITY' is prominently displayed in the center.

# INVENTORY AND AD QUALITY

# QUALITY MATTERS TO DIGITAL AD BUYERS AND SELLERS

## WHAT IS AD QUALITY?

Ad quality covers anything from advertiser category mapping to malicious creatives.

### LEADING CHALLENGES OF ADDRESSING AD QUALITY ISSUES

It's difficult to track down bad actors in the supply chain

+59%

Ad tech solutions don't scan every ad for issues

+41%

Demand partners don't do enough to resolve issues

+34%

Partners don't respond when issues arise

+33%

Ad tech solutions don't block bad ads

+30%

## WHAT IS INVENTORY QUALITY?

Inventory quality covers anything from domain spoofing to viewability to fraudulent arbitrage.

### MAJOR CHALLENGES OF PROGRAMMATIC BUYING

Lack of transparency around media buys

+78%

Brand safety

+59%

Technological capabilities of third-party technology

+54%

Accessing quality data

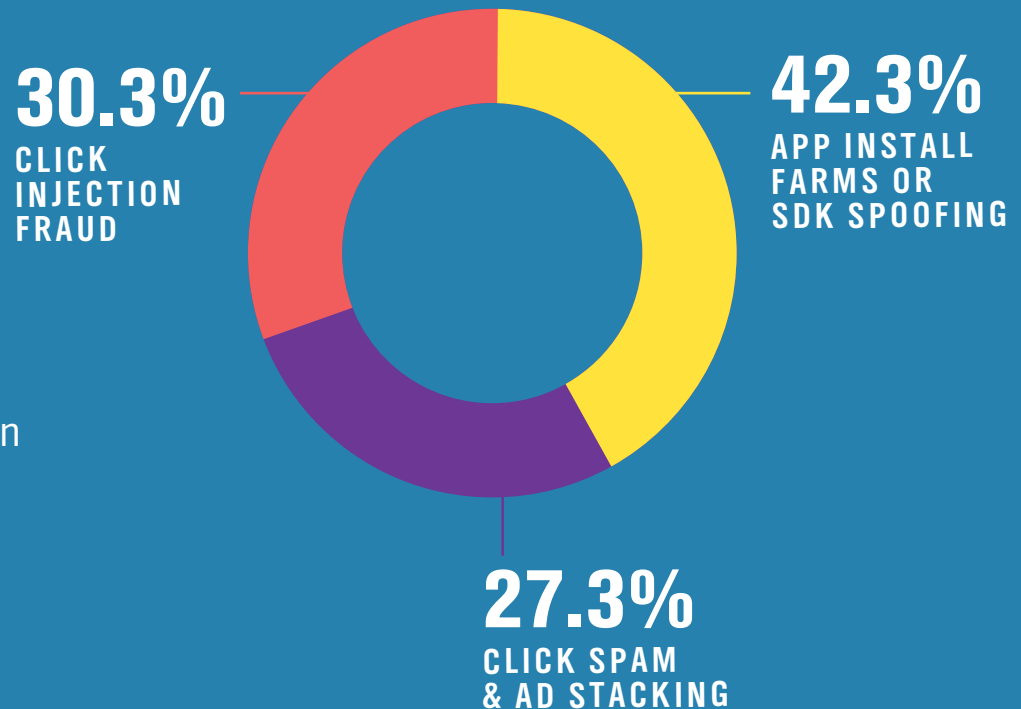
+52%

Lack of education/understanding

+52%

Source: AdLightening, ExchangeWire

# PROPORTIONAL WASTED AD SPEND DUE TO COMMON FRAUD TACTICS IN 2018



As in-app ad spend balloons, challenges remain ahead. An estimated \$25.8 billion worth of ad spend was wasted globally in 2018, including 42.3% linked to app install farms or SDK spoofing.

Source: Juniper Research

# 3 MYTHS ABOUT INVENTORY QUALITY IN DIGITAL ADVERTISING



## QUALITY IS A 100% SOLVABLE PROBLEM

The most common, and maybe most damaging of myths, is that quality management can be solved completely. In reality, as soon as the industry comes up with one solution, bad actors find a way to circumvent the system. The goal is to use all tools available to you to be as close to 100 percent solved as possible.



## FRAUD DETECTION TECH ALONE WILL PROTECT ME

Third-party fraud detection is now considered “table stakes” for any large player, buyer or seller, in the digital ecosystem. Though fraud detection vendors play an important role in helping to identify and avoid invalid traffic (IVT), not every vendor measures quality the same way so reports may vary widely for the same inventory. Deep dive investigations will uncover other signals that support one report or another.

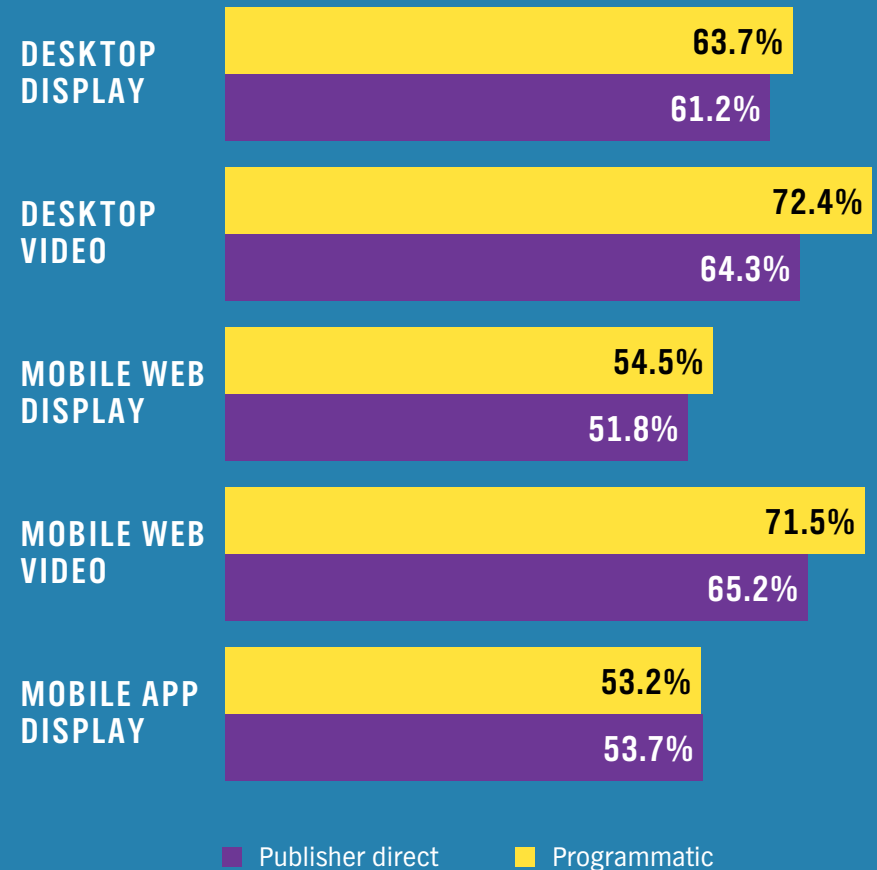


## RISK ACROSS EVERY SSP IS THE SAME

Unlike something like open marketplace RTB protocol, there’s no IAB-standardized and clear way to solve for quality. This means each SSP is left to their own devices to decide for themselves how to solve for this. Some may only partner with a third-party detection vendor, others only use their own tools, and some take a hybrid approach.

# DIGITAL AD VIEWABILITY RATES WORLDWIDE, BY PLATFORM, FORMAT AND PURCHASE METHOD

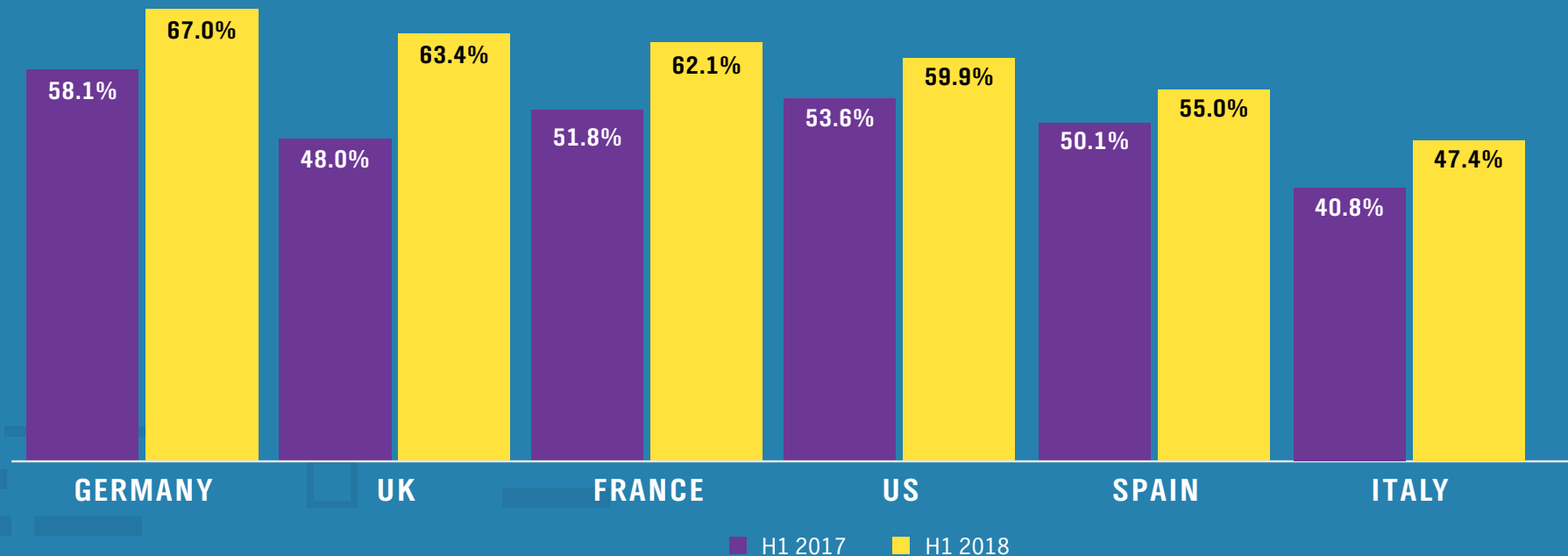
Consumers are watching more video content and moving their viewing habits to multiple screens and devices. The engaging format remains the most viewable across devices. On the other hand, mobile display viewability remains essentially a toss-up as just over 50% of banners actually in view across apps and the mobile web in H1 2018.



Source: Integral Ad Science

# DESKTOP DISPLAY VIEWABILITY RATE IN SELECT COUNTRIES

Among major digital advertising markets in Europe and the Americas, viewability\* rates have improved most in the United Kingdom and France. Germany remains the leading market in the category, with more than two-thirds of desktop display ads in view in H1 2018.

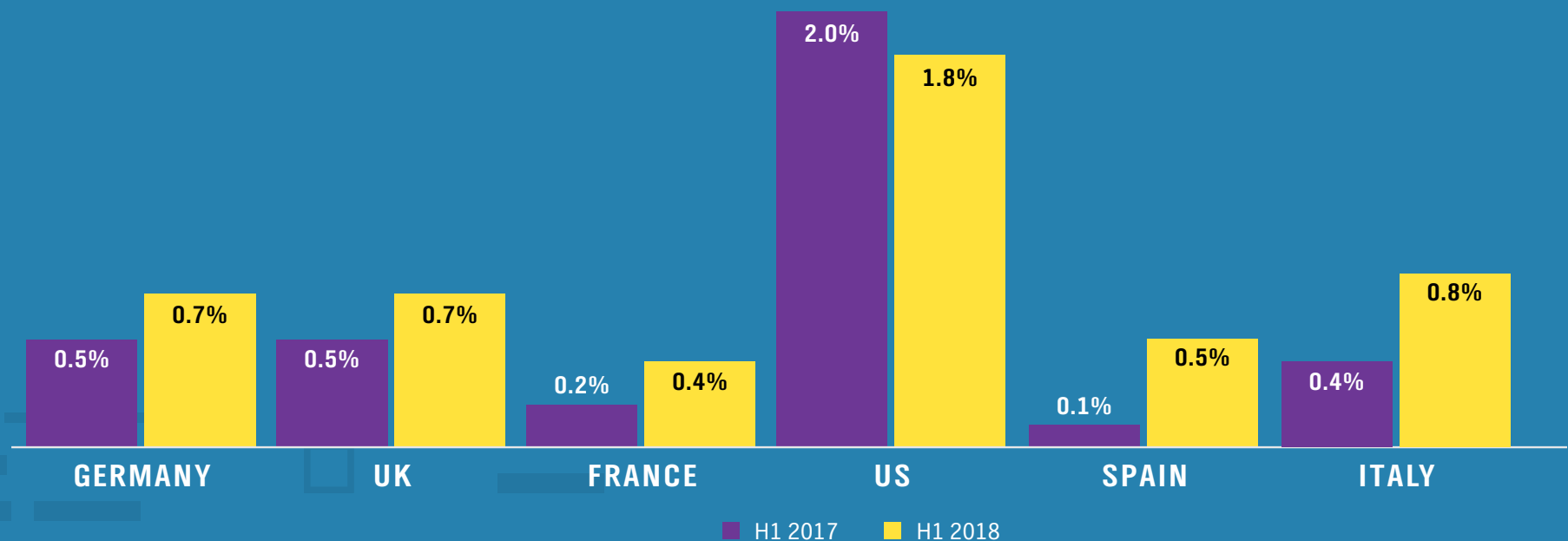


Source: Integral Ad Science; \*per MRC standard



# DESKTOP DISPLAY AD FRAUD RATE IN SELECT COUNTRIES

Roughly half of all programmatic ad spend worldwide is still devoted to the US market. At such scale, it is hardly surprising that fraudsters target this market more aggressively than any other. US-led initiatives such as TAG certification and ads.txt appeared to have a positive impact however, with ad fraud rates in the US market dropping 10% YOY in H1 2018.



Source: Integral Ad Science



## About PubMatic

PubMatic is a publisher-focused sell-side platform for an open digital media future. Featuring leading omni-channel revenue automation technology for publishers and enterprise-grade programmatic tools for media buyers, PubMatic's publisher-first approach enables advertisers to access premium inventory at scale. Processing over 12 trillion advertiser bids per month, PubMatic has created a global infrastructure to drive publisher monetization and control over their ad inventory. Since 2006,

PubMatic's focus on data and technology innovation has fueled the rise of the programmatic industry as a whole. Headquartered in Redwood City, California, PubMatic operates 13 offices and six data centers worldwide.

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