Q4 2018
AD FRAUD UPDATE

pixalate

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ABOUT PIXALATE

Pixalate is an **omni-channel fraud intelligence company** that works with brands and platforms to prevent invalid traffic and improve ad inventory quality. We offer the only system of coordinated solutions across display, app, video, and OTT for better detection and elimination of ad fraud.

Pixalate is an **MRC-accredited service for the detection and filtration of sophisticated invalid traffic** (SIVT) across desktop and mobile web, mobile in-app, and OTT advertising.
www.pixalate.com

KEY TAKEAWAYS

21%

average fraud rate (U.S.)

Q4 2018 saw a **big jump in ad fraud** as scammers took advantage of holiday budgets

There was a **24% increase in IVT** in Q4 compared to Q3

Mobile in-app programmatic advertising had a **23% IVT** rate in Q4

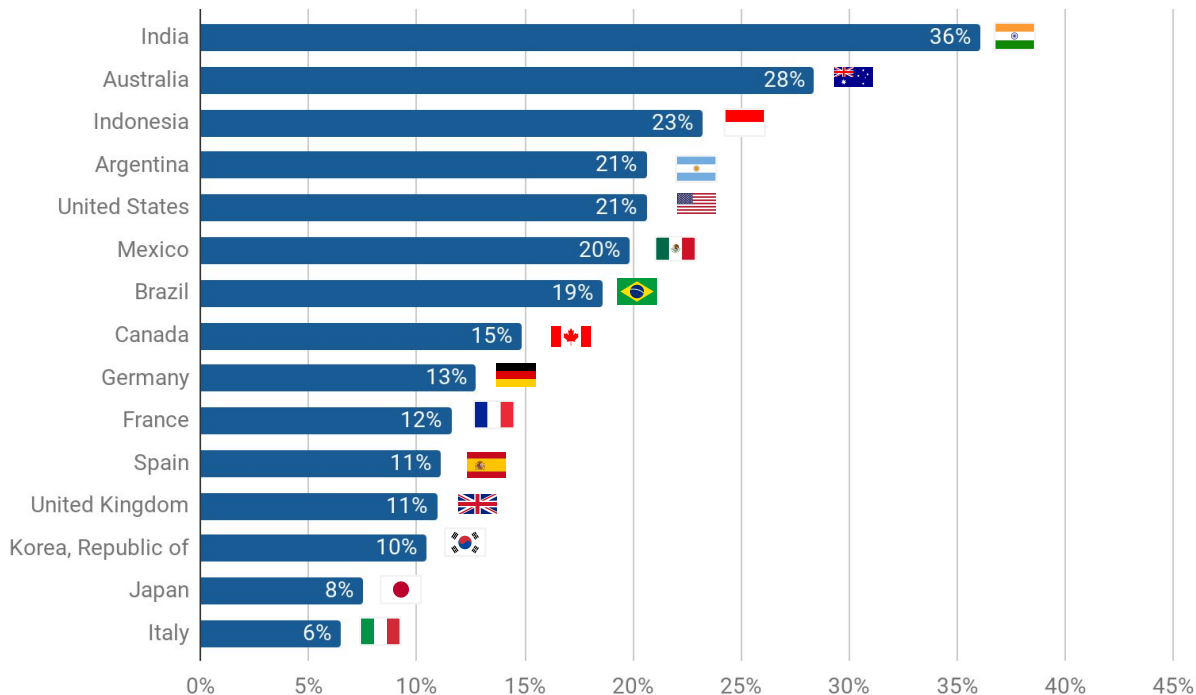**Android** devices had **1.7x more ad fraud** compared to iOS devices

Sites with **ads.txt had 23% less IVT** than sites without ads.txt

AD FRAUD
AROUND THE WORLD

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PROGRAMMATIC AD FRAUD RATES

BY COUNTRY; TOP 15 COUNTRIES IN TERMS OF PROGRAMMATIC AD VOLUME SHOWN; Q4 2018

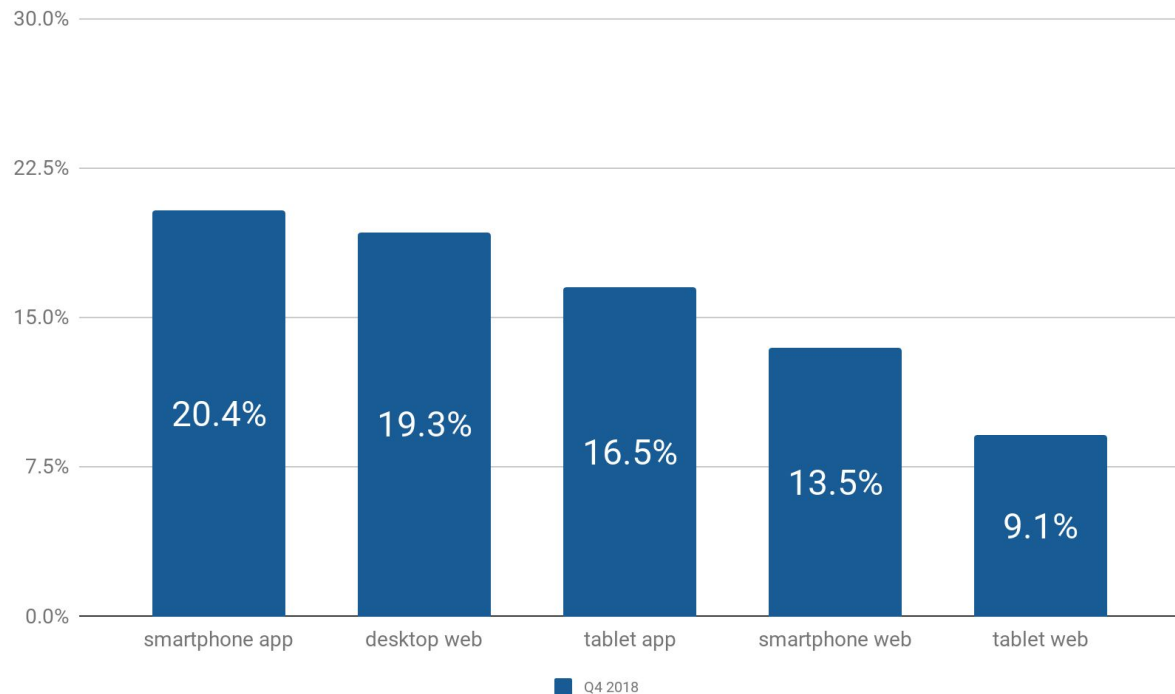| Country	Rate
India	36%
Australia	28%
Indonesia	23%
Argentina	21%
United States	21%
Mexico	20%
Brazil	19%
Canada	15%
Germany	13%
France	12%
Spain	11%
United Kingdom	11%
Korea, Republic of	10%
Japan	8%
Italy	6%

AD FRAUD ON THE RISE

- The U.S. had an IVT rate of 21% in Q4, up from 17% in Q3
  - This was the **fifth-highest IVT rate** in the world

- **10 of the top 15** countries in terms of programmatic ad volume **saw an increase in IVT** in Q4: U.S., Australia, Canada, Mexico, Germany, Italy, Brazil, Argentina, Korea, and India

IVT BY DEVICE TYPE: DISPLAY

GLOBAL; PROGRAMMATIC DISPLAY ADVERTISING; Q4 2018
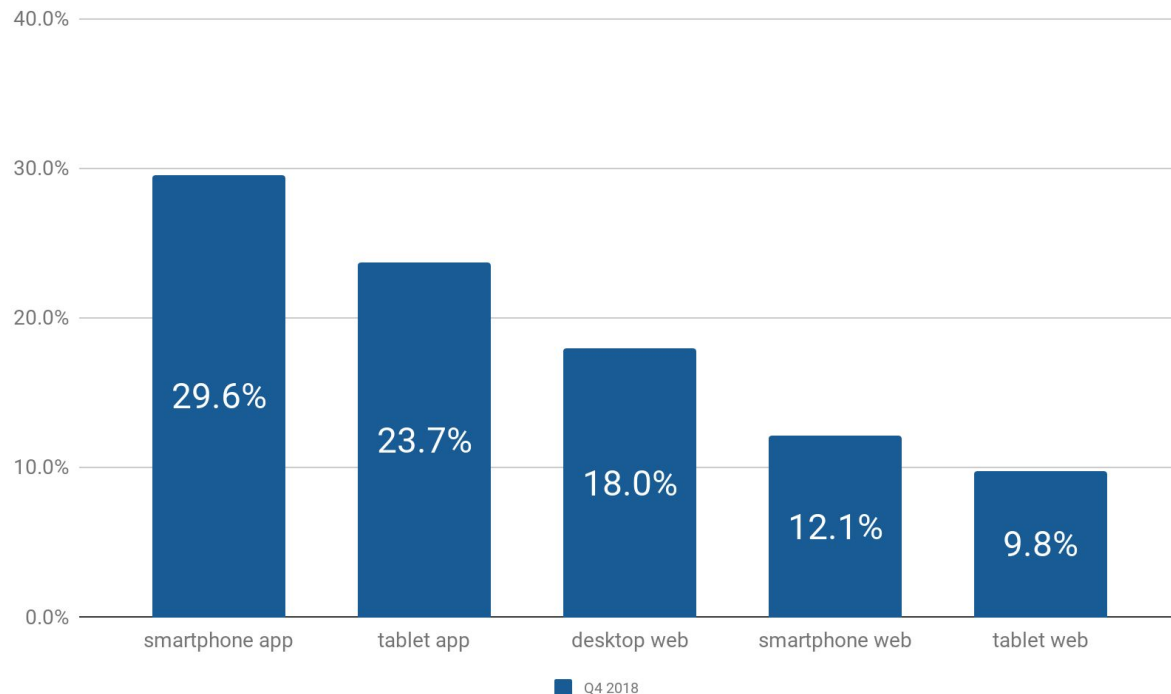

SMARTPHONE IN-APP AT 20%

- Over **one-in-five (20.4%)** smartphone in-app display ads were invalid in Q4

- Desktop web (19.3%) had the second-highest display IVT rate
  - **Up from 16.1%** in Q3

IVT BY DEVICE TYPE: VIDEO

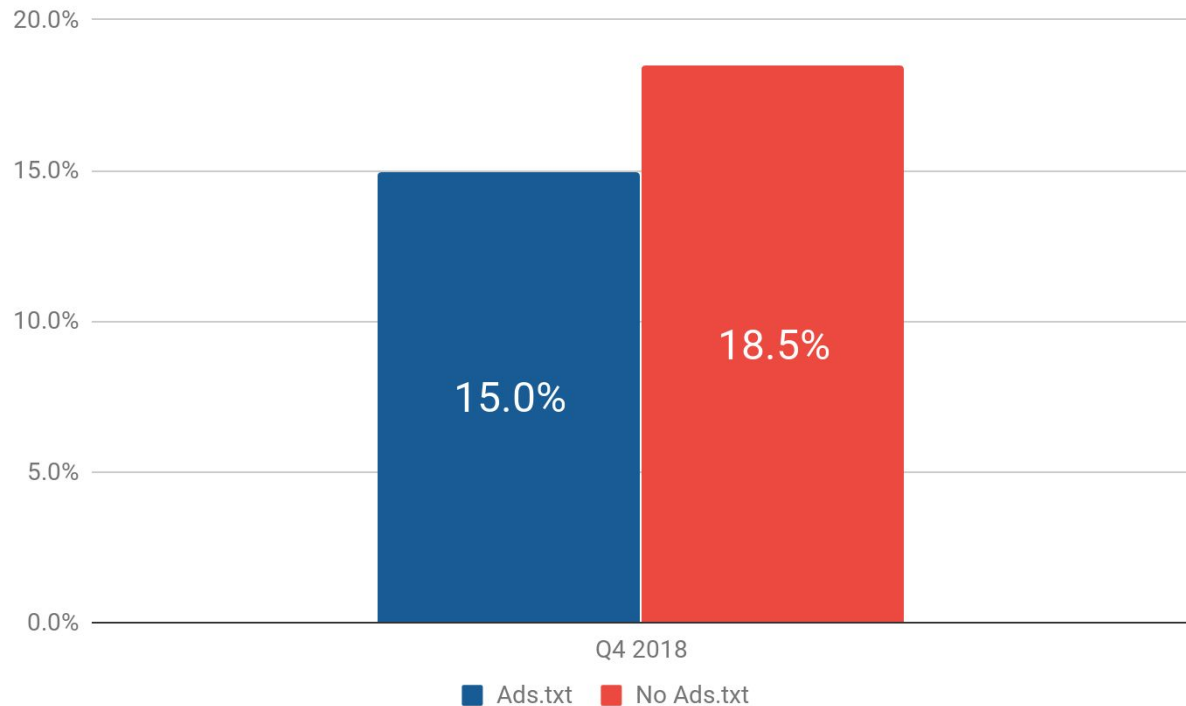**GLOBAL; PROGRAMMATIC VIDEO ADVERTISING; Q4 2018**

IN-APP VIDEO IS RISKIEST

- **Smartphone in-app video (29.6%)** and **tablet in-app video (23.7%)** had the highest programmatic video IVT rates in Q4

- In contrast, **smartphone web (12.1%)** and **tablet web (9.8%)** had significantly lower IVT rates

ADS.TXT: AD FRAUD IMPACT

GLOBAL; PROGRAMMATIC DISPLAY ADVERTISING; Q4 2018

ADS.TXT HELPS REDUCE IVT

- Sites with ads.txt had a **23% lower IVT rate** compared to sites without ads.txt

- Ads.txt doesn't eliminate all ad fraud: IVT rates on sites with ads.txt was still **15%** in Q4

ANDROID vs. iOS

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OVERALL IN-APP AD FRAUD RATES

Mobile in-app IVT rates **rose 33%** in Q4 2018

22.7%
Q4 2018

17.1%
Q3 2018

ANDROID vs. iOS: OVERALL IVT RATES

GLOBAL; PROGRAMMATIC IN-APP ADVERTISING; Q4 2018

26.2% — Q4 2018 — **15.9%**

Android devices had a 1.7x higher IVT rate vs. iOS devices, with IVT rates over one-in-four.

But iOS devices weren't fraud-free, as they still had a nearly 16% IVT rate.
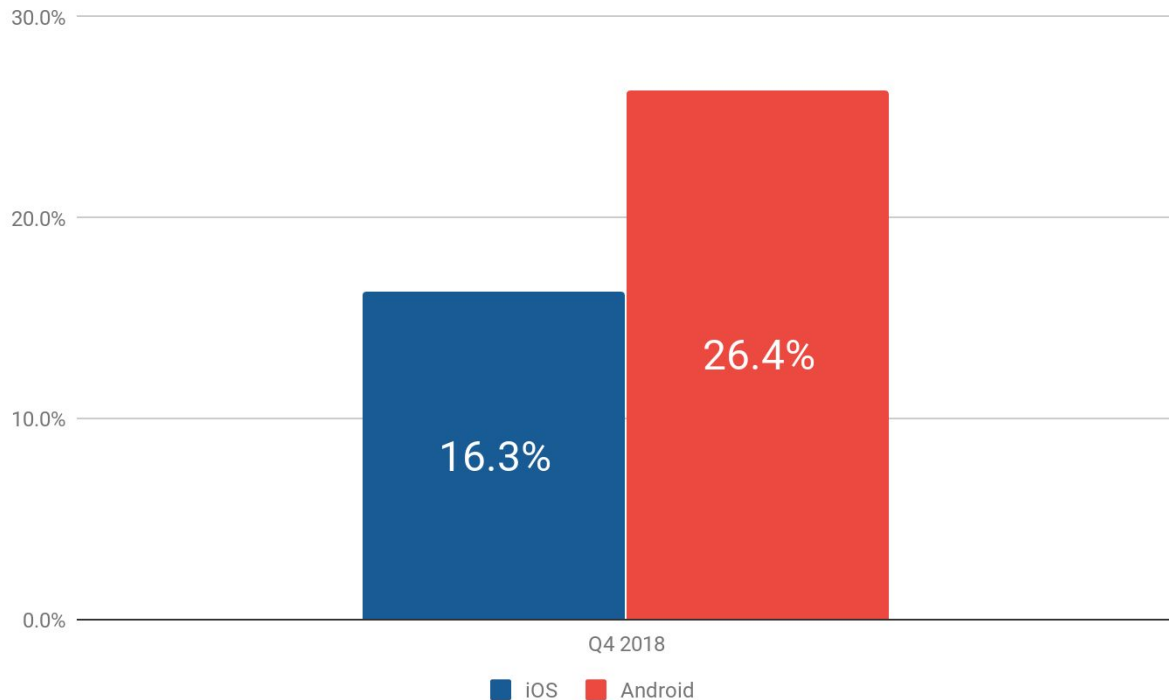
1.7x

higher IVT rate on Androids
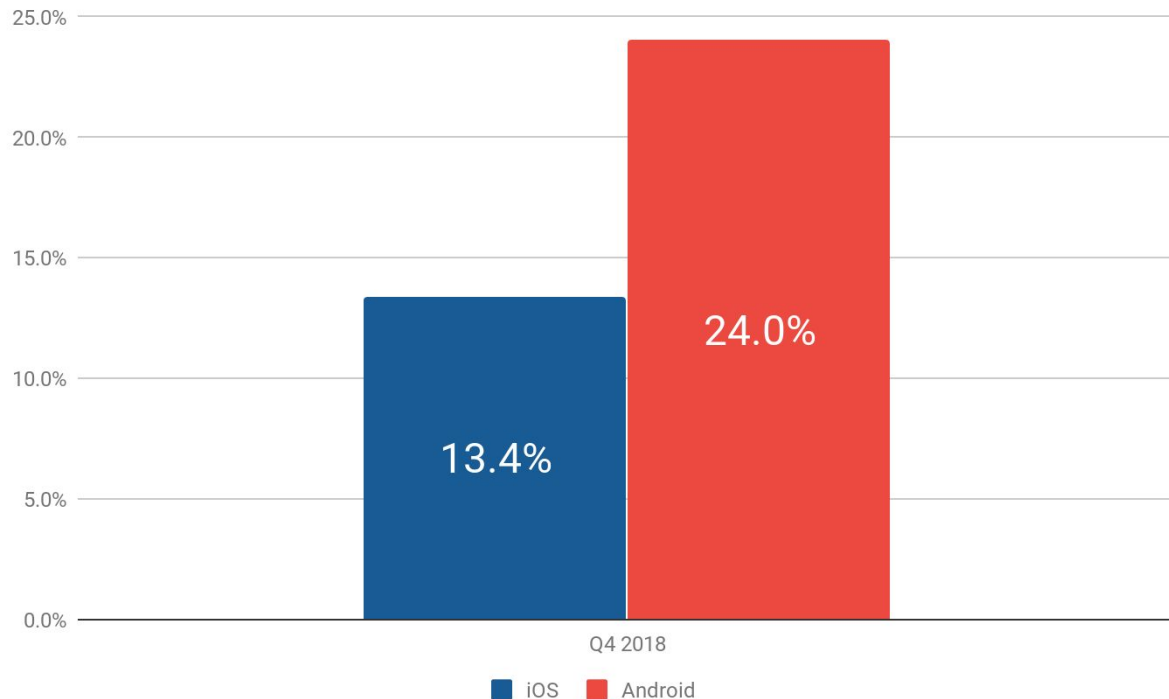
ANDROID vs. iOS: SMARTPHONES

15% - 25% AT RISK

- Smartphone app advertising is risky on both iOS and Android devices, with a **minimum 16.3% IVT rate**

- Over **one-in-four (26.4%)** of programmatic ads meant for Android smartphone users were actually invalid
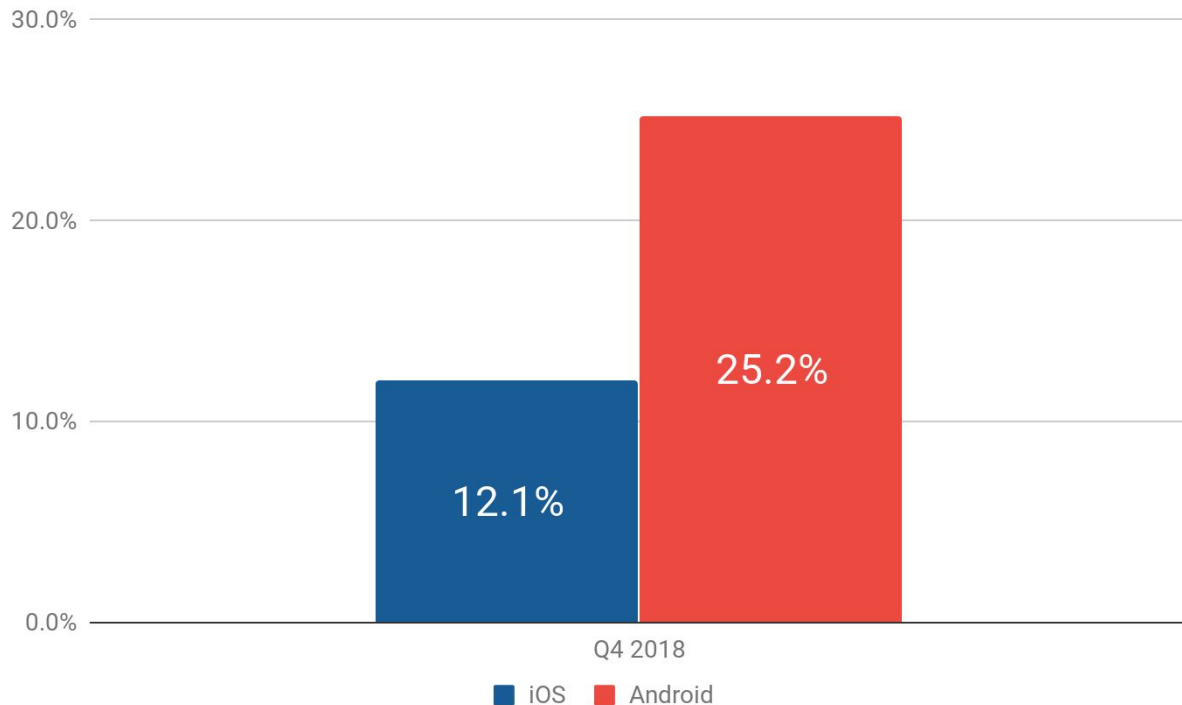
ANDROID vs. iOS: TABLETS

ANDROID NEARLY 2X HIGHER

- Just over **13%** of programmatic ads on iOS tablets were **invalid** in Q4 2018

- The IVT rate was **nearly 2x higher on Android** devices, at 24%
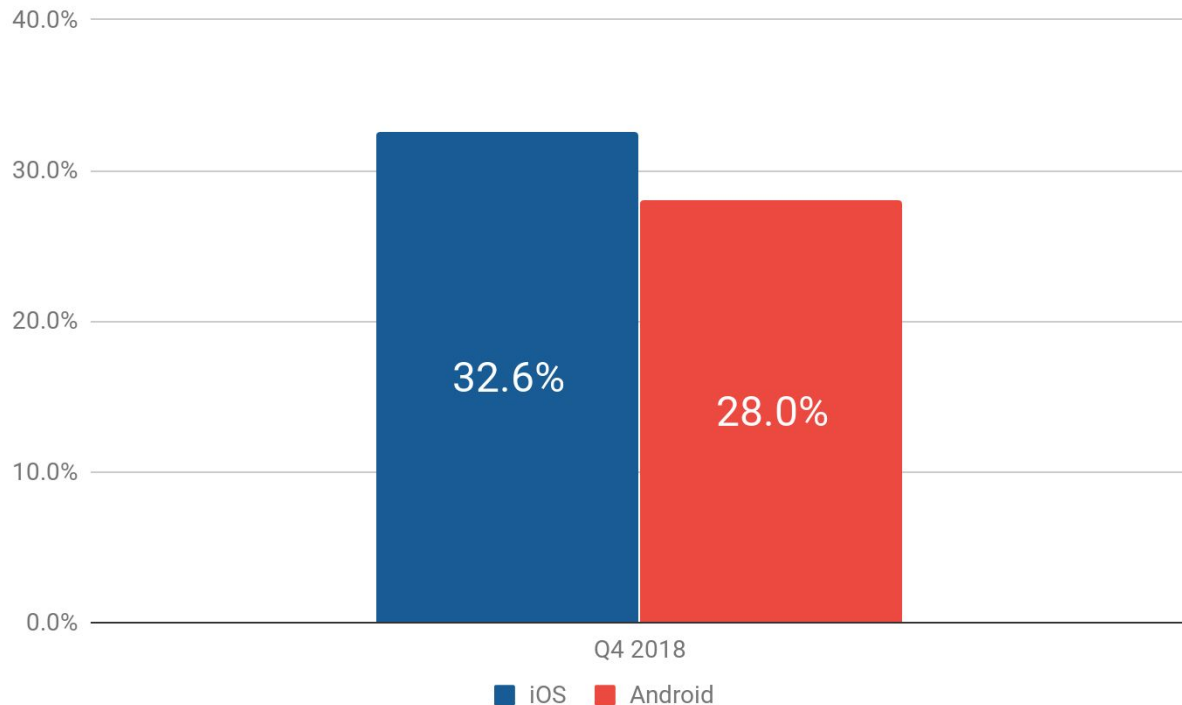
ANDROID vs. iOS: DISPLAY

ANDROID AT 25%

- Android in-app display advertising was **25% IVT in Q4**

- iOS in-app display was about **12% IVT** — 70% lower than Android

30.0%

20.0%

10.0%

0.0%

25.2%

12.1%
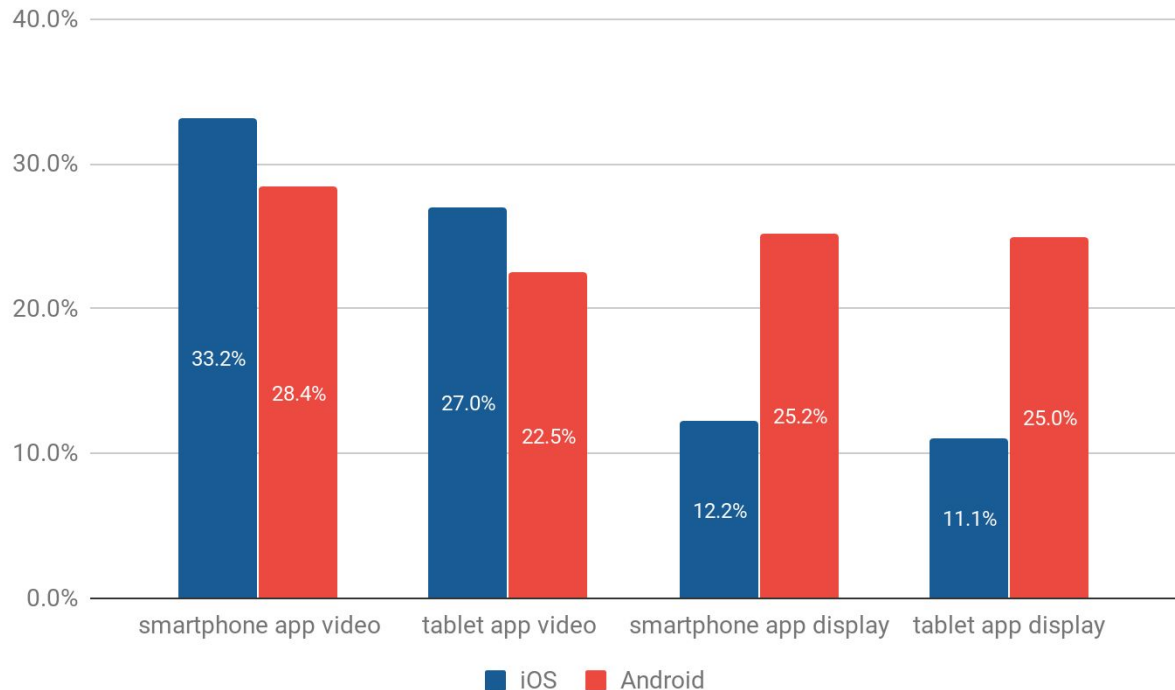
Q4 2018

■ iOS   ■ Android

ANDROID vs. iOS: VIDEO

iOS WITH MORE VIDEO IVT

- iOS devices had video IVT rates of **33%** in Q4, compared to 28% for Android
  - A **difference of 15%**

- **iOS devices** also had **higher video IVT** rates than Android devices in Q3

ANDROID vs. iOS: THE WHOLE ECOSYSTEM

GLOBAL; PROGRAMMATIC IN-APP ADVERTISING; Q4 2018

Bar chart showing iOS (blue) vs Android (red) IVT rates:
- smartphone app video: iOS 33.2%, Android 28.4%
- tablet app video: iOS 27.0%, Android 22.5%
- smartphone app display: iOS 12.2%, Android 25.2%
- tablet app display: iOS 11.1%, Android 25.0%

ANDROID RISKY EVERYWHERE

- iOS is a tale of two ad types: iOS in-app **video IVT rates are 2x - 3x higher** than display

- On Android devices, in-app IVT rates are about **25% for both video and display**, making it a risky channel across the board
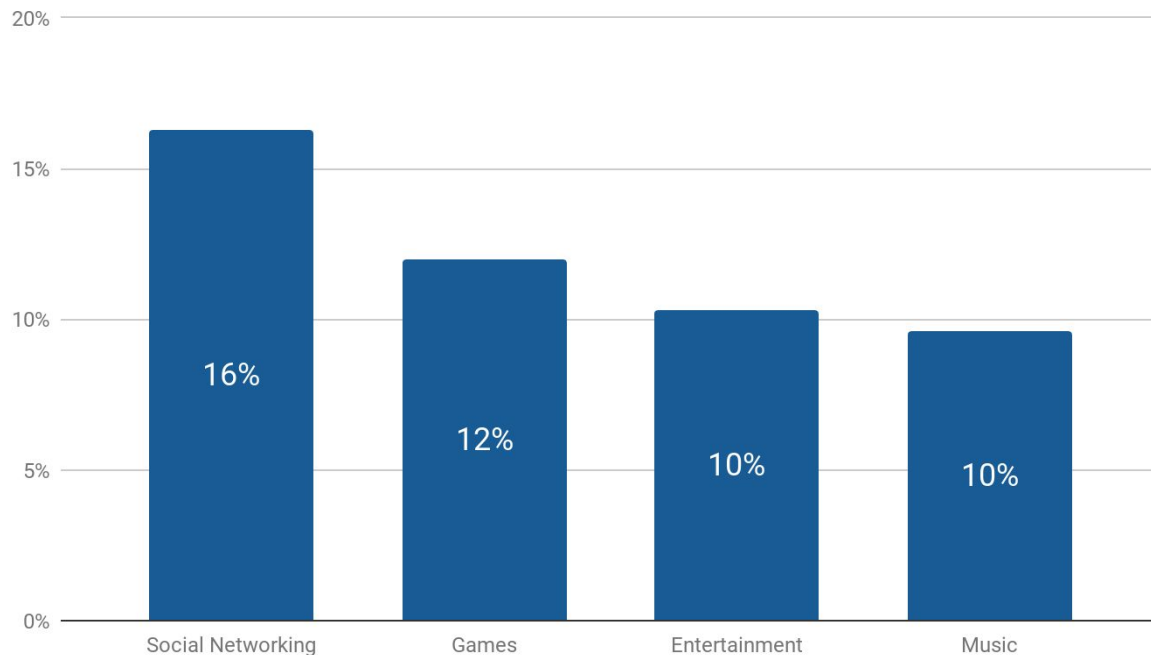
AD FRAUD
BY APP CATEGORY

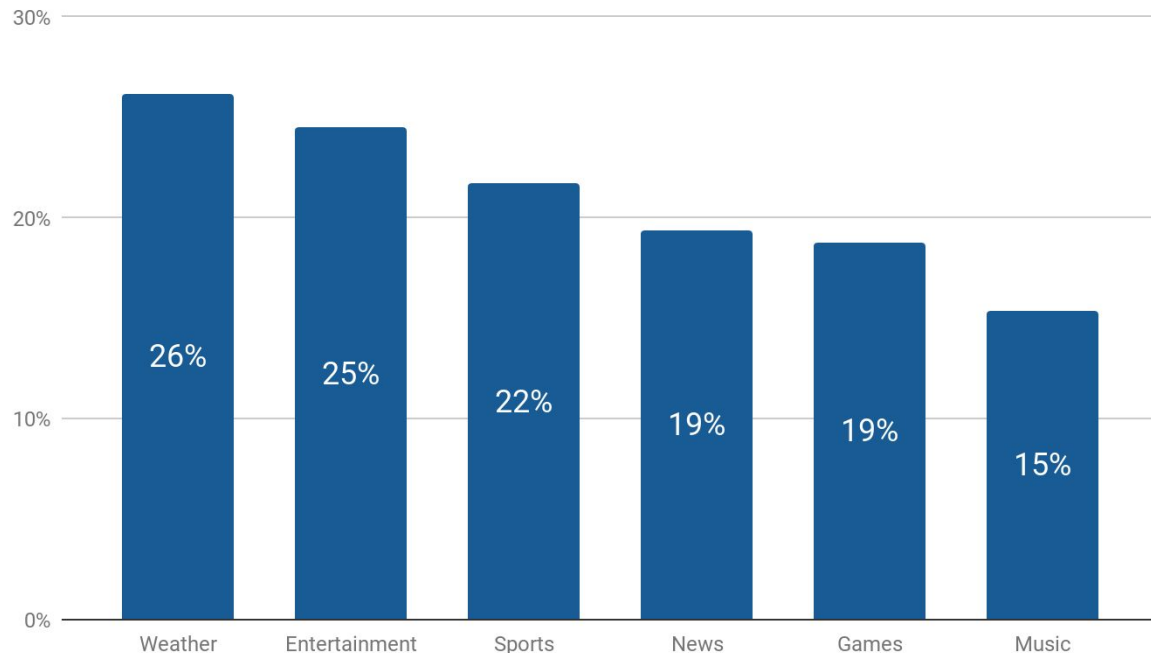pixalate

iPHONE APP CATEGORIES: DISPLAY

'SOCIAL' APPS HAVE 16% IVT

- Social Networking apps had a **16% IVT rate** in Q4, highest among iPhone app categories
  - "Walled gardens" such as Facebook, Twitter, etc., are not included

- **Games** had the second-highest IVT rate, at 12%

iPHONE APP CATEGORIES: VIDEO

NORTH AMERICA; Q4 2018; APP CATEGORIES WITH AT LEAST 5% PROGRAMMATIC AD SHARE OF VOICE

'WEATHER' WITH HIGHEST IVT

- iPhone **Weather** apps and **Entertainment** apps both had video IVT rates above 25%

- Across the board, iPhones had a **bigger problem with in-app video** ad fraud compared to in-app display ad fraud
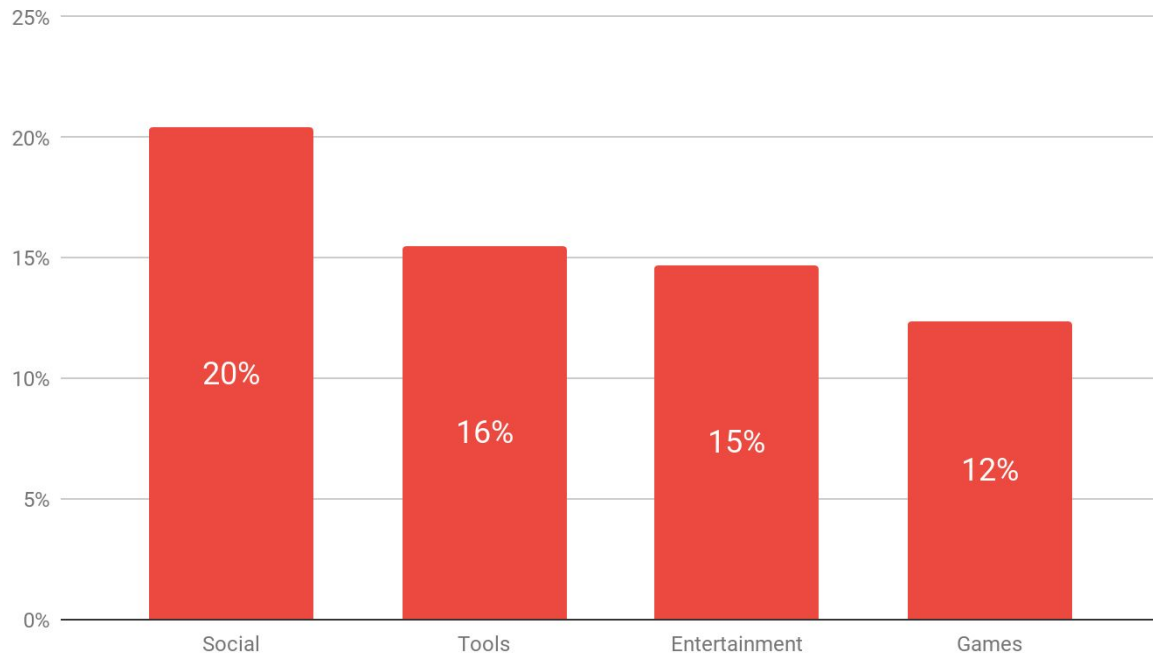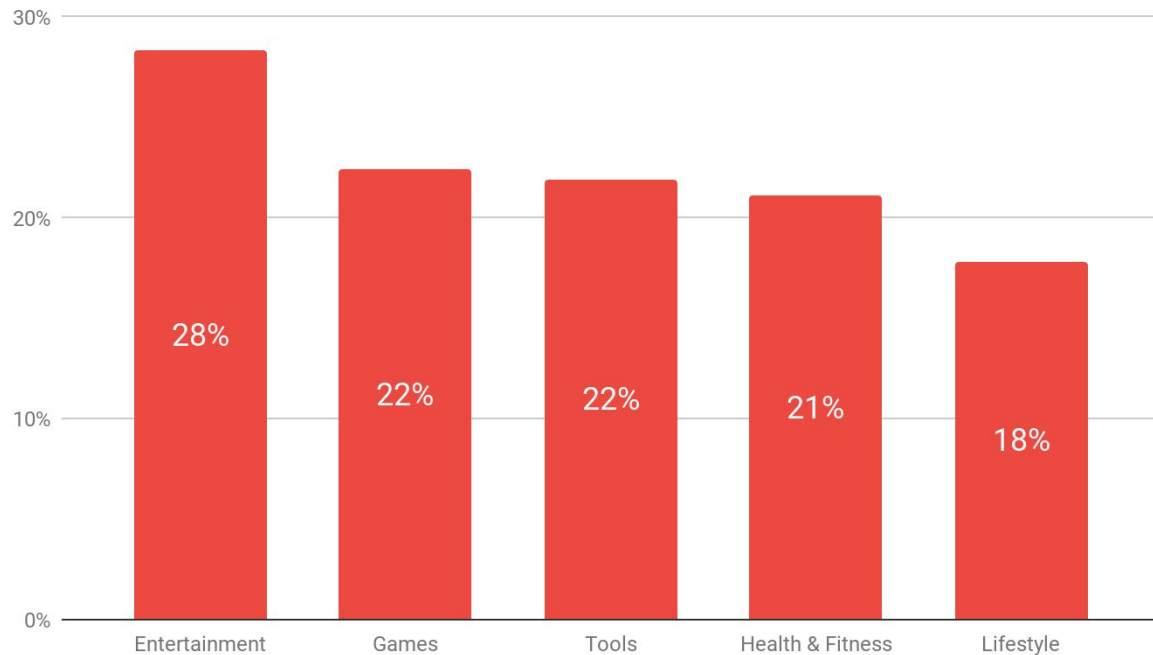
ANDROID PHONE APP CATEGORIES: DISPLAY

'SOCIAL' RISKIEST ON ANDROID

- **Social apps** had the highest display IVT rate (20%) on both Android phones and iPhones
  - "Walled gardens" such as Facebook, Twitter, etc., are not included

- The **Tools category**, which includes flashlight apps, cleaning apps, etc., had the second-highest display IVT rate, at 16%

ANDROID PHONE APP CATEGORIES: VIDEO

'ENTERTAINMENT' AT 28%

- The Entertainment app category had the highest Android phone video IVT rate, at 28%
  - The Entertainment category was over 25% IVT for video on iPhones too

- Games (22%), Tools (22%), and Health & Fitness (21%) all had IVT rates above 20%

METHODOLOGY & DISCLAIMER

METHODOLOGY

Pixalate's data science and analyst team analyzed billions of programmatic advertising impressions across over 80 million domains and over 1.5 million apps utilizing proprietary analytics tools to compile this research. The research contained herein represents data collected by Pixalate from June 1, 2018 through September 30, 2018 ("Q3 2018") and October 1, 2018 through December 31, 2018 ("Q4 2018").

Pixalate utilized its proprietary algorithms to measure invalid traffic ("IVT") levels across devices and channels, including General Invalid Traffic ("GIVT") and Sophisticated Invalid Traffic ("SIVT"). Geography is based off of the User Pool (IP) and not the region of the domain or app. App "category" data is derived from the official Google Play Store and Apple App Store.

DISCLAIMER

The research and insights contained within this report, including IVT rates and other such designations, represent Pixalate's opinions (i.e., they are neither facts nor guarantees). The data has not been audited or reviewed by a third party, but the research and insights are grounded in Pixalate's proprietary technology and analytics, which Pixalate is continuously evaluating and updating.

Per the MRC, "'Fraud' is not intended to represent fraud as defined in various laws, statutes and ordinances or as conventionally used in U.S. Court or other legal proceedings, but rather a custom definition strictly for advertising measurement purposes." Also per the MRC, "'Invalid Traffic' is defined generally as traffic that does not meet certain ad serving quality or completeness criteria, or otherwise does not represent legitimate ad traffic that should be included in measurement counts. Among the reasons why ad traffic may be deemed invalid is it is a result of non-human traffic (spiders, bots, etc.), or activity designed to produce fraudulent traffic."

THANK YOU

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