



Wasted Ad Spend Report 2024

The Global Impact of Invalid Traffic





Table of Contents

- 3. Introduction
- 4. Methodology
- 6. Executive Summary
- 13. Invalid Traffic by Channel
- Analysis by Channel**
- 14. LinkedIn
- 15. Google Video Partners
- 16. X (Formerly Twitter)
- 17. Meta
- 18. Pinterest
- 19. TikTok
- 20. Microsoft Ads / Bing
- 21. Google Display Network
- 22. Performance Max
- 23. Google Search (inc. Shopping)
- 24. YouTube
- 25. Invalid Traffic by Company Size
- 26. Invalid Traffic by Industry
- 27. Industry Analysis
- 29. Invalid Traffic by Region

The Paid Media Traffic Quality Survey

- 32. The Business Impact of Invalid Traffic
- 33. Working with Smaller Budgets in 2023
- 34. Are Ad Networks Combatting Invalid Traffic?
- 35. Claiming Refunds for Invalid Traffic
- 36. Using Third-Party Invalid Traffic Prevention Solutions
- 37. Manually Blocking Invalid Traffic
- 38. Improving Targeting with Audience Exclusions
- 39. Fake Lead Submissions from Paid Media Campaigns
- 40. Top 3 Performance Marketing Concerns in 2023

IAS – The Role of Viewability in Reducing Wasted Spend

- 43. How Does Viewability Complement Click Data?
- 44. Where Does the IAS Data Come From?
- 45. Overall Trends in Viewability Rates
- 47. Overall Trends for Time-in-View

Scope 3 – The Environment Impact of Digital Advertising & Invalid Traffic

- 51. Where Does the Scope3 Data Come From?
- 52. Overall State of Digital Advertising Carbon Emissions
- 52. Emission at the Per-Impression Basis
- 53. Climate Emissions in Programmatic & Display
- 54. Defunding Climate Risk Inventory
- 54. Viewability & Carbon Emissions
- 55. Identifying Waste Within Programmatic Supply Chains
- 56. Carbon Emissions Per-Click
- 57. Calculating Carbon Wasted on IVT
- 59. Conclusion
- 60. About



What is Invalid Traffic?

Invalid traffic (IVT) refers to any website visits that don't come from a real person with genuine interest. It can include bots (both good and bad), fake users, misattributed accidental clicks, malicious clicks from competing advertisers, and otherwise invalid visitors that have zero chance of converting to customers.

The current era of automation and artificial intelligence means bot activity is becoming more prevalent and sophisticated. The [2023 Imperva Bad Bot Report](#) found that in 2022, nearly half (47.4%) of all internet traffic came from bots, a 5.1% increase over the previous year.

While there is an abundance of invalid activity on the internet, not all of it has the same level of impact on businesses. In this report, we specifically hone in on the proportion of IVT that has a direct detrimental effect on marketing performance and business revenue. **Namely, invalid traffic stemming from paid media campaigns.**

How Does Invalid Traffic Impact Businesses?

Invalid traffic isn't a security problem. It's a marketing black hole.

It instantly wastes budget – because those “visitors” will never convert. And the financial costs continue to stack up when you consider lost revenue opportunities. The return on ad spend for invalid clicks is always 0:1, which further stifles business growth.

IVT also distorts analytics, leading to unwise budget allocation. Spam leads, which often follow on from fake clicks, contaminate CRMs, wasting the time and energy of sales teams. Projected revenue forecasts become unpredictable. And the explosion of advertising automation is only making the problem worse.

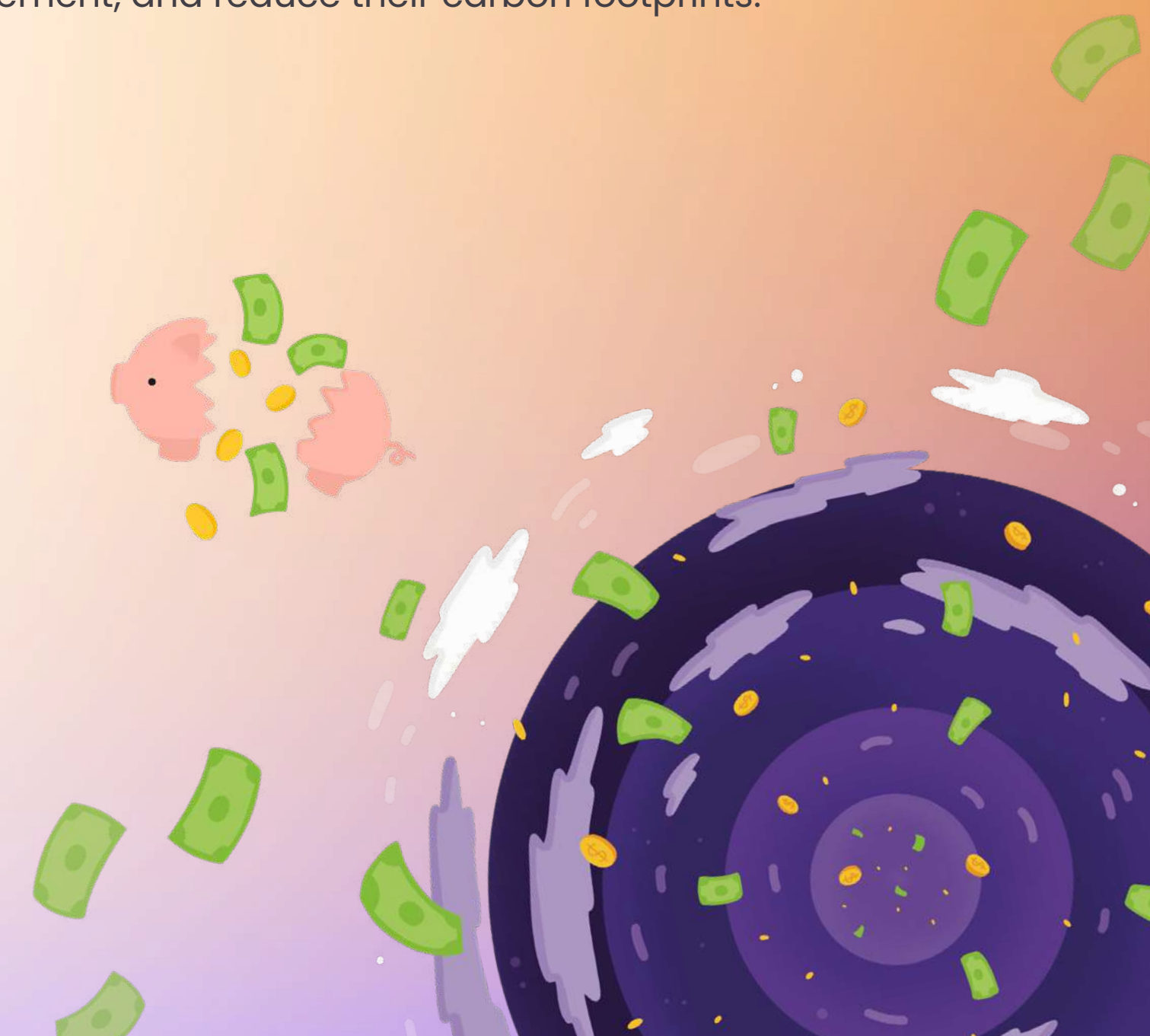
To help unpack the issue and the impact it has on businesses, we've put together our first annual report titled: Wasted Ad Spend Report 2024: The Global Impact of Invalid Traffic

By analysing billions of paid ad clicks from thousands of Lunio customers, we've exposed the true extent of the invalid traffic problem across different industries, regions, advertising channels, and more.

In addition to our own data, we've also partnered with Integral Ad Science and Scope3 to give a more complete overview of the problem and its downstream consequences.

Integral Ad Science specialise in protecting programmatic media buying, and their data enabled us to dive even deeper into global paid traffic trends affecting advertisers. And data provided by Scope3, the world's largest database of georeferenced emissions factors, allowed us to gain a unique understanding of the environmental impact of invalid traffic and the digital advertising industry more broadly.

Our aim is to provide a data-driven picture of the threat posed by invalid traffic, and empower marketers with insights on how to maximise ad spend efficiency, eliminate sources of fake ad engagement, and reduce their carbon footprints.



Lunio's real-time decision engine analyses the validity of millions of paid ad clicks per day across all major marketing channels including Google, Meta, Bing, LinkedIn, TikTok, and more.

Traffic determined to be invalid is instantly excluded on the channel it's detected on. Data identifying the source of the invalid click is then used to populate cross-channel exclusion audiences to prevent it from negatively impacting customers elsewhere.

Our inaugural Wasted Ad Spend report was conducted over a 12-month period from May 2022 to May 2023, analysing a total of 2.6 billion paid ad clicks and an estimated 104 billion impressions from more than 60,000 ad accounts.

We segmented the data by channel, industry, company size, and region to provide actionable insights for marketers seeking to minimise wasted spend and maximise campaign efficiency.

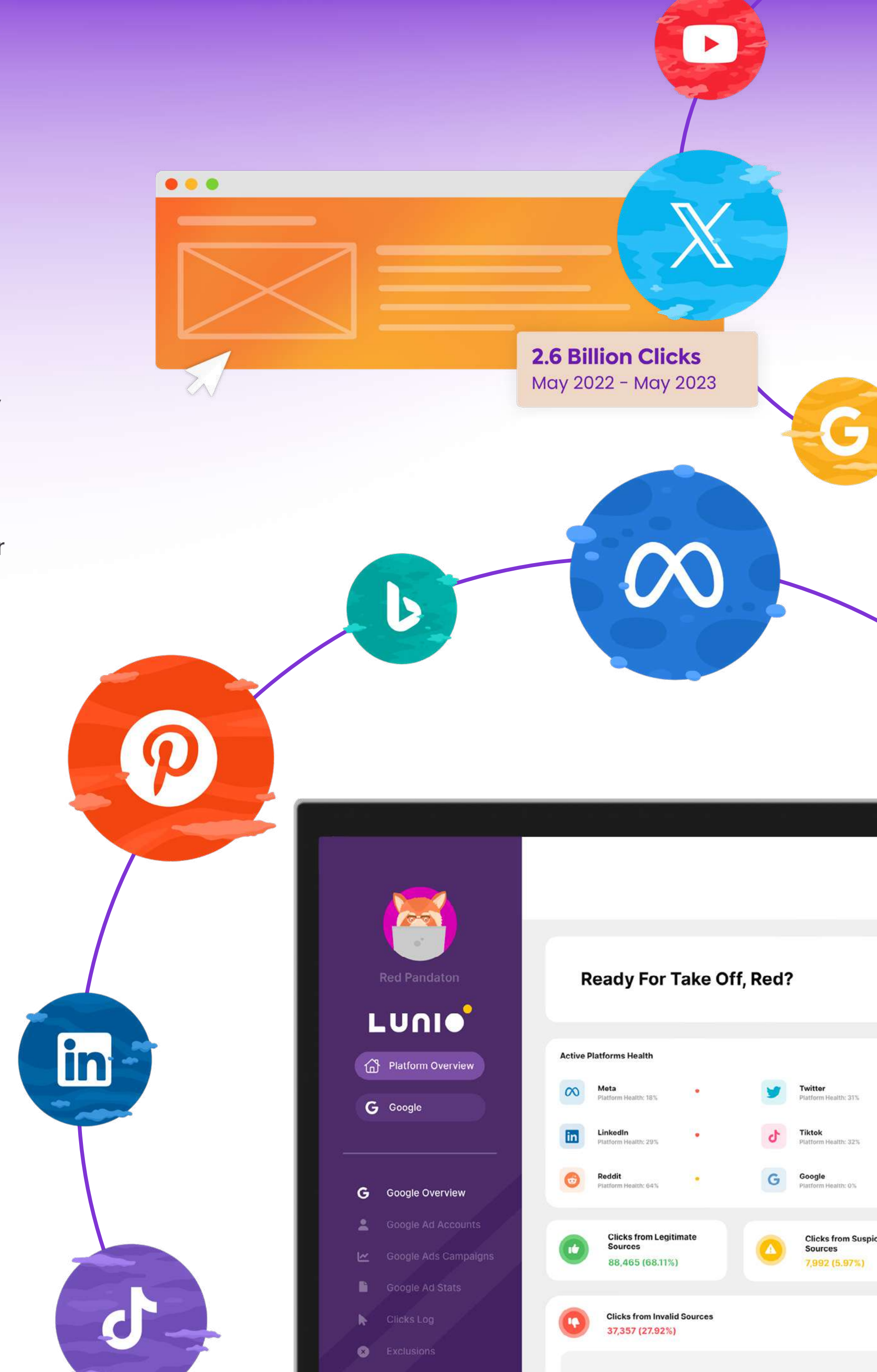
Invalid traffic rates are presented as percentages and represent the number of invalid clicks divided by the total number of clicks in the sample taken for each category.

Our breakdown of invalid traffic rates across individual ad channels was limited to those with a sample size of clicks statistically significant enough to draw meaningful conclusions from. This includes Google Search (inc. Shopping), Performance Max, Google Display, YouTube, Google Video Partners, Bing, Meta, X (formerly Twitter), LinkedIn, TikTok, and Pinterest.

In our channel analysis we combined invalid traffic rates with external data on ad revenue earnings to provide benchmarks for projected wasted ad spend and lost revenue opportunities.

For our breakdown of invalid traffic rates by industry, company size, and region we segmented Lunio's customer database accordingly and established an overall invalid traffic rate for each individual category included in the report.

We supplemented Lunio click data with results from a survey of hundreds of performance marketers conducted in June 2023. Respondents were invited to take part via a call-out sent to Lunio's mailing list. The results of the eight questions in the survey are analysed in full and provide further insight into the business impact of invalid traffic for brands and marketers alike.





To give a complete picture of the current state of wasted ad spend, Lunio partnered with Integral Ad Science (IAS), who specialise in programmatic ad verification at an impression level i.e. they ensure display ads are seen by real people, in brand-safe and contextually relevant digital environments.

The combination of Lunio and IAS data provides unrivalled insight into invalid activity and marketing inefficiencies at both the click and impression level across programmatic, open web, paid search, and paid social.

The IAS data presented in this report originates from the 18th edition of their **Media Quality Report**, first published in May 2023. Full details on the methodology IAS used are available in the original report.

The ultimate goal of this report is to help advertisers understand the current state of invalid traffic, what can be done to mitigate against it, and show how a focus on ad spend efficiency can help drive greater campaign performance across every channel.



To help understand the environmental impact associated with invalid traffic, Lunio partnered with Scope3, who specialise in measuring digital advertising industry emissions and offer solutions to help brands and marketers reduce their carbon footprint.

The Scope3 data presented in this report originates from their Q1 and Q2 2023 **State of Sustainable Advertising** reports. Full details on the methodology Scope3 used are available in the original reports.



Foreword From the CEO

Our mission at Lunio is to maximise the efficiency of the digital advertising space through innovative software solutions. By enabling the era of exclusion for marketers, Lunio helps to accelerate advertising efficiency by excluding budget waste on invalid, fake and fraudulent traffic across walled garden and performance marketing networks.

Our inaugural Wasted Ad Spend report provides the most complete and accurate view of inefficiencies that currently exist in the digital advertising landscape. This report will empower marketers to increase advertising performance while reducing wasted spend, irrelevant reach and the carbon impact of their campaigns.

I'd like to take this opportunity to thank all of our customers and partners for your support, feedback, and collaboration throughout our journey so far. Together, we can build a healthier digital advertising ecosystem in which every click, impression and placement drives genuine value for brands and consumers alike.

Neil Andrew, Co-Founder & CEO at Lunio

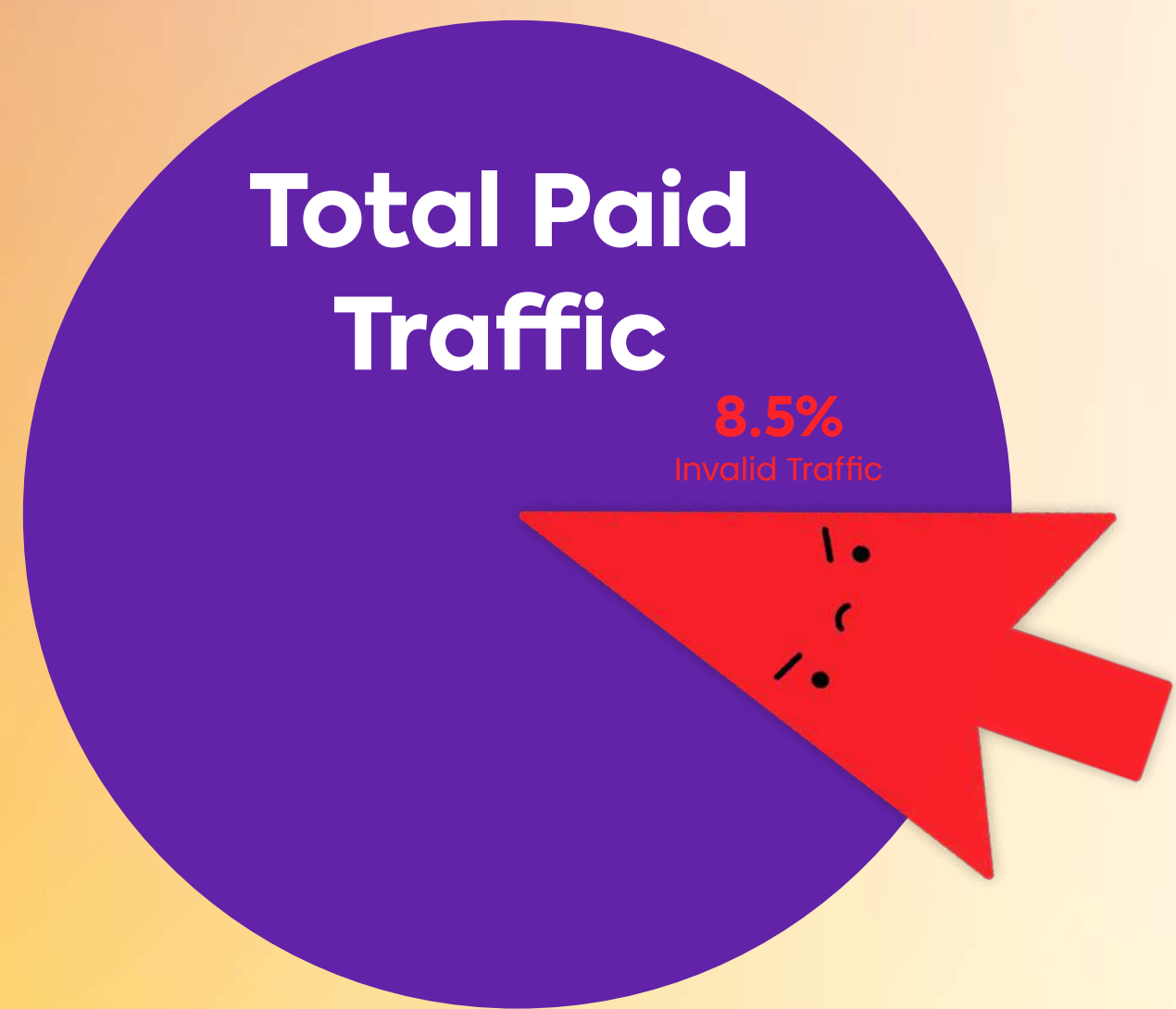


Executive Summary

We evaluated a sample of more than 2.6 billion paid ad clicks from Lunio customers over the course of 12 months (May 2022 – May 2023).

This data set revealed:

8.5% of all paid traffic was invalid.



This means:

1 in every 11.7 paid traffic website visits were invalid.



Google vs Non-Google Channels

When the 2.6 billion clicks were segmented by Google vs non-Google channels it revealed a significant difference – IVT rates were much lower on Google channels.



5.5% of traffic coming from Google channels was invalid.



This includes Search (inc Shopping), PMax, Display, & YouTube campaigns

17.5% of traffic coming from non-Google channels was invalid.

This includes Meta, Bing, LinkedIn, TikTok, X (formerly Twitter), and Pinterest





Executive Summary

Forecasting Wasted Ad Spend

To provide a benchmark estimate of what these average invalid traffic rates across Google and Non-Google platforms translate to in terms of wasted ad spend, we looked to 2022 ad revenue earnings reports, as well as forecasted revenue projections for 2024.

Google

In 2022, Google’s ad revenue amounted to [\\$224.47 billion](#).

When we apply an IVT rate of 5.5% averaged across all Google channels, this equates to:

\$12.35 billion wasted on Google in 2022.

In 2024, Google’s ad revenue is forecasted to amount to [\\$301.59 billion](#), an increase of 34.35%

When we again apply an IVT rate of 5.5%, this equates to:

\$16.59 billion forecasted to be wasted on Google in 2024.



Non-Google Channels

In 2022, global social media ad spend stood at approximately [\\$230 billion](#). In addition, Bing generated [\\$11.59 billion](#) in 2022.

Therefore \$241.59 billion represents an estimate of total ad spend on Non-Google channels.

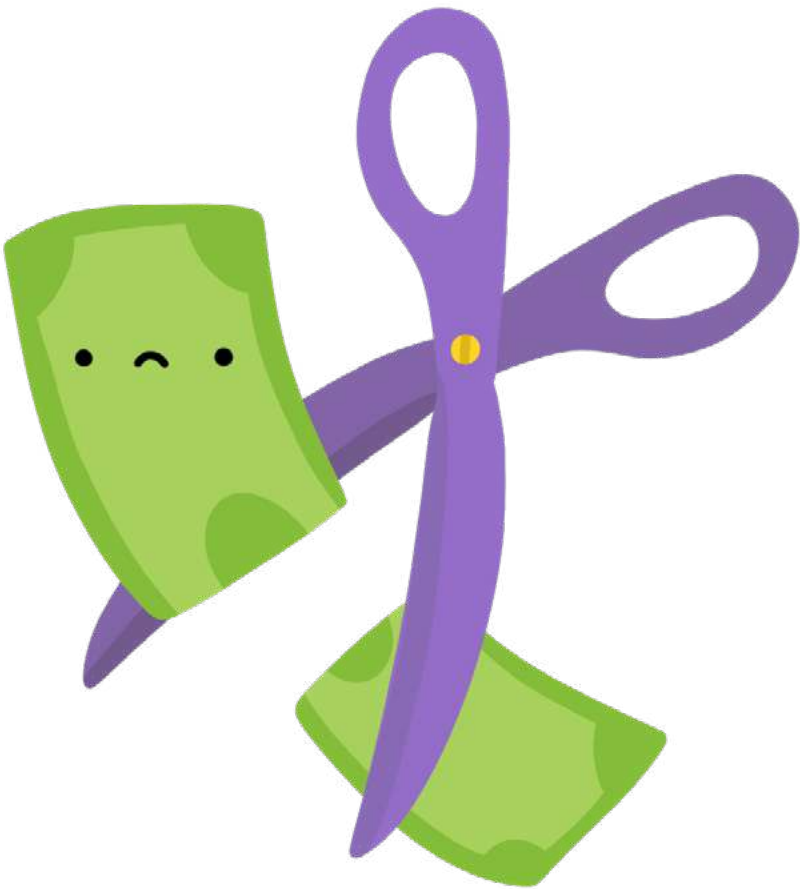
When we apply an IVT rate of 17.5% averaged across all Non-Google channels, this equates to:

\$42.28 billion wasted on Non-Google channels in 2022.

In 2024, global social media spend is projected to surpass the [\\$300 billion](#) dollar mark for the first time. In the same year, Bing is expected to generate [\\$13 billion](#) in ad revenue.

When we again apply an IVT rate of 17.5%, this equates to:

\$54.78 billion forecasted to be wasted on Non-Google channels in 2024.





\$71.37 Billion in Ad Spend is
Forecasted to Be Lost to
IVT in 2024.

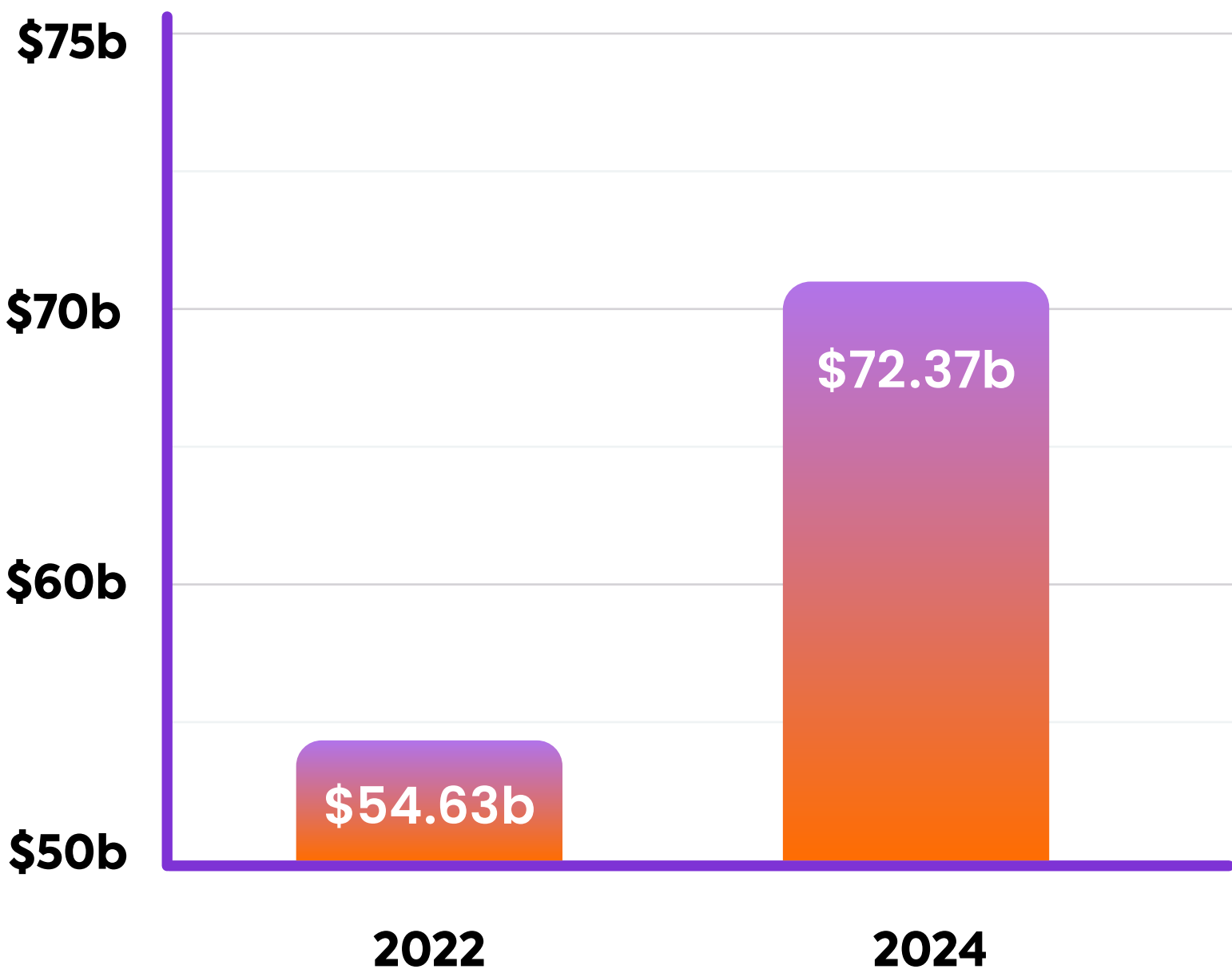


Total Wasted Ad Spend

Based on the previous estimates:

\$54.63 billion in ad spend was lost to IVT in 2022.

\$71.37 billion in ad spend forecasted to be lost to IVT in 2024.

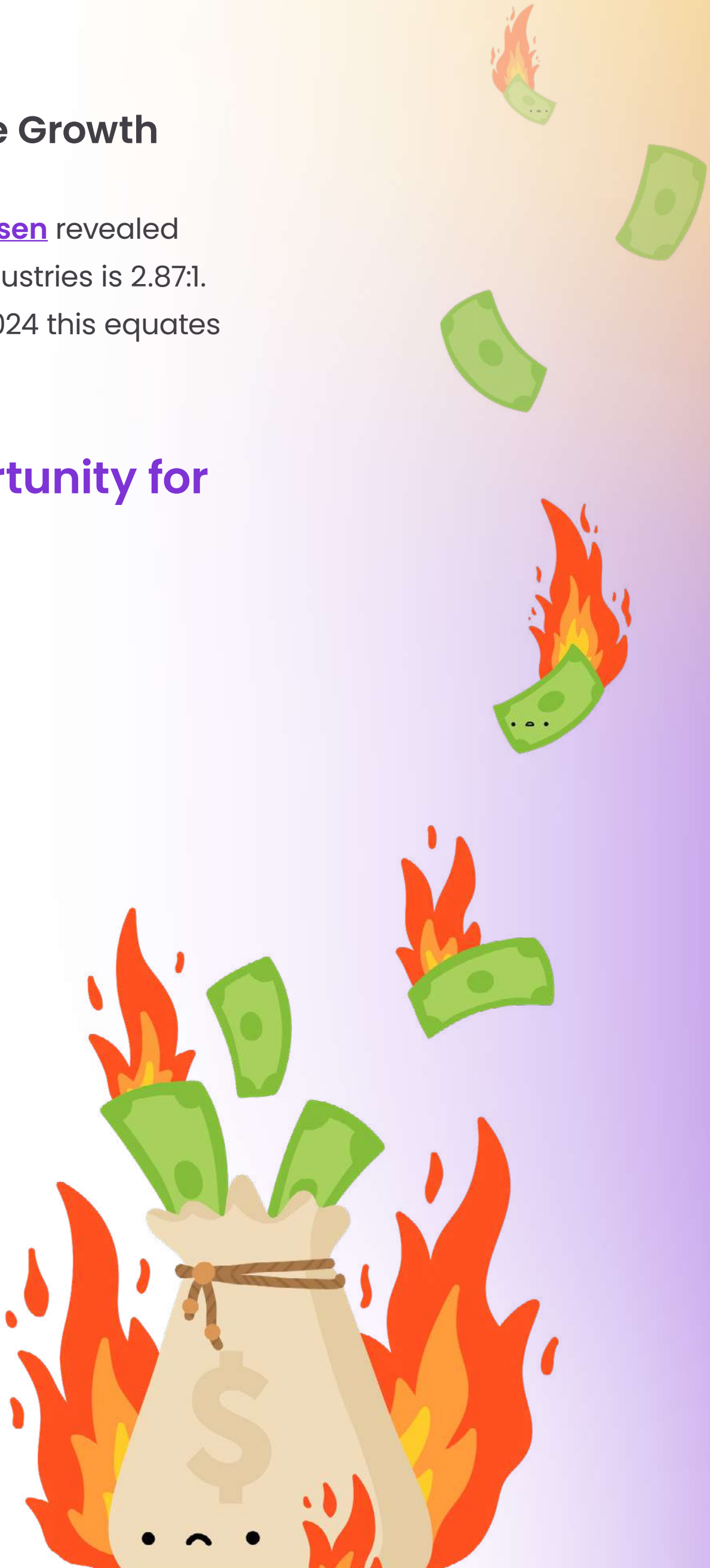


This represents a 33.1% increase in wasted ad spend between 2022 and 2024.

Growing IVT is Stifling Digital Revenue Growth

A study conducted by leading data company [Nielsen](#) revealed that the average return on ad spend across all industries is 2.87:1. When applied the wasted ad spend forecast for 2024 this equates to:

\$204.83bn in lost revenue opportunity for brands and advertisers in 2024.





\$204.83 Billion Will Be Lost
In Revenue Opportunity
Due to IVT for Brands and
Advertisers in 2024.

Analysis – Google Channels

There are many factors contributing to Google’s unrivalled success in digital advertising. But our data suggests advertisers are getting better returns on ad spend via Google at least in part due to the company’s better in-built protections and policies against IVT.

According to Google’s documentation [\(1\)](#) [\(2\)](#):

*“Our dedicated Ad Traffic Quality Team uses live reviewers, automatic filters, machine learning, and deep research to detect and filter **as much invalid and fraudulent activity as possible**.”* [\(1\)](#)

“When our filters identify suspicious traffic but can’t be sure it’s invalid, our automated systems flag the anomalies and gather data for days to weeks. Then our team of live reviewers can analyze the data and decide what to do.

“When we find something wrong, we try to make it right as soon as possible... When appropriate and possible, that money is credited back to the advertisers — not only for the month where we found the invalid activity, but often for the previous month, as well.” [\(2\)](#)

Google’s proactive stance puts them well ahead of most other ad networks when it comes to IVT protection. But despite their efforts to remove “**as much invalid and fraudulent activity as possible**”, **they haven’t been able to completely eliminate the problem, or reduce it to negligible levels (<1%)**.

More sophisticated invalid activity continues to bypass their prevention methods. An average invalid traffic rate of 5.5% across Google channels has significant financial implications for all advertisers. But larger enterprise brands spending \$1m+ per month on Google Ads are the most affected.





Executive Summary

Analysis – Non-Google Channels

Advertisers investing heavily in non-Google channels without protection against invalid traffic experience significant ad spend losses and reduced profitability.

IVT rates vary significantly across non-Google channels (explored in more granular detail in the following sections). But across the board, it's clear their in-built protections and policies are less effective. Non-Google channels don't have the same level of resources or expertise dedicated to IVT prevention, making them more vulnerable.

But there are other factors underpinning the difference. Google-owned channels, particularly Google Search (which [accounts for 58.1%](#) of Google's revenue), cater to users with high intent that are actively searching for specific information. This intent-driven behaviour results in more genuine clicks and interactions. In contrast, non-Google channels like social media platforms have lower user intent and higher potential for accidental clicks and fraudulent interactions.

In addition, non-Google channels tend to offer more complex ad formats than Google channels. Generally speaking, the greater the complexity of the ad format, the more opportunities there are

for invalid engagement. For example, Story ads on Meta can have multiple interactive elements such as polls, making them more vulnerable to bot interactions.

Higher average invalid traffic rates have several implications for brands investing heavily in non-Google channels:

- **Higher proportions of wasted ad spend:** This can negatively impact their ROI and overall campaign effectiveness.
- **Skewed analytics:** Advertisers should be mindful of the influence of invalid traffic when assessing campaign performance metrics provided by non-Google channels. They should pay closer attention to conversion volume and actual revenue generated to provide a more accurate picture of the effectiveness of these channels.
- **Audience targeting:** Higher rates of invalid traffic make it more important to focus on precise audience targeting, primarily through exclusions. For example on LinkedIn, invalid traffic can be reduced by excluding certain locations, and specific job titles.

- **IVT protection & third-party verification:** Higher invalid traffic rates mean advertisers stand to gain even more value from IVT prevention solutions like Lunio and third-party verification tools such as IAS. These tools can provide additional traffic quality insights and help identify which campaigns are most affected.

While non-Google channels might have higher invalid traffic rates, they still offer valuable opportunities for brand visibility and engagement. Therefore, they can't simply be avoided altogether, or scaled back to minimal levels of investment.

Ideally, brands should adopt a diversified marketing mix that includes both demand capture (e.g. Google Search) and demand generation (e.g. social brand awareness campaigns), but with a strategic approach to mitigate wasted ad spend due to invalid traffic.



Invalid Traffic by Channel

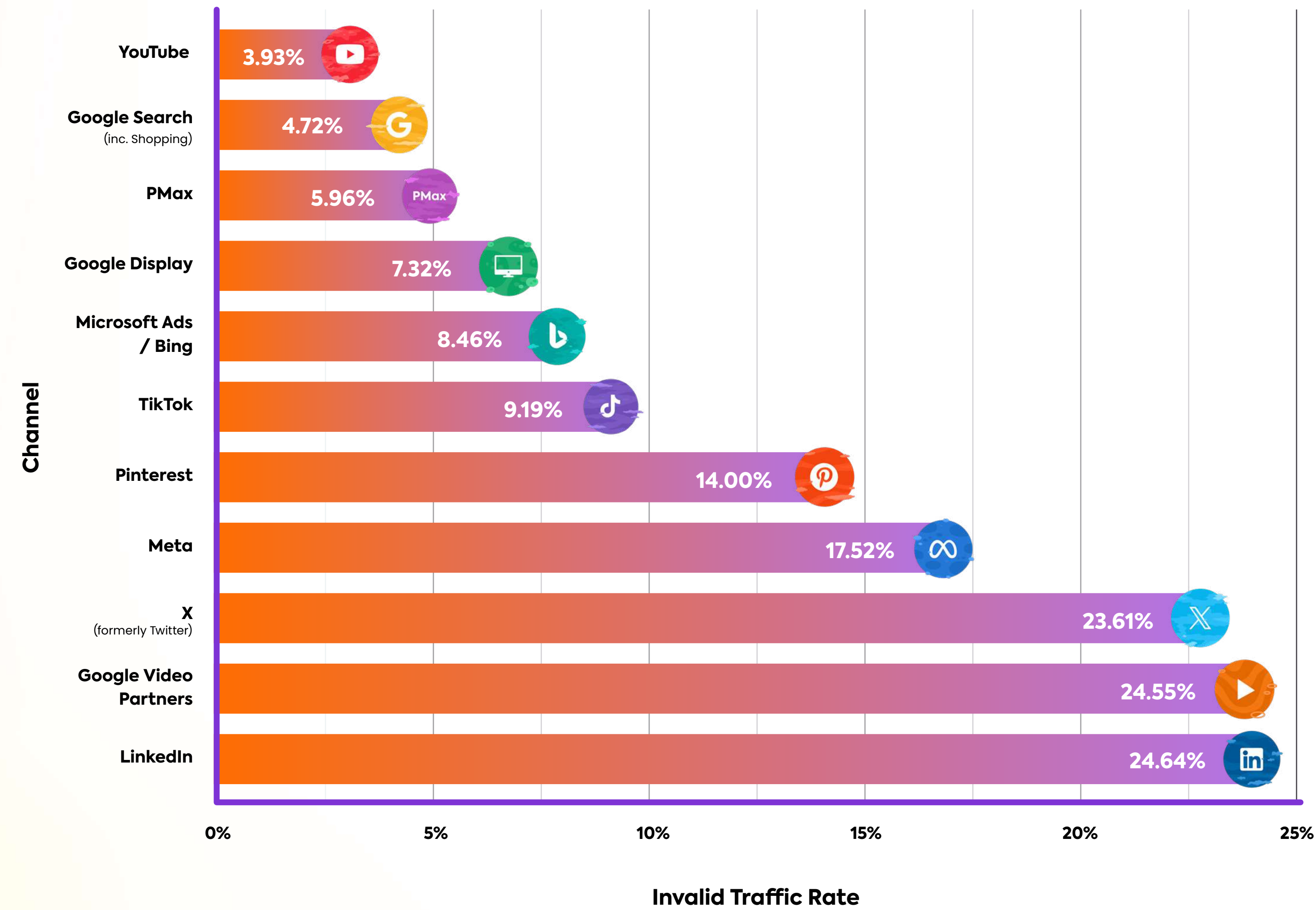
Despite the differences between Google and non-Google channels, our data shows invalid traffic is a prevalent issue affecting all digital marketing channels.

The built-in protection tools put in place by search engines, ad networks, and social media platforms still allow a significant volume of invalid traffic to “slip through the net”.

But there are notable differences in invalid traffic rates across individual channels.

We’ve broken down our findings for each channel in the chart opposite, ranging from highest IVT rates to lowest, with detailed analysis of the data in the following pages.

As stated in the methodology section, we’ve only included channels in our report with a sample size that is statistically significant enough to draw meaningful conclusions from.



LinkedIn: 24.64%

LinkedIn came out as the worst-performing ad channel in terms of IVT. And our report certainly isn't the first to call into question the authenticity of the platform's user base.

A 2022 investigation conducted by NPR found an [abundance of fake profiles](#) on the platform with AI-generated profile photos used for marketing purposes. The majority of these fake profiles were created to drum up sales for companies big and small.

By using fake profiles, companies can cast a wide net online without beefing up their own sales staff or hitting LinkedIn's limits on messages. Demand for online sales leads exploded during the pandemic as it became hard for sales teams to pitch their products in person. And this level of demand has persisted in the post-pandemic era.

In addition to fake sales profiles, scrapers and engagement bots also contribute to the high levels of invalid activity on LinkedIn. Scrapers take all available information from profiles including name, job, company, education, contact data (including email addresses), and more. Engagement bots are typically used to perform actions like connecting with users, liking posts, leaving comments, and other spammy activities in an effort to promote products and services.

LinkedIn has previously acknowledged they have a problem with bots. Their [2022 Transparency Report](#) states they remove 96% of fake accounts using automated defences. In the second half of 2021, they removed 11.9 million fake accounts at registration and another 4.4 million before they were ever reported by other users. But more sophisticated bots are clearly still able to evade detection by better mimicking real human behaviour, which includes engaging with ads.

The average cost-per-click on LinkedIn can range between \$10-\$50. This is much higher than the average Meta benchmark, which sits at around \$5 for B2B brands. As a result, financial losses due to fake ad engagement add up far quicker on LinkedIn compared to other channels.

In short, marketers are highly unlikely to get the performance they'd expect out of LinkedIn campaigns without an IVT prevention system in place.

An IVT rate of 24.64% applied to LinkedIn's 2024 ad revenue forecast of [\\$5.8 billion](#) equates to \$1.43 billion in wasted spend.



Google Video Partners: 24.55%

In June 2023, the findings of a study reported by the [Wall Street Journal](#) revealed about 80% of Google’s video-ad placements on third-party sites, through its Google Video Partners program, violated promised standards.

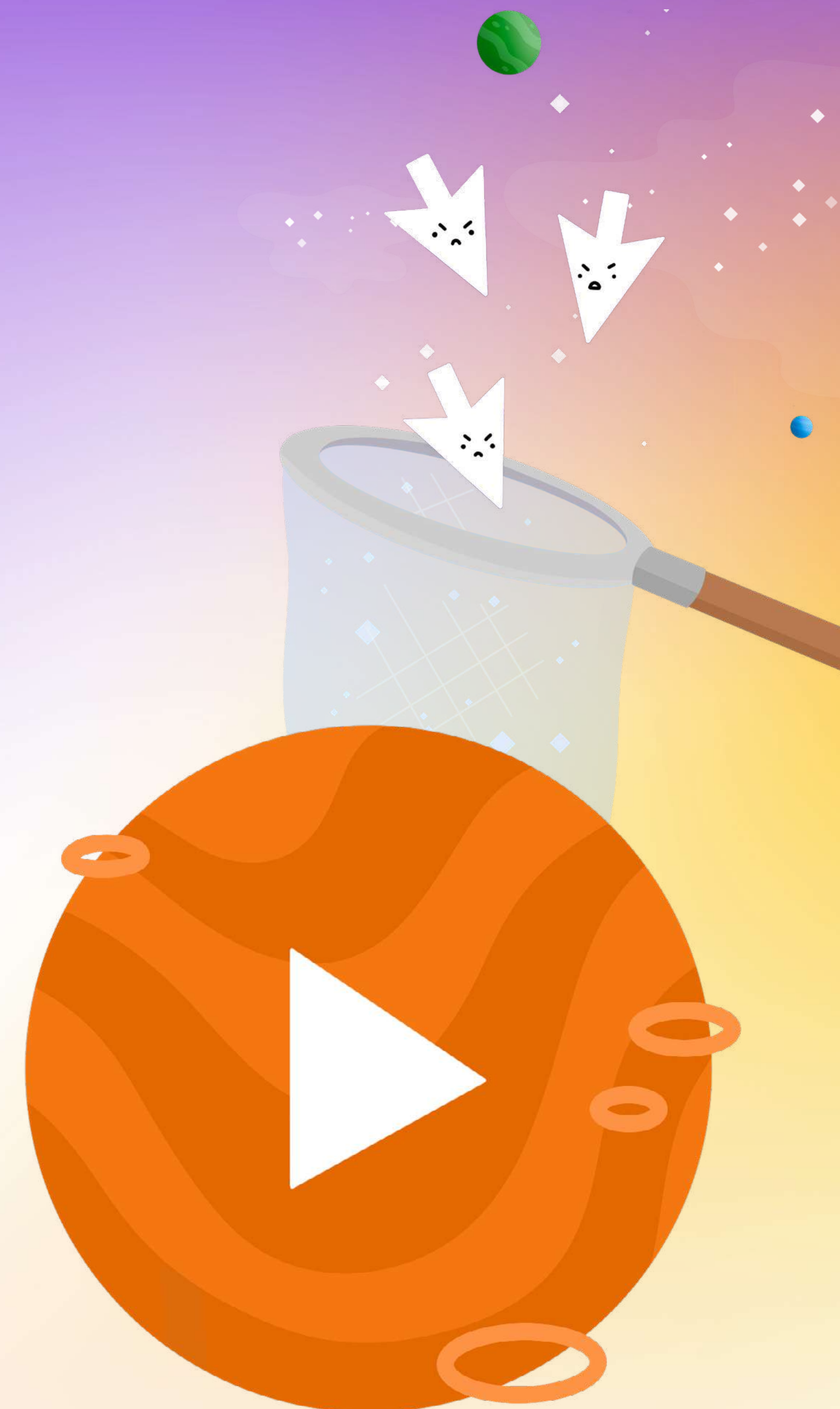
Google claims these third-party sites provide the same ad experience as YouTube, with audio-enabled, fully visible ads that can be skipped. But the study found ads on these partner sites are muted 80% of the time, autoplay off to the side of the screen, and cannot be skipped.

Our data indicates these third-party sites also have a significant IVT problem, with almost one in four ad clicks being fake. This suggests some publishers are intentionally inflating impression and click numbers with bot traffic to increase their own ad revenue.

Google disputes the claims, stating the report used “unreliable sampling and proxy methodologies”. They stated the “overwhelming majority” of video ad campaigns run on YouTube, and that GVP is a small, separate network used to help advertisers reach additional audiences and increase campaign reach by over 20%.

It’s worth noting that other third-parties, including IAS, have also disputed the results of this study, in particular the 80% figure cited. Our data certainly lends credence to these criticisms. While there’s no doubt an issue with invalid impressions and clicks across GVP, the rate isn’t anywhere near 80%. That said, one in four clicks being detected as invalid still poses a major issue for advertisers.

Disputes over the validity of the study aside, advertisers have the choice to opt out of GVP anytime. However, our findings indicate that with strong viewability and fraud prevention technology overlaid on GVP campaigns, there are still significant advantages to be gained in terms of additional reach and exposure.



Analysis by Channel

X (Formerly Twitter): 23.61%

X's bot problem is infamous thanks to the [legal disputes prior to Elon Musk's takeover](#) in October 2022. Despite efforts to cut costs, clean up the platform, and verify users, our data shows 23.61% of paid ad traffic coming from X is invalid.

The ease of account creation makes it easier for the automated proliferation of fake users. There's also a high prevalence of scrapers on X, designed to ingest all forms of publicly available data on the platform, often for the purpose of training new AI models.

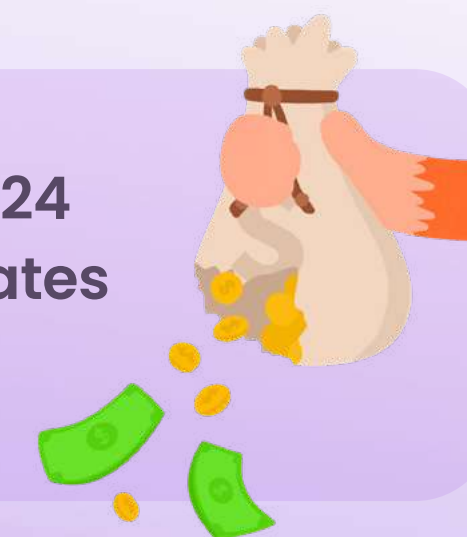
Lastly, bad actors routinely use bots in an attempt to manipulate political and social discourse on X – a problem which will get much worse with the advent of large language models like ChatGPT.

Failing to fix the bot problem paired with changes to content moderation rules which significantly increase brand risk has caused advertisers to abandon the platform in droves. As reported by the BBC, X has [lost almost half of its advertising revenue](#) since it was bought by Musk.

Newly-appointed CEO Linda Yaccarino has stated further efforts to ensure the authenticity of X's user base are central to her plans for the creation of "Twitter 2.0" – a version of the company that aims to be "the world's most accurate real-time information source and a global town square for communication."

It remains to be seen whether these future efforts will be successful, both in tackling the bot problem and convincing major players in the digital advertising world to return to the platform.

An IVT rate of 23.61% applied to X's 2024 ad revenue forecast of [\\$3 billion](#) equates to \$708 million in wasted spend.





Analysis by Channel

Meta: 17.52%

Unlike X, many advertisers invest heavily in Meta. Its 2022 ad revenue of \$113.6 billion is second only to Google (albeit by a considerable margin). So the fact that Meta has an average IVT rate of 17.52% presents a much bigger cause for concern for most brands.

The prevalence of bots and fake user activity on Meta are plainly visible in the comments section of virtually any post with high engagement rates. Friend requests and follows from fake accounts are also common.

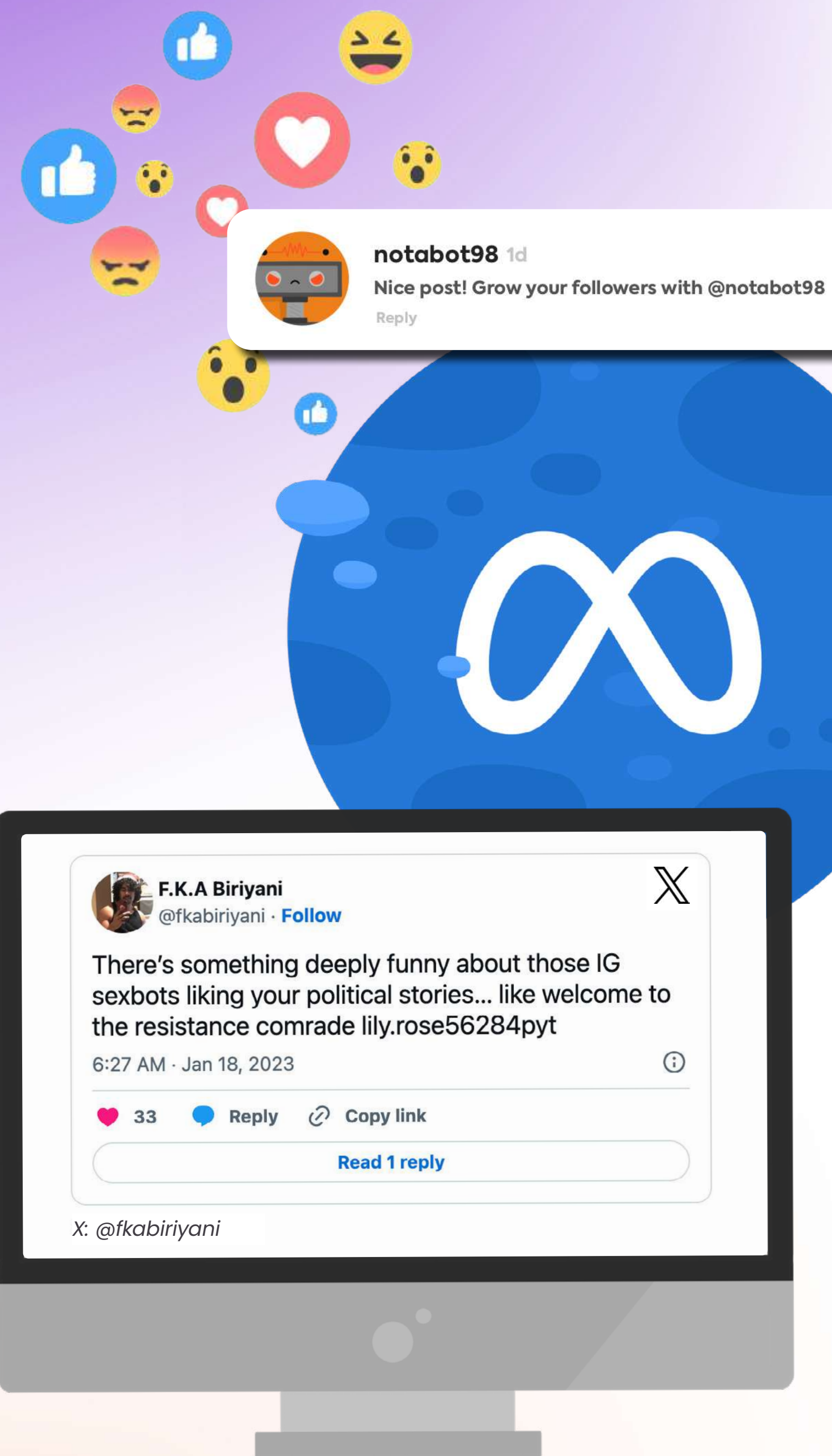
Earlier this year, many Instagram users with public profiles reported their stories were being consistently [viewed and reacted to by bot accounts](#) promoting adult content, with suspicious usernames such as: lindsay38302h.li or emmahart283204r.

The existence of these accounts isn't new. As mentioned, bots on Instagram have spammed the comments of posts for years. But the sheer scale of this new form of bot activity targeting stories was particularly pronounced. Meta have since clamped down on the problem, and it now occurs with noticeably less frequency.

Responding to the controversy, a spokesperson for Meta reported that the company blocks millions of spam accounts every day. *"We continue to invest in anti-spam technology, and in our safety and security team of over 40,000 people, who are focused on keeping spam and other types of harmful content off our platforms,"*

However, our data indicates these efforts are failing to drive down levels of bot-driven invalid traffic stemming from paid ads on Meta. Advertisers who invest heavily in the platform without any IVT prevention system in place are exposing themselves to a considerable degree of ad spend inefficiency - to the tune of almost \$24 billion in wasted spend throughout 2024.

An IVT rate of 17.52% applied to Meta's 2024 ad revenue forecast of [\\$134.72 billion](#) equates to \$23.6 billion in wasted spend.



Analysis by Channel

Pinterest: 14.00%

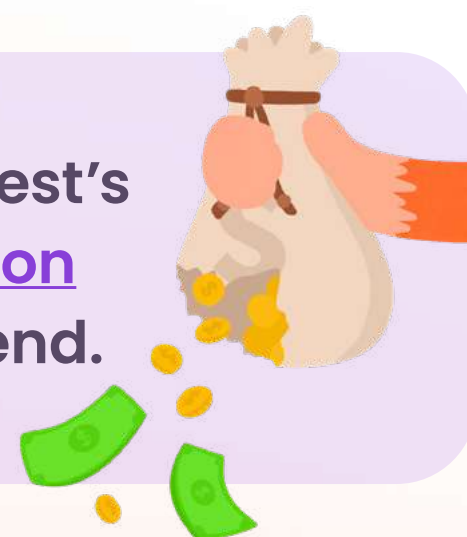
Pinterest is a highly-visual platform, which makes it relatively easy for automated bots to mimic user behaviour and engage with ads without genuine interest.

Many users still use Pinterest as a platform to promote products and earn commissions through affiliate links. While most affiliates adhere to ethical practices, some may resort to spammy tactics to drive traffic to their affiliate links, resulting in an increase in invalid traffic.

Another factor is the feature of pin repinning and group boards. The ability to repin content allows it to spread rapidly across the platform, reaching a wider audience. Unfortunately, this includes the potential of reaching bot accounts, which can artificially inflate engagement metrics and generate invalid traffic.

The apparent absence of a robust invalid traffic detection mechanism allows fake engagement to go unnoticed.

An IVT rate of 14.00% applied to Pinterest's 2024 ad revenue forecast of **\$3.32 billion** equates to \$465 million in wasted spend.



TikTok: 9.19%

TikTok repeatedly hit headlines in 2023. But the focus was on national security rather than ad fraud. In March, the platform’s [CEO Shou Zi Chew appeared before congress in the US](#) to respond to concerns about potential Chinese influence over the platform and allegations that its short videos were damaging children’s mental health.

Leaving aside the concerns raised during the congressional hearing, TikTok has fared relatively well in our findings. While it may come as a surprise to some, its average IVT rate of 9.19% make it the best performing social media platform included in our report – albeit with over \$1.5 billion in estimated annual losses to invalid traffic in 2024.

In earlier years, TikTok was plagued by allegations of artificially inflated view, like, and follower counts. For example, a 2020 article published by Vice revealed they were able to generate [25,000 fake views](#) and 1,000 fake likes just hours after uploading a video to a brand new channel, by paying \$50 to a website promising to drive up engagement rates.

Of course, paying for fake engagement is a problem common to all social media platforms, not just TikTok. But the problem was publicised much more on TikTok, leading to a shift in how consumers perceived the platform.

This negative attitude towards TikTok is attested to in the results of this 2020 Twitter / X poll presented in the bottom right of this slide. *(Based on our findings we can assume up to a quarter of the 494 respondents are bots. But invalid votes aside, the results are still clear.)*

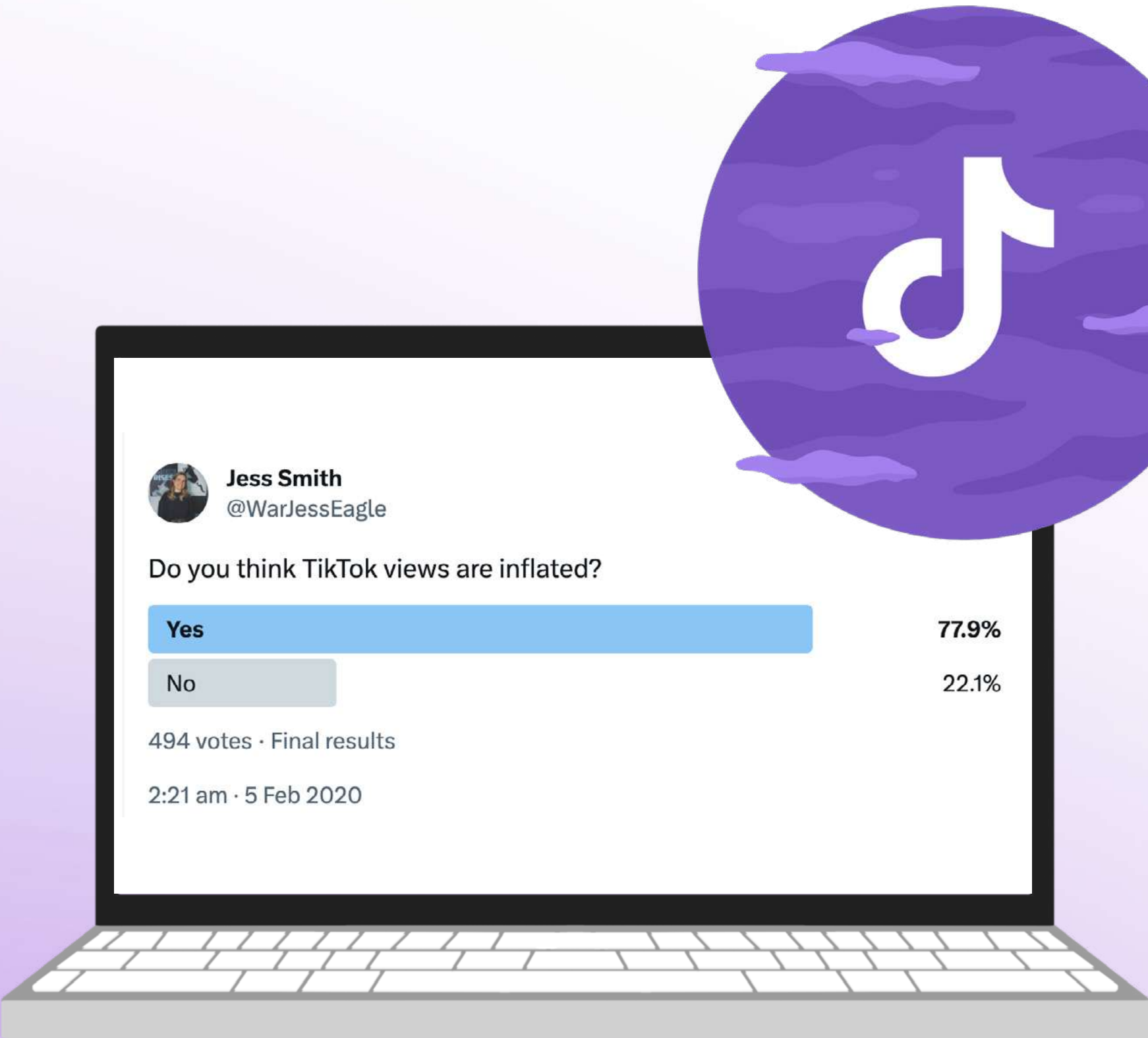
Since then TikTok has ramped up investment in bot detection and ad fraud mitigation. In 2022, the Trustworthy Accountability Group (TAG) confirmed the platform achieved [TAG Certified Against Fraud status](#).

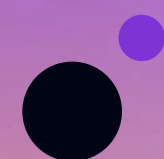
And TikTok’s efforts in this area appear to be paying off. Advertiser’s confidence in the effectiveness and profitability of the platform is clearly growing.

A spokesperson for TikTok said: *“Understanding that spam and fraud are evolving industry-wide threats, TikTok will continue investing in solutions to strengthen our security infrastructure and stay ahead of these challenges.”*

Our findings indicate that the policies and security protocols put in place by TikTok have been much more effective than those put in place by Meta. But they haven’t eliminated the problem completely. Advertisers who are considering scaling their investment stand to gain a competitive advantage by proactively protecting their campaigns against invalid traffic.

An IVT rate of 9.19% applied to TikTok’s 2024 ad revenue forecast of [\\$17.2 billion](#) equates to \$1.58 billion in wasted spend.





Analysis by Channel

Microsoft Ads / Bing: 8.46%

Google has long dominated the search engine market, with a significantly larger userbase than Bing. However Bing's share of the desktop search market [grew by 26.8%](#) from 2019 to 2021, increasing from 4.85% to 6.15%.

Furthermore, Bing's integration with ChatGPT in February 2023 hit the headlines, leading to the addition of more than a million new preview users and helping the channel reach the key milestone of [100 million daily active users](#). Given this, more and more advertisers are beginning to increase their investment in Microsoft Ads, with many seeing promising returns.

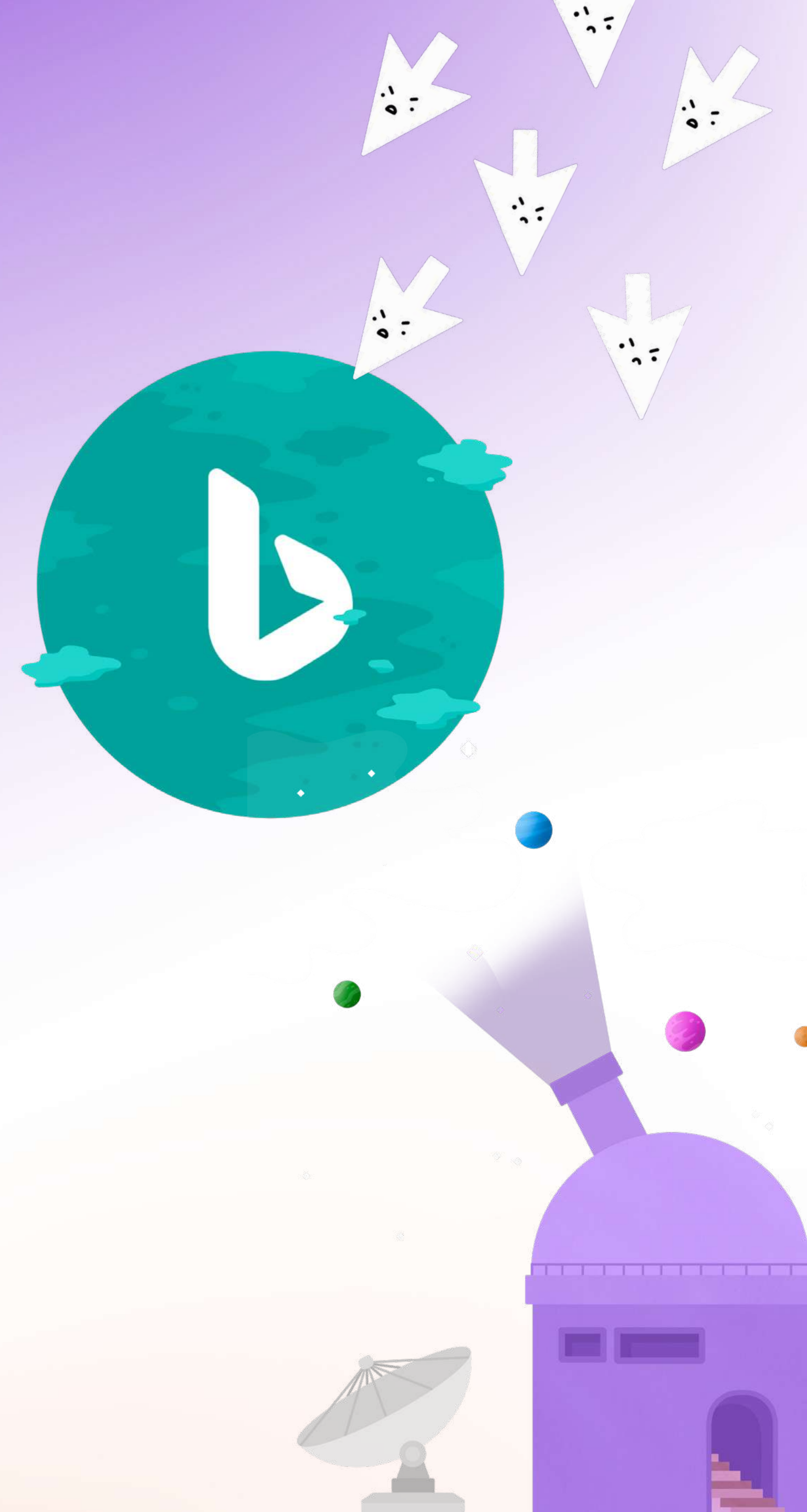
Bing has a lower cost-per-click (CPC) than Google Search, which means advertisers can drive more conversions with their budget. And for many, this translates into a higher Return on Ad Spend (ROAS). But with an average IVT rate almost double that observed on Google Search (4.72%), brands must take into account more of their ad spend will be wasted through Bing campaigns.

Bing's IVT prevention systems have performed relatively well, but their technology is less advanced than Google's. As a result, higher proportions of more sophisticated bot activity are able to go undetected. However, we expect significant improvements over the coming years.

Technologically speaking, Microsoft Ads often lags two to three years behind Google Ads in most areas. One clear example of this is Microsoft's [beta launch of their own fully automated campaign type](#) in July 2023, which also happens to be called Performance Max (coincidence?). This comes a full three years after Google's Performance Max was [first made available](#) in beta.

Given this trend, Microsoft's continued investment in IVT detection will no doubt drive rates down further. But they will always lag behind Search market leaders, Google.

An IVT rate of 8.46% applied to Bing's 2024 ad revenue forecast of [\\$13 billion](#) equates to \$1.1 billion in wasted spend.



Analysis by Channel

Google Display Network: 7.32%

Google's Display Network (GDN) has an average invalid traffic rate of 7.32%, making it the second worst-performing Google channel after Google Video Partners.

Whilst overall GDN invalid traffic rates are lower than some other channels, the spread of IVT is much more sporadic. In the past year, Lunio has audited multiple GDN campaigns with >99% IVT rates, and others with single percentage point IVT rates.

Much of the exposure to IVT depends on the specific placements within GDN (e.g. leveraging high-quality websites vs low-quality content farms, preventing exposure to in-app ads etc), which is why we've created our free GDN exclusion list to remove the worst offenders:

[Download Lunio's 100K Display Placement Exclusion List](#)



- **65,000+ Website Exclusions**
- **16,000+ YouTube Channels**
- **30,000+ Mobile App Placements**

Click fraud is a major contributing factor to the relatively high levels of invalid traffic on GDN. Some of the sites within the Display Network are intentionally created by bad actors for the purposes of defrauding advertisers. Brands end up paying to have their ads appear on these sites, whose only visitors are bots that generate fake clicks. The fraudster then collects revenue for sending invalid traffic through to the advertisers' website.

The barrier to entry for creating fake websites that are eligible for Google Display placements via AdSense is very low. For this reason it's one of the most common forms of ad fraud.

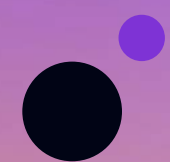
Some unethical publishers may engage in deceptive practices such as pixel stuffing and ad stacking to further increase the levels of fake ad engagement. Pixel stuffing involves using 1x1 pixel ads that are pretty much invisible to humans, but the advertiser is still charged for the "impressions". Similarly, ad stacking works by "stacking" lots of ads on top of each other. Only the ad at the very front is visible, yet scammers claim credit for all of them.

While Google takes measures to detect and prevent invalid traffic across the network, it's a constant battle as fraudsters continuously develop new tactics to bypass detection mechanisms.

Lastly, it's worth noting that Lunio only evaluates invalid clicks, not invalid impressions. So the true extent of invalid activity and wasted ad spend on GDN is likely much higher, as many campaigns are charged on a [CPM basis rather than a per-click basis](#).

Advertisers investing heavily (\$100k+ per month) in display campaigns should use DV360 paired with a viewability solution like IAS to filter out non-viewable and invalid impressions. This results in much higher ad spend efficiency when compared against a standard GDN campaign.





Analysis by Channel

PMax

Performance Max: 5.96%

Performance Max (PMax) allows advertisers to run ads across the entire Google Network from a single campaign. That includes Search, Shopping, Gmail, YouTube, Maps, Discovery, and Display. Since Google deprecated Smart Shopping campaigns in Q3 2022, PMax adoption rates and overall ad spend have continued to rise. Many retailers and agencies are seeing promising results which continue to improve over time.

However, the increased simplicity and convenience of PMax campaigns come at a cost. Our findings show advertisers are exposed to higher average rates of invalid traffic when compared to standard Shopping campaigns. The 1.24% increase in IVT rate stems from a reduced ability to control audience targeting, and a lack of control over ad types.

Since PMax forces the use of Display ads, it results in a higher volume of invalid clicks compared to standard Shopping. In addition, the traditional granular audience targeting options found in Search and Shopping campaigns have also been replaced with “Audience Signals”, which act as mere suggestions to the algorithm, helping to nudge campaigns in the right direction. This is not the traditional form of targeting that advertisers are used to.

Since so much of the activity within PMax campaigns is algorithmically-driven, it can inadvertently lead to an increase in fake user engagement. Fake and invalid clicks are generally cheaper than legitimate ones. This can create a negative feedback loop whereby PMax continues to seek out more and more junk conversions which never translate into revenue, simply because the acquisition costs are lower.

PMax campaign analytics don't allow advertisers to see how their budget is being split across channels. But a [script developed by Mike Rhodes](#) from AgencySavvy creates graphs and tables that visualise PMax spend across Shopping, Video, Display, and Search.

Google Ads Expert and Founder of PPC Mastery **Miles McNair** has used the script with many of his clients and documented the results:

“I don’t see many well-balanced PMax campaigns. It’s rare that you’d have 70% of your budget going on Search and Shopping with the other 30% going towards upper funnel networks to fill in gaps. Spend mostly skews very heavily (90%+) towards Search and Shopping.”



Should You Stick With PMax?

If the script reveals 95%+ of your budget is being spent on one particular placement type (e.g. Search or Shopping), PMax may not be the right option.

In those instances, it often makes sense to revert back dedicated Search, Shopping, and Dynamic Remarketing campaigns for eCommerce, or a granular Search campaign structure for lead generation. Doing so reduces exposure to IVT and gives much more control over ad spend.

To learn more about Performance Max and get lots more tips from Miles and other PPC experts, check out our dedicated guide:

The Expert Guide to Performance Max



Google Search (inc. Shopping): 4.72%

Search-based ads account for [more than half \(\\$162.4 billion\)](#) of Google's total ad revenue (\$224.5). And year-on-year trends show considerable growth, as advertisers continue to increase their investment in this channel. Viewed through the lens of invalid traffic, this uptick in spend is unsurprising.

Our findings suggests the higher returns and profitability typically generated through Google search campaigns are at least partly due to lower levels of invalid traffic. Less ad spend is wasted, which ultimately translates into more conversions and sales.

This is testament to the effectiveness of the preventative measures Google has put in place. As outlined in the executive summary of this report, Google's Ad Traffic Quality Team uses automatic filters, machine learning, deep research, and live reviewers to detect and filter as much invalid activity as possible.

While this multifaceted detection and prevention system is largely responsible for bringing the average IVT rate below 5%, there are a few other contributing factors. Firstly, the intent-driven nature of paid search means ads are only shown to people who are actively looking for particular products or services. This reduces the chances of fraudulent or accidental clicks, and increases the volume of legitimate website traffic with genuine purchase intent.

In addition, paid search ads have a straightforward format consisting of headlines, descriptions, and link URLs. This reduces the opportunities for bots to interact with the ads in a way that could generate invalid traffic, especially when compared to more complex ad formats found in Display campaigns or paid social.

It's worth noting [most retailers have now migrated](#) their smart Shopping campaigns to Performance Max. For many, this has likely resulted in an increase in wasted ad spend, given PMax's IVT rate is 26.2% higher relative to standard Shopping campaigns (an absolute increase of 1.24 percentage points). This has significant financial implications for all retailers and eCommerce businesses.

As Google continues to encourage adoption and increased spend on Performance Max, brands should forecast the impact of rise in invalid traffic and take appropriate steps to mitigate it.

An IVT rate of 4.72% applied to Google's 2024 search ad revenue forecast of [\\$187 billion](#) equates to \$8.81 billion in wasted spend.





Analysis by Channel

YouTube Video: 3.93%

In stark contrast to the poor performance of Google’s Video Partner network, native YouTube video campaigns have the lowest average rates of invalid traffic. This is due to several factors.

In order to maintain the trust of advertisers, Google has made [substantial investments in protecting against viewbotting](#) on YouTube (the use of automated scripts or bots to artificially inflate video view counts). This not only significantly reduces the number of fake impressions, it also prevents more sophisticated viewbots clicking through on ads in an attempt to mimic human behaviour.

YouTube’s platform structure and mechanisms for video delivery also make it more challenging for scraper bots to interact with ads compared to traditional web pages. Since ads on YouTube are delivered algorithmically based on the user’s profile data, bots are unable to search for specific types of ad content to scrape the results.

For fraudsters, the complexity of YouTube’s monetisation system makes it a less attractive target. YouTube requires consistent, sustained engagement in the form of watch time, comments, and other interactions for creators to benefit financially. This presents a significant hurdle to fraudsters seeking quick financial gains, especially when compared to other platforms where engagement metrics are easier to manipulate.

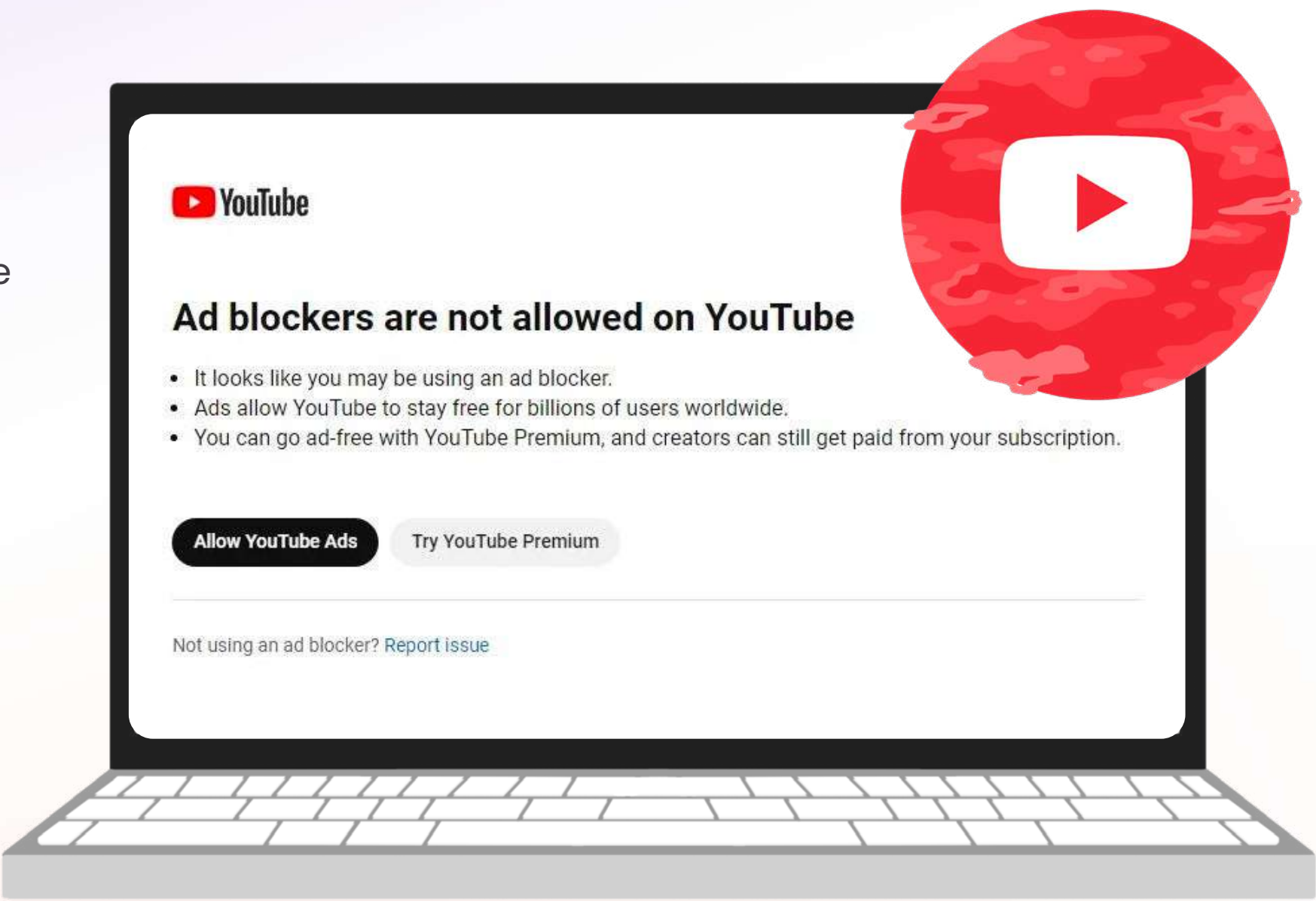
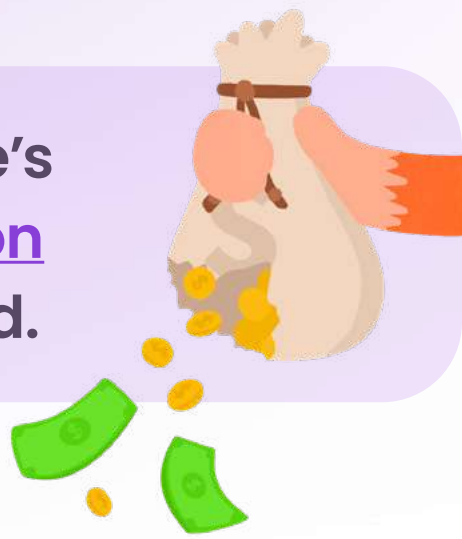
In-built protections aside, it’s worth noting that in June 2023, YouTube took definitive action against ad blockers, which has implications for IVT rates. Users in certain regions have now started to see the following message appear:

YouTube told TechCrunch this [warning sign is part of an experiment](#). With YouTube set to roll out this policy worldwide over the coming months, we expect a significant rise in IVT rates. The number of accidental clicks from genuine users will increase as more people are shown ads. And the number of bot clicks will increase too. Previously those scraping content from YouTube videos (e.g. for training AI models on natural language) would simply use an adblocker.

Lastly, similar to Standard Shopping campaigns, YouTube videos ads have been rolled into Performance Max. Advertisers who have migrated their YouTube video campaigns to PMax will no doubt benefit from greater convenience and simplicity i.e. they don’t need to set up and manage a separate campaign to deliver ads on YouTube. But this comes at a cost, in the form of a 51.65% relative increase in invalid traffic (an absolute increase of 2.03 percentage points).

Brands running YouTube video ads solely through Performance Max should take appropriate steps to mitigate against a significant rise in invalid traffic based on our findings.

An IVT rate of 3.93% applied to YouTube’s 2024 ad revenue forecast of [\\$33.5 billion](#) equates to [\\$1.32 billion](#) in wasted spend.





Invalid Traffic by Company Size

Larger businesses with 10,000+ employees experience significantly higher rates of invalid traffic than all other company sizes in the analysis, at 17.58% on average. This indicates they are significantly more susceptible to the financial impact of invalid clicks. They're also more likely to be affected by the downstream effects of invalid traffic such as skewed analysis and fake lead submissions.

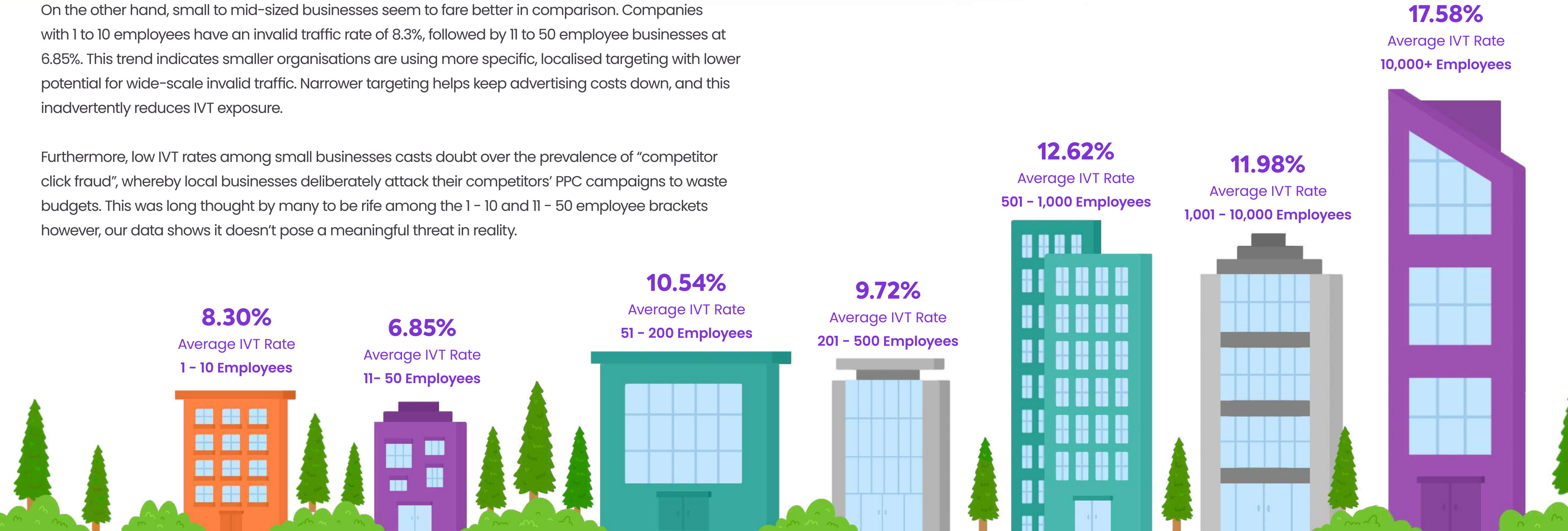
Larger businesses tend to allocate a significant proportion of their advertising budgets towards campaigns with broader targeting to prioritise reach and brand recall, which drives up their average rates of invalid traffic across both Google and non-Google channels.

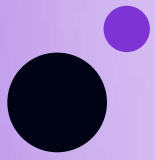
On the other hand, small to mid-sized businesses seem to fare better in comparison. Companies with 1 to 10 employees have an invalid traffic rate of 8.3%, followed by 11 to 50 employee businesses at 6.85%. This trend indicates smaller organisations are using more specific, localised targeting with lower potential for wide-scale invalid traffic. Narrower targeting helps keep advertising costs down, and this inadvertently reduces IVT exposure.

Furthermore, low IVT rates among small businesses casts doubt over the prevalence of “competitor click fraud”, whereby local businesses deliberately attack their competitors’ PPC campaigns to waste budgets. This was long thought by many to be rife among the 1 – 10 and 11 – 50 employee brackets however, our data shows it doesn’t pose a meaningful threat in reality.

Despite the notable difference between large enterprises and smaller businesses, the data clearly shows invalid traffic is a problem for all companies, regardless of size. For larger companies, the higher average rates of invalid traffic call for more stringent monitoring and prevention methods.

On the other hand, smaller companies should not overlook the potential to significantly improve their performance marketing efficiency by blocking invalid traffic and protecting up to 10% of their budget. A small increase in spend efficiency can translate into a significant advantage when competing against other SMBs with limited advertising budgets.

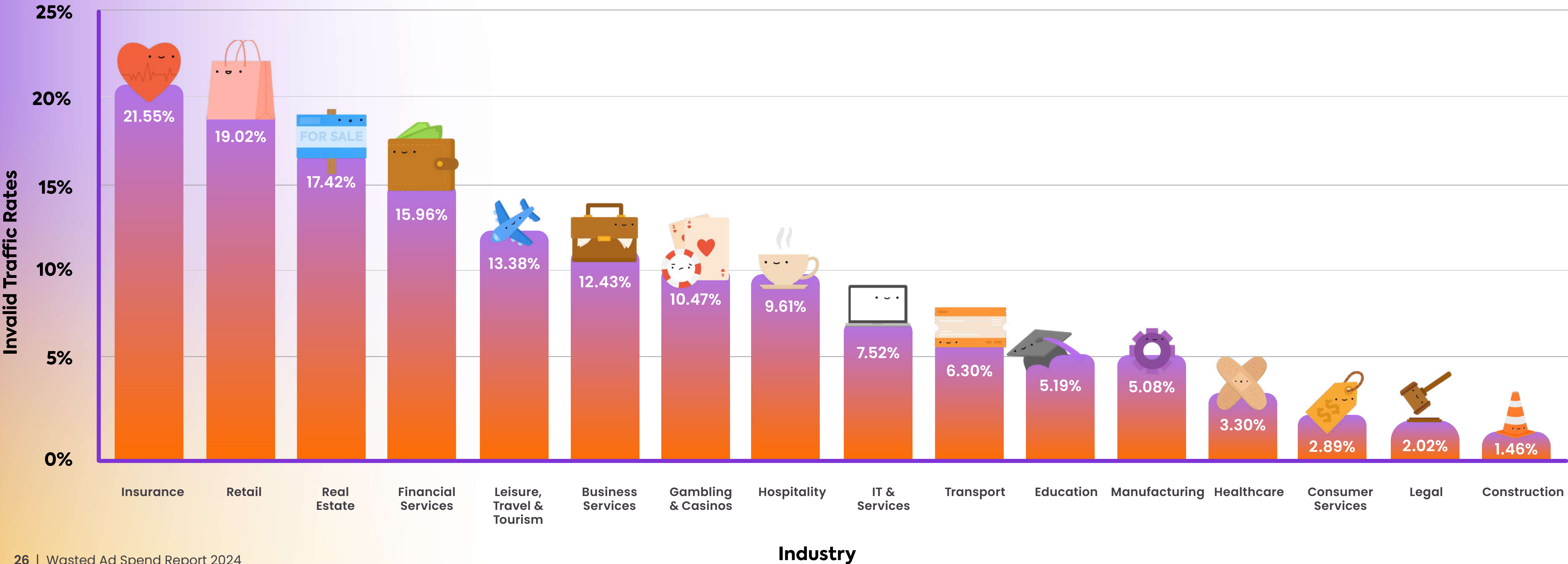




Invalid Traffic by Industry

Invalid traffic is a pervasive problem that affects all businesses investing in digital advertising. However, our analysis of click data from clients across a range of sectors shows that average invalid traffic rates vary significantly by industry.

An industry-by-industry breakdown is presented on the graph below, with analysis of each one on the following pages.





Industry Analysis

Insurance (21.55%):

The insurance industry experiences a high invalid traffic rate. Bots engage in quote manipulation, generate fake policy applications, and attempt to exploit insurance-related ad campaigns.

Retail (19.02%):

The retail industry experiences a high invalid traffic rate. Bots mimic genuine interest in products to skew vanity metrics, engage in ad fraud and manipulate inventory through bulk fake checkouts.

Real Estate (17.42%):

The real estate sector faces a significant invalid traffic rate. Bots manipulate property listings, generate fake inquiries, and exploit real estate-related ad campaigns.

Financial Services (15.96%):

The financial services industry faces a significant invalid traffic rate. This is attributed to bots attempting to manipulate financial markets, exploit online banking vulnerabilities or investment platforms, and engage in phishing scams targeting users’ financial information. The financial services industry also has a significantly higher CPC compared to the market, making it a lucrative target for ad fraudsters.

Leisure, Travel & Tourism (13.38%):

The leisure and travel sector contends with a notable invalid traffic rate. Bots manipulate travel bookings, exploit promotional deals, and engage in click fraud targeting travel-related ads.

Business Services (12.43%):

Business Services experience a relatively moderate invalid traffic rate. This is attributed to bots attempting to exploit lead generation forms, automate clicks on ads related to professional services, or engage in fraudulent activities targeting B2B clients.

Gambling & Casinos (10.47%):

The gambling and casinos sector is known to be flooded with invalid traffic. Although the average sits at 10.47%, the higher percentile sees over 50% of invalid traffic. Bots simulate user activity on gambling sites to manipulate odds, abuse promotions, and engage in fraudulent gambling activities.

Hospitality (9.61%):

The hospitality industry faces a significant invalid traffic rate. Bots attempt to exploit hotel booking systems, generate fake reservations, or manipulate pricing and availability information.

Information Technology and Services (7.52%):

The IT and Services sector witnesses moderate invalid traffic rates. Bots often target tech-related ads to simulate interest in software, services, or technical support, leading to fake leads.

Transportation (6.30%):

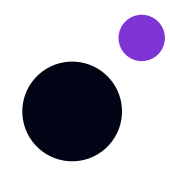
The transportation industry witnesses a moderate invalid traffic rate. Bots simulate interest in travel services, generate fake bookings, and manipulate pricing and availability information.

Education (5.19%):

The education sector experiences moderate to high levels of invalid traffic rates with the higher percentile averaging at 24%. Bots often target educational ads, generating fake enrolments for courses, webinars, or academic services.

Manufacturing (5.08%):

The manufacturing industry experiences a moderate invalid traffic rate. Bots search for and view industrial products, generate false inquiries, and manipulate demand-related ad campaigns.



Industry Analysis

Healthcare (3.30%):

Healthcare experiences a moderate invalid traffic rate. Bots mimic having an interest in medical services, generating false appointments or inquiries, including attempting to exploit health-related ad campaigns.

Consumer Services (2.89%):

Consumer Services also witness a modest level of invalid traffic. Bots simulate an interest in services like home repair, beauty, or personal care, leading to fake inquiries or interactions.

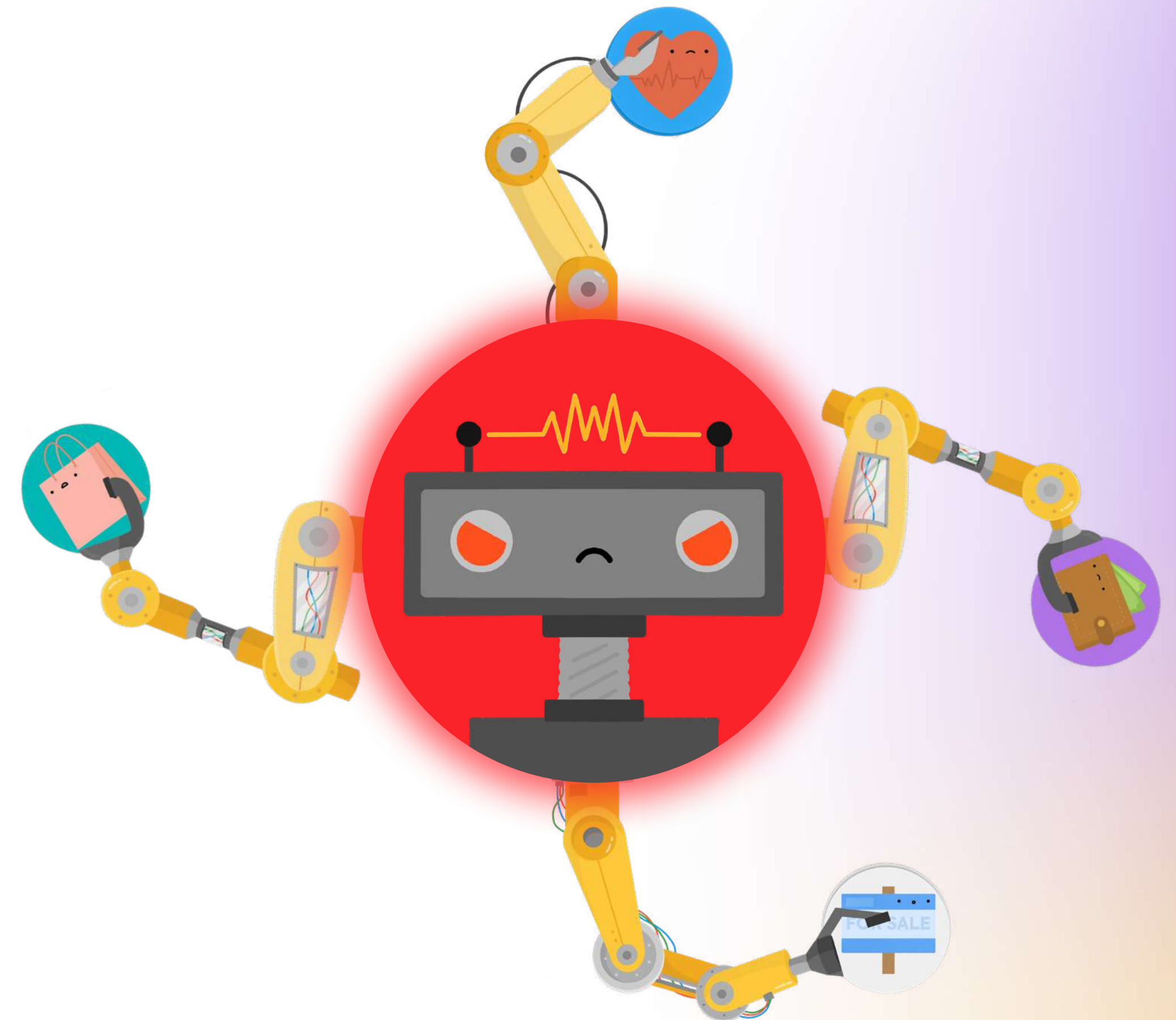
Legal Services (2.02%):

Legal services have a relatively low invalid traffic rate. Bots simulate interest in legal assistance and generate fake inquiries, however the complex nature of legal interactions deter extensive bot activity.

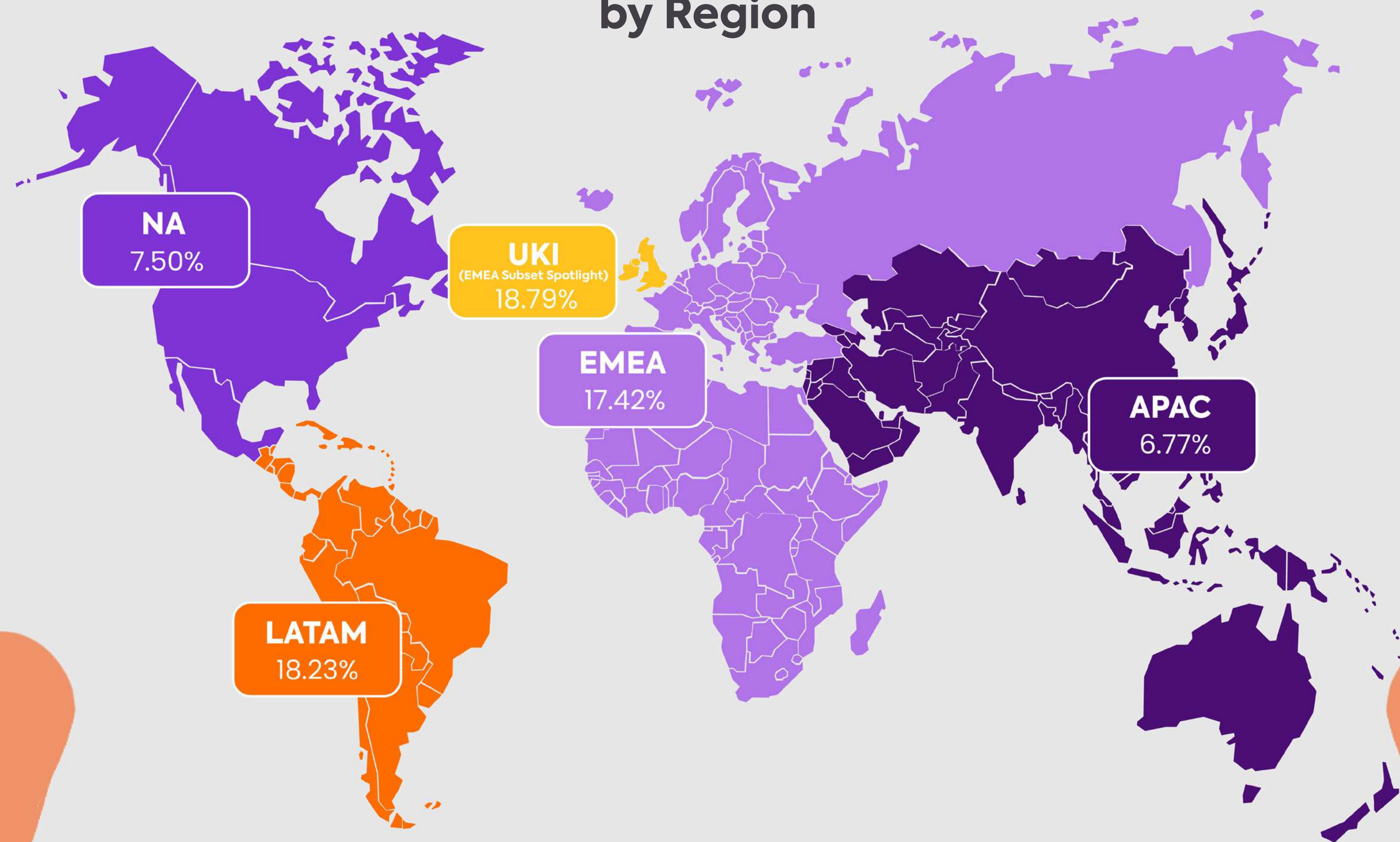
Construction (1.46%):

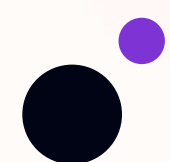
The construction industry has a low invalid traffic rate due to less lucrative opportunities for bot operators. Invalid traffic in this sector involves bots mimicking interest in construction projects or services to generate false leads.

Overall, industries with higher financial incentives, such as insurance, real estate, retail, and financial services, tend to experience higher rates of invalid traffic due to the potential for financial gains through fraudulent activities. It's essential for businesses in these sectors to employ robust invalid traffic prevention measures and regularly monitor their advertising campaigns to mitigate the impact of invalid traffic.



Invalid Traffic by Region





Invalid Traffic by Region

The data indicates that the **Asia-Pacific (APAC)** region has the lowest rate of invalid traffic, at 6.77%. This can be attributed to the region's increasing digital maturity, widespread adoption of better ad verification solutions (e.g. IAS), and ongoing efforts by businesses and regulatory bodies to combat ad fraud. For fraudsters, less developed ecosystems represent a more lucrative target, making them less likely to focus efforts on the **APAC** region. CPCs are also cheaper in **APAC** which make it a less lucrative target.

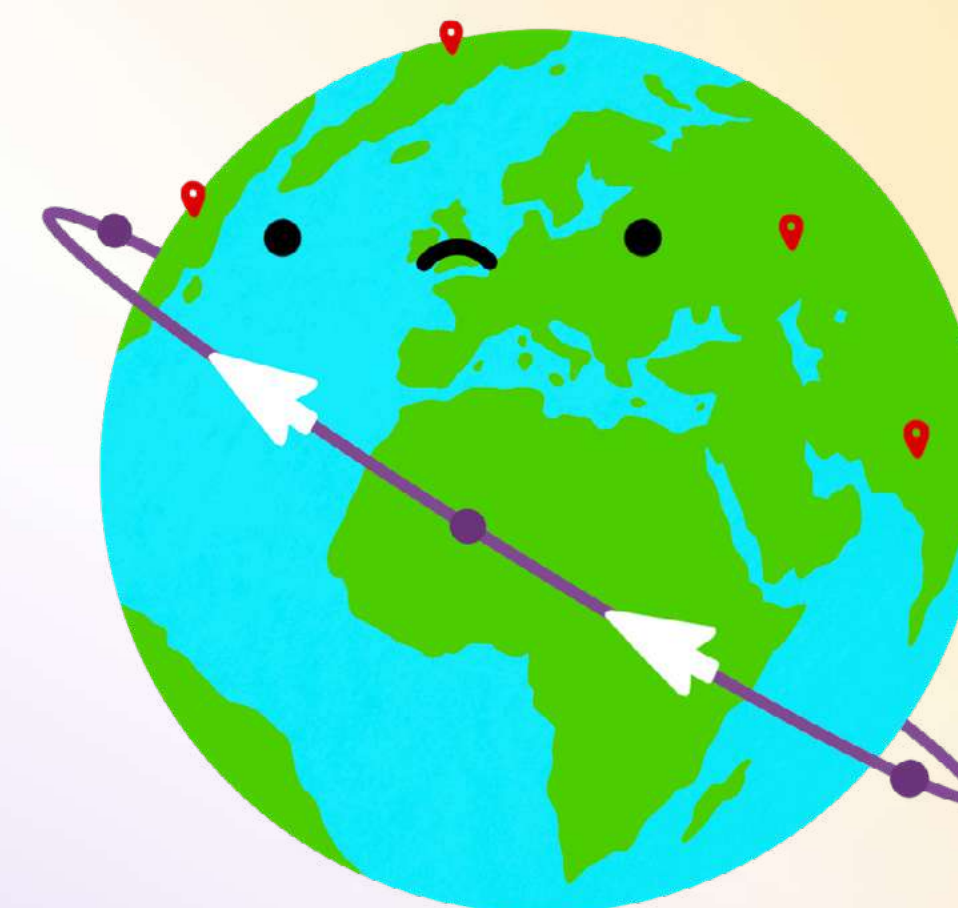
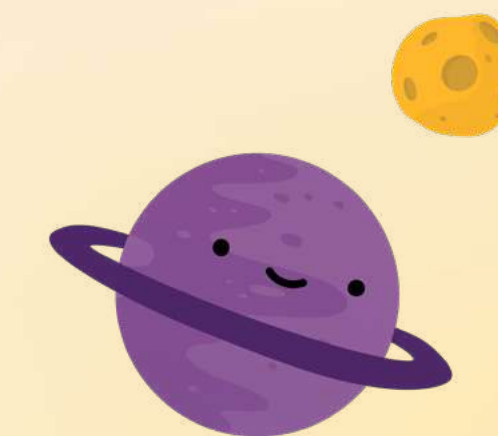
Conversely, the **Europe, Middle East, and Africa (EMEA)** region show a significantly higher rate of 17.42%. This discrepancy may be influenced by the diverse nature of the region, encompassing countries with varying levels of digital infrastructure, regulatory frameworks, and market dynamics. The higher rate in **EMEA** suggests that businesses in this region may need to place additional emphasis on implementing ad verification measures to ensure the quality and authenticity of their online ad traffic is above standard.

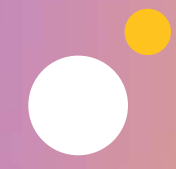
North America (NA) has a relatively lower rate of invalid traffic at 7.50%, which may be attributed to the region's advanced digital infrastructure, strong advertising industry standards, and widespread adoption of ad verification technologies. However, this does not mean businesses in the region can be complacent, as invalid traffic remains a persistent threat that requires continuous vigilance.

The **Latin America (LATAM)** region stands out with the second-highest rate of invalid traffic at 18.23%. Cheaper costs to advertise with lower CPCs, and limited resources for fraud detection and prevention, lower digital literacy, and a more fragmented digital advertising landscape, all contribute to higher rates of IVT. Businesses targeting this region should be particularly vigilant about higher rates of invalid activity.

Finally, the **United Kingdom and Ireland (UKI)** region has the highest rate of invalid traffic at 18.79%. This finding may be surprising, considering the region's strong digital economy and regulatory environment. However, the high rate points to the high-degree of sophisticated bot activity in these lucrative markets, highlighting the need for businesses to remain diligent in their efforts to combat invalid traffic.

Ireland has historically seen high levels of sophisticated invalid traffic (SIVT). Ireland's favourable regulatory environment and corporate tax incentives attracts numerous tech companies, including Google and Meta, to establish their European headquarters in the country. However, this same environment can also attract malicious actors seeking to exploit gaps in enforcement and digital oversight.





The Paid Media Traffic Quality Survey

The Business Impact of Invalid Traffic



The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

To help better understand the various business impacts of invalid traffic, we've supplemented the data in our report with insights and feedback from PPC professionals.

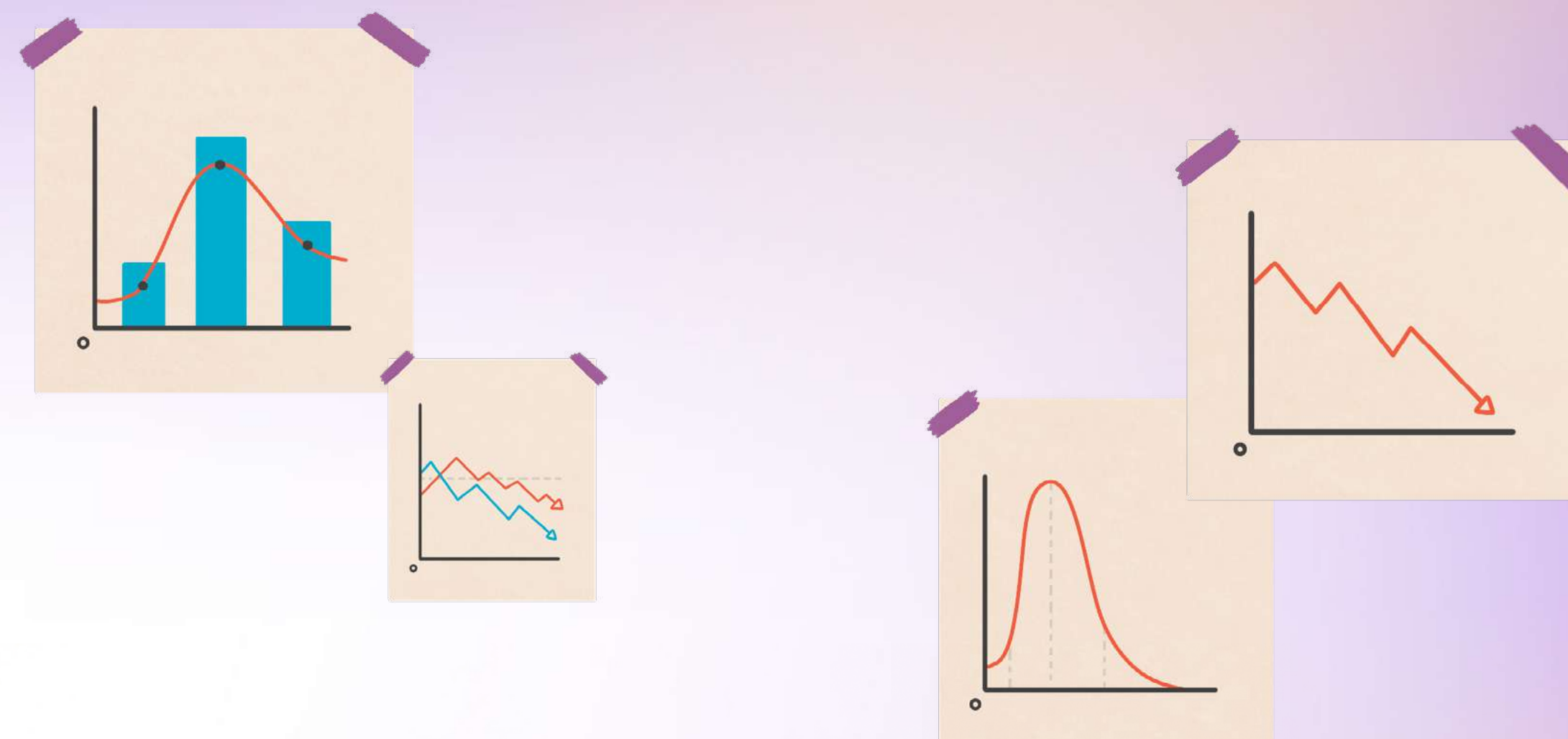
We wanted to discover how marketers are being impacted by macroeconomic factors and ongoing trends such as the rising adoption of invalid traffic prevention solutions and the increasing prevalence of fake lead submissions.

We created a survey of eight questions focusing on a number of key issues which are closely connected to invalid traffic. We then analysed the responses to each question to determine the implications for both businesses and marketers alike.

During June 2023, hundreds of marketers completed our survey. Respondents were invited to take part via a call out sent to Lunio's mailing list, which includes agencies, retailers, and B2B brands of various sizes – from startups to multinational corporations. The results offer a general snapshot of the issues performance marketers are currently facing across a range of topics.

We wish to thank all our respondents for taking the time to fill out the survey. We hope the insights learned will help guide decision-making along the path towards achieving greater performance marketing efficiency.

Below we've presented the results from each question in the survey, with an analysis of what the data suggests about the current state of play in the world of performance marketing.





The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

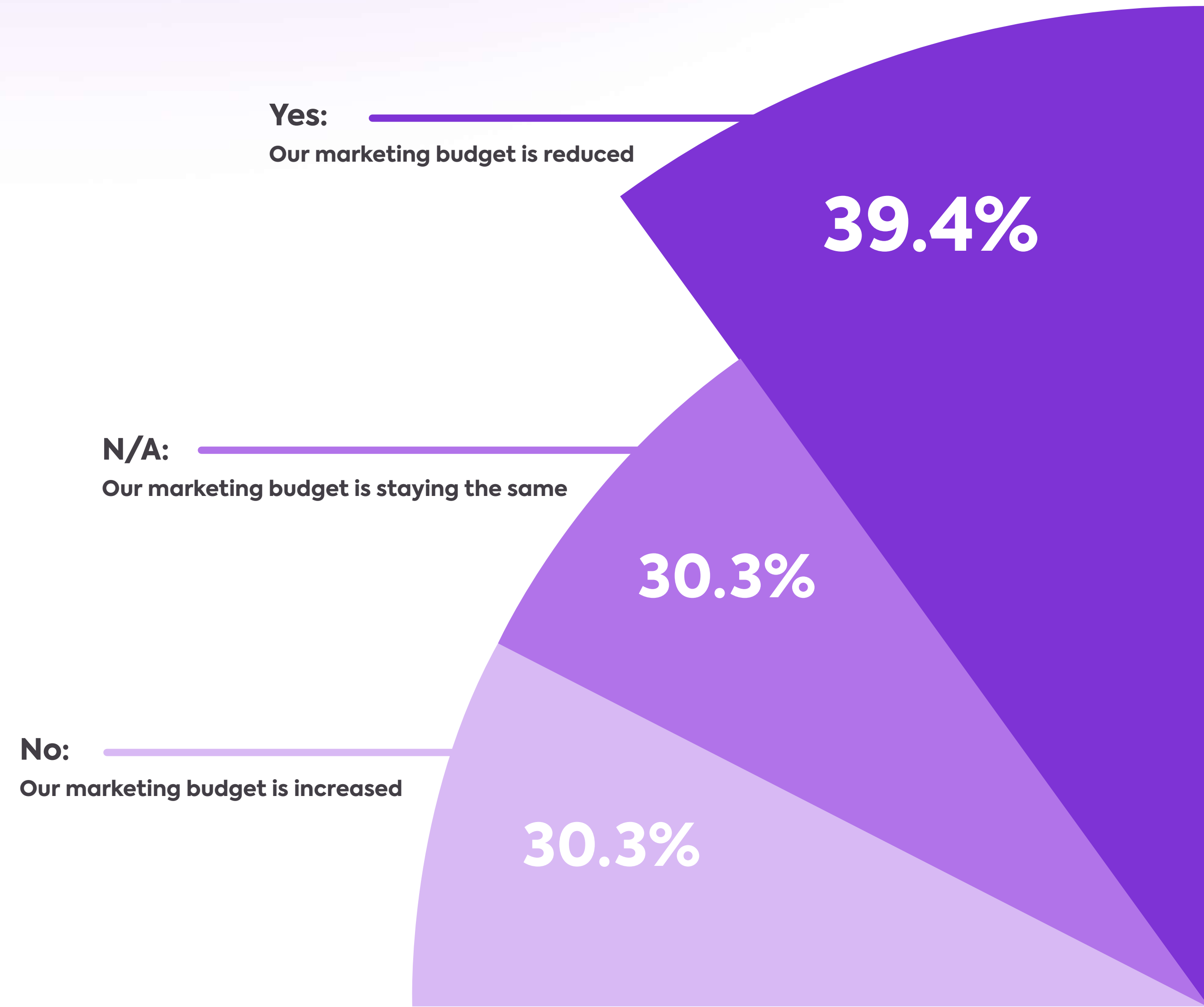
Over 39% of performance marketers are working with a smaller budget in 2023, with another 30% operating with the same budget they had in 2022. Only 30% of respondents had an increased marketing budget for 2023.

This correlates with the prevailing economic situation. Businesses are facing challenging times, which could potentially last several years. The widespread reduction in budgets highlights the pressing need for greater efficiency in managing paid media campaigns.

Despite the difficult circumstances, it is noteworthy that 30.3% of professionals reported having an increased budget, indicating the downturn has not affected all companies equally. But even for those with more to spend, the data shows optimising for greater efficiency is still a critical part of successful paid media management.

As the industry continues to grapple with limited resources and economic uncertainties, eliminating wasted ad spend has become a top priority for businesses aiming to drive growth in a more competitive landscape.

Is Your Team Being Asked to ‘Do More with Less’ in 2023?





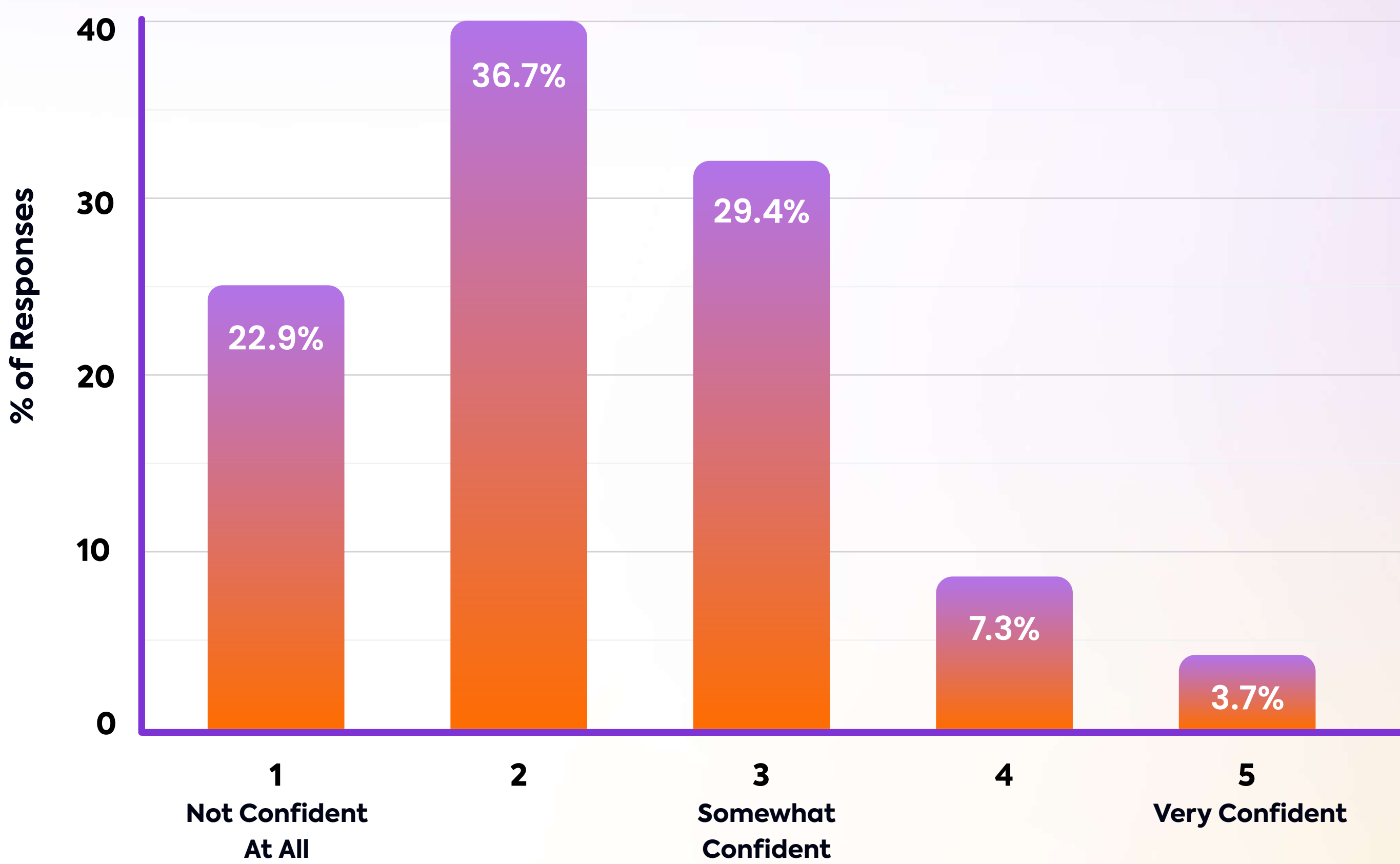
The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

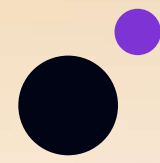
More than half of the respondents expressed a lack of confidence in ad networks’ measures to tackle IVT, with only 11% feeling enough is being done.

This is in-line with the Lunio click data presented at the beginning of this report. Non-Google platforms have a long way to go when it comes to improving the effectiveness of their IVT prevention systems. In comparison, Google is doing a much better job, with IVT rates ranging from 3% – 7%. But respondents clearly feel these efforts are still insufficient.

Ad networks need to improve the effectiveness and transparency of their invalid traffic prevention systems to regain the trust of advertisers. Marketers want to know exactly what is being done to protect their ad spend on each platform, and they want full visibility over the invalid traffic that has been detected and filtered.

How Confident Are You That Ad Networks Are Doing Enough to Combat Invalid Traffic?





The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

Refunds for invalid clicks can only be claimed on Google Ads, which excludes other platforms from this question and its analysis.

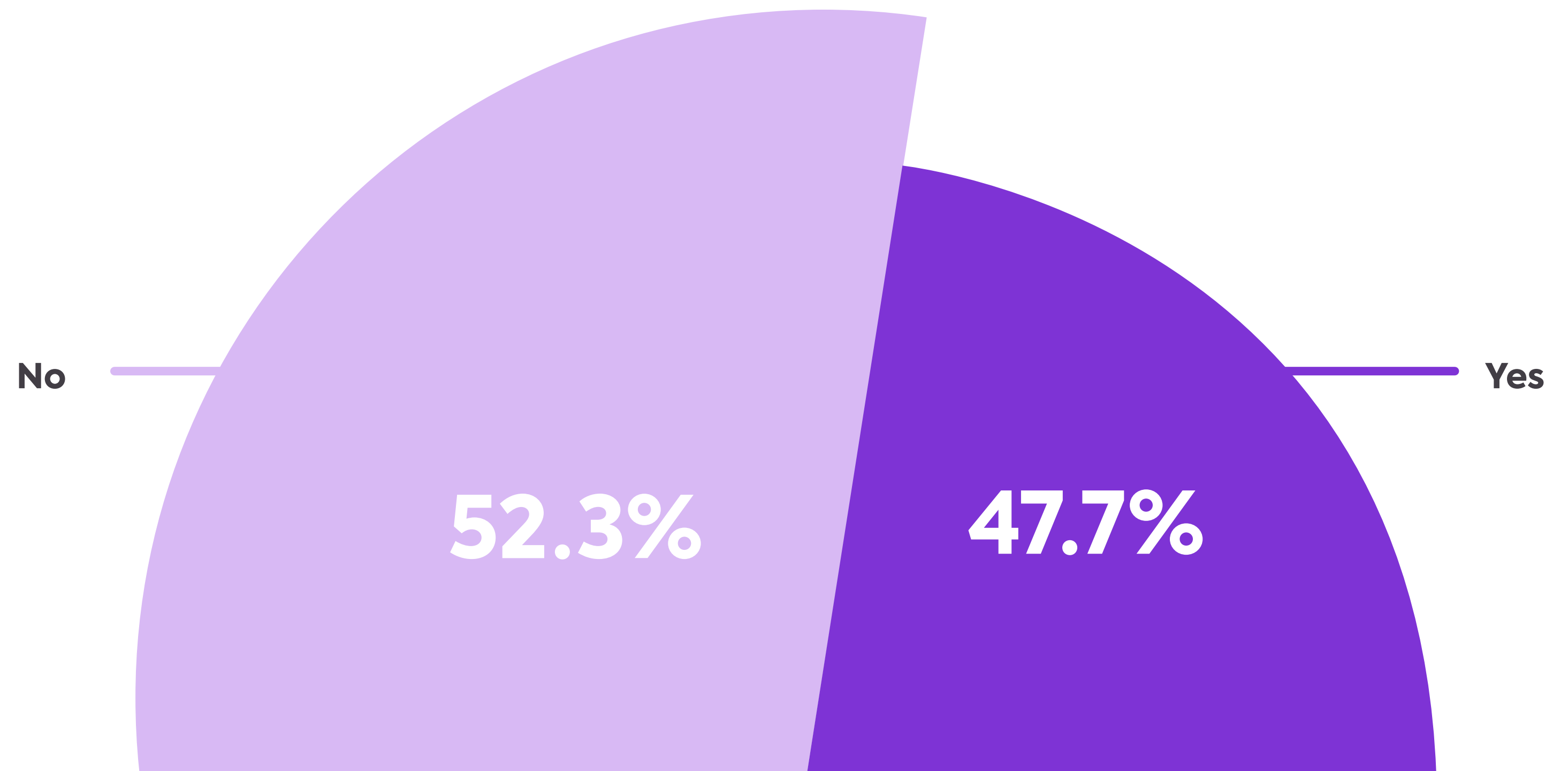
47.7% of respondents had claimed a refund, indicating a substantial number of professionals are aware of the issue of invalid clicks and have actively sought to rectify it. Although it should be noted these responses come from marketers who are interacting with IVT prevention solutions such as Lunio which may skew results. That aside, the process of claiming a refund is well-known to be long-winded, leading to a high level of time investment from those brands that successfully got their money back.

The fact so many marketers have claimed refunds indicates a level of scepticism about Google’s automatic credit rebates for invalid clicks. If Google finds invalid clicks have escaped automatic detection, the advertiser is eligible to receive credit for those clicks called “invalid activity” adjustments.

These invalid activity adjustments can be viewed in the **Billing Summary > Transactions** section within Google Ads. But as Google is still manually issuing refunds to claimants with enough supporting evidence, it shows the automatic credit rebate system does not fully account for all invalid activity.

On the other hand, 52.3% of respondents had not claimed a refund, which suggests the complexity of the refund process might be acting as a deterrent in some cases. It’s likely there were more eligible brands that haven’t claimed a refund due to the perceived difficulty. For some, paying for a certain volume of invalid clicks is unfortunately viewed as an inevitable “cost of doing business”.

Have you Ever Claimed a Refund from an Ad Platform for Invalid Clicks / Fake Users?





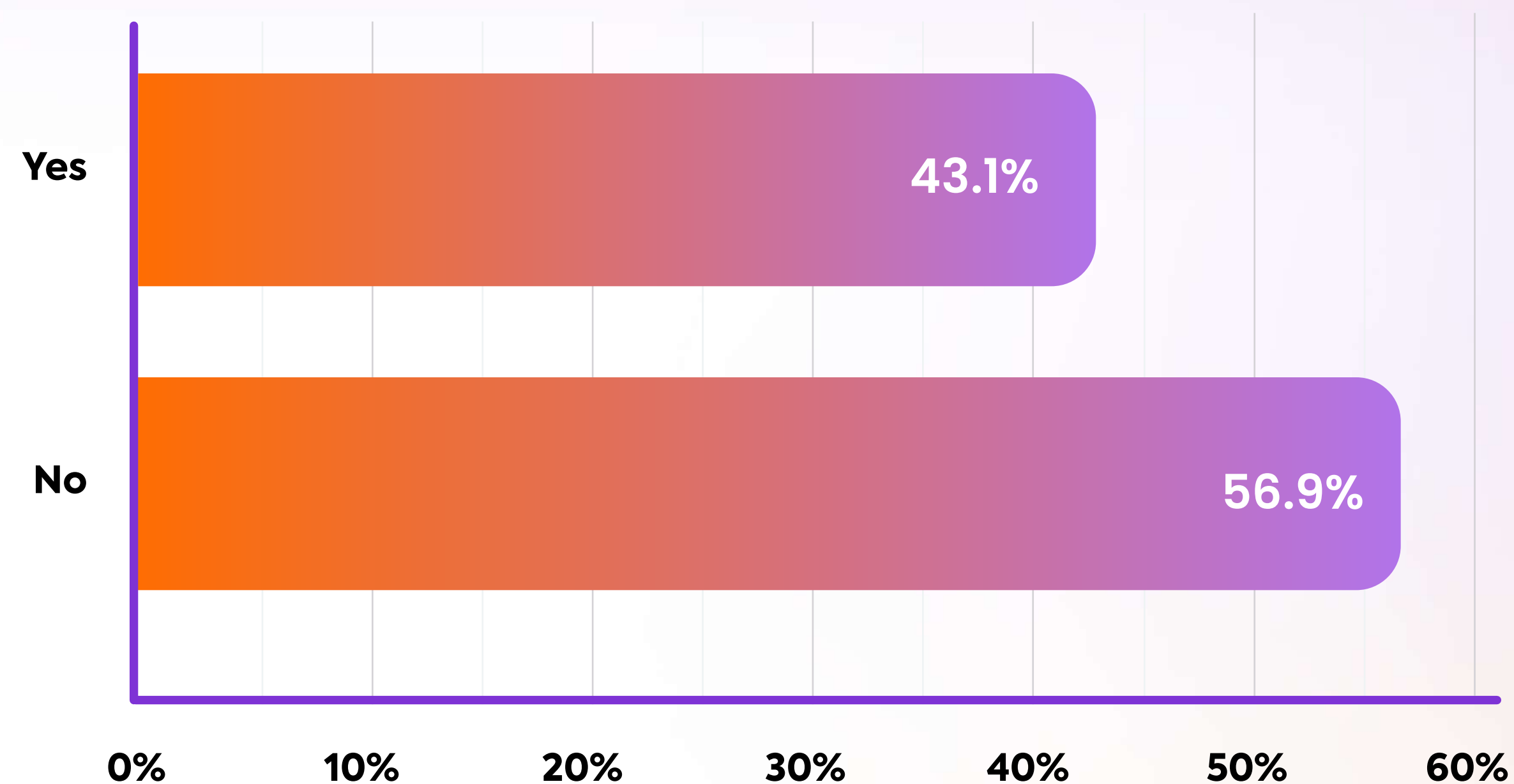
The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

The majority of marketers still don't use any form of dedicated invalid traffic prevention system. This highlights a clear area for improvement in terms of increasing ad spend efficiency.

It should be noted this sample is unlikely to be fully representative of the wider market as these survey respondents were already subscribed to Lunio's mailing list, suggesting they are familiar with the problem of invalid traffic and possibly more proactive in seeking solutions. In reality, the percentage of brands using an invalid traffic prevention system is lower than 43.1%.

Despite this, there was a notable increase in the adoption of third-party prevention solutions compared to the previous year. In Lunio's [2022 State of PPC Survey](#), 74% of respondents stated they weren't using any form of invalid traffic or click fraud prevention system. This shows a growing recognition of the importance of safeguarding paid media campaigns against fake ad engagement.

Do You Use a Third-Party Invalid Traffic / Click Fraud Prevention Solution?





The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

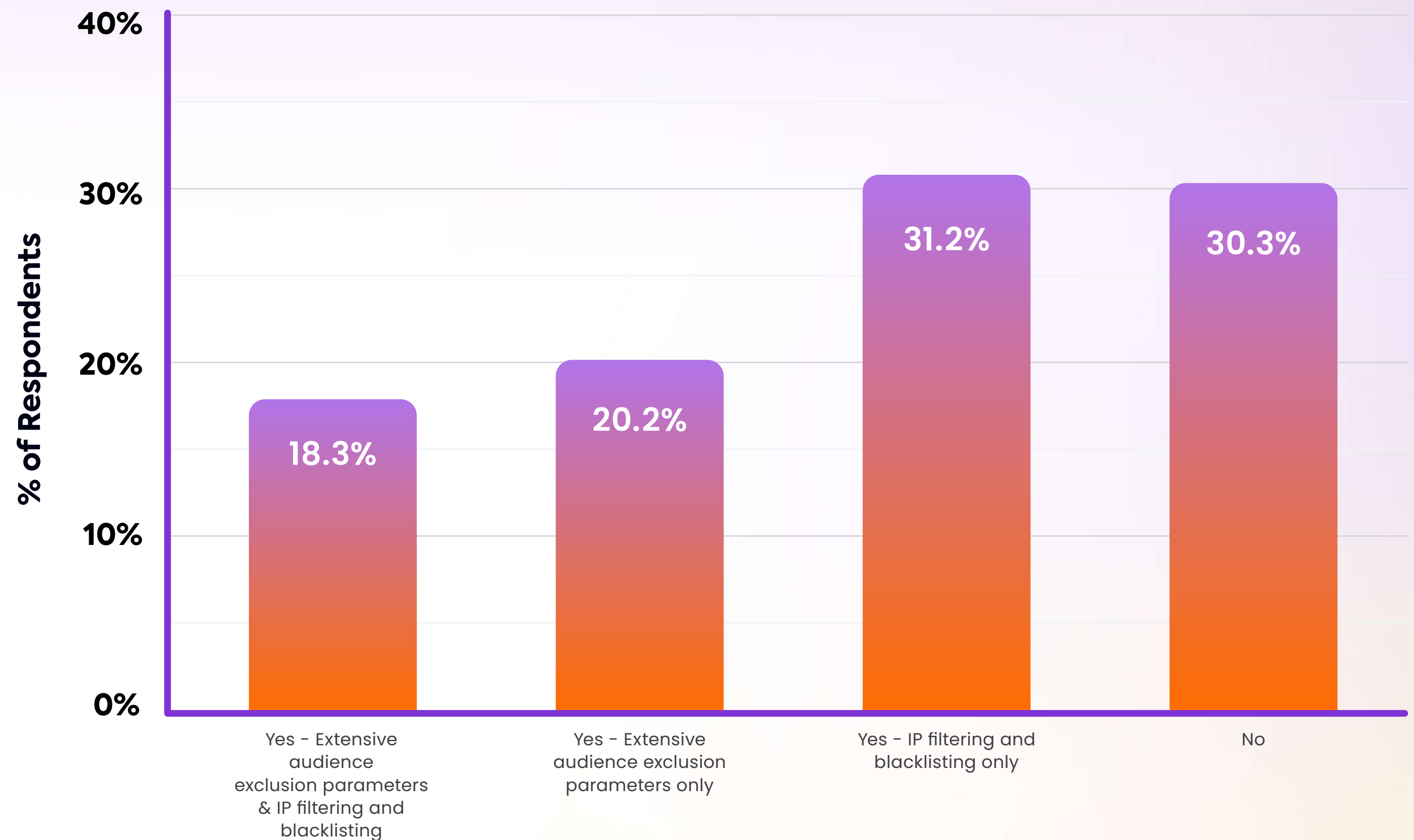
30.3% of the respondents do not engage in any manual effort to block invalid traffic. This lack of proactive action leaves campaigns vulnerable to fake traffic, leading to wasted ad spend and skewed performance metrics.

On the other hand, 31.2% of performance marketers rely solely on IP exclusions, which can be cumbersome and time-consuming, given the manual nature of the process. The popularity of IP filtering and blacklisting shows it remains a popular option despite its setbacks.

Audience exclusions are less popular (20.2%) despite being more efficient and effective than IP blocking in most cases. Audience exclusions are the primary negative targeting option on many ad platforms, and dedicated solutions like Lunio can automatically generate cross-platform exclusion lists. Filtering out invalid traffic via exclusion audiences is a highly effective way of increasing ad spend efficiency, especially on non-Google channels where average IVT rates are often higher than 10%.

Only 18.3% of respondents take a highly proactive stance against invalid traffic, showing a gap in an understanding of the impact IVT can have on campaign performance. Through reports, guides, and webinars, Lunio aims to bridge this gap by raising awareness among performance marketers about the problems created by fake ad engagement.

Have You Ever Used a Manual Method to Try and Block Invalid Traffic?





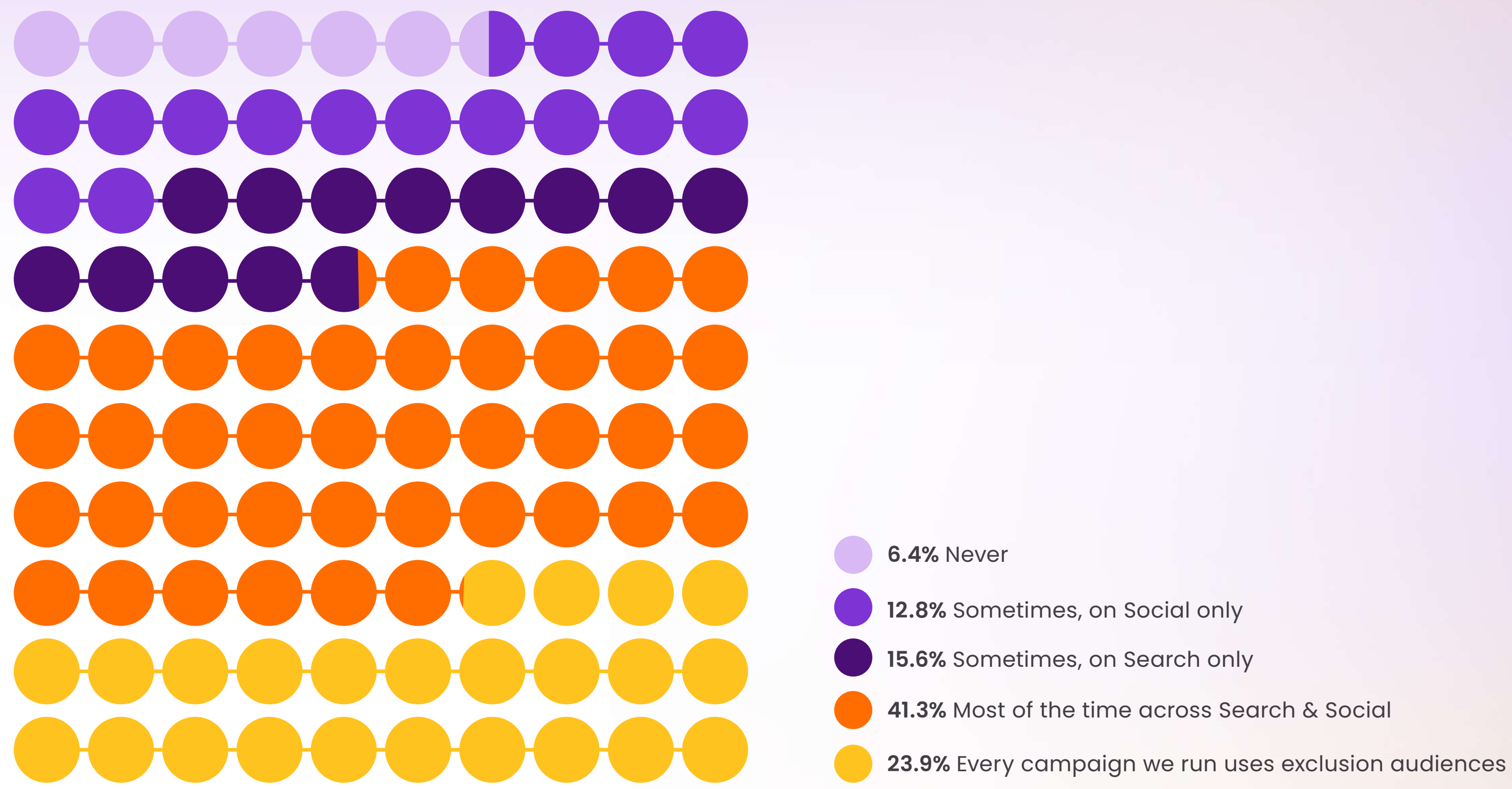
The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

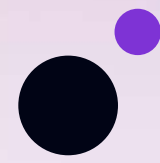
While audience exclusions are less popular than IP blocking when it comes to blocking invalid traffic, it’s encouraging to see the majority of performance marketers are using audience exclusions to enhance their targeting.

65.2% of respondents actively minimise wasted ad spend by applying exclusion audiences to all campaign types. This helps ensure budgets are being concentrated on the most valuable audiences i.e. those that are most likely to convert.

Despite this, 6.4% of respondents never use exclusion audiences. Another 15.6% only use exclusion audiences on Search, while 12.8% only use them on Paid Social. For these brands, making more extensive use of exclusion audiences resents a low-effort, high-reward strategy for improving performance marketing efficiency.

How Frequently Do You Use Exclusion Audiences to Improve Your Targeting?





The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

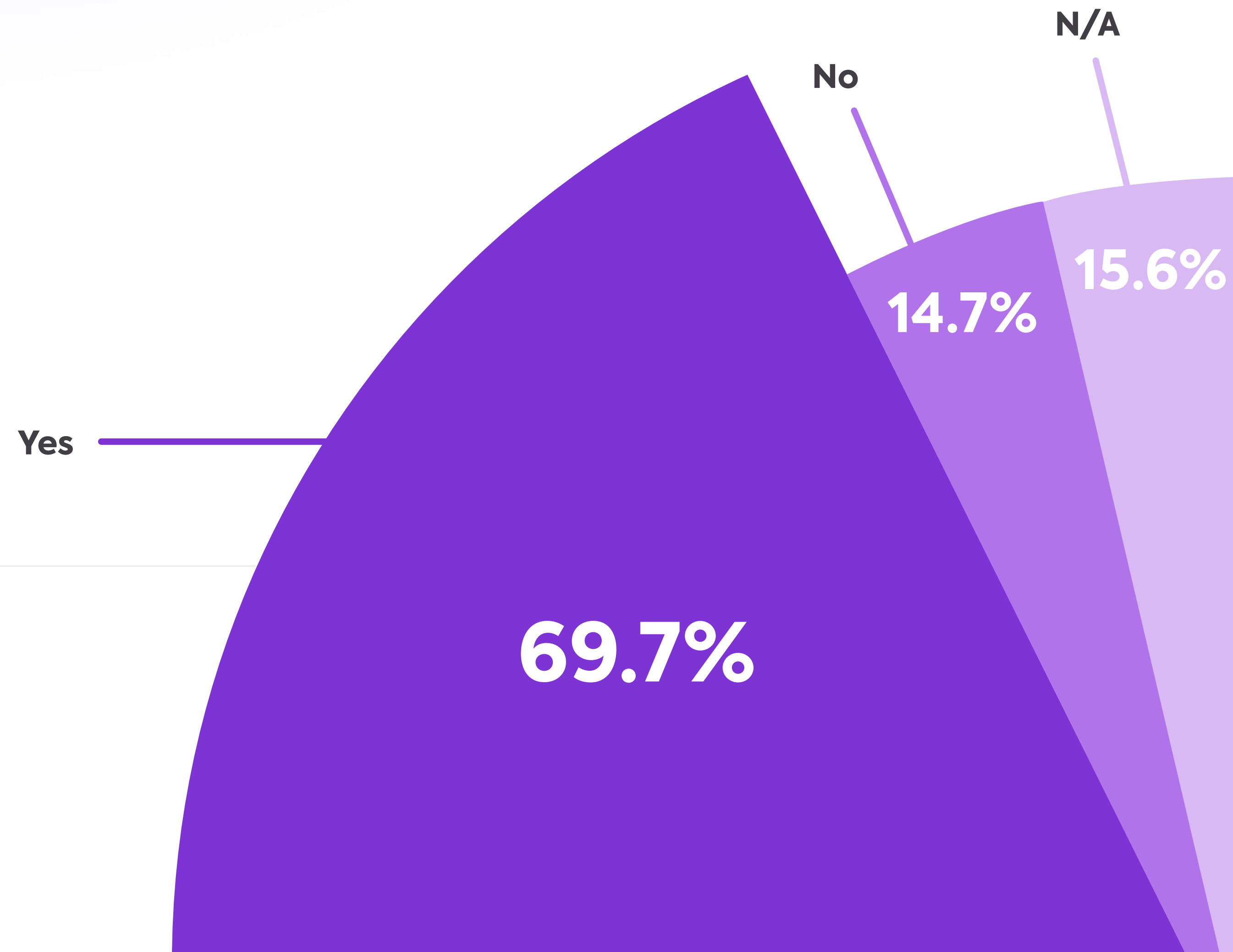
69.7% of respondents acknowledge problems with spam or fake lead submissions originating from their paid media campaigns. The high prevalence of fake leads represents a significant challenge for marketers, both in terms of cost and operational efficiency.

It's important to note not all fake leads are the result of invalid activity. A small number of fake leads come from real human visitors giving false information to avoid being added to a mailing list. These kinds of fake leads are usually easier to spot (e.g. *johnsmith@fakemail.com*) and remove from CRMs.

But the majority of fake leads come from bots filling online forms, usually with user information stolen from real people, making it difficult to tell whether they're real or fake at a glance.

The cost of fake leads can be substantial. Firstly, there is the wasted ad spend associated with the invalid click through to the landing page. But the business costs start to stack up rapidly as hours are wasted investigating and following up leads with zero conversion potential.

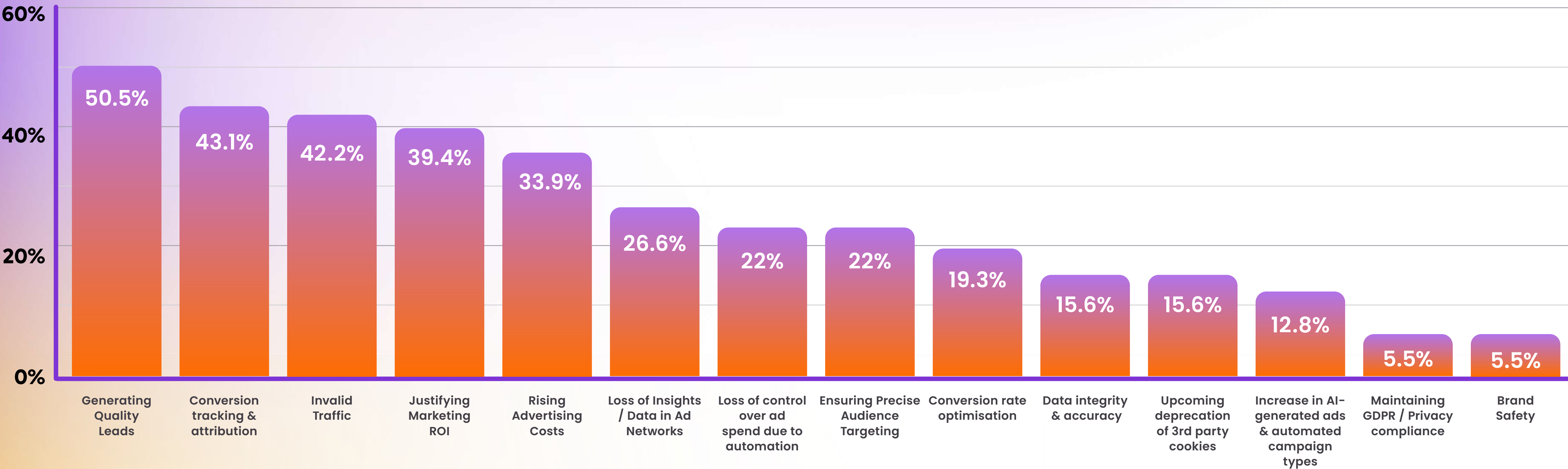
Have You Ever Experienced Problems With Spam / Fake Lead Submissions Coming From Paid Media Campaigns?





The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

Which of These Are Your Biggest Concerns Today? (Choose up to 3)





The Paid Media Traffic Quality Survey – The Business Impact of Invalid Traffic

For this question, respondents could select a maximum of 3 performance marketing-related concerns from a list of 14. The top three concerns are featured in the analysis below.

Generating quality leads came out on top, with 50.5% of respondents citing it as an ongoing issue. This highlights the importance of refining audience targeting through exclusions, especially when using automated campaign types. Many brands would also benefit from implementing a dedicated solution like Lunio to eliminate bot-driven fake leads at the source, preventing them from entering CRMs.

In second place was **conversion tracking and attribution** (43.1%). This concern has always been prominent for marketers – but poor conversion tracking is even more of a problem given that paid media is becoming increasingly automated. With algorithmically-driven targeting and spend optimisation, the principle of ‘garbage in, garbage out’ applies. So marketers need to do everything they can to enhance the quality of the data they’re feeding into campaign algorithms. This includes things like maintaining meticulous offline conversion tracking, using the Enhanced Conversions feature in Google Ads, and regularly auditing setups to ensure everything is working as it should.

The third biggest concern for performance marketers is **invalid traffic** (42.2%). This indicates a growing awareness of the scale and cost of the problem. Invalid traffic directly wastes ad spend, because those “visitors” never convert. It distorts analytics, leading to unwise budget allocation. And it also causes projected revenue forecasts to become unpredictable. As the data in the report indicate, ad networks currently aren’t doing enough to definitely tackle the problem. Therefore it’s down to marketers themselves to put in place extra protections to safeguard their campaigns against IVT on all channels.



The Role of Viewability in Reducing Wasted Spend

To give an in depth picture of the current state of wasted ad spend, Lunio has partnered with Integral Ad Science (IAS) a leading global media measurement and optimisation platform.

About IAS

Integral Ad Science (IAS) provides the industry’s most actionable data to drive superior results. They take a measured, calibrated, and optimised approach to fraud detection, powered by AI and machine learning to provide advertisers with the most accurate detection and prevention. IAS processes 100+ billion daily web transactions, with trillions of data events measured globally each month. Founded in 2009, they work with 2100+ of the top advertisers and have over 400 direct integrations with premium publishers worldwide.

In the same way Lunio ensures every click comes from a genuine user, IAS identifies the most cost-effective path to quality impressions. They ensure ads are viewable by real people, in safe and suitable environments, activating contextual targeting, and driving supply path optimisation.

Their mission is to be the global benchmark for trust and transparency in digital media quality for the world’s leading brands, publishers, and platforms.

How Does Viewability Data Complement Click Data?

A combination of viewability and click data provides unrivalled insight into invalid and fraudulent activity across every important marketing channel including connected TV (CTV), programmatic, open web, paid search, and paid social.

The table below outlines how a combination of pre-bid optimisation and post-click protection work hand-in-hand to provide full coverage of the entire digital advertising ecosystem:

	IVT Prevention Solutions (e.g. Lunio)	Ad Verification Solutions (e.g. IAS)
Measurement Event	Traffic/Clicks Identifies quality traffic and determines user validity (fake or real) in a post-click / interaction environment, creating cross-platform exclusion lists.	Media Impressions Focus on measurement of holistic media quality (Brand Safety/Suitability, Viewability, Fraud), preventing delivery against low-quality media.
Implementation	On-site Pixel, Walled-Garden API Integration Direct access to both websites & buying platforms (inc. walled gardens) which creates a feedback loop of optimisation against IVT and fraud.	3rd Party Tags & Server to Server MMT wrappers dynamically adapt to the environment to serve the right creative and ensure measurement. Server to server integrations on major social media platforms.
Use Cases	Measurement, Protection & Optimisation of Search/Walled Gardens Reduce IVT & fraud in walled garden ad platforms and claw back wasted ad spend.	Measurement & Protection of Media Quality Contextual understanding of placements, supply path optimisation, and video ad engagement analysis to maximise programmatic campaign efficiency.

In essence, pairing the two types of data gives complete insight into the whole ad journey, from impression through to clicks to conversions. Post-click data from Lunio reveals key insights about on-site behaviour to detect and exclude invalid traffic at a level not possible with viewability data only. Pre-bid impression-level data from IAS reveals opportunities to maximise viewability and engagement rates for every ad served before the clicks even occur.

Where Does the IAS Data Come From?

The IAS data presented in the following pages originates from the 18th edition of their **Media Quality Report**, first published in May 2023. All performance benchmarks are available in a [companion workbook](#) for those who wish to review the findings in more granular detail.

IAS measures trillions of data events annually and observes global media quality developments in real-time. Their **Media Quality Report** leverages this database to offer an industry barometer against which ad buyers and sellers can benchmark the quality of their campaigns and inventory.

Definitions

In order to understand and contextualise IAS data, it’s important to establish definitions for two key terms. Unlike paid ad clicks, which are either legitimate or invalid, assessing the quality of ad impressions is more complex and nuanced.

Viewability

Per the Media Ratings Council (MRC) standards, a display ad impression is considered viewable if at least 50% of pixels are on screen for at least one second after the ad has rendered. A video ad impression is viewable if the ad is playing while at least 50% of the pixels are on screen for at least two continuous seconds.

Time-in-View

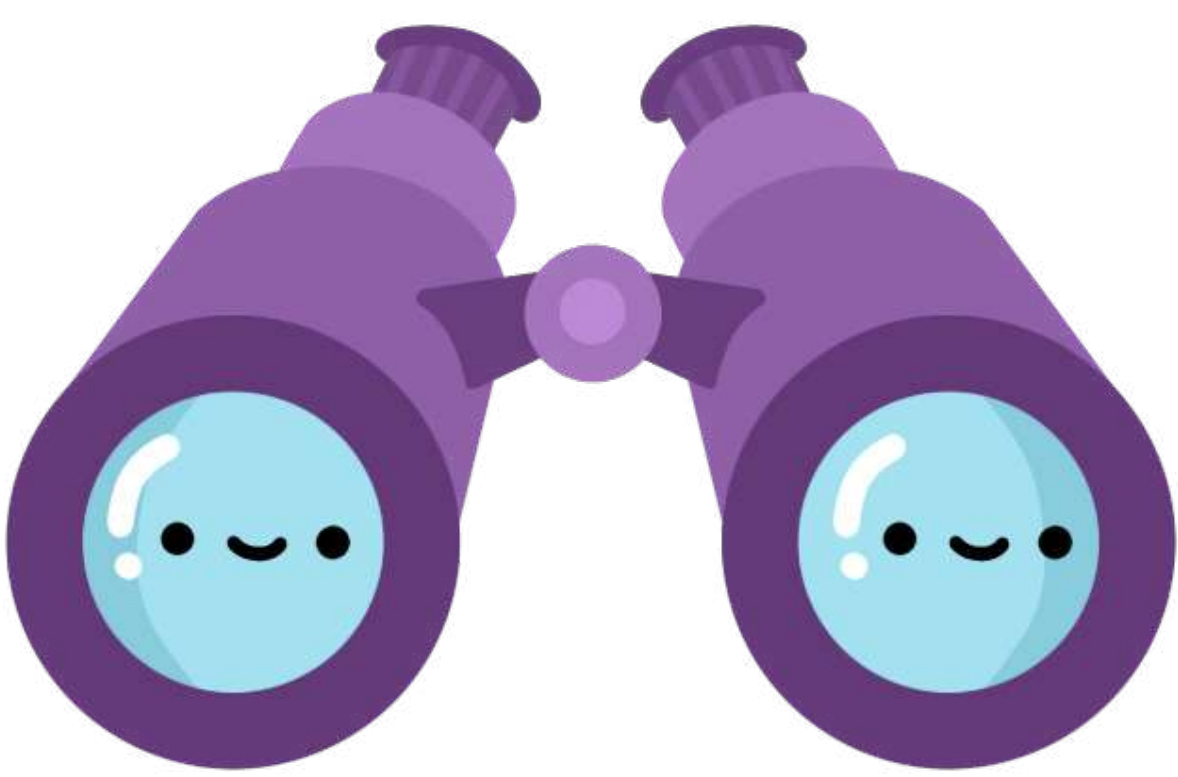
Time-in-view is the average duration that a viewable impression remains in view. Impressions that are not viewable according to the Media Ratings Council (MRC) standard are not included in this calculation.



Viewability

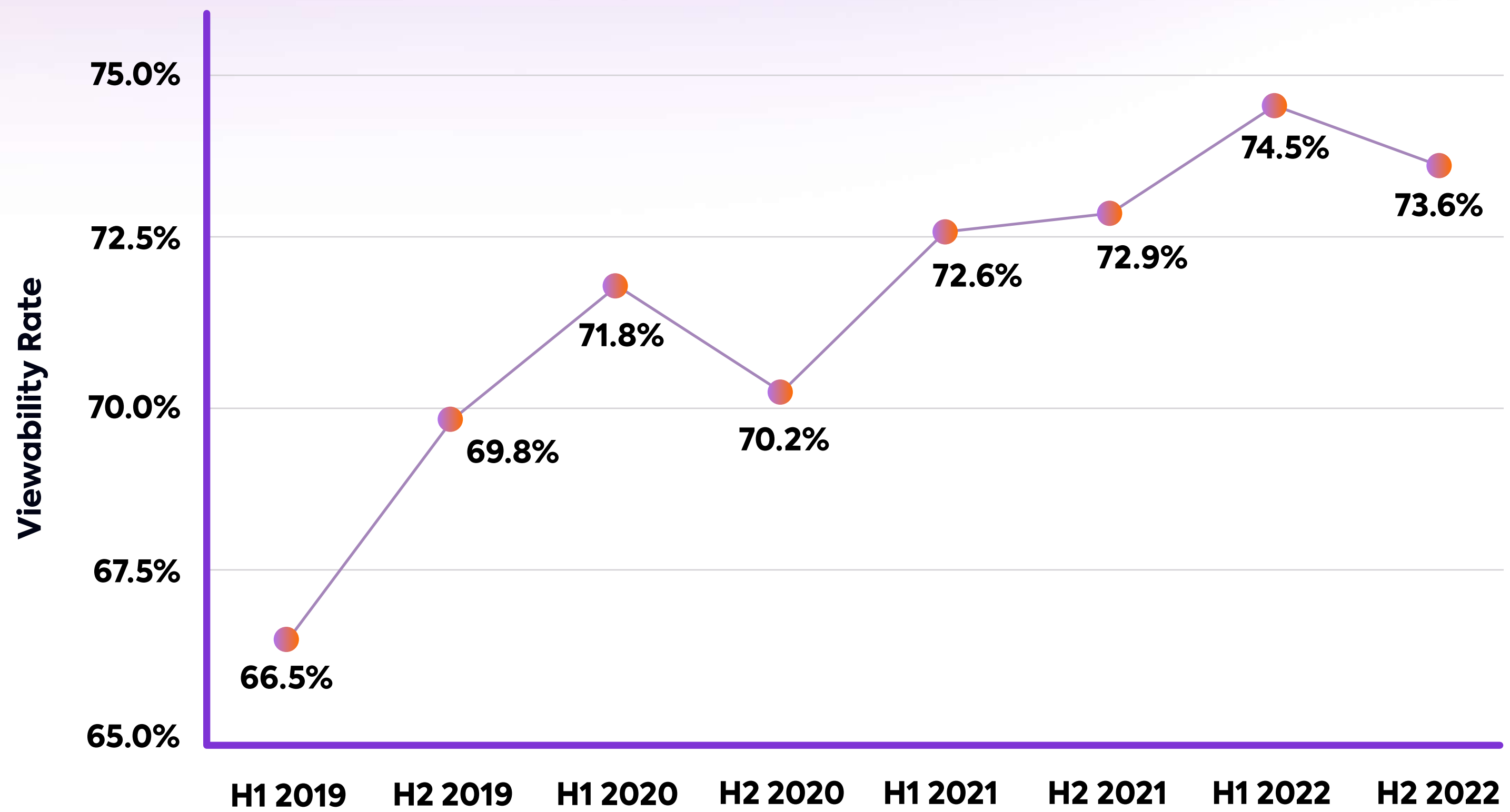
The graph opposite represents global viewability data averaged across all environments including desktop display, desktop video, mobile web display, and mobile web video.

Annual viewability averages worldwide have risen 9% between 2019 and 2022. This long-term upward trend has pushed average viewability levels to hover between 70% and 75% for several years, with the global average reaching **73.6%** in H2 2022.



Viewability | Overall | Worldwide

H1 2019 – 2022



Analysis of Viewability Rates

Taking the global average for viewability in H2 2022, 26.4% of impressions served during this time period were non-viewable ads.

This represents a significant source of inefficiency within programmatic ad campaigns. But unlike an invalid click, a non-viewable ad doesn't immediately equate to wasted ad spend, for the reasons outlined below.

Non-viewable ads may still have some impact on consumers. Viewability requires half of the pixels in display ads to remain in-view for at least one second once they have rendered. For video ads, the threshold is two seconds while half of the video player is in view.

Given this, some of the ads within the 26.4% deemed to be non-viewable may have fallen just short of these thresholds. For example, they may have been in view for just under one or two seconds, or only one-third of the ad may have been visible. In these cases, the ads could still have an impact on consumers, even though they didn't meet the viewability standard.

This means it would be inaccurate to claim 26.4% of advertisers budgets were "wasted" on non-viewable ads. The proportion of budget that was truly wasted is lower than 26.4%, but it's not possible to establish an exact figure due to the way viewability is established.

Despite this, the upward trend in viewability is encouraging. But these rates can only be achieved by using a pre-bid verification solution like IAS. Advertisers running programmatic campaigns without any verification risk significantly higher amounts of wasted ad spend due to the fact that a much higher proportion of their served ads will be non-viewable.

Should We Strive For 100% Viewability?

The path towards 100% viewability is central to advertising strategies for marketers across the globe. In theory, this would minimise ad spend inefficiency by ensuring every single ad served is seen by a real person, in accordance with viewability standards.

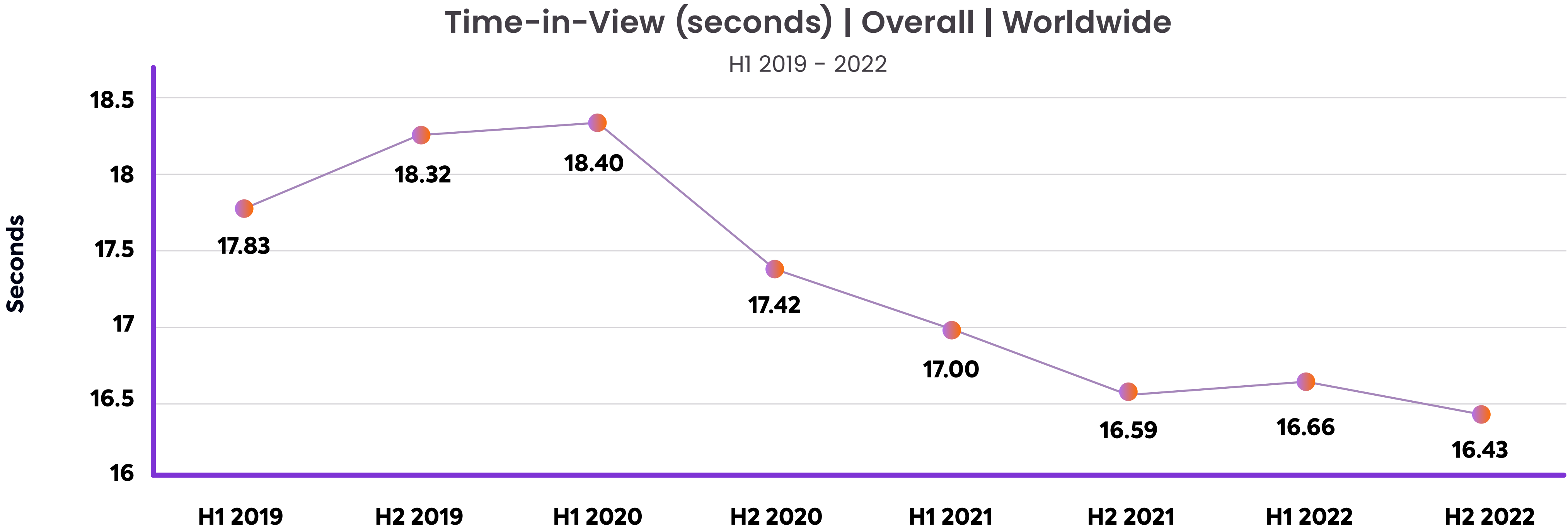
But in reality, striving for ever-increasing levels of viewability can result in a law of diminishing returns, whereby the financial cost required to achieve 100% can actually hinder profitability. Data obtained from IAS clients show higher quality impressions (i.e. those that meet viewability standards) end up costing more than lower quality impressions. As a result, the advertiser may end up reducing their overall return on ad spend by continuing to strive for viewability rates above certain levels.

Therefore striking a balance is the key to maximally efficient spending. By using the appropriate pre-bid segments, performance marketers can maintain relatively high viewability, maximise conversions, maintain a competitive cost-per-conversion, and minimise the impact on scale.

Time-in-View

The graph below represents global time-in-view data averaged across all environments.

In contrast to the trend observed with viewability, annual time-in-view averages have declined since 2020 when a historical high of 18.40 seconds was registered. Since then, there has been a steady decline in time-in-view, reaching **16.43 seconds in H2 2022**, representing an 8.5% long-term reduction between 2019 and 2022.

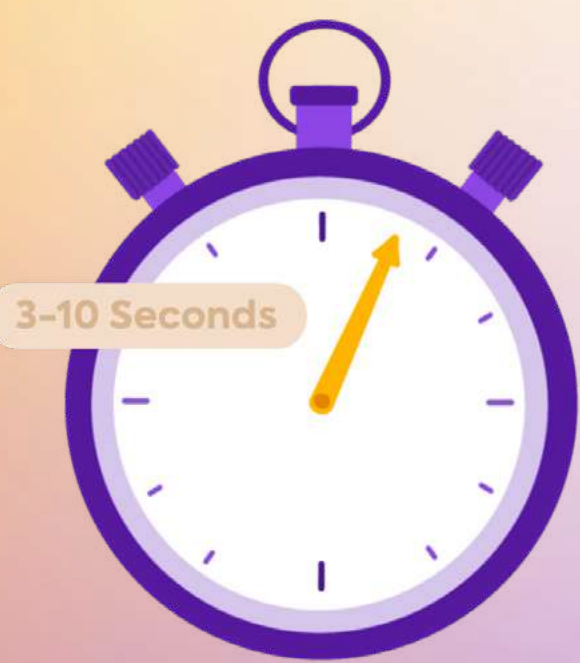


How Does Declining Time-in-View Impact ROAS?

This trend means impressions that were viewable tended to be viewed for a shorter period of time. This applies to both display and video ads.

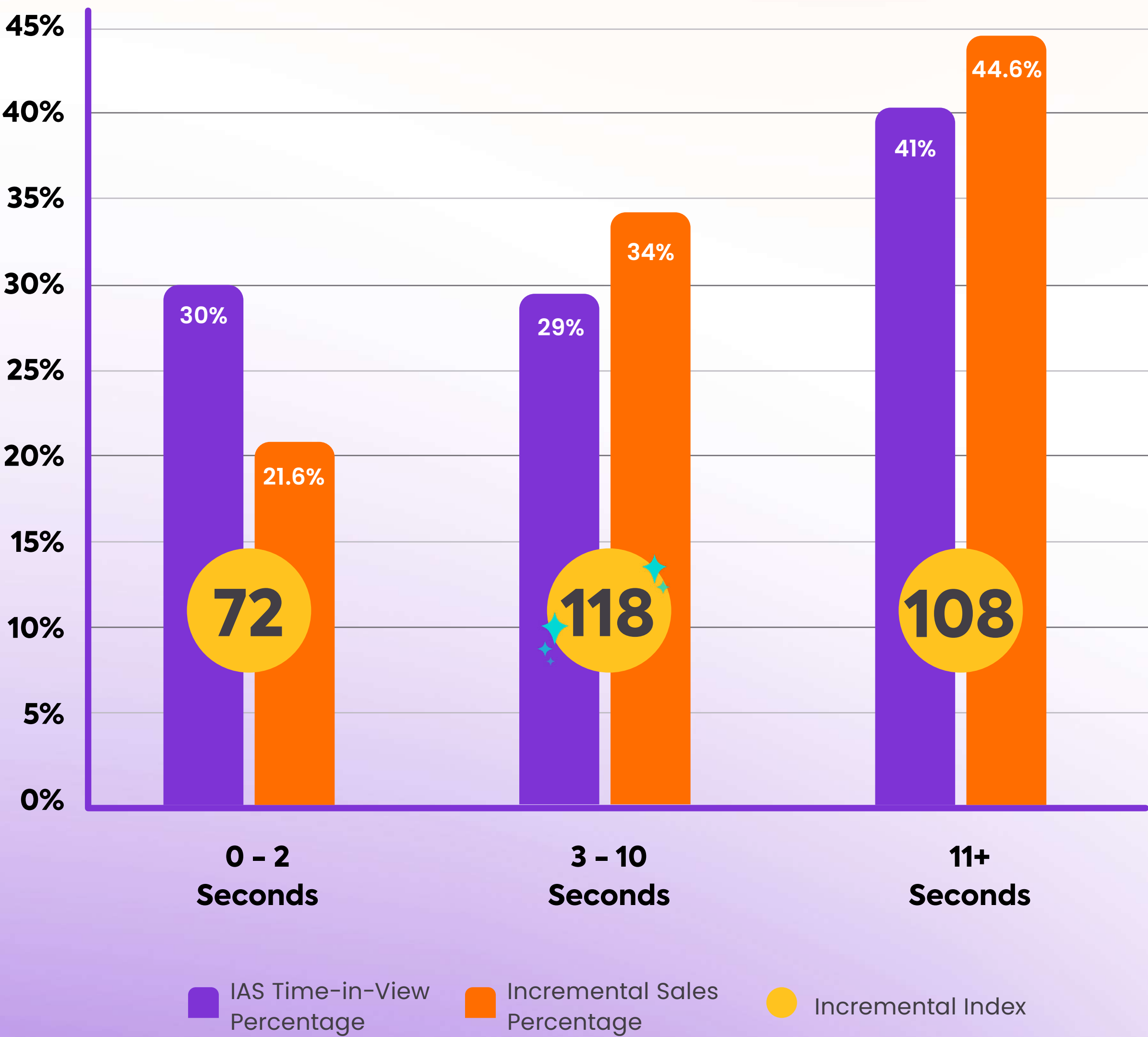
At first glance, shorter time-in-view may seem undesirable. As is the case with striving for 100% viewability, a longer time on screen isn't always the key to driving cost effectiveness. While longer time-in-view is the strongest driver of incremental sales, IAS found that the time-in-view sweet spot to maximise ROAS is actually lower.

IAS partnered with Catalina and a top consumer packaged goods (CPG) brand to study how viewability and time-in-view impact incremental sales and ROAS. In this study, they found ads that remained in view for 11 seconds or more drove the highest percentage of incremental sales.



However, ads that remained in-view between three and 10 seconds hit the sweet spot: they were highest on the incremental index — driving additional sales and boosting ROAS for the CPG brand compared to both shorter and longer time-in-view ranges.

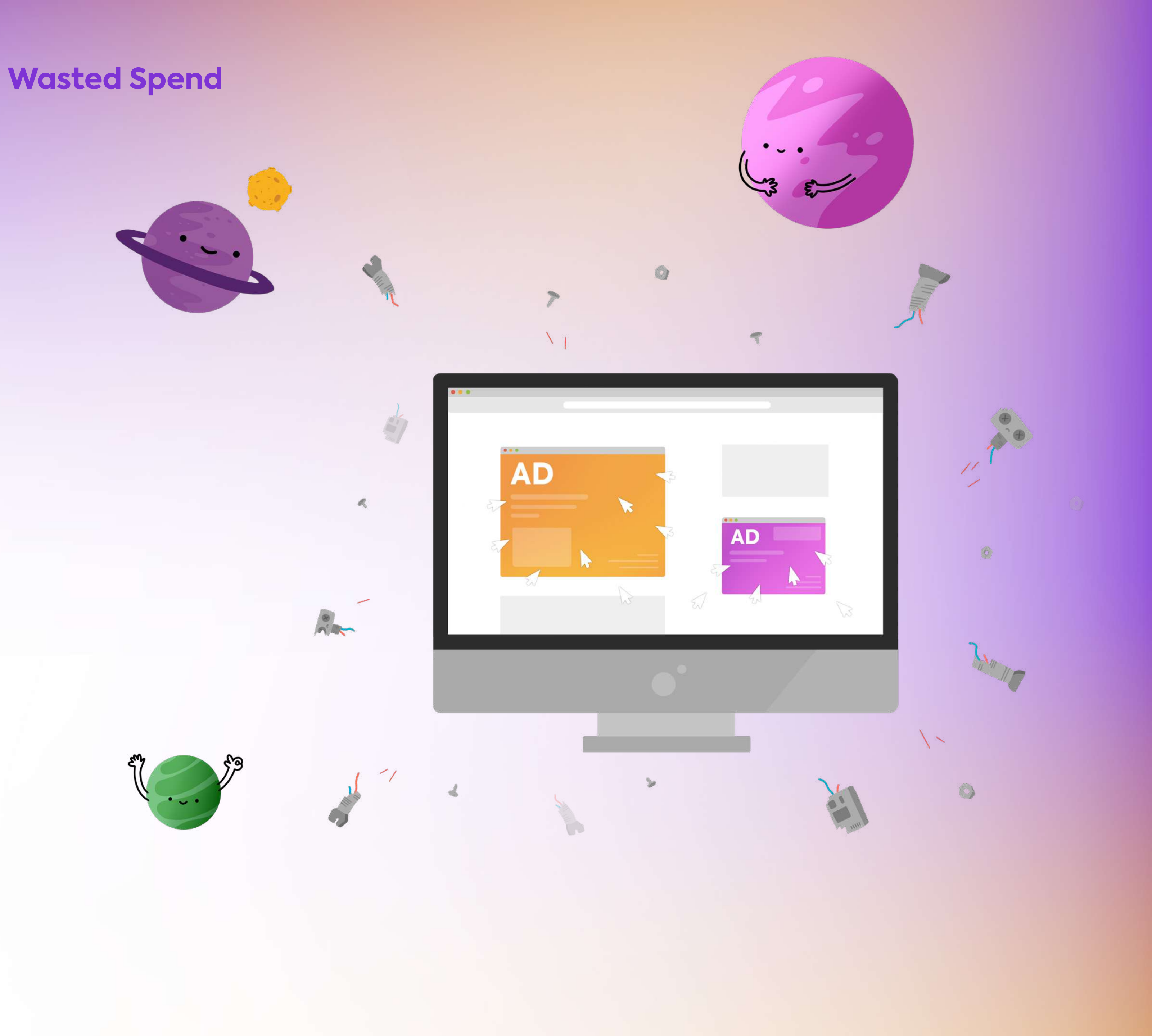
Time-in-View Incremental Index



Maximising Viewability, Minimising IVT

Maximising ad viewability and reducing invalid traffic are essential components of successful digital advertising campaigns. Achieving these goals is critical for ad platforms to maintain a trustworthy and effective ecosystem for publishers and consumers alike. The combined use of Integral Ad Science (IAS) for ad viewability & brand safety, and Lunio for reducing invalid traffic in post-click environments, becomes indispensable for businesses prioritising efficiency over growth at all costs.

By protecting every part of the ad journey against invalid traffic, from impressions through to clicks and conversion activities, advertisers can enhance their campaigns' efficiency, improve user experiences, and achieve better ROI.



The Environmental Impact of Digital Advertising & **Invalid Traffic**



The Environmental Impact of Digital Advertising & Invalid Traffic

To help shine a light on the environmental impact of the advertising industry, and invalid traffic in particular, Lunio leveraged emission data from Scope3.

Scope3 specialise in measuring digital advertising industry emissions and offer solutions to help brands and marketers reduce their carbon footprint through more sustainable practices.

It's important for marketers to understand the impact of invalid traffic extends beyond financial loss. It also contributes to a higher carbon footprint due to the energy costs associated with generating and processing fake traffic, while offering absolutely nothing in return for advertisers.

The environmental impact, coupled with the wasted spend experienced by brands calls for a united front against invalid traffic. By proactively eliminating IVT and prioritising environmentally conscious advertising practices, the industry as a whole can drive down its carbon footprint while simultaneously driving greater campaign performance.

About Scope3

Scope3 is on a mission to decarbonise media and advertising. For organisations seeking to make carbon-aware business decisions, Scope3 is the supply chain emissions data standard that delivers an accurate, comprehensive, and independent emissions model for every company in the digital ecosystem.

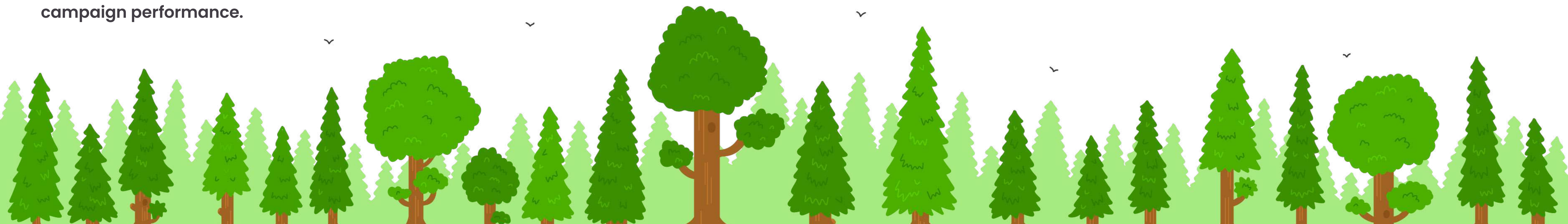
Leveraging an open-source and science-backed methodology, Scope3 emissions intelligence data powers the tools brands, agencies, publishers and technology providers use to measure, understand and take action to reduce their carbon footprint. Founded in January 2022, Scope3 has a global workforce distributed across North America, Europe and APAC.

Where Does the Scope3 Data Come From?

The Scope3 data presented in this report originates from their Q1 and Q2 2023 [*State of Sustainable Advertising*](#) reports. Details of the methodology used to establish carbon emission benchmarks are available in full within the original reports for those that wish to review the findings in more granular detail.

The data selected for presentation in this report is primarily focused on players in the programmatic space, and it represents billions of impressions across tens of thousands of domains/apps on desktop and mobile (including video and banner display ads).

To provide an accurate estimate of the programmatic industry's carbon footprint, Scope3 used a third-party data source in BIScience to assess total emissions values for a given market, as well as for validation purposes against their own datasets.



The Overall State of Digital Carbon Emissions

In their Q2 2023 State of Sustainable Advertising Report, Scope3 looked at the total emissions attributed to programmatic display advertising.

They found that programmatic display alone generates 3.8 million metric tons of carbon dioxide emissions globally every year.

That’s equivalent to **427,000,000 gallons of gasoline consumed or 10,675,000,000 (that’s over ten BILLION) miles** driven in the average family car.

This figure highlights the most complete and accurate view of the programmatic industry’s carbon footprint calculated to date. The numbers are for sites and apps across desktop and mobile, and include video and banner ads.

Emissions at the Per-Impression Basis

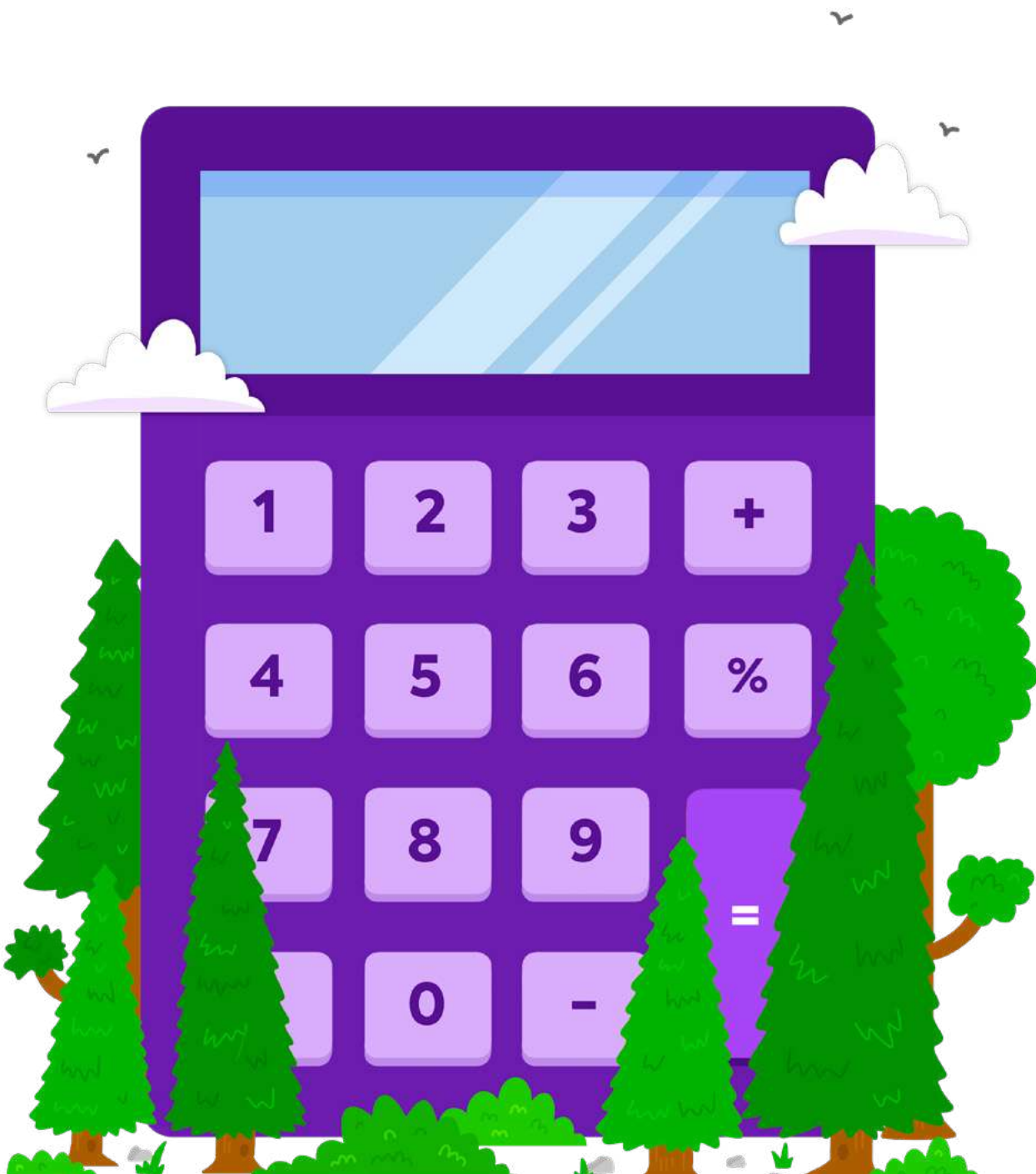
Understanding how ad industry emissions stack up at the global level is important. But using impression-level data is what surfaces useful insights that can drive marketers and companies to alter their behaviour.

In their Q2 Report, Scope3 found that serving 1,000 digital impressions uses 330gCO2e on average.

According to the US Environmental Protection Agency’s greenhouse [gas equivalencies calculator](#), this means every 1,000 impressions uses the same amount of energy required to fully charge 40 smartphones!

This brings the issue of carbon emissions from digital advertising into sharp focus. Considering campaigns routinely rack up millions of impressions, each one consumes enough energy to charge tens of thousands of smartphones.

By understanding the carbon impact of campaigns at the impression level, marketers and brands can begin to conceptualise the extent of their impact on the environment. This is the first step in the path towards eliminating unnecessarily wasteful practices within digital advertising.



Carbon Emissions in Programmatic & Display

In their reports, Scope3 also looked at how publisher emissions stack up to identify factors which drive up the total emissions attributed to programmatic advertising.

By charting how emissions are distributed at the publisher level, the difference between highly efficient domains and carbon heavy publishers is clear.

On one end of the spectrum, there are incredibly carbon-efficient publishers – these domains can be classified as **Green**. The other side is a major problem area for digital advertising. These domains have unnecessarily high carbon emissions and should be considered **Climate Risk**.

What’s Climate Risk Inventory?

Extremely high carbon domains, the worst emitting media properties which are typically fraud, made-for-advertising (MFA), or low-value inventory.

According to Scope3’s Q2 report, climate risk inventory carries a significant cost for marketers, both in terms of carbon and revenue. Emissions from climate risk inventory are on average 2x higher than the market average, while underperforming by 13%.

What’s Made-for-Advertising Inventory?

“Made-for-Advertising” (MFA) is a subset of climate risk inventory. These sites masquerade as prime real estate for online advertising, but ads placed on them yield little impact on consumer behaviour. As such Scope3 have singled them out as a significant source of carbon inefficiency within the digital advertising ecosystem.

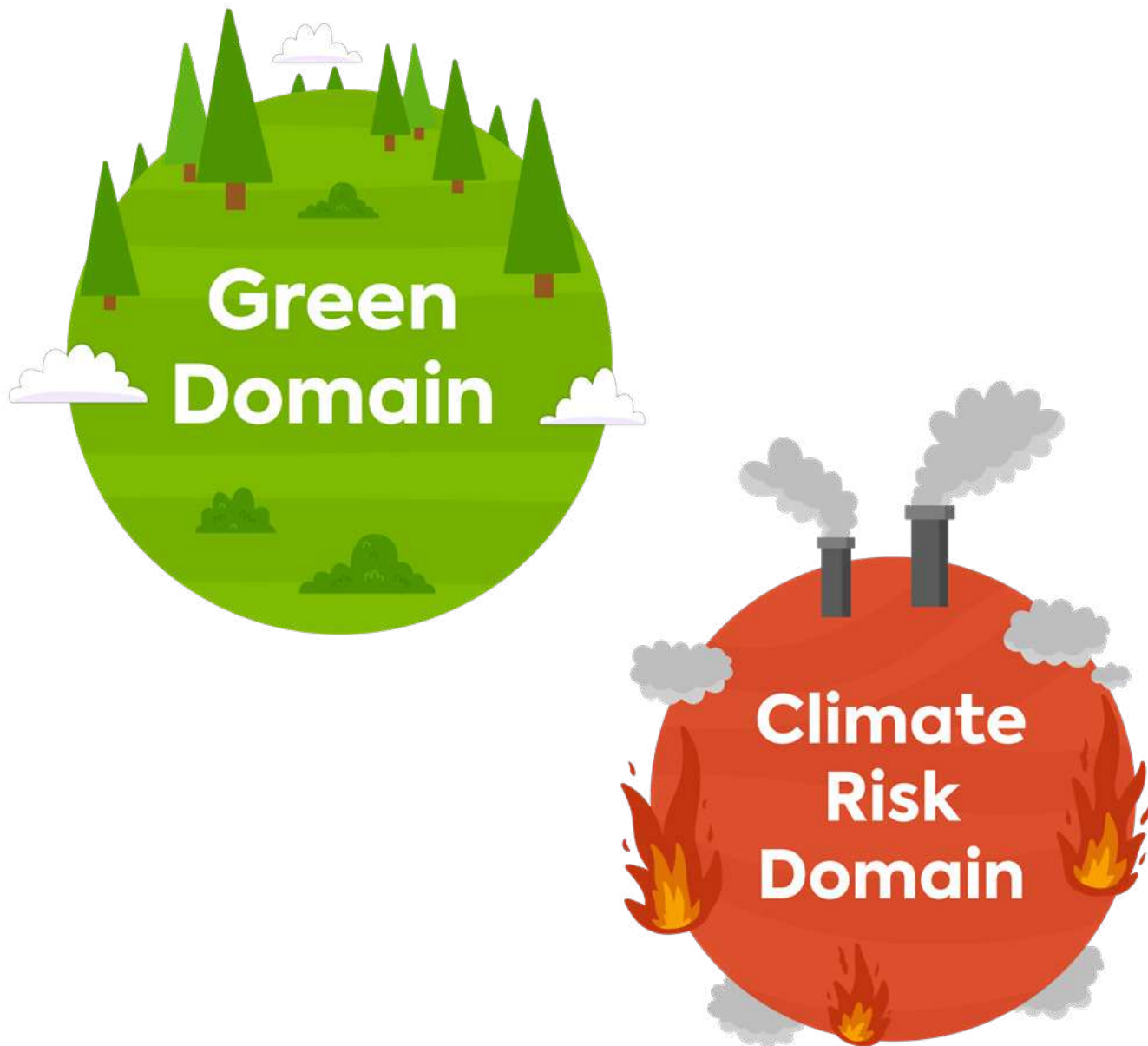
Placements on MFA sites make up 15% of total advertiser spend, according to an ANA study recently published.

The pages on MFA sites are overrun by towering banner ads and strategically positioned video ad players, morphing the browsing experience into a cacophony of chaos. The user experience is terrible, but the programmatic algorithms that facilitate ad purchases perceive these sites as golden opportunities. In principle the ads are more likely to be seen, and they’re cheaper than a lot of other ads.

By industry standards, MFAs do not meet the criteria for invalid traffic (IVT). The visitors to such sites are mostly genuine, but the duration of their engagement is typically short-lived. This occurs when traffic is acquired through content recommendation companies rather than organically earned. As a result they tread a fine line between legitimate traffic and potential IVT.

Speaking to [Digiday](#), Damon Reeve, CEO of the UK-based publisher alliance Ozone said:

“MFA sites are a great working example of a programmatic system being gamed. Advertisers don’t like them, publishers don’t like them, and yet advertiser budgets still flow to them. And that’s because they are designed to perform according to the ad-tech metrics that advertisers value for their digital budgets.”



Defunding Climate Risk Inventory

Both Scope3 reports make it clear all forms of climate risk inventory need to be defunded.

For instance, the worst 10% of domains contribute 33.5k metric tons of CO2e monthly across the 5 countries studied in the Q1 report (United States, Great Britain, France, Germany and Australia). That’s equivalent to driving a car 86 million miles, or 3,449 ‘road trips’ around planet Earth.

This represents the carbon the advertising industry can eliminate today.

Concentrating spend on Green domains not only reduces emissions, it also helps drive better performance through higher quality placements which receive more genuine and sustained engagement.

Viewability & Carbon Emissions

When Scope3 data is paired with data from the IAS on viewability, it highlights the vital importance of using an ad verification solution to minimise the amount of carbon emitted to serve non-viewable impressions.

Of the 3.8 million metric tons of carbon dioxide emissions globally every year by programmatic display advertising, we can assume 26.4% of all impressions were non-viewable – based on IAS benchmarks presented in the previous section of this report.

This means 1 million metric tons of carbon dioxide are emitted each year to serve non-viewable impressions.

It’s important to note that in the same way it would be unfair to equate non-viewable impressions with wasted ad spend, it’s inaccurate to claim the 1 million metric tons used to serve non-viewable impressions were entirely wasted.

For the reasons outlined in the previous section of the report, a certain proportion of non-viewable impressions can still have an impact on consumers, especially those that fall just short of the viewability standard.

That important caveat aside, as overall viewability rates continue to increase over time, carbon dioxide emissions for non-viewable impressions will come down.

Advertisers that continue to run programmatic campaigns without any ad verification solution in place are contributing significantly higher amounts of wasted carbon emissions, as a much higher proportion of their served ads are non-viewable.



Identifying Waste Within Programmatic Supply Chains

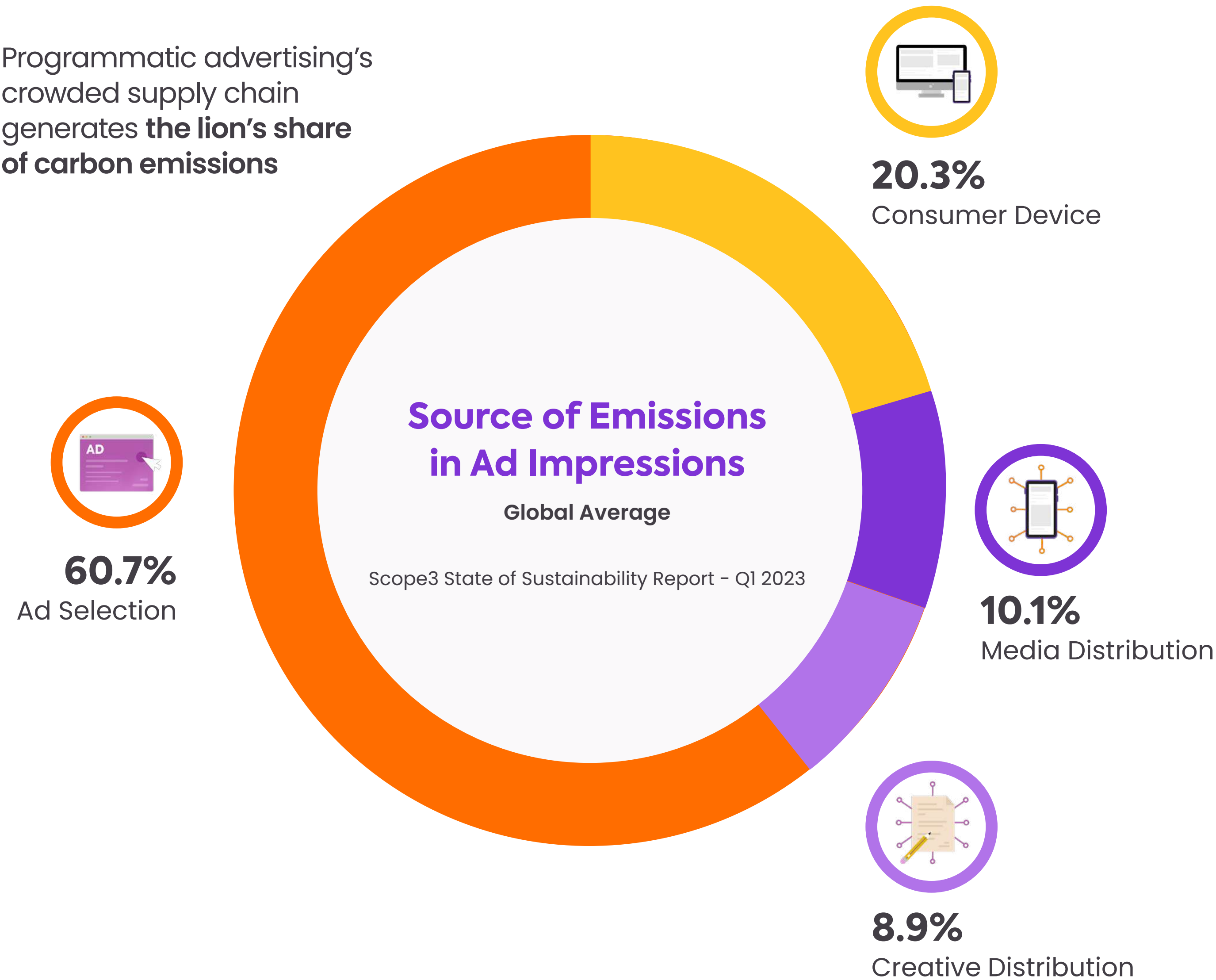
Data from both the Q1 and Q2 Scope 3 reports reinforce the long-standing thinking that programmatic advertising tech stacks are bloated with unnecessary hops.

Each ad impression travels through an “advertising life cycle,” starting with the programmatic selection process and ending when the ad is finally delivered to a consumer’s screen. The three main parts of that journey are ad selection, creative distribution, and media distribution. And each part contributes to an ad’s total emissions.

Scope3 data reveals ‘ad selection’ is an obvious area of improvement. With upwards of 60% of emissions coming from this part of the ad life cycle, marketers who focus their attention on adjusting their programmatic supply chain have the potential to lower emissions significantly.

The extra emissions baggage this factor carries might be exactly what the industry needs to actually remove unnecessary supply paths.

Programmatic advertising’s crowded supply chain generates **the lion’s share of carbon emissions**



Carbon Emissions Per-Click

While both the Q1 and Q2 reports focus on emissions at the impression level, Lunio worked with Scope3 to provide a benchmark estimate for emissions on a per-click basis, as well as an estimate of how much carbon is wasted on invalid traffic.

This was done by assuming an average click-through rate (CTR) for display campaigns.

The average CTR for Google Display ads [sits around 0.5%](#). This means advertisers can expect five clicks for every 1,000 impressions served.

Based on Scope3 data this means five paid ad clicks uses approximately 330gCO₂e. This allowed to establish a carbon emission benchmark per 100 paid ad clicks:

100 paid ad clicks generates 6.6kgCO₂e

That's equivalent to driving an average car for 16.9 miles.

Calculating Carbon Wasted on IVT

Of the 2.6 billion clicks analysed in Lunio's Wasted Ad Spend Report, 228 million (8.5%) were invalid. When we apply an average IVT rate of 8.5% to the emission benchmark above we can determine the amount of carbon wasted per 100 paid ad clicks:

561gCO₂e is wasted on invalid traffic for every 100 paid ad clicks. That's equivalent to driving an average car for 1.4 miles.

Considering marketing campaigns for large enterprises routinely rack up tens of thousands of clicks, the amount of carbon wasted on invalid traffic every year is substantial.



Less Carbon, Better Advertising

“94% of the total solution to curbing the climate crisis is cutting emissions, and emissions cuts that start in the 2020s make up 75% of what’s needed to meet existing climate goals.”

– Dr. John Foley, Project Drawdown

The millions of metric tons coming from advertising every year fall into the category of emissions that can more readily be eliminated. While robust and accurate emissions data is foundational to sustainable advertising, it is ultimately the actions that are taken with it that will drive change.

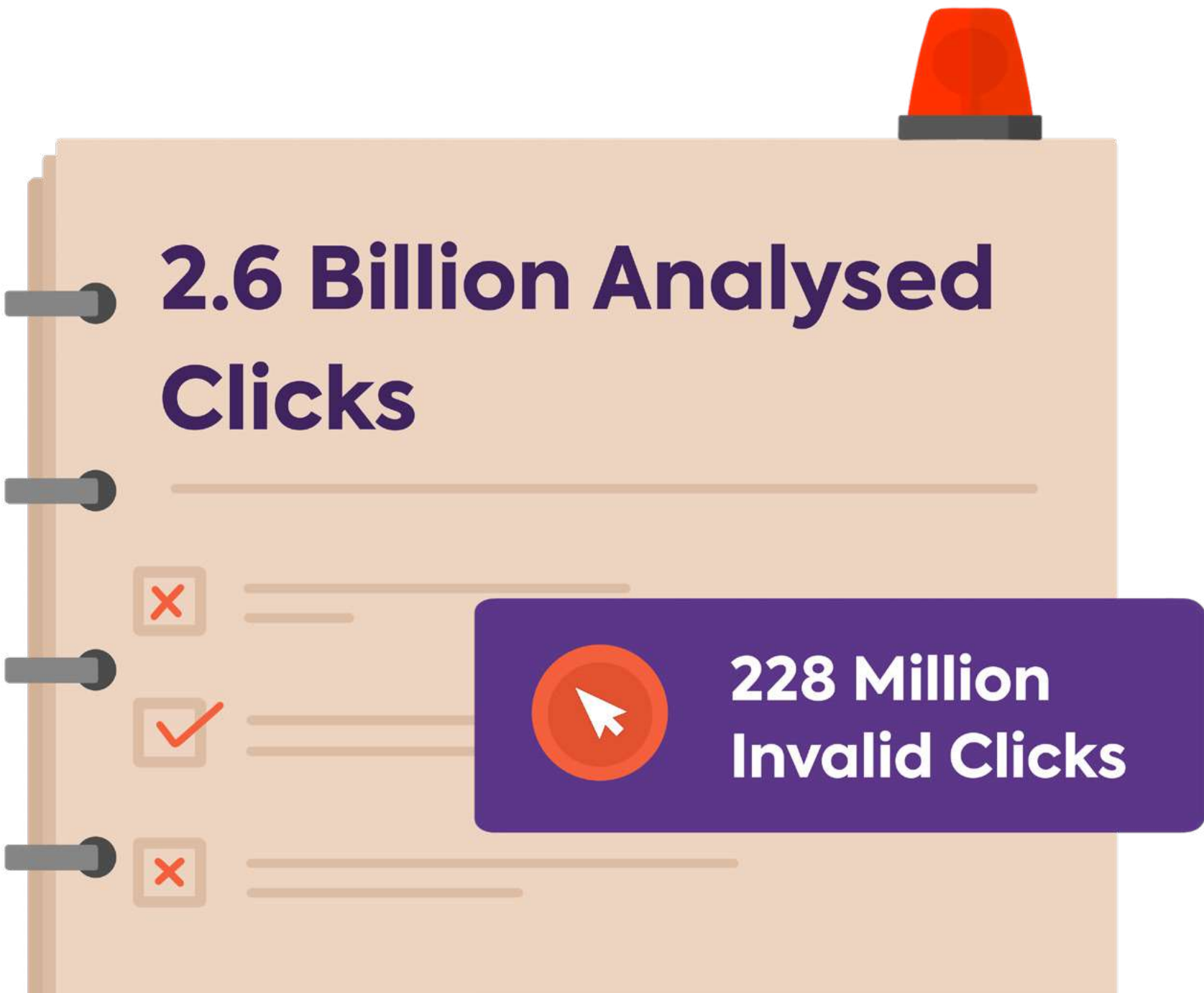
Marketing decision-makers need to keep emissions in mind to achieve the goal of decarbonisation. Doing so not only benefits the planet, it also drives significant increases in campaign performance. With that said, here are four ways brands can reduce their emissions:

1. Eliminate invalid traffic across all campaigns

The path towards decarbonisation and greater ad spend efficiency starts with eliminating what doesn’t work. Namely, invalid traffic with zero-conversion potential.

Introducing a solution like Lunio to eliminate invalid activity across all ad channels represents a low-effort, high-impact strategy every brand can adopt to drive greater performance while simultaneously reducing their carbon footprint.

The downstream benefits go beyond reducing wasted spend. Excluding IVT prevents analytics being skewed by bad data. It dramatically reduces the number of fake lead submissions. And it allows advertisers to focus 100% of their budget on audiences with genuine conversion potential, leading to higher sales volumes and improved return on ad spend.



The remaining three recommendations apply to brands investing in programmatic display campaigns:

2. Use an ad verification solution to maximise viewability rates

Using an ad verification solution like IAS helps to maximise both viewability rates and profitability via programmatic campaigns. Doing so serves to minimise carbon emissions associated with serving less effective, non-viewable impressions.

3. Avoid spending on Made-for-Advertising sites

Brands, agencies, publishers, and ad tech companies can collectively shift spend to avoid climate risk inventory and/or to favour green media. By eliminating MFA sites, advertisers can expect positive impacts on relevant metrics, while reducing the disproportionately high carbon emissions associated with these ineffective ad impressions.

4. Optimise supply paths to reduce emissions stemming from ad selection

The ad selection part of the ad life cycle represents the lion’s share of carbon emissions in the programmatic space. Brands can work to streamline their ad tech stack by identifying and moving away from high emitting partners, while also asking preferred publishers to review their supply paths and shift spend to green media solutions.



Conclusion

In the world of performance marketing, efficiency is paramount. And given the problem of wasted ad spend clearly isn't going anywhere, brands need to tackle its root cause in the form of invalid traffic to continue driving incremental improvements across all channels – from localised search and social campaigns right through to programmatic display. Doing so not only opens a path to new levels of profitability, it also helps protect the planet by driving down needless carbon emissions.

As our data shows, invalid traffic is the root cause of advertising inefficiency and it's increasingly impacting “walled garden” platforms too. Solving for what was once considered a problem for the open web only now must be at the centre of every marketer's campaign strategy, regardless of channel. The lost revenue opportunity for brands as a result of invalid traffic polluting their campaigns amounts to hundreds of billions of dollars per year – and the potential unmeasurable impact of polluted data could be even larger. Above all else, our data makes one thing extremely clear: the security-first approach to tackling bots & IVT is failing, and will continue to do so in this new AI-powered age. It's time for an advertising-first approach to solving this problem, which focuses on attaining profitable outcomes rather than providing arbitrary deterministic good/bad classifications.



Neil Andrew
Co-Founder & CEO

Our research has found a considerable rise in Quality Path Optimisation adoption among marketers globally, indicating a real need for solutions that maximise ROI. We've seen viewability improve across all regions, and global ad fraud rates have remained stable but optimising for viewability solely to reach industry standards may not necessarily result in significant return on ad spend (ROAS). Quality spend is one of the leading criteria for marketers when it comes to quality path optimisation, and by using the appropriate pre-bid segments, high viewability can be maintained, in addition to high conversions while minimising the impact on scale.



Jeremy Kanterman
VP of Research & Insights

For years the ad industry has worked hard to stay ahead of bad actors. We've embraced new technology and practices that promise to improve ad effectiveness and cut waste while still delivering outcomes for marketers. But, the data shows there's still more work to be done. Applying a sustainability lens to campaigns has opened our eyes to the full extent of the waste problem in advertising, and also exposed how inefficiency is responsible for excessive, and unnecessary, carbon emissions. By combining emissions data with other data sources, like Lunio's IVT data and IAS's viewability data, we can begin to pinpoint opportunities to reduce these unnecessary emissions, eliminating wasteful spend and ensuring more effective and sustainable campaigns for marketers as a result.



Anne Coghlan
Co-Founder & COO

The data in this report highlights the true impact of invalid traffic. In addition to the spend directly wasted on invalid clicks and impressions, fake traffic destroys potential revenue opportunities and limits business growth.

Invalid traffic shouldn't be viewed as an inevitable “cost of doing business”. By taking collective action to eradicate it, advertisers can help build a cleaner, more transparent digital ecosystem where every click, impression and placement drives genuine business value.



Lunio is an invalid traffic prevention platform that automatically removes bots and fake ad engagements across all walled-garden paid marketing channels – including Google, Bing, Meta, LinkedIn, TikTok, and many more. By eliminating fake traffic, 100% of your ad spend is focused on audiences with genuine conversion potential, allowing you to make better campaign optimisations with validated data. No more wasted spend. No more worthless traffic. And no more guesswork. Get complete traffic transparency to help you improve metrics that matter. The way paid media should be.

For more information, visit lunio.ai



Integral Ad Science (IAS) is a leading global media measurement and optimisation platform that delivers the industry’s most actionable data to drive superior results for the world’s largest advertisers, publishers, and media platforms. IAS’s software provides comprehensive and enriched data that ensures ads are seen by real people in safe and suitable environments, while improving return on ad spend for advertisers and yield for publishers. Our mission is to be the global benchmark for trust and transparency in digital media quality.

For more information, visit integralads.com



Scope3 is on a mission to decarbonise media and advertising. For organisations seeking to make carbon-aware business decisions, Scope3 is the supply chain emissions data standard that delivers an accurate, comprehensive, and independent emissions model for every company in the digital ecosystem. Leveraging an open-source and science-backed methodology, Scope3 emissions intelligence data powers the tools brands, agencies, publishers and technology providers use to measure, understand and take action to reduce their carbon footprint. Founded in January 2022, Scope3 has a global workforce distributed across North America, Europe and APAC.

For more information, visit scope3.com



End Wasted Spend With Lunio

Concentrate 100% of your budget on real buyers by automatically excluding fake traffic from your ad channels. Get a free 14-day audit to see how much you're currently spending on invalid activity.

Try Lunio Today

HUGO
BOSS

M&S
EST. 1884

ebay

DIESEL

norwegian



INCUBETA



Red Pandaton



Platform Overview

Google

Google Overview

Google Ad Accounts

Google Ads Campaigns

Google Ad Stats

Clicks Log

Exclusions

Conversions



Ready For Take Off, Red?

Active Platforms Health

< 1 / 3 >



Meta
Platform Health: 18%



Twitter
Platform Health: 31%



LinkedIn
Platform Health: 29%



TikTok
Platform Health: 32%



Reddit
Platform Health: 64%



Google
Platform Health: 0%



Clicks from Legitimate
Sources
88,465 (68.11%)



Clicks from Suspicious
Sources
7,992 (5.97%)



Clicks from Invalid Sources
37,357 (27.92%)

Cost of clicks from Invalid Sources

\$79,503.16

Active Exclusions

17,947 IPs

Re-Allocated Budget

\$79,144.59

Active Platforms Health

