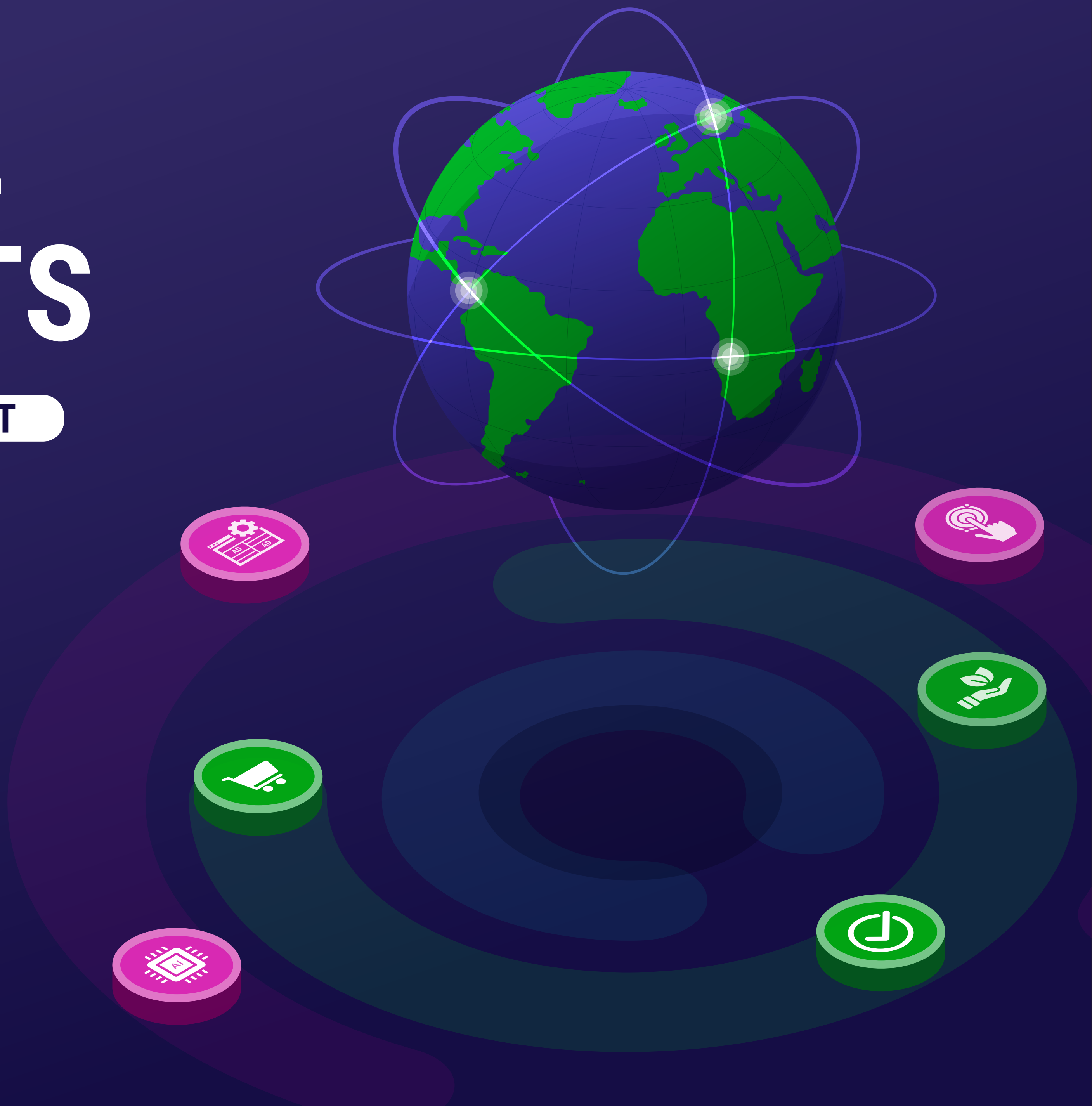
DoubleVerify

GLOBAL INSIGHTS

2024 TRENDS REPORT



Foreword from the CEO

Mark Zagorski
Chief Executive Officer
DoubleVerify

Welcome to our latest *DV Global Insights: 2024 Trends Report*, a data-driven reflection of the transformative forces that are reshaping the digital advertising ecosystem. This comprehensive report examines media quality and performance trends from more than a trillion impressions from over 2,000 brands in 100 markets.

As we navigate an era defined by rapid advancements, the impact of AI technology is undeniable, accelerating change and creating new and unprecedented paradigm shifts in the advertising world. To remain competitive, advertisers must anticipate and adapt to the emerging trends that are shaping the industry as we know it. Our latest Global Insights Report is an exceptional tool to help you do so.

Reflecting on 2023, we recognize the development of several key pivotal trends. AI-driven automation is revolutionizing media and advertising. Attention metrics have emerged as a necessary measurement and performance tool. Digital transformation continues to evolve consumer behaviors, and the rise of various digital channels has expanded advertising avenues. Today's consumers are also more conscious of privacy, sustainability and social issues, and expect more from brands when it comes to incorporating these values into their business practices.

DV is committed to helping advertisers navigate these shifts with actionable insights and innovative solutions.

We are incredibly proud to see the headway we've made in elevating digital media quality — evidenced in our brand suitability, fraud and viewability benchmarks, but our journey is far from over. The next frontier lies in building on these accomplishments through emerging performance-oriented datasets and technologies that will help us drive tangible business outcomes for the global brands we serve.

At DV, we understand that innovation comes with responsibility, and we strive to champion advancements that propel our industry forward and also contribute to the greater good for humanity. Together, we can shape an internet that is stronger, safer and more secure.

Sincerely,

Mark Zagorski
CEO, DoubleVerify

Executive Summary

This is a transformative time in advertising. The industry is fundamentally — and rapidly — changing, and advertisers have more information to juggle than ever before.

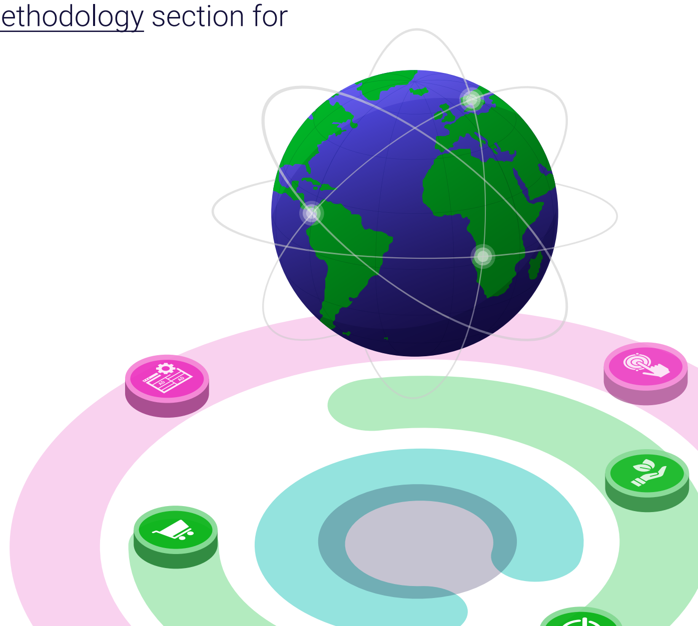
Nothing demonstrates this more strongly than key trends that further cemented themselves as new business realities in 2023. Over the past year:

- **Artificial Intelligence (AI)** became even more widespread, accelerating transformation in media and advertising, from risks associated with generative AI to previously unimaginable performance results.
- **Attention** gained popularity among media buyers, with 47% planning to use attention metrics on most of their buys in 2024.
- **Made for Advertising (MFA)** content increased at lightning speed.
- **Retail Media Networks (RMNs)** offered increasingly popular, specialized inventory.
- **Sustainability** measurement showed that higher media quality leads to lower carbon emissions.

These trends are reshaping how advertisers think about everything from media buying to performance optimization. And on top of these new realities, 2024 is a historic election year, with more than half of the world's population living in countries holding national elections.

The *DV Global Insights: 2024 Trends Report* examines the data behind these shifts while considering the importance of quality as the foundation of all digital media performance. This year, DV further offers four regional reports spanning APAC, EMEA, LATAM and North America that provide deeper insights into regional nuances and highlight election-related trends in local markets.

The media quality and performance data contained in this report is based on DV advertiser benchmark data and supplemented by custom research conducted through Sapio Research. Refer to the Methodology section for more information.



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ARTIFICIAL INTELLIGENCE

AI Revolutionizes Media Quality and Performance

Artificial Intelligence (AI) is more than a tech trend; it's a revolution reshaping the world and redefining the boundaries of what's possible. As AI continues to evolve, it is transforming the marketing and business landscape, changing everything from media consumption to media buying.

AI is the simulation of human intelligence in machines, designed to mimic cognitive functions and make independent decisions based on data analysis.

The widespread use of AI introduces both challenges and opportunities for marketers. With the ability to deploy sophisticated optimization strategies at scale, technologies such as algorithmic bidding provide immense opportunities for advertisers to boost campaign performance. But new concerns, from deepfakes to increasingly sophisticated fraud schemes, are another reality of the AI revolution.

Types of AI

- **Machine Learning** automatically identifies patterns in data and learns from them, improving with more exposure to data over time.
- **Deep Learning** emulates the human brain's learning process to discern intricate patters within text, images, audio and other forms of data. It may not be apparent how certain patterns are identified.
- **Predictive AI** uses machine learning and deep learning to try and forecast future events. Large data sets help to recognize patterns across time to infer future trends or behaviors.
- **Generative AI** uses deep learning to create images, text and video based on user prompts. It relies on training data sets to produce new content, often with remarkable realism.

ARTIFICIAL INTELLIGENCE

Generative AI Leads to Explosion of New Content and Concerns About Media Quality

More than half of media buyers believe generative AI and increasingly sophisticated fraud schemes negatively impact media quality. These are valid concerns, but the bigger picture is more complicated.

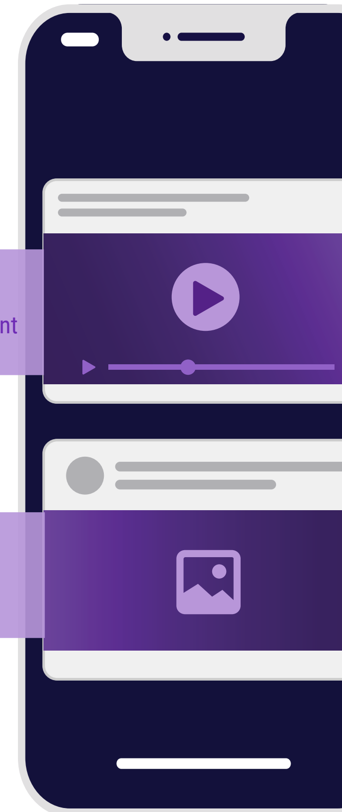
54% of Marketers Believe Generative AI Significantly Negatively Impacts Media Quality

AI tools that were once cost-prohibitive are now readily available, making it easy to generate content at scale. As user-generated content (UGC) environments expand, advertisers are strategically shifting their budgets to capitalize on this trend. DV's product expansion on social platforms has mirrored this trend; in fact, the unique content that DV sees on popular social platforms is increasing up to 100% month-over-month.

Daily, DV Universal Content Intelligence Analyzes:

>1.3B minutes of video content

350M social posts



AI-Driven Classification Protects Brands from Inflammatory Content

DV's Universal Content Intelligence uses AI to classify content quickly and at scale. Computer vision models and optical character recognition (OCR) identify objects and people within content while scrutinizing audio and speech by employing natural language processing (NLP) methods to provide a comprehensive textual analysis.

ARTIFICIAL INTELLIGENCE

53% of Marketers Worry That Increasingly Sophisticated Fraud Schemes Negatively Impact Media Quality

As AI becomes even more widespread, fraudsters have easier access to tools that can amplify fraud schemes. However, AI is also a crucial tool for combating fraud. Despite attackers' best attempts, the overall post-bid fraud rate for DV advertisers remains very low, at 1.1% — a testament to the effectiveness of pre-bid protection.

How Bad Actors Can Use AI to Grow and Scale Fraud Schemes

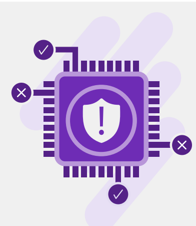
Generative AI makes it easier to falsify data patterns. Bot fraud, for example, commonly targets streaming environments such as CTV and audio, where fraudsters rely on falsified impression data to make it look like ads deliver to real users. With AI, attackers can generate thousands of seemingly authentic user agents (which retrieve and facilitate end-user interaction with web content). Attackers may then further use AI to mimic human behavior, making the pattern of bot traffic more difficult to detect.

But bad actors are not just using AI to grow their schemes, falsified impression schemes are also evolving more quickly. The average bot fraud scheme targeting streaming platforms spawned 269% more variants in 2023.

AI makes it easier to set up new websites for shell companies and publish new apps with dozens of fake reviews that create the illusion of an audience. Investigations into mobile app schemes revealed a heavy reliance on these types of deceptive tactics — AI makes this type of falsification increasingly simple to generate.

Fighting Fraud with AI

DV leverages AI to process vast amounts of data daily and assess impression quality. Machine learning efficiently processes data in real time. AI then identifies trends and patterns that would be invisible to a human analyst not using advanced AI techniques.



In 2023, DV's Fraud Lab Recorded:

58%
more streaming fraud schemes & variants

269%
increase in average number of variants per streaming scheme

2x
as many mobile app investigations

ARTIFICIAL INTELLIGENCE

Predictive AI Drives Significant ROI

Media buyers say they spend nearly a quarter of their time manually optimizing digital media campaigns. Automated optimization strategies, however, can drastically reduce hours spent on operational workflows.

As investment continues to grow in programmatic advertising (with over 84 percent of digital advertising spend projected to be programmatic by 2028), maximizing the value of each media dollar becomes exceedingly important. With algorithmic bidding, advertisers can efficiently optimize toward their key performance indicators (KPIs) without the manual lift. Automated bidding solutions now play an essential role in scaling optimizations across programmatic buys.

55%

of media buyers say AI-driven campaign optimization positively impacts media quality.

Scibids AI Delivers 400% Return

Scibids AI drives an average return on investment (ROI) of $4 for every $1 invested in Scibids AI and an average media cost saved versus cost spent of 38%. Depending on the specific customer KPI, the average campaign ROI fluctuated from $2 to $8.

24%

average share of time marketers spend on manually optimizing campaigns

$4.00

average ROI for every $1 invested in Scibids AI

ATTENTION

Attention Transforms Advertising Strategies

Attention measurement has been gaining traction for several years but, in 2023, it became a key part of many advertisers' media strategies. Now, a noteworthy 47% of media buyers are planning to include attention-based metrics on most of their media buys in 2024. DV advertisers reflect this sentiment: DV Authentic Attention® activation tripled across DV customers over the past year.

Advertisers can use exposure and engagement metrics to gain insights into the factors driving attention and optimize future media buys. DV looked at broad attention trends across media types to provide insight into how different aspects of a campaign influence attention levels.

Several factors influence the level of attention an ad receives, including the type of device, the ad size and the media type. Popular ad sizes vary across platforms, such as mobile apps, mobile web and desktop, each resulting in different levels of attention. This highlights the importance of tailoring ads to suit the specific characteristics of each platform.

Quantifying Attention

The two critical dimensions of attention are exposure and engagement. In real-time and without cookies, DV Authentic Attention analyzes over 50 data points across the exposure of and engagement with an ad.

- **Exposure:** DV Authentic Attention considers an ad's entire presentation, quantifying its intensity and prominence through metrics that include viewable time, share-of-screen, video presentation, audibility and more.
- **Engagement:** DV Authentic Attention analyzes key user-initiated events that occur while the ad creative is displayed, including user touches, screen orientation, video playback and audio control interactions.

ATTENTION

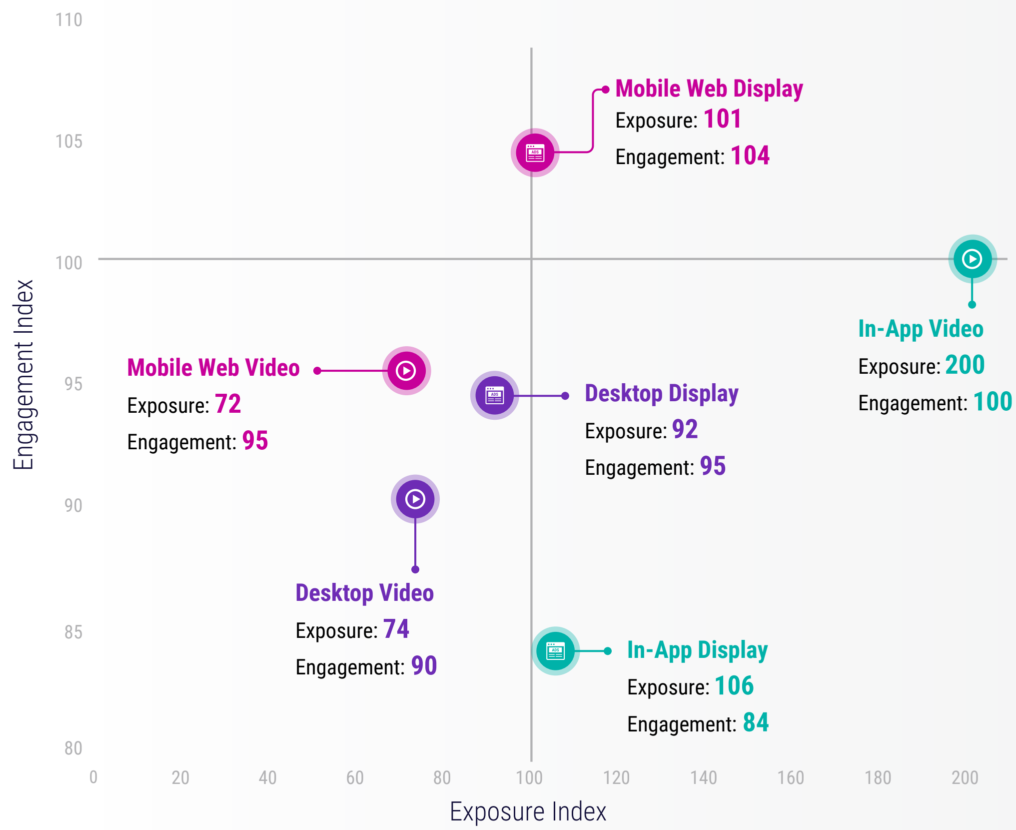
Ad Environment and Size Strongly Impact Exposure

Ad size is crucial in determining exposure, primarily due to its influence on the share-of-screen. On desktop, medium ad sizes (i.e. 300x250) are the most common display ads. Meanwhile, mobile web display has an equal share of small and medium ad sizes (i.e. 300x50, 728x90).

Larger ads consistently outperform smaller ads in terms of exposure metrics across all device types. Small ads demonstrate strong exposure performance in specific environments such as in-app — particularly with video content. This may be because mobile apps tend to deliver one ad at a time, which contributes to higher exposure scores.

Interestingly, engagement with an ad, especially video ads, doesn't hinge directly on its environment or size. This indicates that other aspects of the media buy — such as ad creative, buying tactics and content alignment — influence engagement performance more.

Exposure and Engagement by Media Type and Device



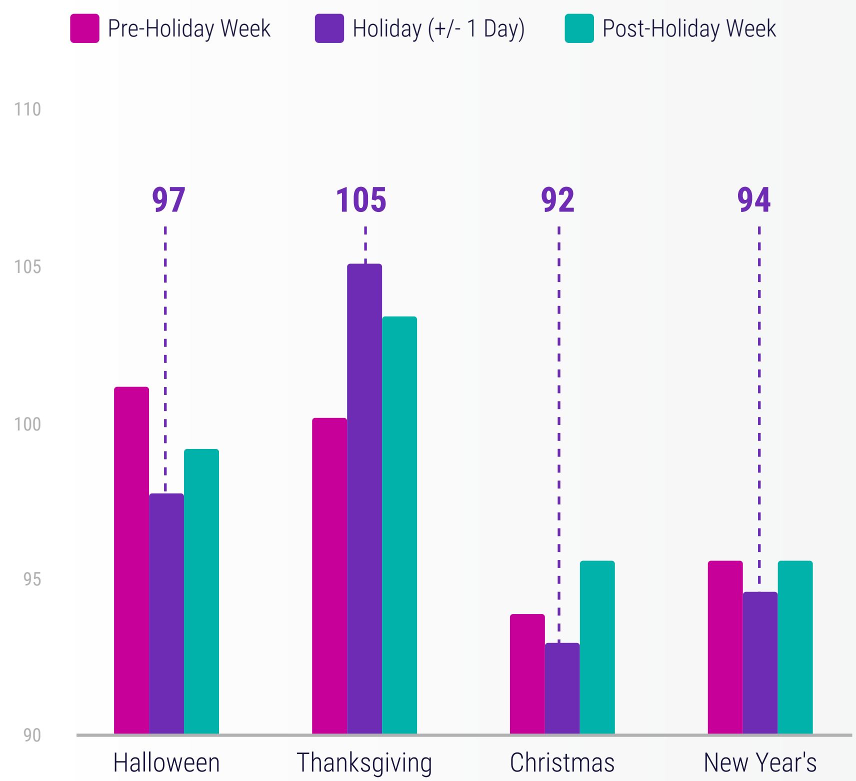
ATTENTION

The Impact of Seasonality on Attention

Seasonal trends and significant media events also impact audience attention. The increase in “digital noise” during competitive marketing periods typically — but not always — corresponds with a decrease in attention. In the busy fourth quarter, for example, attention declines as Halloween and Christmas approach and recovers slightly after the holidays end. The weeks surrounding both Christmas and New Year’s Day drive below-average attention, as do the holidays themselves. But Thanksgiving, a holiday linked with major online shopping sales, exhibits a different pattern; consumer attention peaks during the holiday and subsequent shopping days.

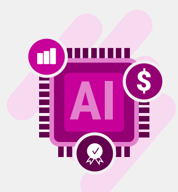
Attention peaks on Thanksgiving and Black Friday

Attention Waxing and Waning During End-of-Year Holidays



AI Spotlight

Scibids AI, through dynamic activation, helps advertisers automatically optimize for attention while simultaneously considering quality and cost.



ATTENTION

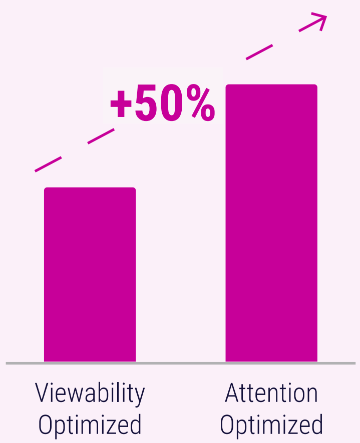
Attention Measurement Proves Reliable KPI to Drive Results

Ad placement and seasonal trends broadly influence attention, but individual campaign objectives can also affect optimization strategies. With attention-backed strategies, advertisers can uncover new optimization opportunities that support specific campaign goals.

For instance, ad placements with high exposure often align with upper-funnel brand awareness objectives, while those with high engagement correspond to direct response or conversion goals. The more advertisers measure attention consistently across their campaigns, the better they can understand and maximize performance — advertisers actively optimizing toward DV Authentic Attention saw an average of 103% improvement in attention over the past year.

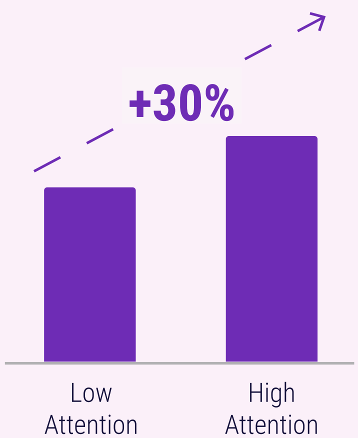
CASE IN POINT

Attention Optimizations Drove a 50% Increase in Branding KPIs



When comparing the performance of traditional viewability-optimized campaigns with attention-optimized campaigns, advertisers saw a 50% increase in upper-funnel awareness metrics.

High Attention Drove Stronger Brand Lift Than Low Attention

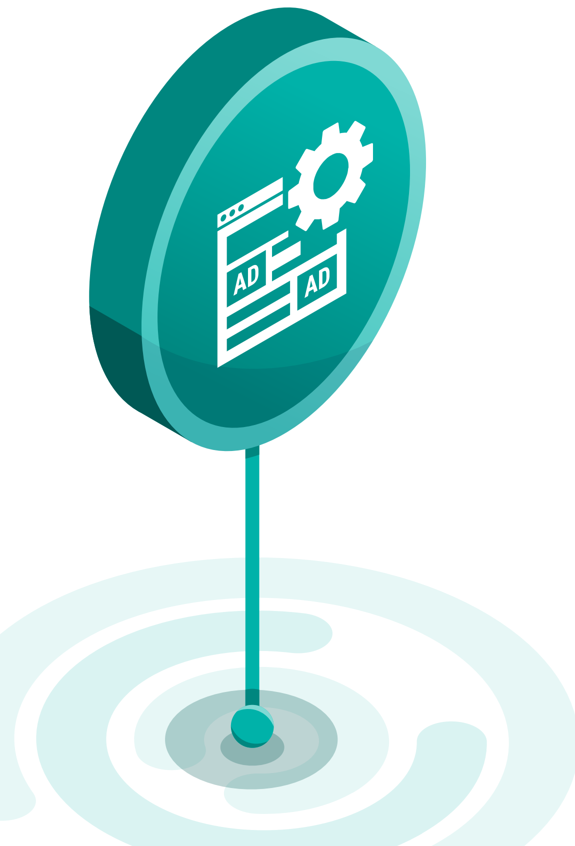


High-attention ad placements (>100 Attention Index) drove an average of 30% higher lift in branding KPIs than low-attention placements.

MADE FOR ADVERTISING

Made for Advertising Increases Its Share-of-Voice

Made-for-Advertising (MFA) content is on the rise. MFA impression volume increased 19% year-over-year, which makes understanding the implications of MFA sites a top-of-mind concern for advertisers.



MFA sites are not inherently invalid — they often attract genuine human traffic. They cover a range of content, and not all MFAs exhibit the same behaviors. Low-tier MFAs, hybrid sites that included a mix of MFA and non-MFA characteristics, increased by 73% in 2023 and drove the overall growth in MFA volume.

To help advertisers understand the potential impact of MFAs on campaign objectives, DV analyzed data across brand safety and suitability, fraud, viewability and attention for both MFAs and other types of media.

Please note that DV introduced tiered MFA categories in 2024, and this analysis uses that methodology against 2022-2023 data.

Classifying MFA Content

MFA sites exhibit most or all of the following characteristics:

- A high ratio of ads to actual content on the page — with ads frequently refreshing to maximize profit from a single visit.
- A heavy reliance on paid traffic sources — such as social and native advertising — with little to no traffic coming from organic sources.
- Content designed to keep users endlessly scrolling or clicking within the same site.
- Content that is often duplicated verbatim across various websites.
- Low ad intensity, which is a comparison of the viewable time duration of an ad to the DV baseline.

Based on the characteristics MFA content demonstrates, it is sorted into one of three tiered DV Brand Suitability categories: High MFA, Medium MFA and Low MFA. High MFAs exhibit the most extreme MFA criteria or behaviors. Medium MFAs exhibit a varying degree of MFA behavior. Low MFA sites generally contain a mix of MFA content and other media, giving advertisers the option to avoid MFA criteria while still serving on sections of the site that are not MFA.

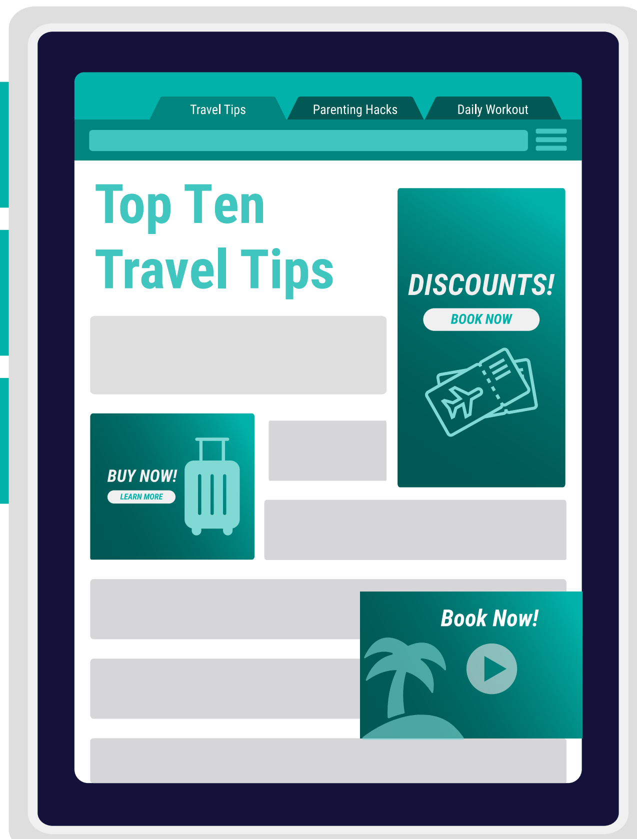
MADE FOR ADVERTISING

MFAs Favor Evergreen Content Categories

There are notable differences in the types of content MFAs produce compared with other media. MFA sites commonly feature evergreen content such as health and fitness, travel, and family and parenting while avoiding time-sensitive topics like sports or news.

MFAs Are:

- **99%** more likely to cover Travel
- **57%** more likely to cover Family and Parenting
- **47%** more likely to cover Health and Fitness



MFAs Are:

- **95%** less likely to cover News
- **56%** less likely to cover Sports

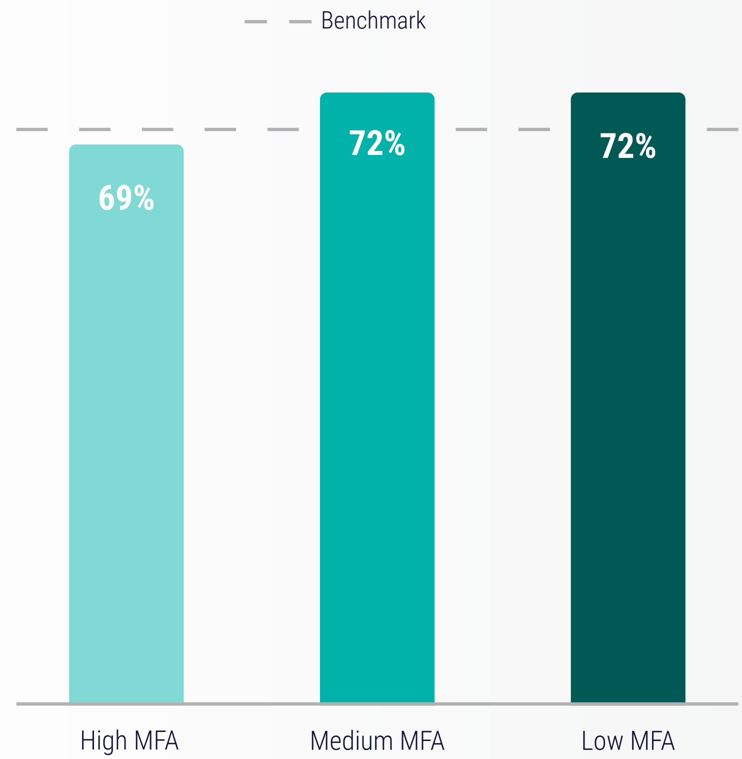
MADE FOR ADVERTISING

MFAs On Par with Authentic Viewability Benchmark, But Attention Suffers

MFAs are all designed to look attractive to programmatic advertisers, with highly viewable ads and generally suitable content. Because of how their business models work, MFAs, regardless of tier, are on par with the DV benchmark for Authentic Viewable Rate — which measures if an ad had the opportunity to be seen in a brand-suitable environment that is fraud-free and served in the intended geography.

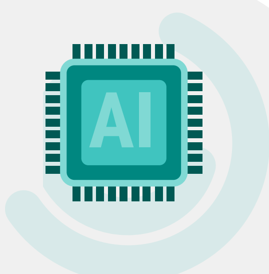
Like any other type of media, MFAs are vulnerable to fraud, but post-bid fraud remains low thanks to robust pre-bid fraud protection. And, because MFAs are often not premium inventory, they are likely less of a target for sophisticated fraud attacks, which most often occur in high-CPM environments.

Authentic Viewability by MFA Tier



AI Spotlight

Generative AI tools can be used to scale MFA content more quickly. DV also uses AI to identify and classify MFAs, giving advertisers the option to avoid this content.



MADE FOR ADVERTISING

MFA Exposure Is Severely Below Baseline

Attention measurement shows the true impact of MFAs on advertising objectives. MFAs drove 7% less attention on display, and 28% less on video.

MFAs drove ***7% less attention*** on display, and ***28% less on video.***

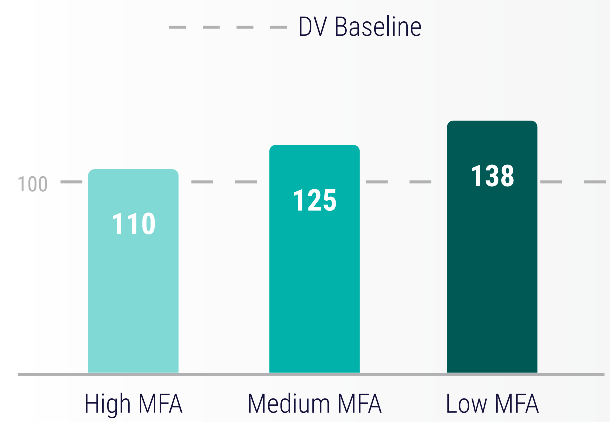
When assessing attention on High MFAs, Medium MFAs and Low MFAs, MFAs fall below the DV attention baseline by 25%, 10% and 1%, respectively. Looking at engagement and exposure separately helps explain why the more a site engages in MFA behavior, the more attention suffers.

MFAs are often designed to keep users endlessly scrolling and clicking within the same domain. The volume of content, promoted viewing behavior and site layout on MFAs all encourage user engagement on display ads, which is one component of attention. Across all MFA tiers, engagement is consistently above the DV baseline.

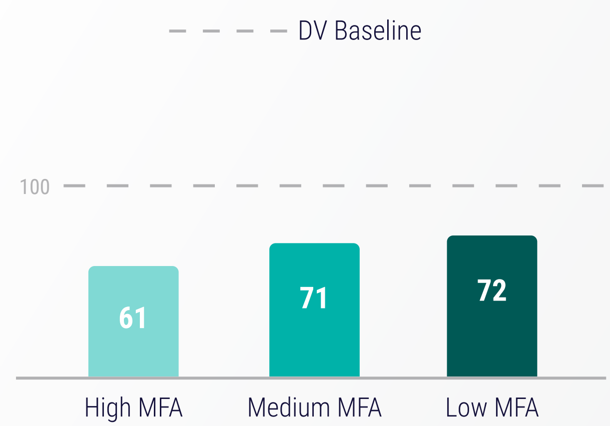
But MFAs typically feature frequent ad refreshes and high ad density relative to the actual content, which ultimately hurts exposure. The intensity of MFA display impressions is roughly half that of other media (nine-second average viewable time versus 18-second average viewable time). Across all MFA tiers, MFA exposure is consistently below the DV baseline.

Video player sizes on MFA sites tend to be significantly smaller (and command a smaller screen share) compared with the available player sizes on other media sites. The low exposure of display and video ads on MFA sites brings down overall attention and reveals a nuance of MFA performance.

Engagement Performance by MFA Tier



Exposure Performance by MFA Tier



RETAIL MEDIA NETWORKS

Retail Media Networks Require Unique Measurement Strategies

Retail Media Networks (RMNs) continue gaining popularity with their rich consumer data and ability to reach audiences at the point of purchase — especially as cookie deprecation quickly approaches. In fact, retail media is growing faster than almost any other channel and is projected to make up one-fifth of worldwide digital ad spend in 2024.

RMNs bring unique value, enabling advertisers to use retailers' first-party data and reach consumers directly at the moment of purchase. And, with audience extension inventory, RMNs help advertisers reach those same consumers across the internet.

To better understand the way onsite and offsite inventory perform, DV compared data across brand safety and suitability, fraud, viewability and attention on RMNs where DV measurement was applied.

RMNs Explained

A retail media network is an advertising channel offered by e-commerce platforms that leverages a retailer's first-party consumer data to reach audiences across their owned and operated properties and extended networks. RMNs combine two types of inventory for advertisers:

- **Owned & Operated (O&O):** Ads that run on a retailer's owned and operated site or app.
- **Audience Extension:** Ads that run outside of a retailer's properties, using first-party data to deliver ads to shoppers across the web.

RETAIL MEDIA NETWORKS

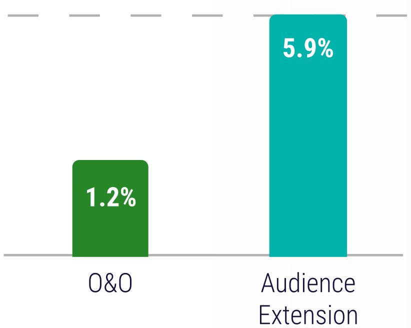
Brand Suitability and Fraud Violations Are Lower on RMNs, But So Too Is Viewability

In addition to attracting high-intent audiences, RMNs also display superior brand suitability and lower fraud rates compared with the DV benchmark. While viewability is 8% lower than the benchmark, this is in line with expectations. Unlike traditional ad environments, e-commerce platforms serve as digital marketplaces. Their primary focus is on enhancing the shopping experience, with viewability optimization often taking a backseat. This is evident in the 36% viewable rate on O&O inventory. Despite this, audience extension boosts the overall viewability on RMNs. It's important to note that many RMNs leverage pre-bid activation on Audience Extension buys, which improves media quality performance.

RMN Brand Suitability Violation Rate

Better Than Benchmark

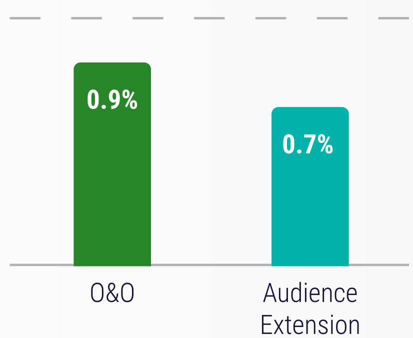
10% Lower



RMN Fraud/SIVT Violation Rate

Better Than Benchmark

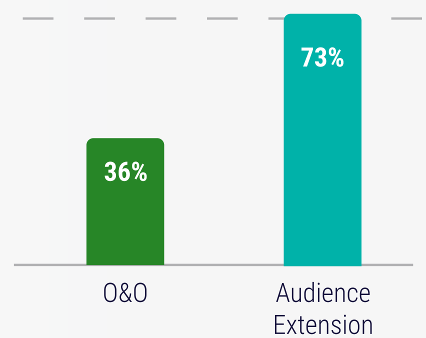
31% Lower



RMN Viewable Rate

Below Benchmark

8% Lower



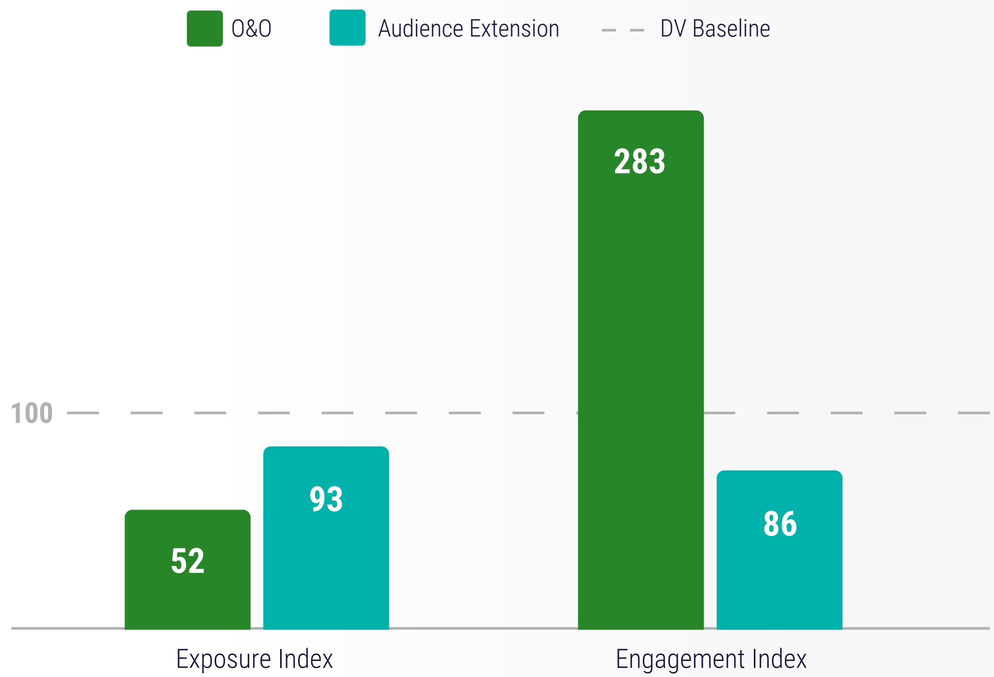
RETAIL MEDIA NETWORKS

Onsite RMN Ads Drive Higher Engagement

The distinct roles of audience extension and O&O inventory in retail media necessitate a nuanced understanding of KPIs. While audience extension ads boast higher viewability and exposure, it's important not to overlook the value of O&O inventory. Even though O&O inventory has lower viewability and exposure, it effectively targets shoppers at key decision moments when they are much more likely to engage with ads. In fact, engagement is 183% higher, on average, across O&O inventory when compared with the DV Attention baseline.

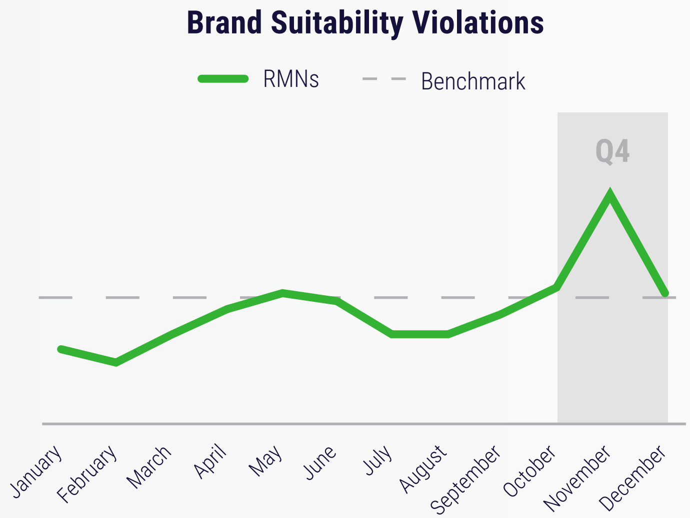
O&O Engagement is ***183% higher*** than DV's baseline.

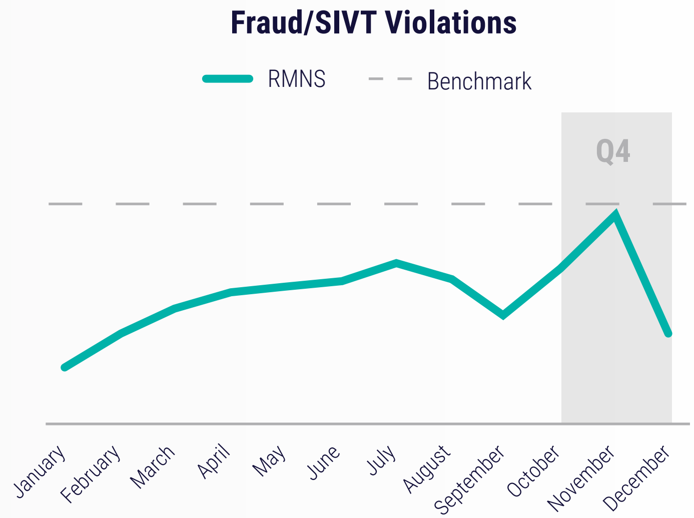
Exposure and Engagement Across O&O vs. Audience Extension



RETAIL MEDIA NETWORKS

Seasonality Influences Quality and Performance on RMNs





Media quality trends across RMNs highlight the importance of having a nuanced, flexible strategy, especially during the busy fourth-quarter holiday shopping season. As the competition for retail ad space intensifies, RMNs generate higher onsite traffic, but they still need to increase audience extension volume to meet advertiser demand.

During this period of higher demand in the fourth quarter of 2023, brand suitability violations climbed by 37% across RMN campaigns and fraud violations increased by 7%. RMNs also delivered the lowest viewability in November, demonstrating that ensuring quality requires more work during the peak shopping season. Exposure and engagement, however, both peaked in Q4 for RMN buys overall, underscoring that the unique value provided by RMNs requires a tailored approach to measurement.

45% 

of media buyers believe that shopping holidays will have the most impact on their brand suitability strategy in 2024.

SUSTAINABILITY

High-Quality Media Produces Fewer Emissions

Digital advertising produces a significant carbon footprint. According to a study cited in The Wall Street Journal, roughly 10% of the energy usage of the internet comes from online ads. This has not escaped the attention of brands who, in recent years, have increasingly prioritized sustainability and environmental responsibility. This shift is not just about corporate social responsibility, but about aligning with the evolving values and expectations of consumers.

For advertisers to make a positive impact, it's crucial to understand how digital advertising strategies contribute to carbon emissions. DV's carbon emissions measurement powered by Scope3 empowers brands to make data-driven sustainability decisions with their digital media strategies.

To understand the relationship between media quality and sustainability, DV analyzed emissions across all DV advertisers, including both Scope3 active customers and non-active customers.

How Digital Advertising Generates Emissions

Emissions come from every step of an ad's journey from creation to being viewed. A significant contributor to an ad's total digital carbon footprint is the often complex journey it takes to get from advertiser to consumer. As a result of the electricity used by the millions of servers that power real-time bidding, machine learning, identity management and beyond, digital advertising has been shown to have a meaningful carbon footprint.

SCOPE3

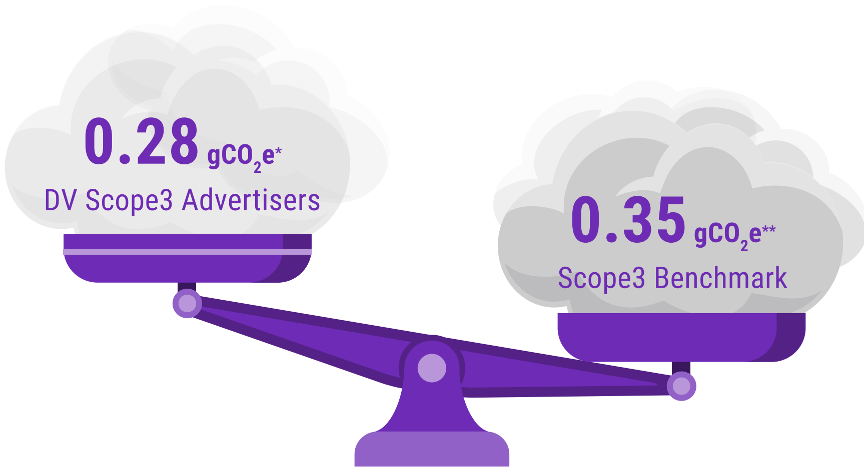
About Scope3

Scope3 is on a mission to decarbonize media and advertising. As the standard for supply chain emissions data, Scope3 provides an accurate, comprehensive and independent emissions model for the digital ecosystem. Their science-backed, open-source methodology empowers brands, agencies, publishers and technology providers to measure, understand and take action to reduce their carbon footprint. Established in 2022, Scope3 operates globally across North America, Europe and APAC. Learn more at Scope3.com.

SUSTAINABILITY

DV Active Scope3 Customers Produce 21% Fewer Emissions

DV's active Scope3 customers produced an average 0.28 grams of carbon dioxide emissions (gCO_2e) per impression between March and December of 2023. This is 21% lower than the Scope3 global average for the same period (0.35 gCO_2e).



DV Advertisers Have Lower Emissions, Overall

The average emissions for all DV advertisers, not just those actively using Scope3, is 0.30, which is still below Scope3's benchmark.

It's worth noting that this is not significantly higher than the average of DV's active Scope3 customers (0.28), which is likely because it is still early for Scope3-active clients in their optimization journeys.

AI Spotlight

Advertisers can leverage Scibids AI with Scope3 data to automatically optimize toward sustainable inventory while maintaining other key campaign parameters.

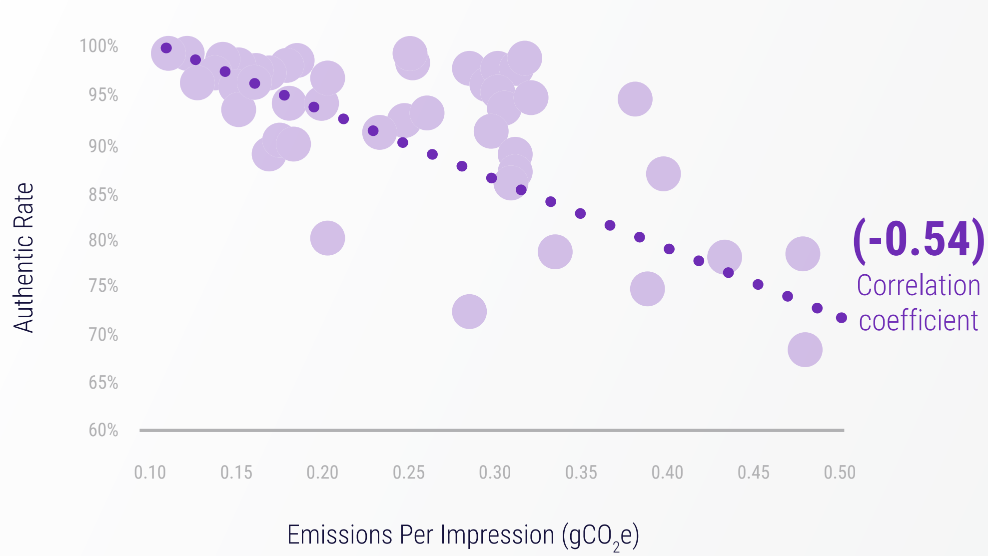
* Data source: 82 active DV Scope3 clients in 2023
** Data source: Scope3 Display web & video, March through December 2023 average, based on total emissions. Does not include consumer device emissions.

SUSTAINABILITY

The Relationship Between Quality Inventory and Lower Scope3 Emissions

To better understand the impact of media quality on carbon emissions, DV analyzed the top 60 advertiser campaigns by volume. DV found a correlation between high Authentic Rates (the percentage of monitored ads that were brand-suitable, fraud-free, and served in the intended geography) and lower emissions. DV further found a correlation between low Authentic Rates and high emissions. As quality declines, emissions tend to go up; as quality improves, emissions tend to go down.

Carbon Emissions vs. Media Quality



MFA Sites Lead to Higher Emissions

44% More

emissions are generated by High MFA sites relative to the average across DV-measured media

Correlation coefficients range from -1 to 1. A higher absolute value indicates stronger correlations. Generally, anything with a correlation coefficient of ±0.4-0.7 is considered a moderate correlation.

SUSTAINABILITY

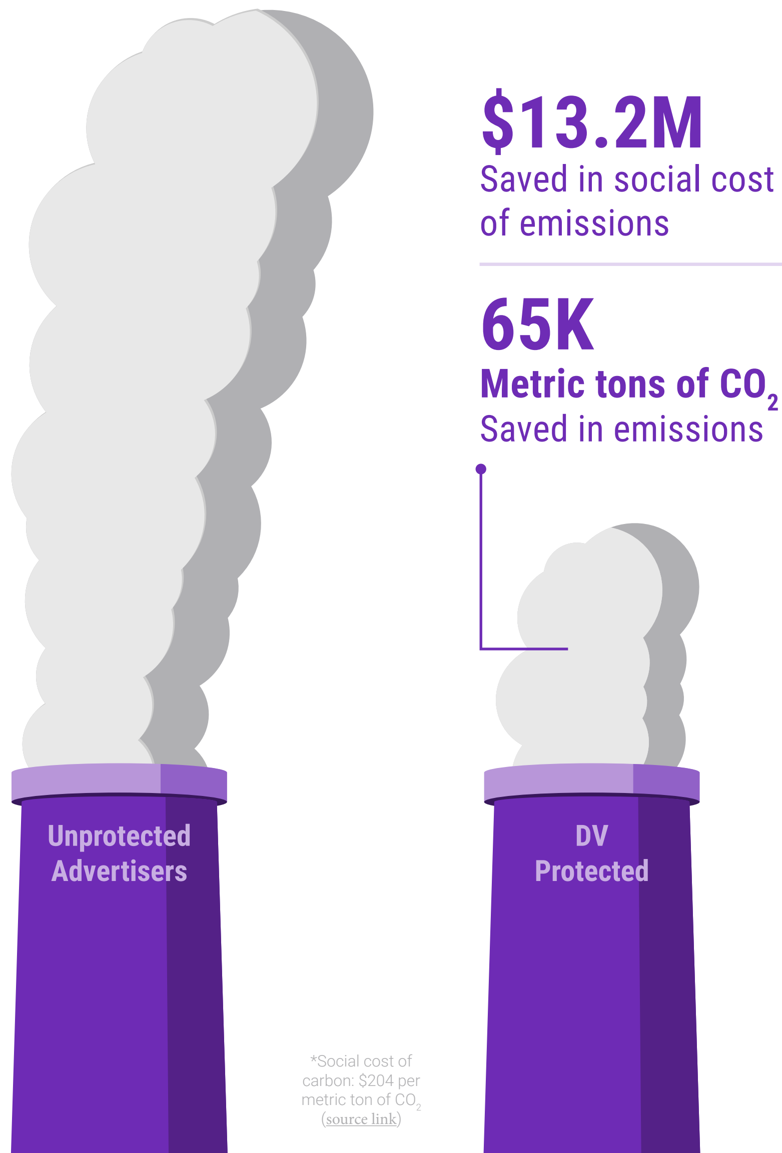
The Environmental Impact of Non-Authentic Ads

To calculate the emissions caused by unprotected media waste, DV looked at Scope3 measurement on a test campaign with monitoring services active, but no pre- or post-bid protections in place.

The average Authentic Rate across DV advertisers is nearly 95%, while it was just 83% on the unprotected campaign. Using this difference, DV calculated that DV protections helped avoid a quantifiable 64.9 thousand metric tons of CO_2 emissions waste from non-authentic ads in 2023. This is equivalent to a $13.2M social cost.

> DV protections help avoid emissions waste from non-authentic media

Emissions Waste from Non-Authentic Ads



*Social cost of carbon: $204 per metric ton of CO_2 (source link)

MEDIA QUALITY

Media Quality Improves for Protected Advertisers

For DV advertisers, there has been a positive shift in global trends across three core quality indicators — brand suitability, fraud and viewability. This improvement, observed for the third year in a row, reflects strong adoption of both pre- and post-bid verification strategies by advertisers.

Pre-bid protections act like a quality control checkpoint, assessing the quality and relevance of an ad placement before the bid and filtering out options that don't meet the advertiser's requirements. Post-bid measurement analyzes ad performance and detects any non-quality impressions after the ad is placed. The widespread adoption of these strategies indicates a proactive approach by advertisers to improve media quality, optimize ad spend, and maximize return on investment.

DV ran an unprotected test campaign to gain a deeper understanding of what quality looks like for advertisers without protections. This campaign helps examine the effect of impression quality on ad spend and quantify the waste associated with low-quality placements.

DV Authentic Ad®

The DV Authentic Ad is a proprietary metric that ensures media quality. To be counted as Authentic, an ad must be viewable, by a human being, in a brand suitable environment, within the intended geography. DV de-duplicates quality violations to provide a definitive measure of media quality — enabling brands to use the Authentic Ad as a defining, holistic KPI for campaign effectiveness.

MEDIA QUALITY

Brand Safety and Suitability

Pre-Bid Protections Bring Violation Rates Down

5.8%

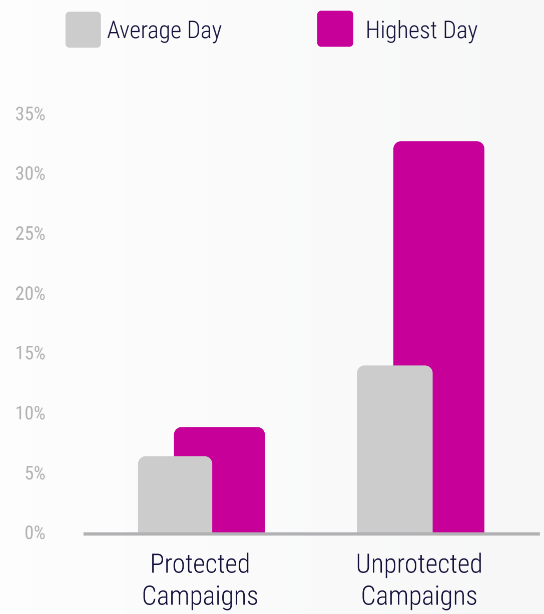
Brand Suitability Violation Rate

↓ 17% Decrease Year-Over-Year

Despite tumultuous news cycles in 2023, DV's Brand Suitability Violation Rate benchmark declined by 17%. This decrease is tied to the continued adoption of pre-bid protections. Authentic Brand Suitability usage, which allows advertisers to align pre-bid avoidance to their post-bid brand suitability settings, increased by 41%.

The performance disparity between protected and unprotected campaigns highlights the importance of pre- and post-bid protections. The unprotected test campaign sees a more than 30 percentage point fluctuation between the best and worst performing days and a 150% higher Brand Suitability Violation Rate overall. In contrast, campaigns protected by DV maintain stable performance, varying by only 3 percentage points.

Brand Suitability Violations: Protected vs. Unprotected Campaigns



MEDIA QUALITY

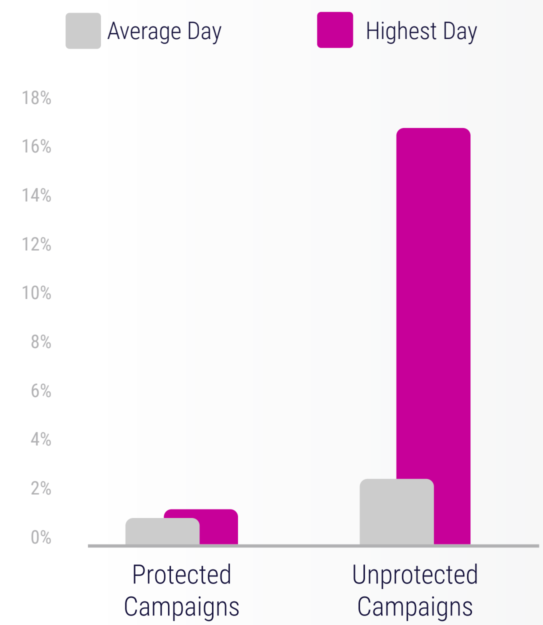
Fraud/SIVT

Fraud/SIVT Rates Stabilize Even As New Schemes Proliferate

1.1%
Fraud/SIVT Violation Rate
↓ 2% Decrease Year-Over-Year

Fraud is not going anywhere: in 2023, the DV Fraud Lab observed a 23% increase in new fraud schemes and variants compared with 2022. But, sophisticated anti-fraud protection is keeping the post-bid fraud rate steady, even as new schemes emerge. The post-bid fraud rate for protected campaigns fluctuates day-to-day by just 1%, while unprotected campaigns experience a more significant swing ranging from 1% up to 17%.

Fraud/SIVT Violations: Protected vs. Unprotected Campaigns



AI Spotlight

Fraud protection is the second most popular way media buyers plan to use AI in 2024.
The DV Fraud Lab uses advanced AI technology and thorough human review to detect large-scale traffic trends and subtle variations caused by attackers attempting to find new loopholes.

MEDIA QUALITY

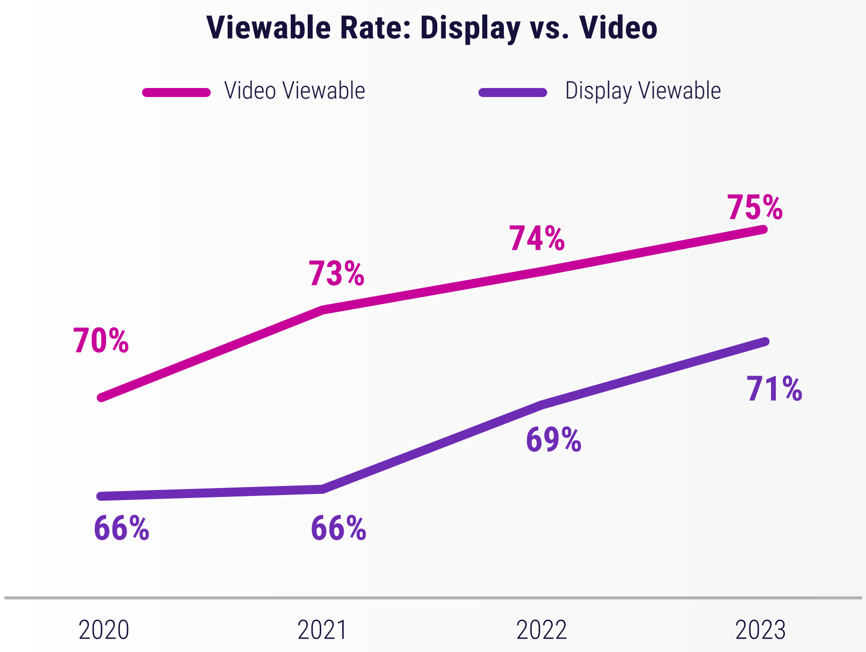
Viewability

Display and Video Exceed 70% Viewable Rates

71%
Display Viewable Rate
↑ 3% Increase Year-Over-Year

75%
Video Viewable Rate
↑ 2% Increase Year-Over-Year

Advertisers often aim for a 70% Viewable Rate — meaning, for every 1,000 ads purchased, at least 700 should be in view. But as viewability has steadily climbed for several years across display and video (both now exceed 70% for the first time), a 70% Viewable Rate is transitioning from a target to an industry standard.



AI Spotlight

Automated bidding enables advertisers to optimize toward a lower CPM while maintaining viewable KPIs.

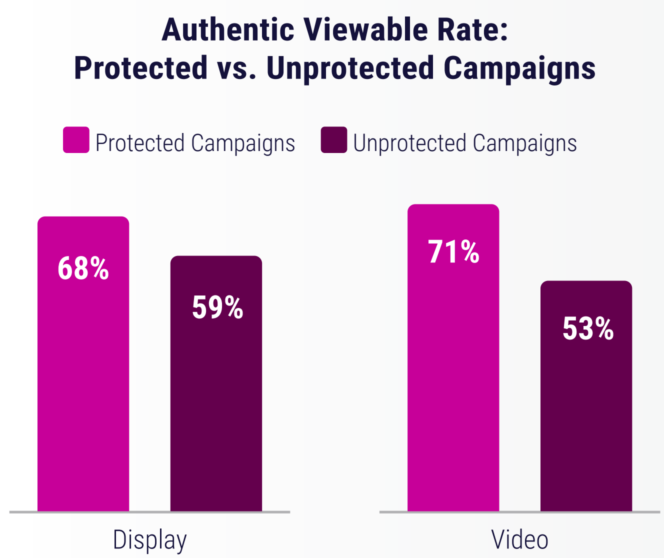
MEDIA QUALITY

The Authentic Ad

Low-Quality Inventory Causes Significant Media Waste

68%
Authentic Viewable Rate
↑ 4% Increase Year-Over-Year

DV's Authentic Viewability rate goes beyond measuring viewability and looks at the rate of ads that are viewable and serve in brand-suitable, fraud-free, in-geo environments. The unprotected campaign showed significantly lower Authentic Viewable Rates, at 59% for display and 53% for video. In other words, more than one-third of unprotected ads are wasted on low-quality media.



The Bottom Line Impact

$294K per Billion Impressions
Unprotected Campaign Waste

Unprotected advertisers inadvertently buy more low quality media, which generates more campaign waste. DV advertisers reduce that waste through pre- and post-bid protections, increasing their return on ad investment.

MEDIA QUALITY

CASE STUDY

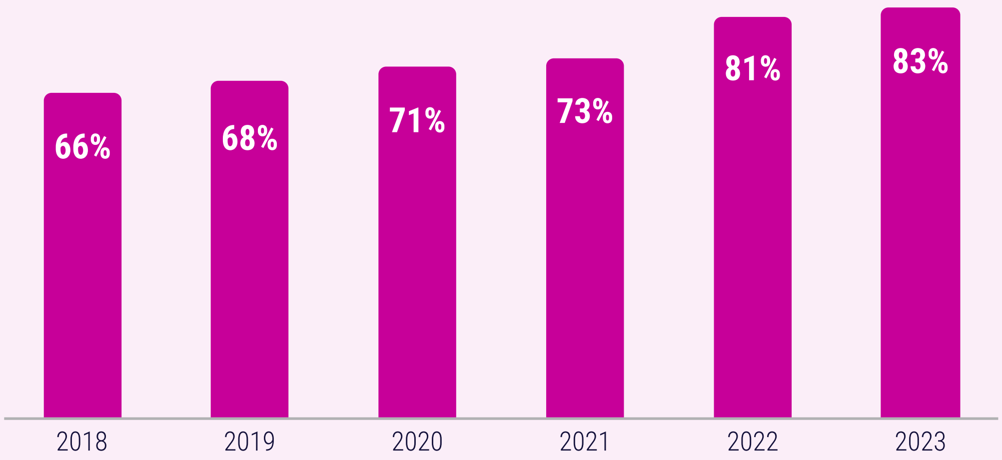
Mondelēz Improves Global Media Quality by 26% Over Six Years

Over six years, Mondelēz's focus on media quality has yielded significant results. By implementing pre-bid strategies – ensuring they place their ads in suitable, high-quality environments – and being an early tester of DV Authentic Attention, they have effectively maintained control over their ad placements and minimized waste. More than six years ago, Mondelēz launched DV's suite of solutions in 80+ markets with a centralized global approach to media quality.

This proactive strategy has led to a 71% decrease in their overall violation rate. And 83% of their impressions are now viewable, free of fraud and brand suitable — exceeding the DV benchmark by an industry-leading 15 percentage points.

Brands that employ innovative measurement and mitigation strategies, like Mondelēz, maintain a competitive edge in the dynamic landscape of digital advertising. By prioritizing media quality and leveraging advanced tools and techniques, brands can maximize their ROI and ensure their ads reach real people in the right context.

Mondelēz Authentic Viewable Rate



Methodology

Data Notice

This report employs DV technology to analyze more than one trillion impressions from over 2,000 brands in 100 markets. Unless otherwise noted, all data contained in this report is based on DV generated data. All data is post-bid unless otherwise indicated. Post-bid monitoring and blocking technology record violations. Violation rates are post-bid metrics because violations are tracked after an ad has been purchased. Pre-bid technology stops an advertiser from bidding on an unsuitable impression, which prevents a violation from happening in the first place. That is why many of the numbers we report, while directionally accurate, do not represent the full scope of DV's protection.

Unless otherwise noted, comparative data points should be read as year-over-year comparisons which span January 1, 2023 to December 31, 2023 versus the same time period for the prior year.

Unprotected Campaign

As a point of comparison to DV customer campaigns (the majority of which use a combination of pre- and post-bid protections), DV created a test campaign with no protections. We collected monitoring data on the unprotected campaign for the full year and compared it alongside our 2023 benchmark data, which is referenced throughout the report as protected campaign data and spans January 1, 2023 to December 31, 2023.

Media waste is the approximate calculated cost associated with total media violations (brand suitability, fraud/SIVT, etc.). This cost figure is derived by multiplying the total violations by a $3 "cost-per-mille" (CPM), which reflects the cost per 1,000 impressions.

DV Authentic Attention

DV Authentic Attention is DV's privacy-friendly attention measurement solution which provides display and video attention metrics that are MRC-accredited across desktop, mobile web and in-app. It does not rely on cookies and analyzes over 50 data points on the exposure of a digital ad and consumer's engagement with a digital ad and device in real-time.

- **For exposure,** DV Authentic Attention evaluates an ad's entire presentation, quantifying its intensity and prominence through metrics that include viewable time, share of screen, video presentation, audibility and more.
- **For engagement,** DV Authentic Attention analyzes key user-initiated events that occur while the ad creative is displayed, including user touches, screen orientation, video playback and audio control interactions.

Sapio Survey Methodology

DV contracted with Sapio Research to survey 1,000 marketing and advertising decision-makers from APAC (Australia, India, Japan, Indonesia, Thailand, New Zealand, Vietnam); EMEA (France, Germany, U.K.); LATAM (Brazil, Mexico); and North America (Canada, U.S.). The survey outcomes are referenced throughout this report, cited as marketers or media buyers' opinions.

Sample data was collected from online partner panels. The interviews were conducted by Sapio Research in March 2024 using an email invitation and online survey.

Results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of interviews and the level of the percentages expressing the results. In this particular study, the chances are 95 in 100 that the survey result does not vary, plus or minus, by more than 3.1 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample.

Scope3 Carbon Emissions Measurement

DoubleVerify's carbon emissions solution is powered by Scope3, which provides advertisers with reporting to measure and monitor the complete carbon footprint of their digital advertising supply chain. The data accounts for the total emissions generated by the complete path of an ad, including indirect emissions, as recommended by the Greenhouse Gas Protocol, which confirms that any emissions in connection with a business should be measured as part of the footprint of that company. For a closer look at the carbon emissions measurement, please refer to Scope3's methodology.

Glossary

Ad Density
The ratio of ads to content on the page.

Ad Environment
Ad environment describes the digital ecosystem in which an ad is delivered.

- **Desktop:** Ads delivered to a desktop computer.
- **In-app:** Ads delivered within a mobile application.
- **Mobile web:** Ads delivered to a mobile web browser.

Artificial Intelligence (AI)
AI is an umbrella term for any type of digital application that can make independent decisions based on learnings from data analysis.

Attention Index
A proprietary, aggregated measure of over 50 attention signals that provides actionable insights into ad exposure and user engagement to measure campaign performance.

- Calculated in real time against a 28-day rolling window, normalized to 100, for display and video.
- An index above 100 indicates that performance is above average, and an index below 100 indicates that performance is below average.
- MRC accredited across desktop, mobile web and mobile apps.

Authentic Ad
A proprietary, MRC-accredited metric that ensures media quality standards are met. To be counted as Authentic, an ad must have the opportunity to be seen, by a human being, in a brand suitable environment, within the intended geography.

Authentic Brand Suitability (ABS)
A DV solution that allows advertisers to create a centralized set of brand safety controls and automatically deploy them across multiple programmatic buying platforms and campaigns. ABS was the first solution to perfectly align pre and post-settings – enabling advertisers to avoid unsafe and unsuitable content before placing a bid.

Authentic Rate
The percentage of monitored ads that meet the definition of Authentic – namely, that they are brand suitable, fraud-free and served in the intended geography. It is calculated using the following formula: Authentic Ads/Monitored Ads.

Authentic Viewable Rate
The percentage of measured ads that meet the definition of authentic viewable — namely, that the ad has the opportunity to be seen in a brand suitable environment that is fraud-free and served in the intended geography.

Bot Fraud
Bot Fraud occurs when impressions are served to a fraudulent non-human requestor. These bots can mimic legitimate human web traffic interactions to generate additional web page impressions, or even clicks on digital ads.

Brand Suitability Violation Rate
Brand Suitability violations represent requests and incidents from apps, sites, or pages that served or were prevented from being served because they did not meet one or more of a brand's Brand Suitability settings.

Connected TV (CTV)
A television set that is connected to the Internet via OTT devices, Bluray players, streaming box or stick, and gaming consoles, or has built-in internet capabilities (i.e., a Smart TV) and is able to access a variety of long-form and short-form web-based content.

Digital Carbon Footprint
A digital carbon footprint refers to the potential environmental impact of online activities, including energy consumption and the emission of greenhouse gasses.

Digital Noise

Digital noise describes anything online that distracts users from consuming a brand's message, including, but not limited to, too many emails or advertisements.

Engagement (Authentic Attention)

For engagement, DV Authentic Attention® analyzes key user-initiated events that occur while the ad creative is displayed, including user touches, screen orientation, video playback and audio control interactions.

Exposure (Authentic Attention)

For exposure, DV Authentic Attention® evaluates an ad's entire presentation, quantifying its intensity and prominence through metrics that include viewable time, share of screen, video presentation, audibility and more.

Fraud/Sophisticated Invalid Traffic (SIVT) Rate

Ad fraud/SIVT is a type of invalid activity that illegitimately represents online advertising impressions or data events in order to generate revenue. Fraud/SIVT violations represent requests and incidents that served or were prevented from being served because they were recorded as bot fraud, site fraud, nonhuman data center traffic and/or injected ad events.

Fraudster

Any individual who knowingly takes action with the intent to gain from ad impression fraud, which includes, but is not limited to, misrepresentation, laundering, hidden ads, nonhuman bot traffic or other forms of IVT.

Protected Campaigns

Protected campaigns, in this context, refers to DV benchmarked customer campaigns in aggregate, which employ varying services across our suite of verification solutions.

Made for Advertising (MFA) Sites

MFA sites exhibit most or all of the following characteristics: high ratio of ads to content; heavy reliance on paid traffic sources; keeps users endlessly scrolling or clicking; low ad intensity; and content that is often duplicated verbatim on multiple websites.

Media Waste

Media waste (as defined by DV for the purposes of this report) is the approximate calculated cost associated with total media violations (Brand Suitability, Fraud/SIVT, etc.). This cost figure is derived by multiplying the total violations by an estimated $3 "cost-per-mille" (CPM), which reflects the cost per 1,000 impressions.

Post-Bid

Post-bid refers to what happens after a programmatic bid is won.

Pre-Bid Activation

Pre-bid activation refers to the evaluations that happen before a programmatic bid is placed.

Programmatic

Media or ad buying that uses technology to automate and optimize, in real time, the ad buying process.

Retail Media Network (RMN)

An RMN is an advertising channel offered by e-commerce platforms that leverages a retailer's first-party consumer data to reach audiences across their own properties and as part of extended networks

Unprotected Campaign

DV's test campaign with monitoring services active but no pre- or post-bid protections in place.

Viewable Rate

The Interactive Advertising Bureau (IAB) and Media Rating Council (MRC)'s standard definition of ad viewability dictates that at least 50% of an ad must be in view for a minimum of one consecutive second for display ads or two seconds for video ads.

DoubleVerify

We Make the Internet **Stronger**, **Safer** and **More Secure**