

The Data-Driven Transformation of Out-Of-Home

Advertising's weakest link becomes its brightest prospect

A new frontier for data-driven advertising

In a decade marked by digital disruption, few sectors have been as completely transformed as advertising. Data lies at the heart of this transformation.

Of course, data has always been important to advertising; providing the audience insights needed to drive good creative and ensure appropriate targeting and measurement. But today's use of data is something else. Thanks to the availability of big data, martech automation and the proliferation of digital channels, advertisers can target people with personalised messages at just the right moment. Meanwhile, programmatic ensures these impressions reach the right audiences at the best price and in the most efficient manner.

However, in this story of wholesale change there's been one notable exception: out-of-home (OOH) advertising. While the forces of digitalisation have impacted on OOH in the form of digital displays, signs and billboards, the data-driven approaches that have revolutionised the rest of the advertising mix has so far largely been absent.

“OOH advertising is at the tipping point of its own data revolution”



Data leaves home

The good news is that this is about to change. Our hypothesis is that OOH advertising is at the tipping point of its own data revolution. Thanks to the availability of spatial, audience and movement data at scale, OOH advertising is set to become every bit as context-aware, measurable and programmatic as online advertising. This is a new frontier in data-driven advertising - an emerging world of opportunities to make a brand's out-of-home campaigns more relevant and impactful.

In this paper, we investigate the data-driven transformation of OOH advertising. Here, you will find data points that show exactly what this transformation means for advertisers and why they should care. We also provide a clear step by step guide for how advertisers can drive success in their OOH campaigns and leverage programmatic to drive efficiency and scale.

Over the next few years, we believe OOH will take its place at the heart of integrated, automated and measurable campaigns. We hope this paper will provide a starting point to help you place your business at the forefront of this change.



Tom Laband,
*CEO & Co-Founder
at adsquare*



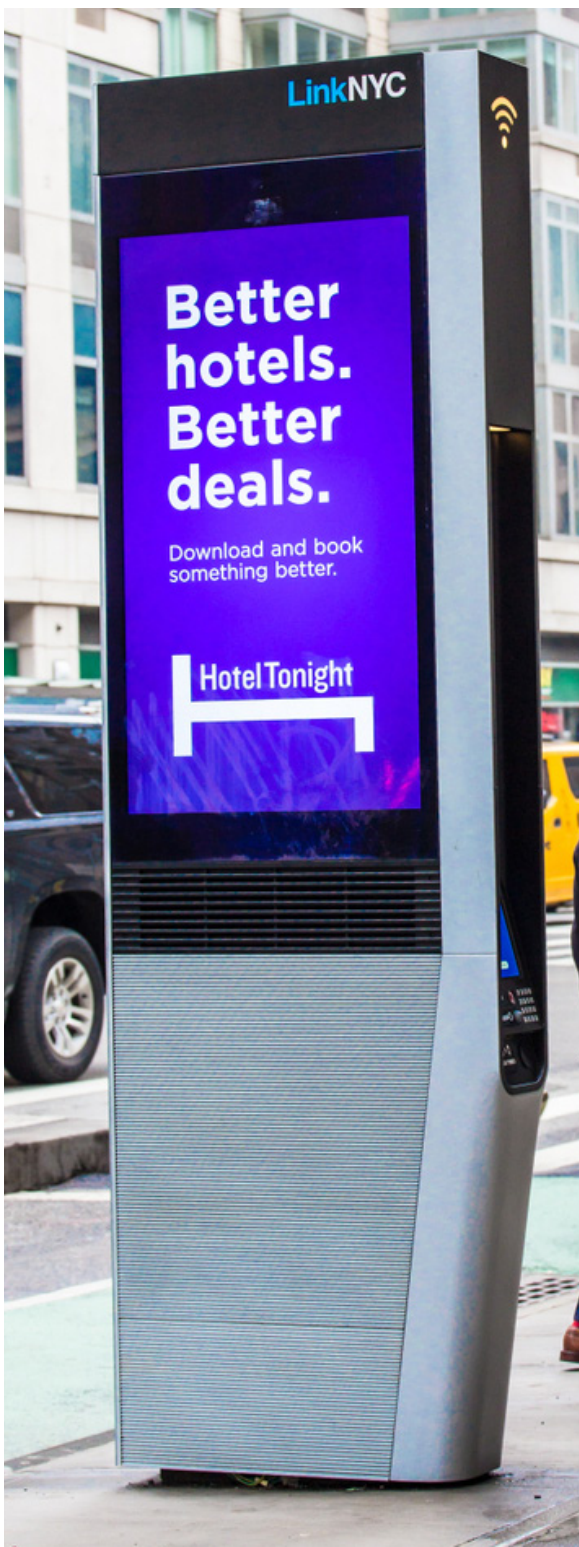
Contents

01 Introduction	05	→
02 The transformation of OOH	08	→
03 Preparing for the OOH revolution	10	→
04 Five steps to transformational OOH	12	→
05 Conclusion and summary	23	→
06 References	25	→
07 About adsquare	26	→

01

Introduction

Out-of-home advertising has been with us for as long as there have been products to sell. It's an easy and relatively brand-safe way to get promotional messages out in front of the public as they go about their daily lives. The fact that, broken displays and obstructed billboards aside, OOH comes with 100% viewability makes it a perfect way to get noticed.



The market takes off

Despite advertisers' familiarity with the medium, the market for OOH posters is expected to grow rapidly in the next few years: from \$41.8 billion in 2018 to \$55.9 billion in 2024¹. A significant part of this growth comes from the rise of Digital OOH (DOOH) advertisements. Taken on its own, the global DOOH market is forecast to reach \$8.39 billion by 2023 achieving a CAGR of 12.6% from 2017 to 2023.²

The global DOOH market will reach \$8.39 billion by 2023

The future of OOH advertising has not looked this rosy for some time. Even as digital has provided new ways to reach audiences through technologically advanced billboards and displays, uptake has not kept pace with the stratospheric levels of growth seen in areas such as online search or display. Today, for example, the search advertising market in the US stands at \$55 billion³ compared to just \$8 billion for the country's entire outdoor advertising market.⁴

Past problems

There are a number of reasons behind why OOH advertising has lagged other advertising formats. These include a lack of data for planning insights, creative customisation, audience targeting and measurement. Attribution has proved to be particularly challenging: even with the very latest digital billboards it has historically been difficult for brands to measure how many people viewed an ad, let alone whether that view drove a purchase.

A lack of programmatic automation has also been a factor. Due to a lack of integration with supply-side platforms, there has been very little inventory available programmatically. Combined with difficulties over attribution and context-aware, real-time targeting, digital displays have remained largely 'dumb' posters with frames purchased in a decidedly analogue manner.

OOH unlimited

The good news is that the barriers to the growth of programmatic have finally been removed. As this paper shows, recent technological advances mean that OOH advertising is catching up with the rest of the advertising mix. You shall see that by taking a data-driven approach to OOH, advertisers can embed audience insights, contextual relevance and programmatic delivery unto their outdoor campaigns and even link them with digital assets. Doing so is another important step to a future where you will need just one media plan and a single audience buy across all your advertising activities.



DOOH is growing at nearly twice the rate of the total OOH industry⁵

02

The transformation of OOH

Five reasons you should care

500 billion+

daily digital ad
opportunities

50%

of multi-location brands
target customers with
location data

30%

of campaigns are now
proximity-based

84%

of Generation-Z pay
more attention to OOH
than other forms of
advertising⁷

497%

return on every OOH
advertising dollar
spent⁸



03

Preparing for the OOH revolution

Laying the data foundations

The case for change is clear: data-driven, programmatic approaches to OOH advertising translates to more effective campaigns, lower costs and better integration with the wider marketing mix.

However, as with any data-driven innovation there's a significant caveat: OOH campaigns will only be completely successful if the right data is in place. Advertisers need to ensure they have access to the right sources of data and in the right quantities for the transformational impact of OOH advertising to be unlocked. What are these data sources?



The OOH data triad

There are three intertwined data elements to a successful OOH advertising transformation:

- **Spatial data** describes information that relates to the physical location of a frame and includes data on points-of-interests, households, and weather. This data can be taken from a range of sources including maps, meteorological companies, census information, etc.
- **Audience data** is that all important information on the people you want to reach. This includes socio-demographics, affinities, interests, place visits, purchases etc., extrapolated from Mobile Advertising IDs
- **Movement data** charts the location of end user devices by mapping anonymised Mobile Advertising IDs to timestamps and latitudes/longitudes and is essential for understanding the real-world behaviour of consumers.

Combined, this data triad opens the door to effective OOH advertising. It also enables programmatic DOOH campaigns. If you can bring all of this data together, sift it for the planning and implementation insights you need, and then activate these insights through a programmatic Demand-Side Platform (DSP), then you will be well on the way to a new and more successful OOH advertising paradigm.



The timing is perfect for an OOH renaissance. GDPR and privacy concerns are slowing the online advertising market just as digital out-of-home technologies are opening the door to dynamic creative experiences. Meanwhile, anonymised data sources are offering new ways to reach viewers and measure results. There's never been a more exciting time to work in this space.

Andreas Knorr, Marketing Director
at WallDecaux (JCDcaux Group)



04

Five steps to transformational OOH

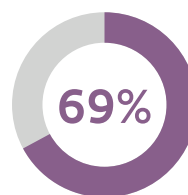
Once the data foundation is in place you're ready to start. At this point, the challenge comes down to knowing how best to use this data foundation to make OOH posters more strategic, contextual and valuable (to the brand and to its customers). We've identified a five-step plan that you can use to help ensure your OOH campaigns deliver the transformational results now available.



Step #1:

Use data to turbo-charge campaign planning

In the out-of-home space, campaign planning is essentially about working out the best placement for advertisements. In the past, this was often a numbers game: a brand with an important, well-budgeted campaign would pay a premium for a large billboard in a prime location with significant footfall, for example. Where context was considered, it was usually on a fairly elementary basis: a sportswear brand, for instance, might choose to place their posters near football stadia.



of adults see a digital screen each week - broader coverage than for commercial radio⁹

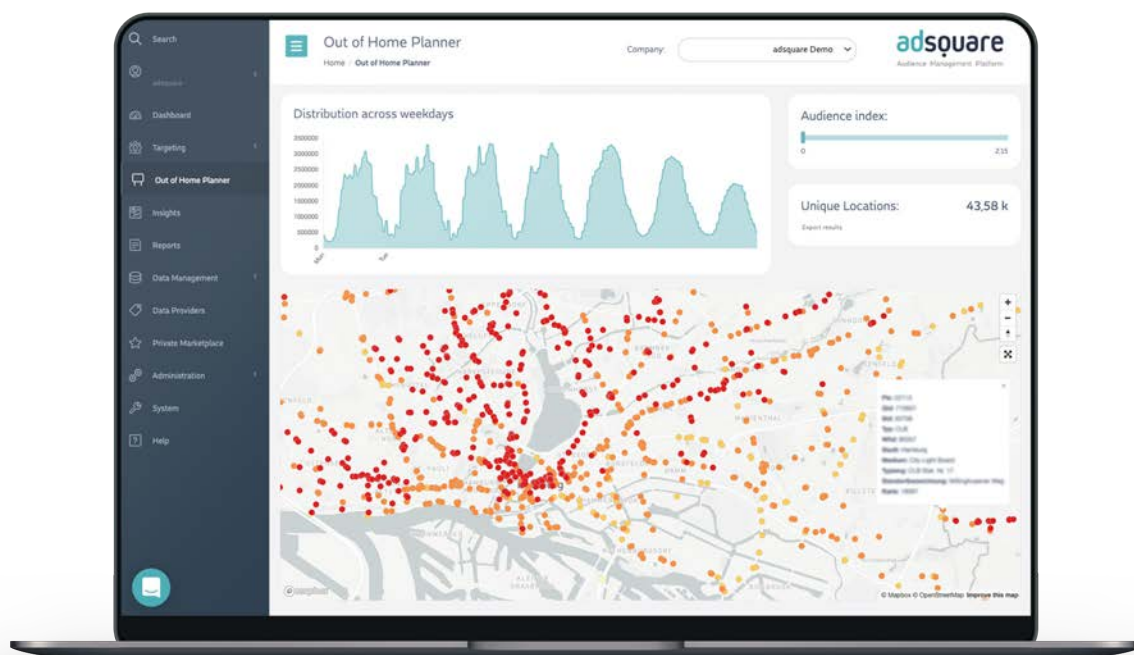
In the data-driven world, campaign planners have many more colours to their palettes. The spatial, movement and audience data described previously provides advertisers with granular insights into the totality of the poster. These insights allow them to make decisions about ad placements based on a number of factors including:

- **The physical location** (e.g. places data)
- **The demographics of the area** (e.g. credit card and census data)
- **The brand and social affinities of people passing by** (e.g. geosocial, telco, app usage and movement data)



Sound complicated? It shouldn't.

The right planning tool should be as intuitive as any other adtech interface. You should be able to model your target audience through simple-to-use drop-down menus that visualise results (i.e. the posters matching the exact audience/context requirements) on a map. Identifying exactly the right posters for each campaign should be a matter of just a few clicks.



Finding your exact audience (without being 'creepy')

You know your customers intimately. But where are they now? And where will they be later today? And how can you answer these questions without raising severe privacy concerns?

The right approach to OOH targeting allows you to find your audience based on data extracted with **the explicit consent of the user** from their raw location data connected to Mobile Advertising IDs (AAID, IDFA) with timestamps and latitudes/longitudes. This data allows you to find the OOH locations where your target audience is over-represented based on real movement data in the area:



As outdoor specialists, Kinetic are experts in planning campaigns for some of the world's best-known and most innovative brands. We are therefore always looking for smarter and more precise tools to make those campaigns more effective. Using Spatial, audience and movement data in one platform allows us to find these audiences and act upon them quickly and easily.

Adam Powell, Head of Data
at Kinetic Worldwide



Step #2:

Get programmatic with DOOH

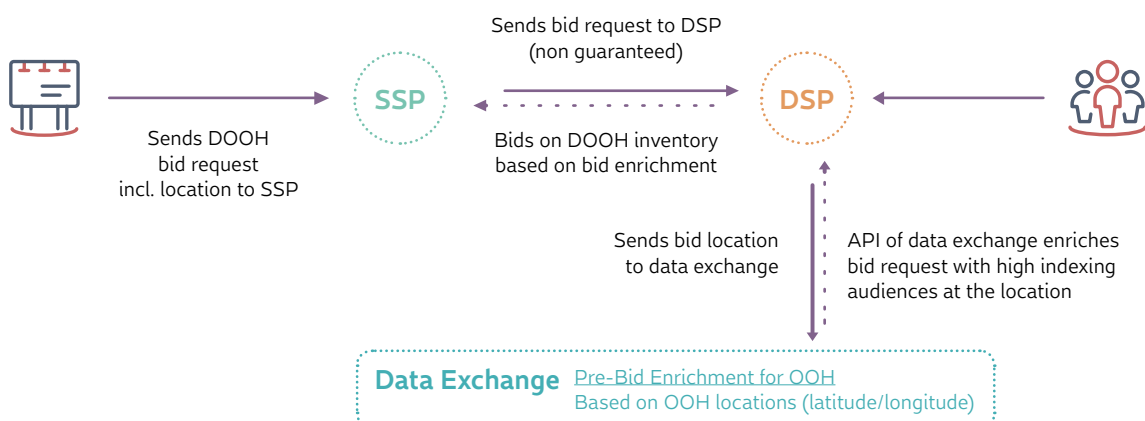
You've gathered together your data, analysed it in depth, and used it to identify the exact poster you need. And thanks to your movement data, you can see in real-time when key target customer segments are walking by individual posters. The challenge now is how to activate your campaign.

For real-time, audience-specific, proximity-based campaigns there's really only one option: programmatic targeting. If the data triad lays the foundation for transformational OOH advertising, programmatic activation provides the execution.

2.5X

DOOH posters are twice as likely to be seen and 2.5 times more impactful than traditional OOH ads¹⁰

On a technical level, there's currently only one way of doing this: by integrating your foundational data with Demand-Side Platforms (DSPs) and Supply-Side Platforms (SSPs) at the pre-bid phase. Doing so allows you to enrich the OOH inventory available through your DSP so that you can identify the real-time, proximity-based opportunities on offer and programmatically activate any segment built with your OOH Planner:



In real-world terms, this gives you the opportunity to target just the right people at just the right moment. A digital billboard in an airport might, for example, be activated with an ad for a high-end watch the moment that first class passengers are walking past. The poster can then quickly be sold on to brands looking to target business, then economy class passengers.

The move to programmatic OOH is well under way. Already, ad agencies are pressing OOH media owners to make more inventory available for programmatic trading and VIOOH, a programmatic trading marketplace, has predicted that programmatic OOH will go mainstream in 2020.¹¹ If you are not yet looking at programmatic activation for your OOH campaigns, it seems that now is the time to start.

Back of the net

During France 2019, The Football Association targeted and engaged effectively with England fans to arouse interest for the Women's World Cup in the world's most popular global sport.

On-goal execution

Through a pre-bid integrated DSP, the ads were run programmatically on JCDecaux properties leveraging spatial, audience and movement data to deliver the right message to the right people at just the right time. The inventory was managed by VIOOH, the global marketplace for out-of-home.

A stunning victory

Proximity segments and audience affinity indexes per poster location led to 2.4 million viewed impressions from the perfect audience.



Step #3:

Combine OOH with other advertising channels

The transformation of OOH advertising on its own offers brands huge opportunities around data-driven planning and proximity-based targeting. But this is just the start. When combined with other advertising channels, the benefits of OOH become even stronger.

Social ads see a 23% uplift in effectiveness when combined with DOOH¹²

Mobile has two particular strengths in this regard. First, you can run real-time proximity campaigns by drawing a radius around target digital posters. Adverts and promotions supporting your poster campaign can then be sent to all users within that radius to drive home the message. This approach allows you to provide context-relevant information to your customers that add real value - such as delivering a promotion to a user while they are right outside one of your stores.

The second application is second-screen retargeting. You can view which posters individuals have passed by during the course of the day, and then follow up with a relevant mobile, social or desktop ad later in the day. With consumers 48% more likely to click on a mobile ad after being exposed to the same ad on OOH¹³, this is an approach well worth taking.



We see the future of advertising as being resolutely data-driven and truly omnichannel, where a coordinated campaign will reach out to people with the same creative and messages regardless of whether they're watching TV at home, using a mobile social media app, or looking at a digital display on the street. This vision is still a little way off, but we're getting there. Certainly, advances in bringing data together so brands can target OOH and desktop/mobile at the same time is an important step forward.

Anna Forbes, UK General Manager
at The Trade Desk



OOH Retargeting in 3 easy steps

- 1 Create a geo-fence around poster locations used for an OOH campaign
- 2 Analyse raw movement data to identify users who have been exposed to OOH campaigns
- 3 Reach these users on their mobile device and desktop via targeting and cross-device solutions

Eurowings sees uplift with mobile retargeting

The carrier mandated OOH specialist WallDecaux to target frequent fliers OOH and the parties realised that a combination of audience insight, location data and mobile activation would be key.

Readying for take-off

Leveraging a data-driven approach, Eurowings mapped the best poster locations across German cities to target frequent fliers. It then used pre-bid data integration with leading DSPs to extend the campaign to all mobile apps used in proximity to its posters.

Landing customer attention

The multi-channel approach helped generate brand and product awareness and interest in Eurowings' offering. 55% of the targeted group liked the poster and 29% looked up more information after seeing the mobile ad. Overall, the campaign generated a 35% uplift in click-through rates.

WallDecaux
Premium Out of Home



symbolic picture

Step #4:

Solve the attribution challenge

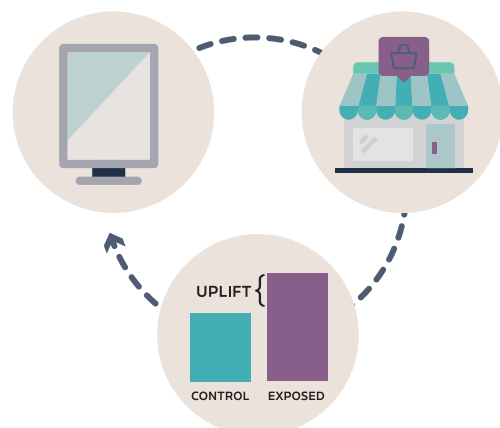
As mentioned above, one of the more intractable of challenges with OOH is attribution. Advertisers have struggled to measure just how effective poster activations are and which behaviours they have triggered. To date, most brands have relied on fairly general metrics to define the success of OOH campaigns, such as overall sales or store visits, or route-derived footfall estimates. Data-driven transformation solves this challenge at a stroke and provides clear and granular attribution metrics - post-campaign and in real-time.



OOH boosts store visitation rates 50% to 127%¹⁴

The secret sauce to effective OOH attribution is footfall measurement. By combining the movement and location data elements of your data foundation you can analyse whether individual consumers who saw your OOH ad then went on to visit a store, and whether they did so more often than people who had not viewed the ad. Doing so, you can calculate a clear visitation uplift number that can help you evaluate the effectiveness of the campaign.

Another benefit of the data-driven approach to OOH is that it can also show whether target consumers are taking action on their mobile devices. Data companies collect information from mobile devices owned on things like app installs (again, where the owners of devices have given their consent for this information to be collected and shared). When cross-referenced with spatial data, it's possible to see if a user exposed to an OOH ad (or re-targeted ad for that matter) then goes on to install the advertisers' app. It's thereby possible to draw a clear link between ad view and action.



Finally, the new approach to OOH also allows brands to measure in real-time. By integrating your data platform with DSPs such as The Trade Desk, Google Marketing Platform, Tabmo or Adform, you can track footfall measurement in real-time. This allows you to optimise your campaign 'on-the-fly', by tweaking creative elements, for example, or

swapping its location to a different digital poster. This turns attribution from a simple measurement tool to a source of live campaign insights and optimisations that can help you improve results.

More data, more visits

For its latest OOH campaign in Germany, sportswear giant Decathlon and OOH operator WallDecaux wanted a way to know both how many people had seen its campaign and whether they'd gone into their retail outlets as a result.

Measurement in motion

Taking the movement data of consumers exposed to its posters (i.e. people who came within 50 metres of a frame), the company then used mobile device data to see how many of these consumers then visited one of Decathlon's nearby retailers.

A race to the stores

Applied footfall analysis showed a staggering 38% uplift in store visitations from consumers exposed to the poster campaign compared to control groups. Not only did Decathlon have a great ad campaign, they had the numbers to prove it.

WallDecaux
Premium Out of Home



Step #5:

Learn more about your audiences

The final step in ensuring your OOH capability is truly fit for the digital age goes back to that first fundamental: data. By transforming your approach to OOH, you can keep learning about relevant audiences to better personalise campaigns, improve targeting and optimise ad spend. This is an approach to advertising that keeps getting better.

The trick is to return once again to data sources from Mobile Ad IDs that have been exposed by consenting users. By enriching this data with audience and movement data, you can get a good idea about who saw your DOOH ad as well as a range of insights across dimensions including advanced demographics, distances to conversion, top stores etc. Many advertisers are looking to go even further, and are sourcing additional effectiveness studies from partner organisations.



What's really great about the new wave of digital OOH and the programmatic advertising solutions it offers, is that it allows brands to get personalised without actually getting personal. The messages sent out through such campaigns chime exactly with target demographics and their immediate contexts, in real-time. But this is fundamentally about creative buying; and as a result, programmatic OOH remains essentially a broadcast channel. All these elements are a huge strength at a time when privacy in advertising is centre-stage but brands need to do more to get cut-through.

Jean-Christophe Conti, CEO
at VIOOH



05

Conclusion and summary

A revolution is at hand - make sure you're ready

From being the weakest link in the data-driven advertising chain, out-of-home is on the fast-track to becoming its most important asset.

The cause is clear: finally, 'big' data in the form of spatial, audience and movement data is available to deliver the insights needed to make OOH campaigns more relevant to audiences, and the contexts they find themselves in when outdoors.

Meanwhile, programmatic automation has finally caught up with the DOOH space. By integrating data with DSPs, brands can hone their campaigns and update them even when live to ensure they are optimised at all times. Accessing Mobile Ad IDs and mobile app data also provide new opportunities for retargeting and crystal-clear attribution.

The five steps outlined in this paper show you the areas that can be transformed through the better use of data and programmatic. However, while these steps are necessary, they're not sufficient. As you look to implement a new OOH model to make the most of the opportunities at hand there are three essential questions you should ask yourself:

1. Does your data partner provide all the sources of data you need, at the right volume and with quality assurance?
2. Is this data integrated across all five phases of OOH planning, DSP activation, retargeting, attribution and insights?
3. Is your data brand-safe and sourced only from users that have provided explicit and full consent for its use?

If you can answer 'yes' to these three questions, then your data platform is fit-for-purpose. From there, you can look forward to a future where your OOH capabilities deliver more than ever and take their rightful place as part of a broad mix of integrated, data-driven advertising channels.



References

1. Imarc, *Global Outdoor Advertising Market to Reach US\$ 55.9 Billion by 2024, Bolstered by Improving Transportation Facilities*, 2019, <https://www.imarcgroup.com/global-outdoor-advertising-market>
2. Allied Market Research, *Global digital-out-of-home (DOOH) market to reach \$8.39 billion by 2023: AMR*, 2019, <https://www.globenewswire.com/news-release/2019/10/28/1936387/0/en/Global-digital-out-of-home-DOOH-market-to-reach-8-39-billion-by-2023-AMR.html>
3. Inc, *Google Dominated the \$55 Billion Search Advertising Market for Over a Decade. Here's How Amazon Plans to Shake Things Up*, <https://www.inc.com/jason-aten/google-dominated-this-55-billion-market-for-over-a-decade-heres-how-amazon-plans-to-shake-things-up.html>
4. Oaaa, *US Out of Home Advertising Up 4.5% to Record \$8 Billion in 2018*, 2019, <https://oaaa.org/StayConnected/PressReleases/tabid/327/id/5692/Default.aspx>
5. Campaign, *Adspend forecast revised up this year as search fires on all cylinders*, 2019, <https://www.campaignlive.co.uk/article/adspend-forecast-revised-year-search-fires-cylinders/1663849>
6. VIOOH, *State of the Nation*, 2019
7. Ad Age, *Gen Z and the Future: A Mixed Outlook*, http://adage.com/d/resources/resources/whitepaper/gen-z-and-future-mixed-outlook?utm_source=AA1&utm_medium=AA&utm_campaign=AAhub
8. OAAA, *New Study: Out of Home Advertising Delivers \$5.97 in Revenue ROI*, 2017, <https://oaaa.org/StayConnected/PressReleases/tabid/327/id/4923/Default.aspx>
9. Mediatel, *The many challenges of making OOH programmatic*, 2019, <https://mediatel.co.uk/newsline/2019/11/01/the-many-challenges-of-making-ooh-programmatic/>
10. Mediatel, *Study reveals impact of combining DOOH with social media campaigns*, 2018, <https://mediatel.co.uk/newsline/2018/10/25/study-reveals-impact-of-combining-doooh-with-social-media-campaigns/>
11. Campaign, *Programmatic OOH tipped to go 'mainstream' in 2020*, 2019, <https://www.campaignlive.co.uk/article/programmatic-ooh-tipped-go-mainstream-2020/1664123>
12. More About Advertising, *Talon Outdoor: research shows video and Out of Home is an unbeatable media combination*, 2018, <https://www.moreaboutadvertising.com/2018/11/talon-outdoor-research-shows-video-and-out-of-home-is-an-unbeatable-media-combination/>
13. IAB, *Digital Out-of-Home: Case Studies That Prove It Works*, 2017, <https://www.iab.com/news/digital-home-case-studies-prove-works/>
14. OAAA, *Attribution Data Defines the Value of OOH in Series of New Reports*, 2019, <https://oaaa.org/StayConnected/PressReleases/tabid/327/id/5733/Default.aspx>

adsquare

About adsquare

adsquare is the Real-Time Data Exchange that gives advertisers access to accurate data at scale. The self-service platform has been built mobile-first and enables more relevant campaigns based on audiences and their context. It offers seamless access to multiple data dimensions for more effective targeting, measurement and insights and has been developed with privacy at its core.

adsquare is solving the challenges of OOH advertising by combining the strengths of all adsquare products in one single platform solution. Our out-of-home solutions allow you to easily combine various data types for improved campaign planning, programmatic DOOH activation, multi-device retargeting, measurement and insights.

Headquartered in Berlin, the company operates worldwide with additional offices in New York, Madrid, London, Paris, Milan and Singapore.

For more information visit www.adsquare.com or contact info@adsquare.com