IAB EUROPE NAVIGATOR:
PROGRAMMATIC OUT OF HOME ADVERTISING

Contents

Section 1. Introduction

Out of Home (OOH) is almost as old as civilisation itself. From the moment there were goods to sell, and money to buy them with, vendors have relied on posters, engravings and symbols to attract peoples' attention as they go about their daily rounds. The use of OOH has continued right into the modern age. Today, however, OOH advertisements have to compete with digital media for consumers' attention. Many of us stumble around city centres glued to our smartphones, looking up just long enough to cross the road or avoid a fellow pedestrian. Others, in the face of busy schedules, race from meeting to meeting, shop to shop, with barely a second's thought given to their surroundings.

Because of these challenges, OOH media must work harder than ever before. Fortunately, the digital age has also given rise to new tools and capabilities that make OOH advertising increasingly powerful. These include programmatic OOH, an increase in inventory and new digital formats that are inspiring richer, content-led adverts. Thanks to these Digital Out of Home (DOOH) technologies and processes, advertisers have more choice than ever about the targeting, activation and measurement of OOH campaigns.

The static posters and billboards of the past are being replaced by dynamic digital frames hosted on a range of formats including billboards, street furniture, busses and trains, shopping malls and more. These frames leverage programmatic automation to serve multiple ads to multiple audiences at multiple times throughout the day. And marketers have more control than ever to select, in real-time, the perfect location, screen size and moment to reach their target audiences.

The emergence of DOOH has come at a significant time. With TV and radio audiences fragmenting under the force of digital, advertisers have been looking for a new one-to-many broadcast medium. With their ability to reach many people at one time, DOOH channels may well be the solution many have been looking for. Even in times of lockdowns and curfews due to the COVID-19 pandemic, DOOH plays an important role for brands to demonstrate awareness and sensitivity to the situation at large. Programmatic buying of DOOH allows brands and agencies to control their spend, respond instantly to lockdowns - whether regional or national - and focus on times of the day that get more reach. It's for these reasons that since March 2020, programmatic DOOH vendors have reported new first-time buyers to their platforms.

In this paper, we examine the growth in demand for DOOH and the drivers behind this demand, the strengths and opportunities around programmatic OOH across Europe, and some considerations around measurement and creativity for DOOH campaigns.

Section 2. The Fundamentals of Programmatic OOH

Looking at the overall OOH market, digital accounts for the lion share of future demand and revenue growth. Based on our analysis of market forecasts, the total DOOH market Globally will be worth €8.2 billion in 2020. While this is small compared to the €28.4 billion that we forecast will be achieved in the traditional OOH market, we expect it to grow to €13 billion by 2024, while traditional OOH will remain relatively flat.

Global: OOH market in EURbn
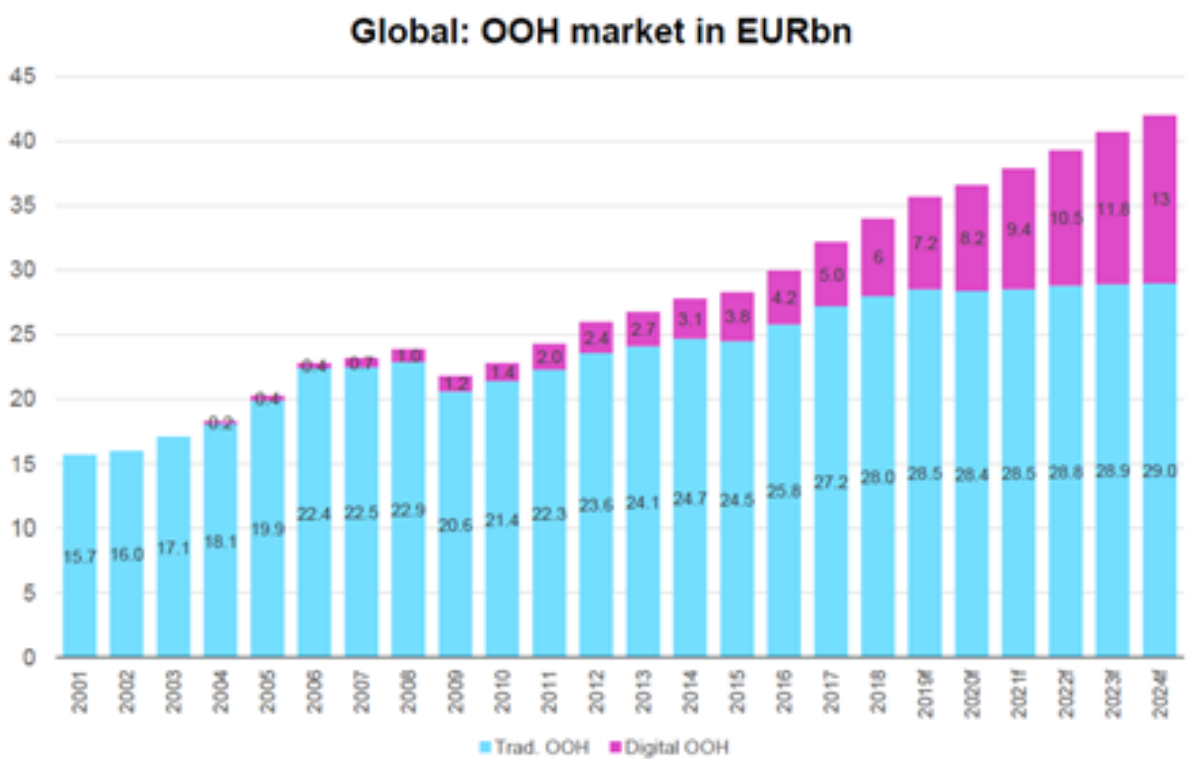
Source: *IAB Europe, Magna, GroupM, local Industry bodies*

DOOH is now the second fastest growing advertising medium (trailing only the mobile internet) and is predicted to account for over 30% of OOH revenue in some mature markets. That will be achieved through a Compound Annual Growth Rate (CAGR) of 13.7% for DOOH between 2018-24 (this compares to a CAGR of 0.5% for traditional OOH over the same period.

2.1 OOH vs. DOOH

Digital OOH advertising brings with it a number of strengths that contrast with traditional OOH advertising:

OOH	DOOH
Powerful and Targeted Media - Offers massive national reach, but can also be tailored to have local relevance and to target niche audiences. Can also help with all metrics from driving brand awareness to driving conversion.	**Hyper Targeting** - More ability to target via demographic, geographic, income group etc. Visuals can also be adapted to context and audience.
High Impact Media - The most visual media type. Enables life size and larger-than-life experiences.	**Greater Impact** - Allows reach content and interactivity with full motion video, real-time content, social media engagement, syncing and touch screen interactivity, AR, mobile to screen and gesture.
Unavoidable Media - Unlike other media, OOH cannot be avoided, switched off or thrown away. OOH intercepts not interrupts.	**Location-Specific Offers On The Move** - Multi-platforming offers to reach people on the move thanks to location data. Links programmatic OOH mobile marketing.
Effective Media to Reach Mobile Audiences - Reaches people in the real-world, influencing decisions on their journeys between work, home and entertainment activities, enabling path to purchase.	**Flexibility / Real Time Creative** - Allowing content to in effect be created and edited in real time in response to data triggers in any and every site location.
Cost Effective Media - OOH can have lower cost per impressions than other traditional medias.	**Cost Saving and More Sustainable** - No production cost and lower technical fees. No materials required so not wastage of materials.

2.2 Programmatic comes to DOOH

Another strength of DOOH is that it opens the OOH market to the efficiency benefits of programmatic buying and selling. However, the programmatic delivery of OOH is a cause of concern for many OOH executives. They worry that opening inventory to real-time bidding (RTB) will commoditise value and start a race to the bottom. In fact, this is unlikely to happen. In contrast to the internet, OOH has a finite amount of inventory – particularly when it comes to premium placements on prime locations.

There are several other differences between programmatic for DOOH and programmatic for general digital campaigns that are worth explaining. First, as DOOH creative formats are heavier than digital or mobile banners they require additional time to pre-cache and load the creative when serving ads. This adds lag to the process. Second, OOH reaches many consumers at one time, rather than the audience of one catered to by digital ads. As a result, it's simply not possible to change the creative every single time (every time, for example, a new person drives by a roadside billboard).

Because of these differences, transacting in real-time on DOOH slots requires a fundamentally different approach to online advertising.

Selling programmatically

From the media owners' point of view there are five key areas that must be addressed when selling inventory programmatically:

1. What Supply-Side Platforms (SSPs) are active in my region?
2. Do they have a good track record of demand generation?
3. Is their integration compatible with my digital signage platform?
4. Is my digital signage platform and the SSP capable of displaying HTML5 content (the current standard for web-based content)?
5. Is my digital signage platform compatible with the type of integration the SSP requires?

From a business perspective, media owners – companies like JCDecaux, Clear Channel and ExterionMedia – have the freedom to open up all of their inventory (i.e. all screens at all times) or package certain screens and times together at reduced or increased prices. When making this decision, media buyers need to consider the ease of adoption by advertisers and ensure any inventory limitations are communicated clearly.

The transaction model between media owners and advertisers varies between markets. Some attach an audience multiplier to each playout, whereas others transact on playouts instead of cost per mille – either because they lack the data for audience multipliers or because the advertiser wants to concentrate on the pacing of a campaign at targeted moments. Media owners should check with their SSP candidates what's possible and keep their market's and clients' preferences in mind.

2.3 Buying programmatically

Programmatic provides much more flexibility over the sale of inventory. Traditionally, DOOH media owners have sold inventory through time-limited packages that guarantee a minimum share of voice or number of playouts, which gives them guaranteed budgets per campaign. The programmatic buying of DOOH brings a range of new opportunities for advertisers.

With programmatic buying, therefore, unit prices can be a little higher than bulk insertion order buys, but advertisers have been known to shift their TV or web budgets to programmatic DOOH due to lower barriers of entry. This provides opportunities for incremental revenue for media owners from buyers they didn't previously have access to.

For their part, advertisers executing programmatically benefit from greater control over their DOOH campaigns. For instance, leveraging the capabilities of DOOH-enabled Demand-Side Platforms (DSPs), advertisers can access proof of plays directly, integrate complementary mobile buys or enable data triggers to their companies (please refer to the use cases in the following section of this paper for more detail).

A real-time DOOH auction is usually comprised of the following six parameters:

1. A screen and publisher identifier
2. Any private marketplace deal IDs that are invited to bid
3. Accepted creative formats and their duration
4. A floor price
5. An audience multiplier, if available
6. Audience identifiers such as demographic information (which may be estimated or provided via real-time technology)

Sophisticated programmatic DOOH buyers tend to layer their own targeting on top of these parameters using data-centric applications. This approach allows them to leverage contextual relevance at a given moment and in a given location, and even exploit their own audience data to help them make the best buying decisions. There are other opportunities to leverage data in the programmatic process, and these are outlined later on in this paper.

DOOH does not, of course, operate in a vacuum, and sophisticated advertisers and agencies will want to incorporate multiple channels under a single media plan running on their DSP. The ultimate goal of such buyers is to execute display, native, video, audio, TV and DOOH on the same platform and deploy unified strategies.
Discovering DOOH inventory should be an easy task for the buyer. DSPs that offer visual discovery of inventory across their connected SSPs have an advantage in this regard. Finally, filtering display units on location and type (such as roadside, retail, transit, etc.) is key for the rapid creation of programmatic DOOH campaigns, and something buyers should look out for.

Section 3. Opportunities and Challenges

As with any new approach to advertising, programmatic DOOH brings with it a mix of opportunities and challenges for all stakeholders. Here are some of the key elements to be aware of.

3.1 Opportunities

1. One to many advertising - In digital advertising, one to one messaging is common practice, however for screens with high reach, such as OOH media, this approach is more difficult. Programmatic OOH exchanges overcome this issue by partnering with mobile identity partners to supply both digital ID and personalisation needs. For advertisers, programmatic DOOH therefore offers to combine the benefits of automation and efficiency with a one to many reach.

2. Contextually relevant messaging - The real-time data activation element of programmatic creates a huge opportunity for brands. Using data elements such as live weather or traffic data, advertisers can add dynamism to their creative and leverage real-time impression-based buying to capture the attention of large audiences. Additionally, programmatic allows advertisers to target audiences based on special interests, time of day, weather and geo-location, enabling them to provide personalised messages via DOOH screens.

3. Data-driven decisioning - By working closely with companies in the mobile data space, buyers can enrich their programmatic decision-making with rich audience insights. For instance, user segments created from the historical location behaviour of mobile device owners can provide insights for real-time bidding decisioning – much like targeting audience data for buying browser or in-app inventory, but with a one to many approach. It goes without saying that these audience data segments need to be formed using consenting users in compliance with data privacy regulations such as GDPR.

Programmatic DOOH in action

There are already numerous examples of brands that are using programmatic DOOH to reach audiences in new ways. For a recent campaign, Virgin Active, a UK gym brand, programmatically bought DOOH screens and mobile inventory as part of a unified campaign strategy to target people looking for gym membership. The campaign was highly successful, increasing footfall by 2.44%.

In Turkey, Toyota managed to become the highest selling important car brand in the country for the first time thanks to a DOOH campaign. The campaign's goal was to raise awareness of Toyota's hybrid vehicles, which it did through dynamic creative. Based on real-time data, the creative was triggered at roadsides during periods of heavy traffic and enabled by the programmatic buying of impressions on digital billboards. The DOOH campaign was also synched with real-time ads served to mobile phones in the proximity of the billboards.

In another example from the region, Turkish Airlines recently launched a highly unified campaign that took advantage of the centralised DOOH inventory purchasing enabled by its DSP. The carrier wanted to use a targeting strategy that would scale across three continents and numerous publishers, while also syncing mobile display ads to locations near to individual DOOH screens. Thanks to the approach, the brand saw around 10x higher mobile engagement compared to non-DOOH supported control campaigns.

In all these cases, programmatic DOOH is benefitting advertisers through centralised buying, scale across media owners, dynamic and targeted creative and cross-channel execution capabilities for unified campaigning.

3.2 Challenges

Programmatic DOOH is still relatively immature, and there are a number of challenges that could slow its progress in Europe if not addressed. These include unfamiliarity with the channel among advertisers and brands, a fragmented market, and a lack of standardisation.

To address the first of these challenges, it will be crucial to ensure that trade desks are completely up to speed on the media including having a broad understanding of metrics (impressions, plays, Gross Rating Points, etc.) and screen characteristics (media owners, typologies, formats, etc.). To achieve this goal there needs to be clear and agreed definitions.
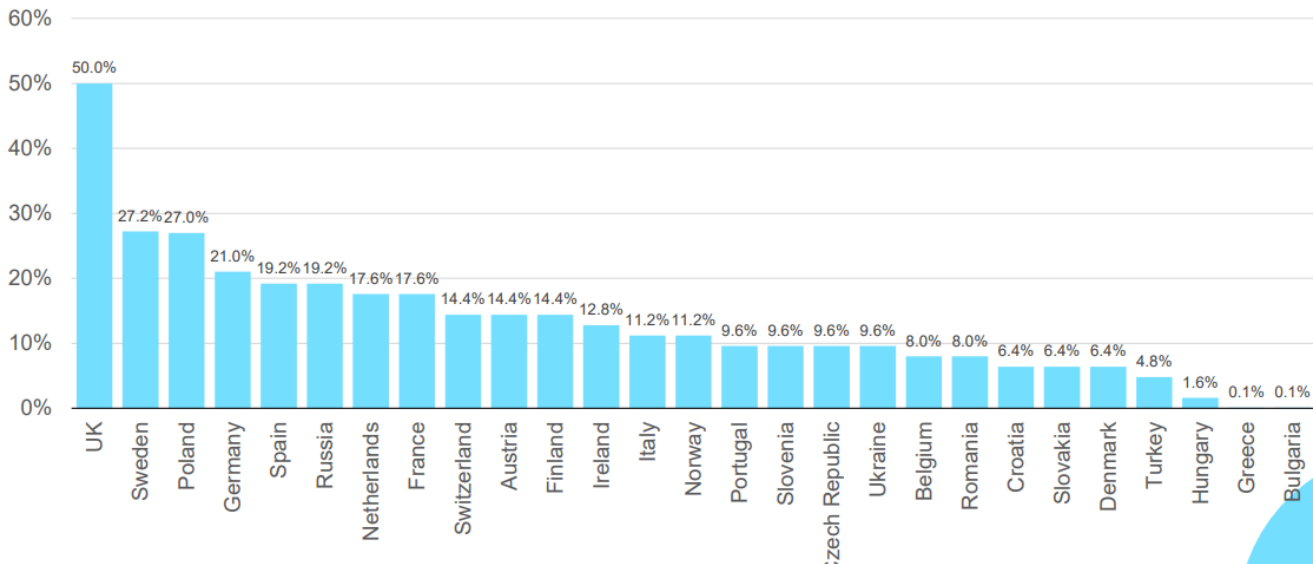
When it comes to fragmentation, the key challenges to address are around inventory and multiplicity of programmatic systems. Technical fragmentation restricts the flexibility and accuracy that traders require for effective programmatic trading. At present, real-time buying, which promises complete flexibility, is still negligible in Europe for OOH media. In this context, traders have to reframe their skills in campaign management and reporting. With limited versatility and real-time metrics, they may have to focus their media plans on branding and creativity instead of direct ROI, which is a significant shift in how they construct their proposals.

As programmatic DOOH matures, traders will require greater standardisation and a more detailed inventory structure and pricing model. These will need to be combined with precise targeting, dynamic creative, flexibility, detailed reporting, and a mature ecosystem. In the near future, DOOH trading will require exactly the same level of connectivity, transparency and measurability as with any other digital media.

Section 4. Programmatic DOOH in Europe: The State of Play

Unlike the digital advertising market as a whole, the DOOH market in Europe is relatively evenly spread and achieving double-digit growth in most markets.

DOOH share of OOH Ad revenue (2018)

Country	Share
UK	50.0%
Sweden	27.2%
Poland	27.0%
Germany	21.0%
Spain	19.2%
Russia	19.2%
Netherlands	17.6%
France	17.6%
Switzerland	14.4%
Austria	14.4%
Finland	14.4%
Ireland	12.8%
Italy	11.2%
Norway	11.2%
Portugal	9.6%
Slovenia	9.6%
Czech Republic	9.6%
Ukraine	9.6%
Belgium	8.0%
Romania	8.0%
Croatia	6.4%
Slovakia	6.4%
Denmark	6.4%
Turkey	4.8%
Hungary	1.6%
Greece	0.1%
Bulgaria	0.1%

Source: Magna Global, eMarketer, IAB Europe's own calculations

In line with this trend, the adoption of DOOH technology is at encouraging levels across Europe and the transition to the approach proceeding at a good pace. Currently, media owners in the Netherlands and the United Kingdom stand out for their adoption of SSPs, while Turkish advertisers are producing some of the most impressive creative using DOOH programmatic techniques (see case studies in section 2).

According to figures from Nielsen AdIntel UK, investment in DOOH (59%) outstripped that of traditional OOH (41%) in the first half of 2019. However, it's likely that much of this spend is focused on London, where, for instance, underground stations are now awash with DOOH frames.

Across Europe, brands are experimenting with triggers for the DOOH buy, including live or historic audience data, store footfall figures, weather data and road traffic levels. The use of data to drive creative content is also a well adopted strategy, as a growing number of media buyers allow the use of HTML5 creatives on their screens. In this regard, campaigns by Toyota and PepsiCo in Turkey stand out.

In France, the adoption of DOOH media expanded rapidly in 2018 with a 22.3% increase in sales. That year, according to figures from Displayce, the majority of trading desk users indicated that they expect DOOH to be present in 18% of media plans, up from 11% in 2017.

The signs are that the French market is ready and waiting for programmatic DOOH to hit the mainstream. At present, the programmatic ecosystem is ironing out the details of how the trading system will operate.

SSPs in the region are starting to structure their inventory for programmatic, while DSPs are looking to provide additional programmatic services for campaigns that run either through direct connections or through ad exchanges.

The availability of DOOH inventory across Europe over programmatic is set to increase. Major OOH media owners such as JCDecaux and VIOOH are building or adapting SSPs to make premium inventory available through programmatic.

As this inventory is rolled out across media owners' local operations, an increasing number of markets are gaining access to programmatic DOOH frames. What's more, in many countries independent DOOH media owners with popular screens are partnering with independent DOOH SSPs. This trend is creating a vibrant supply ecosystem for buyers.

DOOH location and screen types

Some DOOH media owners specialise in certain locations, such as trains and busses or shopping centres. In Europe, such specialist providers are well represented.

Street furniture such as bus shelters, large displays adjacent to motorways or facing public squares, vertical screens in retail districts or shopping malls and city centres form the main bulk of available inventory.

Global: Share of Units vs Share of Revenue
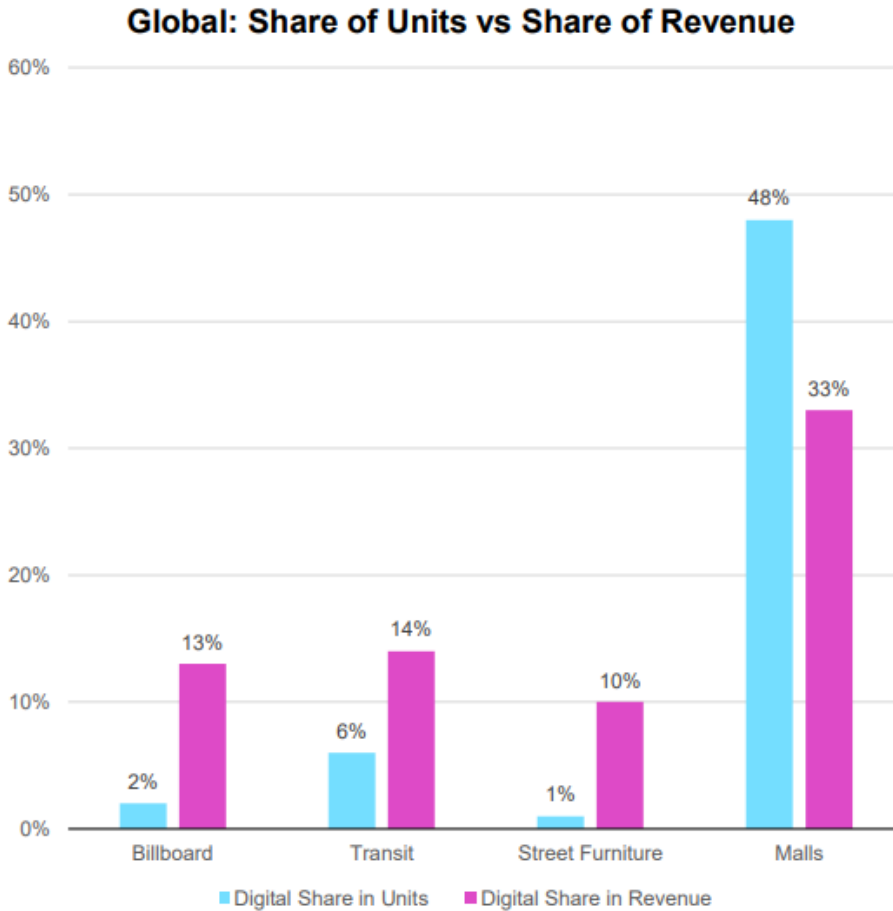
Source: Lamar, Magna

However, as cities enter the smart city age and more screens are installed in vehicles or in public spaces, supply will grow.
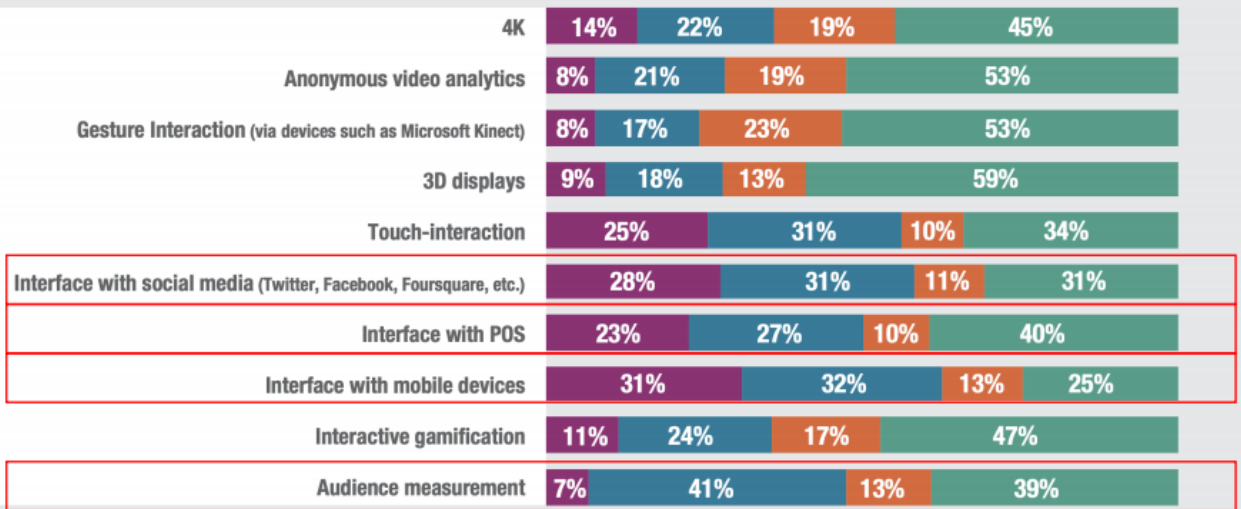
In Sweden, for example, electric pod taxi company Bzzt has over 50 vehicles roaming the city of Stockholm, taking travellers who have called a vehicle via an app to their desired destination in the city. Each vehicle has a double-sided digital screen mounted on its roof, which are available for programmatic ad placement via a DSP.

In addition to a broader variety of screens, buyers are starting to demand that screens come with more features to improve their advertising uses. These features include elements such as social media interfaces, interactive gamification and audience measurement. The graph below illustrates the additional features that buyers are looking for now and in the next couple of years.

39. Which of the following digital signage features do you have now, or plan to add?

Legend:
- ■ Have now
- ■ Plan to add in the next 2 years
- ■ Plan to add in more than 2 years
- ■ Do not have, no plans to add

Feature	Have now	Plan to add in the next 2 years	Plan to add in more than 2 years	Do not have, no plans to add
4K	14%	22%	19%	45%
Anonymous video analytics	8%	21%	19%	53%
Gesture Interaction (via devices such as Microsoft Kinect)	8%	17%	23%	53%
3D displays	9%	18%	13%	59%
Touch-interaction	25%	31%	10%	34%
Interface with social media (Twitter, Facebook, Foursquare, etc.)	28%	31%	11%	31%
Interface with POS	23%	27%	10%	40%
Interface with mobile devices	31%	32%	13%	25%
Interactive gamification	11%	24%	17%	47%
Audience measurement	7%	41%	13%	39%

Key applications for advertising

Source: NEC Displays

Section 5. Measurement

Traditionally, measurement of Out of Home media has been driven through the understanding of how many people saw the campaign and how often. Campaign success has then been determined through two metrics: Reach and Frequency – the foundations of advertising measurement around the globe.

Today, measurement methodologies aim to use multiple sources of data, gathered through surveys and technology, to build a complete picture of OOH campaign performance.

One of the hot topics to emerge in the area of campaign measurement in recent years is around identity resolution in less addressable media. Put simply, brands want to measure all touch points with consumers in all mediums. The transition from less addressable to addressable media buying has disrupted all channels, including OOH. Programmatic OOH has a natural advantage against both less addressable buying methods and one to one digital activations by combining geofence data with beacon networks or footfall measurement for retailers.

Measurement with mobile devices also provides heat maps that can show the effectiveness of traditional OOH placements.

Mobile location companies have recently focused on providing detailed measurement frameworks to map each touch point of the customer such as dwell time in a store to actual purchases. Such advanced metrics will only improve as technology becomes more sophisticated. It will not be long, for example, before advertisers will be able to measure viewability of a DOOH frame through the use of eye-tracking tools.

Section 6. Creativity Considerations

What seems increasingly clear is that DOOH provides brands, advertisers and agencies with an unprecedented opportunity for creativity.

Automated buying allows brands to bring in data sources of their choice to do two key things in real-time:
1. Decide when to show an ad
2. Decide what ad to show

These capabilities enable a near infinite range of campaign permutations. Thanks to rules for targeting and creative decisioning, an advertiser buying DOOH programmatically through a DSP has countless more creative options than an advertiser purchasing through insertion orders.
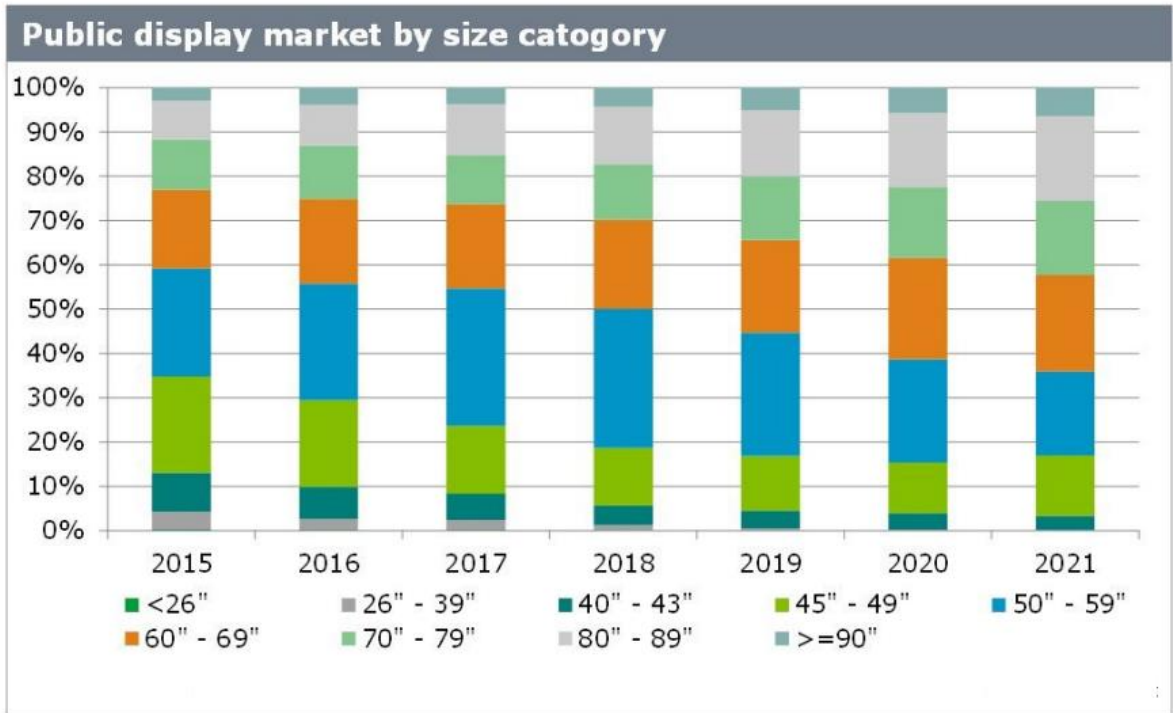
What's important is that advertisers are flexible when planning their programmatic DOOH creative strategy. Consumers on the go will often only glimpse an ad and they don't consider or care about the underlying transactional technology. As with all advertising, what will resonate with consumers is impactful creative that makes good use of data. That's why the use of HTML5 should be encouraged with programmatic DOOH as it opens even more creative doors for advertisers and makes it more likely their ads will win the attention of consumers.

Sizes, formats and strategy

DOOH screens are undergoing something of a growth spurt. Figures from IHS Markit suggest that continuing between 2015 and 2021 the trend has been for screen sizes to increase. However, DOOH screen sizes can still vary widely and that will affect the creative approach. Fortunately, HTML5 provides designers the flexibility and responsiveness they need to generate the same creative in all necessary sizes.

Creative length is another consideration. As with video campaigns, DOOH creative needs to be concise – certainly no more than 10 seconds. Whilst DOOH ads are non-skippable and non-intrusive, passers-by are not obliged to glance at an ad, let alone watch it in its entirety. It's also important for variety so that the same playout isn't repeated on the same spot continually.

To make ads contextually relevant, advertisers should look for sources of information that they can pass on to people as they walk, or drive, by the screen. The media owner may be able to help provide relevant data for this task, or it could be that the advertiser already has this information in its business analysis

Public display market by size catogory

Legend:
- ■ <26"
- ■ 26" - 39"
- ■ 40" - 43"
- ■ 45" - 49"
- ■ 50" - 59"
- ■ 60" - 69"
- ■ 70" - 79"
- ■ 80" - 89"
- ■ >=90"

Source: IHS Markit

When it comes to grabbing attention, animations are generally preferable to static ads. Here, advertisers should use fully animated ads using at a bare minimum the MP4 format. Advertisers can use a number of pre-prepared MP4s for use under different targeting conditions, though this might result in increased creative costs. It should be noted that in some cases it may not be possible to use animations, such as where regulations forbid their use on roadside screens.

As a final consideration, advertisers should look to use HTML5 for the creation of ad copies from a single package. Advertisers can still place full motion video within this format, as well as place dynamic elements that will differ based on data sources.

Creativity Tips at a glance

Provide, rather than ask	As with content marketing, sometimes the best approach with DOOH is to provide information to people rather than ask something of them. Consider providing weather data, transport news, events, headlines and conversations within your creative.
Explore third party data sources	Third party data can be used to help brands target specific audiences based on their known location at given times. Third party data can also be used for content-aware creative. Data to consider includes financial market data, train arrival times and air pollution data, all of which are usually available via APIs.
Investigate data sources within the company	A digital brand may have analytics data that shows user behaviour by location and time of day, which could be used in DOOH campaign settings. A physical retail brand, on the other hand, may have store analytics systems in place that can provide data for optimising footfall.
Have a cross-channel mindset	By using a DSP with capability to buy on a number of channels, you can enrich DOOH line items with mobile retargeting, or use your online campaign's behaviour for storytelling.
Engage creative agencies from the beginning	Proactively making creative agencies aware of the targeting capabilities available in programmatic OOH may inspire them to think about creative copy in a different way and spin off new ideas.
Use a 10 second Video that gets attention	As every second is a battle to gain and retain attention, catch the viewer's eye with animation and subtitles. Include the brand logo or product name 2 or 3 times within the content and use as much as possible smiling characters. Think about using your Video Social Media assets.

Section 7. Summary

Before the global pandemic, which brought a series of internal lock downs, DOOH programmatic in Europe was seeing high levels of growth across the value chain. With restrictions being lifted and movement increasing once again, SSP/DSP buying is in the midst of an uptick that looks set to continue.

As a one to many media, it requires new ways of thinking and greater collaboration between programmatic and OOH teams. But the benefits of the media make this effort worthwhile and look set to usher in more proximity-based campaigns, more cross-channel campaigns, and more contextual trigger-based campaigns. From a creative point of view, the media promises something of a renaissance as data-driven techniques come to the fore.

The market is young, but growing fast. It's the perfect time for all stakeholders to take stock and understand what it might mean for their business.

Contributors

IAB Europe would like to thank the following contributors who helped to author this Guide

Alp Ayhan, Founder and CEO, Awarion / Vice Chair IAB Turkey Programmatic Taskforce

Falguni Patel, Head of Business Development, Nielsen

Gokberk Ertunc, Programmatic Manager, OMD Turkey & IAB Turkey member

Pierre Gauthier, Vice-Chair, IAB Europe Programmatic Trading Committee and Executive Committee Member, IAB France

Laure Malergue, Founder and CEO, Displayce

Represented (as above) by Alp Ayhan and Gokberk Ertunc

Lauren Wakefield
Marketing & Industry Programmes Director
wakefield@iabeurope.eu

Helen Mussard
Marketing & Industry Strategy Director
mussard@iabeurope.eu