



**GNM Australia Pty Ltd**  
Public Response to the  
ACCC digital advertising  
services inquiry  
**June 2020**

# About GNM Australia Pty Ltd

Launched in May 2013, Guardian News & Media Australia Pty Ltd (GNMA) is a free premium digital news site in Australia, with a total reach of 10.3m people (*Nielsen DRM, April 2020*), making us the fifth most read news masthead in the country. We employ 61 FTE journalists and 35 FTE commercial and operations staff through our operations in Sydney, Melbourne and Canberra, as well as numerous freelance contributors.

We are a trusted source of quality news with a particular focus on politics, the environment and social welfare. We are also part of the Guardian's 24-hour global news operation, helping to cover breaking international stories in all parts of the world. GNM Australia operates as an Australian Pty Ltd company with revenue invested back into Australian journalism.

GNMA is owned by Guardian News and Media Holdings (GNMH) which is owned by Guardian Media Group (GMG), which is the publisher of [theguardian.com](http://theguardian.com), a leading global English-language newspaper website. The Scott Trust is the sole shareholder in GMG and its profits are reinvested in journalism and do not benefit a proprietor or shareholder.

## Introduction

The digital economy has evolved rapidly, and it has evolved organically. At the heart of the present structure of the digital economy is an online advertising market that is based on the use of personal data in order to serve targeted marketing to consumers. The introduction of programmatic advertising technology has industrialised the online advertising market, enabling intermediaries to match the demands of advertisers for inventory, made available by publishers, in a real time online trading marketplace.

As the recent two year study from ISBA and PWC into the digital supply chain in the UK demonstrates how the rapid growth of this marketplace means that systems have quickly become complex and opaque. At a headline level, the study found that 50% of advertising revenues are lost to middlemen before they land as an impression on a publisher website. Beneath the surface of the report, symptoms of a broken market include findings that:

- "15 advertisers had nearly 300 distinct supply chains to reach 12 publishers..."
- A lack of uniformity across the supply chain on whether data is stored on a log level or aggregated basis led to a number of problems in data matching. Inconsistencies across parties in data formatting (names, currency, device type etc) further increased these challenges...
- The data captured from a DSP for an impression is not equally captured on the sell side. Impression matching cannot easily be performed at campaign level due to missing information in datasets."<sup>1</sup>

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<sup>1</sup> <https://www.isba.org.uk/knowledge/digital-media/programmatic-supply-chain-transparency-study/>

The central finding of the ISBA/PWC report is that standardisation is “urgently required across a range of contractual and technology areas, to facilitate data sharing and drive transparency”.

## Focus on the fixing the underlying problem

Programmatic advertising can be used to buy inventory on a specific website through direct deals and private marketplaces, or to target an audience of users that accord to a set of specified metrics, at a given time, wherever they go across the web. Programmatic trading through the open marketplace (OMP) has rapidly become the predominant way in which online advertising is bought and sold online today. Trading is underpinned by a global technical protocol, OpenRTB, which is designed and promulgated by the IAB Tech Lab, a part of the wider IAB trade body group. Google has its own variant of this protocol, Authorised Buyers<sup>2</sup>, which underpins its many advertising products and services.

OpenRTB is a set of technical parameters that set out the types of data that *may* be transmitted; what commands are used to send and receive data; and/or how data transfers are confirmed. The protocols are implemented in a range of ways by businesses across the ecosystem. As a result, there is no uniformity of data provided to publishers or advertisers about how auctions for advertising inventory are conducted in practice. As the ISBA/PWC notes, *“each study participant had different data definitions, taxonomies and signifiers”*.

The lack of consistent market data in the online advertising market contrasts poorly compared with other marketplaces with real-time trading at its heart. The Australian Investment and Securities Commission provides guidance which regulates the operation of companies that operate in financial markets, including in relation to the production of market data<sup>3</sup>. In Europe, financial markets are underpinned by the Markets in Financial Instruments Regulation (MiFIR), which require that UK and EU firms *“submit complete and accurate transaction reports to the regulator within one working day of execution”*. This regulation is, in turn, enforced by the Financial Conduct Authority in the UK, which is able to levy fines on firms where they fail to comply with reporting requirements<sup>4</sup>. In the US, following the financial crisis, the Security & Exchanges Commission established the Consolidated Audit Trail plan<sup>5</sup> with the ambition of achieving *“the primary goal of creating a single, comprehensive audit trail to enhance regulators’ ability to surveil the U.S. markets in an effective and efficient way”*.<sup>6</sup>

While the size and scale of financial markets is substantially greater than the online advertising market, online advertising underpins the business models of some of the

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<sup>2</sup> <https://developers.google.com/authorized-buyers/rtb/start>

<sup>3</sup> <https://asic.gov.au/media/1240949/rg172-reissued-24-september-2013-1.pdf>

<sup>4</sup> <https://www.fca.org.uk/news/press-releases/fca-fines-goldman-sachs-international-transaction-reporting-failures>

<sup>5</sup> <https://www.catnmsplan.com/about-cat>

<sup>6</sup> <https://www.catnmsplan.com/about-cat>

most valuable and powerful technology companies in the world today. Online advertising can also be used to fund a range of negative online content and activity which cause a range of harms to consumers. While online advertising remains in relative infancy, it is clear that online advertising will be the primary channel through which brands seek to market to consumers in the future<sup>7</sup>. The model of regulation that underpins financial markets does, therefore, provide a helpful blueprint as to how regulation can improve the quality of market data, restoring trust and transparency for those involved in market trading.

Such efforts are vital to reform a market in which the market data is not made available to a third party regulator for audit and assessment, nor is it often made available to buy and sell sides to enable robust interrogation of fraud or misallocation. By way of stark example, it took the ISBA/PWC study team 9 months to gain access to auction data relating to transactions between *“15 advertisers, 12 agencies, five DSPs, six SSPs and 12 publishers, representing approximately £0.1bn of UK programmatic ad spend.”*

In this context, it is perhaps unsurprising that advertising fraud is estimated to have cost \$19bn, or 9%, of total digital advertising spending in 2018 with predictions this will grow to “\$42 billion of ad spend [in 2019] across online, mobile and in-app channels”<sup>8</sup>. Nor is it surprising when studies find that over a six-year period in which the digital advertising market grew by 177%, ad tech vendor revenues grew by an extraordinary 930% over the same period.<sup>9</sup>

This money does not just disappear, it goes somewhere. The advertising technology company AppNexus has drawn a direct line between ad fraud - which is itself a symptom of opacity by design - and a black economy that supports and encourages the proliferation of misinformation and fake news.<sup>10</sup> This is wastage that ultimately means higher prices for consumers, and less money being directed towards media owners who invest in high quality journalism and other forms of media.

## 1. How competitive do you consider each market in the ad tech supply chain to be and why?

As we note in the introduction to this response, the inconsistent nature of market data currently generated by ad tech vendors, combined with the inability for advertisers and publishers to gain access to that data, makes it incredibly difficult to make a detailed assessment of the degree to which market participants are providing a good level of service. Fixing the basics of the marketplace should create a positive domino effect, enabling advertisers and publishers to have more control over good ads placed in bad places, and bad ads attempting to be placed in good places. It should also enable advertisers and publishers to hold ad tech intermediaries to account for performance

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<sup>7</sup> <https://www.thedrum.com/news/2019/06/13/global-ad-spend-slow-digital-will-capture-50-budgets-2020-says-groupm>

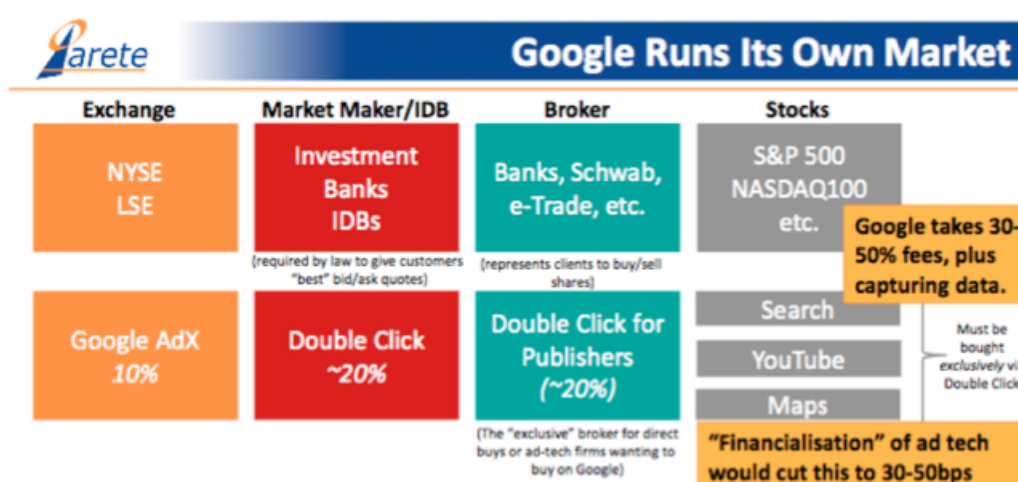
<sup>8</sup> <https://www.businesswire.com/news/home/20170926005177/en/Juniper-Research-Ad-Fraud-Cost-Advertisers-19>

<sup>9</sup> <https://adexchanger.com/agencies/zenith-more-money-goes-to-ad-tech-than-to-actual-media/>

<sup>10</sup> <https://www.appnexus.com/en/company/whitepapers/inventory-quality-whitepaper>

against contract, increasing the performance of those vendors, incentivising innovation based on transparency and accountability.

In terms of competition across the ad tech supply chain, Google is the pre-eminent business across all aspects of that value chain, reaching from: ecosystem (Android); to browser (Chrome); to search engine (Google Search); to AI assistant (Google Home); to adwords; to ad serving on behalf of advertisers (DFA); to ad serving for publishers (DFP); to its own ad network (GDN); to the aggregation of ad networks (DBM); to the analysis of the whole ecosystem through Google Analytics. The convergence of these products - and the move in 2012 to consolidate 70 separate privacy policies into a single privacy policy - have raised concerns about the ability of Google to aggregate, investigate and act upon this personal data within its products and services.<sup>11</sup>



Analysts Arete have drawn parallels between Google's position at the heart of the digital advertising market, to a scenario in which JP Morgan sat at the heart of the financial markets playing a part in every side of a financial transaction. Arete has suggested that this position enables Google to extract 30-50% of transaction value, which is the aggregate value taken by Google at multiple points of the same transaction, as it flows across the Google ad stack. Those transaction costs are significant, yet opacity in the market means that it is hard to know what publishers actually receive as the market data that is generated is inconsistent, and is often not disclosed to either the advertiser or publisher.<sup>12</sup>

## Google/DoubleClick merger

The DoubleClick purchase enabled Google to acquire data and functionality, but also to eliminate a rival supplier from the market, creating a dependency at the heart of the digital economy. Google DoubleClick is integrated into more websites and demand

<sup>11</sup> <https://www.wired.co.uk/article/google-ico-privacy-policy32>

<sup>12</sup>

<https://www.arete.net>

sources than any other ad exchange, enabling Google to effectively control advertiser demand, which in turn makes it an indispensable platform for publishers to interconnect with. Google is clear about this advantage, stating in promotions that DoubleClick enables clients to *“Connect [their] inventory to unmatched global demand... Only DoubleClick Ad Exchange connects you to millions of Google AdWords advertisers, plus a worldwide pool of top networks, trading desks and DSPs. Increase competition for every impression with unparalleled global demand.”*<sup>13</sup>

The decision to allow Google to buy Doubleclick in April 2007 enabled Google to entrench its position at the heart of the digital advertising ecosystem, whilst in one transaction, removing any realistic prospect of a third party entering the market to compete with Doubleclick.

As FTC Commissioner Harbour wrote in her 2007 dissenting opinion in the Google/DoubleClick merger, *“It is difficult to believe that Google - with a market capitalization of nearly \$207 billion, a top-notch engineering team, and a wealth of connections among publishers and advertisers - would have been unable to refine its beta product and release a highly competitive third party ad serving solution of its own... By purchasing DoubleClick, Google will acquire data that will contribute to, and exacerbate, network effects. As a result, the Google/DoubleClick combination is likely to “tip” both the search and display markets in Google’s favour, and make it more difficult for any other company to challenge the combined firm.”*

Before being consumed within Google Ad Manager (GAM), the independent Doubleclick network represented the plumbing between advertisers, ad exchanges and publishers who owned advertising inventory. Alongside all of the data that Doubleclick had collected to understand the intentions and interests of users on sites across the web, DoubleClick was integrated into more websites and demand sources than any other ad exchange.

In her dissenting opinion of the Doubleclick merger, FTC Commissioner Harbour noted that *“the combined Google/DoubleClick will become a “super-intermediator” with access to unparalleled data sources. In this role, Google/DoubleClick may be able to match up buyers and sellers in ways that more fully maximize the value of all advertising space. As the merged firm’s dataset grows, data-driven algorithms may perform at least as well as direct sales - if not better - in choosing which advertisements to display to generate the greatest return on investment. If this were to occur, the value of intermediated “remnant” space might approach (or surpass) the value of directly-sold “premium” advertisements, in terms of the ability to place the right message in front of the right Internet users at the right moment.”*

This prediction in 2007 is consistent with how the market has evolved, post-merger. Google has flattened the value of inventory in premium environments down to that of

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<sup>13</sup> <https://web.archive.org/web/20170810192643/https://www.doubleclickbygoogle.com/solutions/revenue-management/ad-exchange/>

inventory on long tail websites, and UGC sites such as YouTube, that are owned and operated by Google.

In terms of a realistic alternative to GAM, there is very little choice in the market, with only AppNexus providing a vaguely credible offer as a partner that could play a similar role in advertising operations. The purchase of AppNexus by US telco AT&T has been seen as evidence as reduced competition for the largest ad intermediaries in the supply chain<sup>14</sup>.

The more recent integration of AdX with GAM on the server side, means that AdX has all the inventory targeting capabilities of an ad server, without the extra work that all other SSPs require. It also means that it is much easier to set up and run programmatic guaranteed campaigns, which can otherwise be a very manual and time-consuming process. This means that GNMA tends to favour Google systems for more premium advertising sales, as it gives GNMA the targeting and execution that most clients want, without the need for development work or difficult setups.

There is also the additional technical advantage that DV360 has with GAM, as they share the same cookie space. This helps with targeting and richer audiences. Google also sets a first-party cookie via its ad tag on page, whilst intermediaries are all third-party.

There is an ease of integration and compatibility of Google tools, and consistent measurement and metrics. However, DV360 still provides invalid traffic claims<sup>15</sup>, whilst giving us little or no insight into why the claim the traffic to be invalid. When asking questions about transactions and data sets performed between different aspects of Google's business, Google has suggested that they cannot provide a response as a result of separation between individual Google business units.

## Data monopolies

Commodities such as data and consumer attention do not obey the same rules as other products. Large data sets can be very difficult to gather and replicate, creating a barrier to entry for everyone apart from the one company who gains dominance first. In addition, the value of data is directly linked to an organisation's ability to process it and to use the insights from that data. A piece of data on its own can be worthless if it is not understood within the context of other pieces of data, and therefore cannot be understood and analysed to guide commercial decisions. The attitude of those at the heart of silicon valley culture is perhaps best summarised by the view of Peter Thiel, co-founder of PayPal and Palantir, who said: *"Competition is for losers. If you want to create and capture lasting value, look to build a monopoly."*<sup>16</sup>

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<sup>14</sup> <https://digiday.com/media/ceo-brian-lesser-gone-advertisers-question-atts-commitment-xandr/>

<sup>15</sup> <https://www.google.com/ads/adtrafficquality/invalid-activity.html>

<sup>16</sup> <https://inform.org/2018/06/22/why-tech-markets-are-winner-take-all-patrick-barwise/>

Examining the intersection between big data and competition law, the European data protection supervisor, the late Giovanni Buttarelli, wrote that the Commission decision on the Google/DoubleClick erred in taking case took a *“purely economic approach to the case, [meaning that] the commission did not consider how the merger could have affected the users whose data would be further processed by merging the two companies’ data sets, conceivably to provide services, perhaps bundled or even tied to the simple search service, that were not envisaged when the data were originally submitted. The decision did not refer to consumer welfare nor to the users of Google’s search engines, even though this potentially implicated every internet user in the EU. It therefore neglected the longer term impact on the welfare of millions of users in the event that the combined undertaking’s information generated by search (Google) and browsing (DoubleClick) were later processed for incompatible purposes.”*<sup>17</sup>

The ability of advertising intermediaries to demonstrate how they will collect, aggregate and deploy personal data - in order to use that data to sell advertising, or other products and services - is what matters in relation to those platforms receiving venture capital funding to build, grow and innovate around new products and services. As the online advertising market becomes more concentrated in the hands of just a few global online platforms, it will become more difficult for new entrants to secure funding from traditional sources such as venture capital.<sup>18</sup>

The introduction of new regulations such as the General Data Protection Regulation - and the prospect of an enhanced ePrivacy regulation - are also impacting on appetite for investment in adtech that is not owned by the major online platforms. A study by the FT, published in January 2017, found that the *“number of global adtech venture financing deals will touch 343 by year-end, a 17 per cent drop compared with 414 deals in 2015... The data also showed a 33 per cent drop in the volume of funding in the past year, from \$3.2bn to an estimated \$2.2bn – comparable to 2013 volumes.”*<sup>19</sup>

The flight of capital away from ad tech businesses is negative for publishers, who often rely on third party ad tech to serve relevant advertising within their environments to provide a competitive dynamic against the services provided by dominant online platforms. Market consolidation will mean that publishers, media owners, advertisers and media agencies will become increasingly reliant on a few, large digital intermediaries to trade and serve digital advertising.<sup>20</sup> Citizens seeking a career in the advertising industry will also be faced with a reduced number of companies with whom they might consider pursuing a career, while governments seeking to maintain high quality advertising sectors within key cities and regions will become ever more reliant on a small number of dominant businesses to drive investment and jobs. Innovation

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<sup>17</sup>[https://secure.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2014/14-03-26\\_competition\\_law\\_big\\_data\\_EN.pdf](https://secure.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2014/14-03-26_competition_law_big_data_EN.pdf)

<sup>18</sup><https://www.theguardian.com/technology/2017/oct/20/tech-startups-facebook-amazon-google-apple>

<sup>19</sup> <https://www.ft.com/content/c4c358ca-c6af-11e6-8f29-9445cac8966f>

<sup>20</sup><https://www.standard.co.uk/business/gideon-spanier-beware-the-big-beasts-as-facebook-and-google-squeeze-rivals-a3304851.html>



will be defined on the terms of those businesses in line with their own aims and commercial models.<sup>21</sup>

## 2. Do ad tech suppliers provide their customers with services that reflect the cost of providing that service and/or the value of that service to the customer?

As we note in the introduction to this response, the inconsistent nature of market data currently generated by ad tech vendors operating in the online advertising market, combined with the inability for advertisers and publishers to gain access to that data, makes it difficult to assess whether market participants are providing a level of service that reflects the cost of providing that cost to the customer. Fixing the basics of the marketplace should create a positive domino effect, enabling advertisers and publishers to have more control over good ads placed in bad places, and bad ads attempting to be placed in good places. It should also enable advertisers and publishers to hold ad tech intermediaries to account for performance against contract, increasing the performance of those vendors, incentivising innovation based on transparency and accountability.

The lack of consistent, verifiable market data means that it is hard to ascertain basic information about transactions within the open marketplace, let alone enable advertisers and publishers to verify the security and efficiency of the programmatic marketplace. Estimates suggest that opacity at the heart of the digital advertising market has led to the loss of \$19bn, or 9% of total digital advertising spending in 2018,<sup>22</sup> to ad fraud. Some analysts predict that ad fraud grew again in 2019, to \$42 billion of ad spend being lost across online, mobile and in-app channels being<sup>23</sup>.

This money does not just disappear, it goes somewhere. The advertising technology company AppNexus has drawn a direct line between ad fraud - which is itself a symptom of opacity by design - and a black economy that supports and encourages the proliferation of misinformation and fake news.<sup>24</sup> This is wastage that ultimately means higher prices for consumers, and less money being directed towards media owners who invest in high quality journalism and other forms of media.

As noted in our introduction, the recent two year study from ISBA and PWC into the digital supply chain found that 50% of advertising revenues are lost to middlemen before they land as an impression on a publisher website. In its recent interim report on the online advertising market, the UK Competition & Markets Authority (CMA) examined how a firm with market power in this market would exploit that power, stating that,

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<sup>21</sup> <https://digiday.com/media/google-is-about-to-test-candidates-to-succeed-the-third-party-cookie/>

<sup>22</sup> <https://www.businesswire.com/news/home/20170926005177/en/Juniper-Research-Ad-Fraud-Cost-Advertisers-19>

<sup>23</sup> <https://www.emarketer.com/content/the-size-of-the-ad-fraud-problem-in-digital-marketing-is-varying>

<sup>24</sup> <https://www.appnexus.com/en/company/whitepapers/inventory-quality-whitepaper>

“Typically, a firm with market power would be able to exploit it by raising prices. We note that advertising-funded platforms use auctions rather than setting prices directly, and therefore may be considered to have less influence over the price. However, such platforms can employ various levers within those auctions that directly and indirectly influence advertising prices. For example, search engines such as Google determine the maximum number of ads that can be shown per search query, how these ads are presented, the way in which relevance is assessed, the level at which reserve prices are set and the way in which matching algorithms work. These levers collectively influence the prices advertisers pay.

We have found that the profitability of both Google and Facebook has been well above any reasonable estimate of what we would expect in a competitive market for many years. In 2018 we estimated that the cost of capital for both Google and Facebook was around 9%, compared to actual returns on capital of over 40% for Google and around 50% for Facebook. This evidence is consistent with the exploitation of market power.”

### Unified pricing changes

Moves by Google, announced in March 2019, to change the auction process within GAM that Google says will “transition publisher inventory to a unified first price auction for Google Ad Manager.” Google suggested that the move to a single first price auction will help to “reduce complexity and create a fair and transparent market for everyone.”

The effect of these changes for publishers is to create universal floor prices within GAM, and remove some of the functionality that publishers use to control and manage the value of their inventory. The changes have removed the ability for each publisher to price by bidder or buyer. The ability to price by demand source is essential, both to prevent intermediaries in the supply chain getting access to high quality publisher inventory at below market price, as well as to prevent the injection of malware in GNMA’s system.

The unified pricing changes mean that Google demand sources cannot be priced differently to other demand sources. This has implications for the ability of publishers as they seek to stimulate competition for publisher inventory in the marketplace. Appendix H of the UK CMA’s interim digital advertising market study notes that the “transition to Unified Auction has been accompanied by changes to how publishers are allowed to set floor prices. Specifically, publishers using Google Ad Manager are no longer allowed to set different floor prices for different buyers (eg SSPs or DSPs). Google’s internal documents show that this was an integral part of the design of the Unified Auction and was motivated by the fact that publishers tended to set higher floor prices for AdX compared to other SSPs.”

## Content Verification Providers

In the era of newspapers, television, radio, or indeed direct sales of digital advertising online, there was a connection between advertising and the content it funds, creating a high degree of accountability for both parties in that transaction. This maintained high content standards, and enabled advertisers to demand or pursue change from publishers whose content standards fell.<sup>25</sup> As advertisers have become more reliant on the use of personalised audience targeting on search and social platforms in order to reach consumers, advertisers have lost the leverage they have traditionally had to demand change in the policies or practices of the platforms. While many high-quality publishers continue to operate stringent policies in relation to the digital advertising that they permit to appear within their services, in a world of programmatic audience trading that self-regulated compact between advertisers and platforms does not exist.

Where brands pursue an advertising strategy based on chasing audiences across the web at the lowest possible price, they can find that their advertising impressions end up spread thinly, across the long tail of the web. The UK ISBA/PWC report, for example, found that of the 15 advertisers that took part in the study, *“advertisers appeared on an average of 40,524 websites, most being non-premium. Only 19% of impressions were served to study publishers”*.

In place of the clear accountability between advertising and the content it funds, content verification services have emerged to try and assure advertisers that audience targeting will not result in their advertising impressions running in ‘unsafe’ contexts, content verification providers (CVPs) offer blocking services has emerged as yet another player in the lumascape.

Different advertisers use different CVPs, each of which uses a different taxonomy and methodology to put in place keyword post-bid blocks, which prevent impressions bought legitimately through programmatic auctions, being served on a website. High profile examples of such blocking include on the New York Times and Wall Street Journal websites, just as but many publishers - including The Guardian - lose booked revenue everyday as a result of the use of CVP technologies<sup>26</sup>.

In addition to providing post-bid keyword blocking services, CVPs also enable advertisers and agencies to block at a pre-bid stage, using the data generated by post-bid tools to teach algorithms to prevent auctions from taking place at all. The crawling and analysis that CVPs perform on publisher websites is fed back as data signals to inform pre-bid actions, creating a feedback loop for advertisers using their tools when purchasing through DSP partners. This creates a vicious cycle as post-bid data is used to educate algorithms to avoid sites that have a high proportion of articles that feature terms that advertisers are advised that they should block advertising running against. This means that spend never lands on news publisher websites, and therefore is never blocked at a post-bid stage. The fact is that, even with access to post-bid keyword

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<sup>25</sup> <https://www.theguardian.com/media/blog/2011/jul/07/news-of-the-world-phone-hacking-live-coverage>

<sup>26</sup> <https://www.buzzfeednews.com/article/craigsilverman/news-sites-need-ads-to-survive-the-coronavirus-more-than-35>

blocking data - which publishers normally have to pay to access - it is not possible to understand the actual impact of CVPs on news publishers monetisation without corresponding access to pre-bid data. We understand from CVPs that, in line with much of the data generated in the online advertising marketplace, it is unlikely that publishers could currently gain access to DSP data to analyse the impact of CVP tools at a pre-bid stage.

In order to gain any level of understanding about how these tools are impacting inventory running on their websites, publishers are forced to subscribe to multiple tools provided by different verification companies. The lack of consistency of how CVPs operate, and the blunt nature of their tools, means that publishers are forced to pay money to companies that are effectively demonetising the investment that publishers make in journalism. While high level guidance is provided on the use of these tools by trade bodies, these companies are largely unregulated.

The recent UK ISBA/PWC report raises significant questions about how effective CVP tools are in preventing ad misplacement. The distribution of advertising inventory to an average of 40,524 websites suggests that these tools are not targeting advertising to inventory hosted within reputable environments. At the very least, it is not clear how any brand could meaningfully analyse or assess whether they are happy for their spend to appear on all of those 40,524 websites. When combined with a lack of access to high quality market data, and the ability to use auction data to track through where advertising impressions have been bought, it would be incredibly difficult for advertisers to understand whether money has been spent on working media, or has been subject to advertising fraud.

In terms of the lack of a level playing field between independent publishers and online platforms in relation to CVP tools, while CVP tools are responsible for the loss of actual (and potential) spend on publisher websites, CVP tools cannot be deployed against content and activity hosted on dominant social platforms. This means that while ads are prevented from running within premium editorially curated environments, there is no way to prevent those same ads from running against uncurated user generated content within walled garden environments.

The current content verification paradigm means that while a brand might choose to prevent their ads from running on an extremist website, they are presently unable to prevent their ads from running next to the feed of a social media user, who views extremist content through that site. This is like banning ads from running in extremist magazines, but allowing a stockist of extremist magazines to profit from engagement with those magazines through advertising plastered on the walls of that stockist. The inability for brands to use CVP tools to prevent adverts running within social platforms, means that those platforms have no incentive to build tools - or allow the use of third party tools - to do so. On the contrary, the incentive is to use the justification of free speech to enable the distribution of the widest possible range and volume of content, on the basis that all of that content generates user engagement, which can be monetised through user engagement with advertising within that environment.

Given the cost of content verification tools to both advertisers and publishers, there is a question about what these tools are for, what is the harm that they are seeking to prevent? Is it the prevention of advertising monies being used to fund or encourage the dissemination of extremist content, or is it simply to try and prevent the embarrassment of their brand being found on an extremist website? The ability for the advertiser to access more reliable market data could negate the need to use CVP tools, by enabling that advertiser to develop more nuanced targeting strategies.

In the meantime, while the CVP market continues to expand, the ACCC should work with internet advertising trade bodies to standardise the taxonomies of the content verification provider industry. The impact of these technologies on the blocking of advertiser spend demonetisation of publisher inventory should be made available to advertisers and publishers - in relation to both pre-bid and post-bid keyword blocking - at no cost.

5. Who are the main competitors in the supply of the following ad tech services in Australia? Please provide market shares estimates wherever possible.

- a) publisher ad servers?
- b) supply-side platforms and ad exchanges?

(Note: To the extent that these services are fully integrated, they will be considered as a single entity. If you consider these functions to remain separate, please provide separate information for supply-side platforms and for ad exchanges.)

- c) ad networks?
- d) demand-side platforms?
- e) advertiser ad servers?

Please find attached appendix A, which details the detail requested at question 5.

6. For each service in the ad tech supply chain, do any firms have the ability to profitably raise prices or lower quality without losing customers?

Google

The fact that Google is the dominant search engine in Australia and the provider of advertising technology products across both the buy side and sell side of the digital advertising market, means that over time, Google has created the biggest pool of demand and supply across the search and display markets in the digital world, and much of this inventory is tied to the use of Google's ad products. This, along with Google's dominant search business, creates a virtuous circle for Google whereby:

- advertisers have to use Google advertising products to gain access to the vast audience of individuals that use Google's consumer products;
- publishers have to enable the crawling and distribution of their content via Google consumer products in order to be visible to members of the public who use Google services, providing key data points to Google which it uses for ad personalisation, and;
- publishers have to use Google advertising products in order to ensure that they feature as part of a consolidated buy from advertisers and agencies acting on their behalf.

## Integral Ad Science (IAS)

IAS provides content verification (CVP) technology, which seeks to provide advertisers with assurances around where ad impressions are bought online. IAS provides another measurement tool other than the adserver. As we note above, in some instances advertisers use CVP to block ads from appearing against content that is bad or affects brand suitability. In other instances, the technology produces 'false results' and blocks advertising against legitimate journalism. Many marketers use custom keyword blocklists to guarantee their ads do not appear alongside undesired content even if in legitimate journalism publishers. Consequently, some ads are blocked post delivery and may negatively impact the effectiveness of the campaign.

IAS dynamically scores individual pages. Whether it's adult content, alcohol, gambling, hate speech, illegal downloads, illegal drugs, offensive language, or violence. A publisher must use IAS in order for their content to be categorised. IAS has trading agreements with many agencies, based on this technology service. IAS competes with Oracle's (Moat), Comscore and now Doubleverify. All of whom are now seen as being an obligatory industry standard, but the tech that is deployed is often blunt and authorises buyers to implement any parameters behind the adtag, without a mandatory disclosure to the publisher. This can have a detrimental effect on the campaign as inventory is subjected to unknown parameters affecting delivery. Publishers are directly held to account for terms that weren't disclosed such as keyword URL blocking.

In order to strike an agreement with agencies, publishers such as GNM have to commit to using and paying for IAS services on their sites. IAS is the biggest of a number of companies (as listed above) that provide content verification services to agency and advertising partners. In order to continue trading in the online marketplace, publishers have to contract with IAS in order to ensure that their inventory is searchable by IAS. Without paying IAS, publisher inventory would not be visible to IAS tools, and therefore would not be made available through ad auctions on the buy side. The intermediation of the buy side and sell side by content verification providers has further fractured the relationship between advertisers and premium publisher inventory, and added significant additional monthly cost for publishers.

Along with this, these vendors require Publishers to carry extra code on a page level and/or by creative. Having a negative effect on a Publisher's page speed and increasing the weight for displaying creative ads, affecting load times.

Display advertising services

## 10. Who are the main suppliers of display advertising services in Australia?

Major suppliers of inventory across the Australian market are:

- Facebook display network
- Google ad exchange which includes display advertising from the following major media players:
- News digital - NewsCorp who own the number one commercial digital offering in Australia - news.com.au and have other publications such as The Australian, Daily Telegraph and Herald Sun.
- Nine digital - Nine network who own nine.com.au and also the other digital newspapers SMH, AGE, Australian Community Media and others.
- Seven West Media which has 7news
- Daily Mail Australia
- Guardian Australia
- SBS

## 11. Do any of these suppliers have the ability to profitably raise prices or lower quality without losing customers in the market for display advertising.

It is unlikely that any online news publisher would be able to profitably raise prices in the marketplace without losing customers.

The rapid growth of search and social platforms, as a result of limited liability for the user generated content that they host within their walled gardens, has seen a rapid increase in the volume of advertising inventory available within those walled gardens for advertisers to purchase. When combined with the capture of personal data, provided by users at sign-up, and data generated through browsing and activity in and outside those walled gardens, search and social platforms have defined buy-side expectations about how personalised consumer targeting should be.

In terms of the quality of service providers to advertisers and users, we note above how content we understand that social media platforms do not allow advertisers to deploy CVP tools within their walled garden environments. This means that advertisers accept much lower assurances around the standards applied as to where their advertising impressions have appeared within those walled garden environments.

Facebook has also faced years of questions cacy of video advertising on its platform. In June 2016, Nicola Mendelsohn, Facebook's VP for EMEA said that video viewing was burgeoning on the platform, saying that *"We're seeing a year-on-year decline on text... We're seeing a massive increase, as I've said, on both pictures and video. So I think, yeah, if I was having a bet, I would say: Video, video, video."* Facebook CEO, Mark Zuckerberg had previously said in April 2016 that *"We're entering this new golden age of video... I wouldn't be surprised if you fast-forward five years and most of the content that people see on Facebook and are sharing on a day-to-day basis is video."* Evidence submitted as part of the legal action suggests that Facebook knew that some of the metrics that they were using to calculate time spent watching video were dramatically inflated. *"In one, Facebook had inflated Average Duration of Video Viewed from 2.0 seconds to 17.5 seconds (an increase of 775%); in the other, Facebook had inflated Average Duration of Video Viewed from 2.4 seconds to 17.3 seconds (an increase of 621%)."* Facebook claimed in a blog post that *"As soon as we discovered the discrepancy, we fixed it."* However, the legal action suggests that Facebook knew about the issue for at least a year before admitting anything in public.<sup>27</sup>

The decision to allow Facebook to acquire Instagram and WhatsApp means that there is limited competition in the social media advertising market to ensure that they maintain high standards in the service they provide to advertisers. From an advertiser perspective, the fact that Facebook, Instagram and WhatsApp are all owned by the same ultimate parent business means that they have a limited range of options in terms of where they can spend marketing budgets. As a recent article about the launch of Facebook Stories, as a competitor to Instagram Stories, outlined *"Even when Facebook loses, it still wins. Price spikes are scaring away some advertisers from Instagram Stories and leading them to diversify to ... Facebook Stories, which are cheaper."*<sup>28</sup>

In relation to raising or lowering prices, the UK CMA recognises that prices are not set in a traditional way by online platforms, but can be influenced by a range of factors. In its interim report on online platforms, the CMA notes that,

*"advertising-funded platforms use auctions rather than setting prices directly, and therefore may be considered to have less influence over the price. However, such platforms can employ various levers within those auctions that directly and indirectly influence advertising prices. For example, search engines such as Google determine the maximum number of ads that can be shown per search query, how these ads are presented, the way in which relevance is assessed, the level at which reserve prices are set and the way in which matching algorithms work. These levers collectively influence the prices advertisers pay."*

The reality for advertisers and publishers operating on either side of the online advertising market, is that the opacity surrounding the operation of advertising

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<sup>27</sup><http://www.niemanlab.org/2018/10/did-facebooks-faulty-data-push-news-publishers-to-make-terrible-decisions-on-video/>

<sup>28</sup><https://digiday.com/marketing/demand-instagram-stories-ads-heats-early-adopters-turn-facebook-stories>



intermediaries and the inconsistency of auction data generated through the marketplace, means it is not possible to audit the performance of suppliers.

Questions for market participants

12. Who are the main competitors supplying the following data services in Australia? Please provide market share estimates wherever possible.

- a) data management platforms
- b) data brokers
- c) data analytics services, and
- d) ad measurement and verification services.

13. What types of data are of value to ad tech services providers?

The data points used by ad tech intermediaries for the processing of online advertisers are set out in the latest IAB tech lab openRTB schema.<sup>29</sup>

The rapid growth of search and social platforms, as a result of limited liability for the user generated content that they host within their walled gardens, has seen a rapid increase in the volume of advertising inventory available within those walled gardens for advertisers to purchase. When combined with the capture of personal data, provided by users at sign-up, and data generated through browsing and activity in and outside those walled gardens, search and social platforms have defined buy-side expectations about how personalised consumer targeting should be. In defining the norms of the marketplace based on the volume and specificity of personal data that can be collected about a user, and the ability to aggregate that data in order to sell online advertising based on audience characteristics, audience targeting has reduced the value of advertising inventory hosted within editorially curated premium environments.

More broadly, the way in which the norms that determine success in the online advertising market have developed are disadvantageous to consumers and to premium publishers such as GNM. The capture of data in order to measure advertising performance has led to the emergence of a number of direct response metrics, including:

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<sup>29</sup> <https://github.com/InteractiveAdvertisingBureau/openrtb>

## Last touch attribution

Last touch attribution means that the credit for a “conversion” on the advertiser’s site (e.g. a purchase or call to action) is attributed to the partner or publisher that drove the last impression that the user saw before they purchased or acted. It ignores factors such as the other times that the user may have seen advertising. It is also known as a “cost per acquisition” (CPA). The use of CPA has been industrialised by Google’s doubleclick ad server and these metrics are now commonly used on most digital advertising campaigns.

CPA has encouraged many of the practices that consumers dislike the most, such as an excessive frequency of retargeted ads<sup>30</sup> and the personalisation of intent based search based advertising, both of which have become the most prized forms of advertising offered in the marketplace today.

In the case of retargeting, if agencies or buyers are acting on behalf of an advertiser, there will be a group of people who have already visited the site who they believe represent the greatest probability of making a purchase on the site. Therefore, the media budgets will skew towards spending lots on these individuals whose browsing history suggests that they may already be interested in the product. Retargeting practices are the main reason why consumers feel like they are being “followed” around the web.

In the case of search advertising and why this is valued by the marketplace, typically someone searching for something on the web demonstrates the strongest level of intent, but it is also what people do at the last point in time before they make a purchase on a website. But the fact that the user has searched for a specific search term or product says nothing about the journey that user went on, in terms of exposure to advertising and branding through other media channels and platforms, whether online or offline.

The fact that those different points of exposure to that user cannot be tracked by other media channels and platforms to the same degree that Google is able to track, results in a high proportion of conversions being attributed to search, as this is generally the last place in the advertising funnel that the user goes before making an online purchase. In addition to Google being able to use data gathered through multiple touchpoints with the end user, through its Play store, Google also has access to credit card data which further enables it to assert that it was *their* search advert that triggered the end user to make a purchase.<sup>31</sup> The UK CMA noted in its interim report in figures E.2 and E.3, that the volume and completeness of Google’s data set - gathered via multiple separate Google products - makes it almost impossible for other tech platforms, let alone independent media owners such as GNMA, to compete with that data superiority. Put simply, that data enables Google to tell a story about the apparent effectiveness of its advertising business in a way that no other media company can.

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<sup>30</sup>[https://www.iabuk.com/sites/default/files/public\\_files/AA\\_Public\\_Trust\\_Paper.pdf](https://www.iabuk.com/sites/default/files/public_files/AA_Public_Trust_Paper.pdf)

<sup>31</sup><https://www.bloomber.com/news/articles/2018-08-30/google-and-mastercard-cut-a-secret-ad-deal-to-track-retail-sales>

## Cookie bombing

Another practice used by agencies and ad tech companies - in order to be credited with driving the conversion - is cookie bombing<sup>32</sup>. Cookie bombing involves showing an ad lower down the page in the browser of a large number of users, giving that cookie huge reach across the web. If the user does then click through to the page of an advertiser whose ad (and associated cookie) has featured somewhere on a publisher page, the cookie bomber will seek to assert that it was their advert that was responsible for the sale, and therefore is due an attribution fee, even if that ad was never seen by the user. Again, this practice of cookie bombing uses data and technology to infer responsibility for a purchasing decision by an end user, but says nothing about the multiple points at which that user may have seen adverts on premium publisher sites.

All of these measurement strategies utilise the ability to track the moment of purchase on digital devices. None of them speak to the effectiveness of media channels in delivering advertising that engages with the consumer, or the role that advertising plays in influencing the purchasing decision of a consumer over the long term. Given this approach, the firm with the most data is best placed to *suggest* that it was the crucial interface between the purchaser and the advertiser, and therefore should be rewarded for that transaction.

## Additional industry metrics

### Viewability

Some advertisers have come to the realisation that they trade in a market that is built on broken metrics. In response to concerns from advertisers, agencies have sought to find other ways to assure advertisers that media buys are effective. In 2013, the online measurement company ComScore released research which found that 53% of ads *“do not have the opportunity to be seen by a consumer”*.<sup>33</sup> In response, one of the metrics that has emerged is viewability, the industry standard metric that measures when 50% of the ad is in view for at least 1 second.

In theory, the use of a viewability metric could benefit advertisers and premium publishers, in the sense that it could be used as a way to give credit to the marketing with which consumers *actually* engage on the page, rather than inventory that is paid for on the web by an advertiser, but never seen by a consumer.

However, rather than viewability being used to restrict their campaigns only to viewable CPA, advertisers will generally attribute a proportion of value using a viewability threshold or target, as well as a cost per acquisition. So in this scenario, there is a campaign with a CPA metric, and a general viewability target of - say - 70%. Delivering these metrics in tandem is a challenging task, because the channels that

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<sup>32</sup> <https://digiday.com/marketing/brands-tum-blind-eye-confessions-former-agency-exec-attribution-scamming/>

<sup>33</sup> <https://www.comscore.com/ita/Public-Relations/Blog/Viewability-Benchmarks-Show-Many-Ads-Are-Not-In-View-but-Rates-Vary-by-Publisher>

worked well previously for direct response metrics (including those outlined above), are not necessarily the same channels that deliver strong viewability metrics, or the channels that are good for both are very expensive.

As a result of this tension, we see the rise of a new tactic - the placement of viewable inventory without the application of any targeting - in an effort by vendors to achieve the highest viewability possible, whilst in parallel placing unviewable inventory on a publisher site for the use of retargeting, cheap cookie bombing and search advertising, where DR consumer conversions are strongest.

While creating a metric for viewable inventory is a positive step forward, buyers continue to spend the vast majority of their marketing budgets on the non-viewable impressions that drive conversions. It is a reflection of the fact that the online advertising market has evolved to prize DR advertising over and above brand marketing, that even though buyers now have an option to buy impressions based on viewability, instead they continue to buy viewable impressions without a clear understanding of the context in which they are served, so long as they are cheap. This clearly undermines the incentive for continued investment in high quality environments, and instead incentivises the creation of lower quality environments that draw consumers in with a range of viral content. For consumers, who pay with their data and advertising views for access to content, that data is used to generate value for websites that host low quality content and low cost targeted advertising, which - unbeknownst to the user and outside of their control - has the effect of diverting advertising spend away from publishers that they do value and trust.

#### 14. Do ad tech services providers and ad agencies use both personal and non-personal information?

Yes - they will use both personal and non-personal data for the purpose of processing online advertising. It is the ability to combine various inherent personal data points with "live" contextual data that is most prized by advertisers.

#### 15. Do different types of ad tech services use different types of data? How is the data used to assist ad tech functions?

In March 2018, Google published new legal terms to take into account the implementation of GDPR in May 2018. As a result of these new legal terms, publishers were forced to accept Google's position as a co-controller of data collected by Google on digital properties where Google has a cookie present. GNMA understands that as a result of this position as co-controller, Google is able to combine first party data that they collect across 50 properties within the Google family of apps, with first party data gathered on publisher websites, in order to target advertising on GNMA's own site.

Google's self-determination as to its co-controller status was not the subject of discussion between Google and its advertising partners. While this status could be covered by article 26 of the GDPR, whereby "two or more controllers jointly determine the purposes and means of processing", there was no such joint determination in this case. At the time of the change in legal position, four publisher trade bodies acting on behalf of hundreds of publishers wrote to Google asking for clarification on this change in legal position<sup>34</sup>. We are not aware of a written response to these concerns.

We understand that Google uses this data to increase its value proposition for advertisers, for example, by creating affinity segments in DV360 that group users in propensity to pay and other categories. Google also uses that data in AdWords and Google remarketing. The value of this functionality to advertiser clients is noted in the UK CMA's recent interim report on online platforms, which found that,

"The strengths of Google's DV360 mostly derive from its scale and links to Google's inventory, data, and other services in the ad tech ecosystem. The advantages mentioned by advertisers and media agencies include DV360's access to a vast inventory across the internet, its seamless integration with the rest of Google's ad stack, exclusive access to YouTube inventory, use of Google's proprietary data and affinity audiences. Several respondents also favour DV360 for its usability and capabilities, while the lack of transparency on its bidding algorithm or audiences, difficult integration with non-Google technologies and lack of flexibility in product development are the limitations most often mentioned."

In addition there are many third party data providers (such as Eyeota) whom buyers can access via DSPs. This data is then overlaid on inventory which adds an additional cost to the buyer, resulting in a smaller proportion of the total campaign spend coming to publishers. It is unclear how these third parties collect data, how effective the products provided by these businesses actually are, or how data is used to target publisher audiences.

## 16. Are any other participants in the data supply chain relevant to the supply of ad tech services or ad agency services?

There are many participants in the data supply chain relevant to the supply of ad tech services or ad agency services. Appendix H of the UK CMA's interim report in its market study of online platforms provides detailed analysis of the role of data in the online advertising market.

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<sup>34</sup> <https://adage.com/article/digital/publishing-trade-bodies-criticize-google-GDPR/313314>

## Questions for market participants

For publishers:

### 17. a) What information do you need to make informed decisions about how to sell your display advertising inventory?

Access to consistent market data is vital in order to make informed decisions about how to sell your display advertising inventory, to understanding buyer behaviour, and developing selling strategies across different marketplaces, i.e. OMP, Direct, PMP. Market data held by ad tech partners that we have previously sought to access includes:

- Geography (i.e. country)
- Device
- Browser
- Referrer
- DMP key value
- Section key value
- Keyword key value
- Consent key value
- Content type key value
- Creative size
- Ad slot

The ability to gain access to such information is hampered for two reasons.

First, while the technical parameters that underpin programmatic auctions - openRTB - set out the types of data that *may* be transmitted, what commands are used to send and receive data, and/or how data transfers are confirmed, they do not direct or mandate that vendors should generate auction data in a uniform way. Left to the discretion of each vendor, the protocols are implemented in a range of ways by businesses across the ecosystem. As a result, there is no uniformity of data provided to publishers or advertisers about how auctions for advertising inventory are conducted in practice. As the recent ISBA/PWC report notes, *“each study participant had different data definitions, taxonomies and signifiers”*.

Second, vendors will often suggest that publisher access to market data is not possible either for contractual or more recently, for reasons related to obligations flowing from data protection law. The difficulty in being able to access crucial market data was noted as a key reason why the recent UK ISBA/PWC study on the ad tech ecosystem ran many months behind schedule. The study notes that *“contractual T&Cs across all study participants were inconsistent, as were their interpretations... These challenges with data access and data format caused this study to take 9 months longer than intended.”* *The report highlights chicken and egg permissioning in the online advertising*

*marketplace, whereby there “is a lack of clarity and understanding over how parties share data and who needs to permission what, with up to four separate parties requested to confirm their approval over one data set for one part of one supply chain.”<sup>35</sup> The report recommended that the “industry must make it simpler for participants (e.g. advertisers, agencies, publishers) to access and share their data or their client’s data.”* We would concur with this recommendation, but note that in relation to the very largest ad intermediaries, our experience (see our response to 17.b) is that it is extremely difficult to negotiate access to auction data for audit purposes. Therefore a right of audit may need to be imposed by a 3rd party such as a regulator.

## Facebook Audience Network (FAN) auction data

The Guardian was previously a participant in the Instant Articles initiative, pulling out in April 2017<sup>36</sup>. In order to monetise Instant Articles units, publishers have to use Facebook’s Audience Network. At the time that we were engaged with the initiative, FAN provided us with no visibility of advertisers who appeared within Instant Articles formats next to our journalism, or the revenues that we secured for our inventory. We were unable to set floor pricing for our ad inventory - limiting the economic benefit - or to set rules about who could advertise next to our journalism which created a significant risk for GNM’s brand. We understand that advertisers can now see where their ads ran on Facebook<sup>37</sup>, but it is not clear whether publishers have the same capability to understand which ads ran next to their content, or gain access to detail about winning or competing bids for publisher inventory.

## 17. b) Do you have access to this information? If not, how does this impact your decision-making about how to sell your display advertising inventory?

In October 2016, GNM published the results of a series of tests to purchase its own advertising inventory to understand how money flows up the digital advertising supply chain. Through those tests, GNM discovered that in some cases just 30 pence in a pound spent by an advertiser was received by the publisher. In an effort to eliminate the prospect of such revenue leakage in the future, GNM developed seven key principles that it has sought to embed into every vendor contract. These principles are are:

- **Clean auction dynamics** - for the vendor to commit to no manipulation of auctions beyond the explicitly agreed auction model;
- **Supply-chain management** - only inventory directly sourced from the Guardian will be made available for buyers to purchase:

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<sup>35</sup> <https://www.isba.org.uk/news/time-for-change-and-transparency-in-programmatic-advertising/>

<sup>36</sup> <https://digiday.com/media/guardian-pulls-facebooks-instant-articles-apple-news/>

<sup>37</sup> <https://en-gb.facebook.com/business/help/148229179267759>

- **Fraud** - vendor to operate a policy of zero-tolerance and provide regular updates of their methodology to do so. Vendor commits to 100% of ad traffic measured by an independent third-party with regular reporting;
- **Auction data** - vendor commits to pass the Guardian a minimum of the top three bids from the vendor's sub-auction. Vendor will provide access to a feed of data to show a complete view of all auction participants;
- **Data ownership and usage** - vendor acknowledges that the Guardian's auction bid, audience and site data is owned by the Guardian - and licensed to the vendor for the duration of the partnership;
- **Provision of audit rights** - the Guardian will maintain full audit rights to the transactions carried out on behalf of the Guardian; and
- **Avoidance of inducements and incentives** - vendor prohibited from charging any non-disclosed fees, offering any payments of rebates in relation to Guardian inventory.

The implementation of these principles within contracts has, however, subject to the position and power of the vendor in the market. Where there is substitutability of a vendor - allowing publishers to replace a non-compliant vendor with a compliant one - implementing these good practice principles is possible. Where vendors are in a dominant market position, and there is no realistic prospect of substitutability, pushing for acceptance of these principles is hard if not impossible.

## 17. c) Who controls access to this information?

Access to market data is currently at the commercial discretion of ad tech vendors with whom we work. It is essential that this review seeks to ensure that advertisers and publishers are able to gain access to market data, from all of the vendors with whom they work, regardless of the size and position of that vendor in the marketplace.

We have previously submitted to the ACCC on the need for the implementation of a transparent system of programmatic receipting ("TSPR") that would shine a light on the opacity by design at the heart of the digital advertising market. We still believe that the the objectives which GNMA sought to achieve the TSPR are vital to creating transparency, accountability and competition in the online advertising marketplace. But as we note above in the introduction to this response, we believe that there are lessons to learn from other markets - particularly financial markets - as to how this objective could be achieved in an efficient and effective way.

### A revised market data standard

In the context of online advertising auctions underpinned by OpenRTB, a revised market data standard is crucial to enable buyers and sellers of advertising inventory to build tools that can provide real-time analysis as to where, when and how money and data are directed within the programmatic ecosystem. Such a market data standard would enable buyers and sellers to build tools that ingest market data in order to provide a complete, reconcilable record for every ad transaction. Together, they would



represent a record of the “truth”, which is reconcilable after the event, such that investors can verify their every transaction with near-certainty.

The market data that is generated as part of the programmatic advertising process today, is currently withheld by vendors for their own exclusive use. The only “reporting” that currently exists for buyers and sellers today is a partial, one-sided record of the transaction with an intermediary, with transaction IDs removed to prevent participants reconciling transactions at a unit-level. As a result it is impossible to spot fraud, hidden fees or reselling through discrepancy.

While the evolution to a revised, consistent market data standard would not automatically eradicate problems of fraud and leakage in and of itself, it would enable advertisers and publishers to plug that market data into analysis tools that could provide a granular end-to-end paper trail that surfaces the intelligence necessary for the buyer and seller to take action under contract, or to potential action by a competition or privacy regulator.

The evolution to a market data standard would act as the foundation for businesses to trust that they can securely interact and exchange value with each other. Individuals and businesses would engage in the economy without fear of being duped, with the aim of heralding a new age of open data and transparency.

Beyond the benefits of greater transparency for advertisers and publishers operating in the programmatic marketplace, access to a reliable market data, combined with innovative new tools to analyse that data would enable:

1. Responsible advertising technology companies to create their own tools and to demonstrate to clients, and potential clients, the efficiency and efficacy of their products and services.
2. The Department of the Treasury to understand - at an aggregate level - the geolocation of digital advertising impressions, thereby enabling the Treasury to more accurately assess where tax is owed on digital advertising that is served within Australia would support ongoing national conversations about the implementation of the digital services tax, and global conversations about profit-shifting.
3. Enable Ad Standards to build tools to underpin complaints about online advertising as well as providing data about the volume of advertising on specific platforms, with a view to those platforms contributing to the system of advertising self-regulation. Such a tool will become more important as digital advertising impressions are served within newsfeeds and ephemeral messaging apps such as Instagram and Snapchat.
4. Australian Communications and Media Authority, to understand trends in digital advertising, particularly the nature of the websites and publishers that are funded through the digital advertising market. This will become important as online platforms seek to shift advertising budgets away from existing media channels such as television.

5. The ACCC to build tools to accurately size revenue flows in the market, understand bottlenecks and anomalies in revenues flows across that market, analyse patterns of behaviour amongst different market participants, use that data in the context of potential mergers and acquisitions, and analyse how market shares are shifting on a dynamic basis.

## 19. For publishers:

a) Are you able to easily determine the price at which your inventory is sold and the difference between the sale price of your ad inventory and the revenue you receive?

No. Please see our response to question 2. The online advertising market is currently operating in the absence of consistent market data or the ability for advertisers or publishers to gain reliable access to that data.

b) Can you easily compare the price and quality of services being offered by supply-side ad tech services providers? If not, what is preventing you from being able to make this comparison?

No. Please see our response to question 2. The online advertising market is currently operating in the absence of consistent market data or the ability for advertisers or publishers to gain reliable access to that data. It is extremely difficult for publishers and advertisers to compare the price and quality of services offered by supply side ad tech service providers, and has been made harder Google has transitioned to its unified pricing strategy.

Ad agency services

## 22. For publishers:

a) What types of discounts, rebates, or benefits do you give to ad agencies?

GNMA makes available to all media agencies a standard discount of 20%, which is applied to GNM's market ratecard.

GNMA offers media agencies a standard 10% media agency commissions which is outlined on all bookings and is applied to direct bookings only, and is not applicable on programmatically traded bookings.

All additional discounts and or bonus inventory is made available to advertisers at time of booking and is commensurate to the total investment, seasonality and market demands. These additional discounts/bonus inventory is outlined on all booking forms.

No further rebates are offered.

b) What information do you have regarding how these are passed on to advertisers?

GNMA is not privy to how these discounts, rebates, or benefits are passed on to advertisers.

25. Are there any features or aspects of current auction or bidding processes that you consider may have the potential to preference any particular supplier of ad tech services? If so, please provide examples.

GNM has limited visibility into the precise mechanisms of the advertising ecosystem, and specifically the way in which auctions are conducted. This has led to significant concerns about 'ad tech taxes', and the extent to which ad tech intermediaries are exploiting opacity at the heart of the marketplace. These concerns were recently highlighted by the finding of the ISBA/PWC digital supply chain study which found that 50% of advertising revenues are lost to middlemen before they land as an impression on a publisher website.

26. Do you consider auctions and bidding processes to be run fairly for all market participants?

See our response to question 25. The online advertising market is currently operating in the absence of consistent market data or the ability for advertisers or publishers to gain reliable access to that data.

27. How does the ad tech supply chain differ (if at all) for display ads served on desktop browsers, mobile browsers, and mobile apps?

These are the main differences web adtech is generally the same, however App doesn't operate the same.

Supply chain differences between WEB and App

Tracking

<b>Web</b>	<b>APP</b>
Cooki es	Device ID

## Available User Data

<b>Web</b>	<b>APP</b>
Web activity (e.g. shopping habits, favorite websites, etc.)	GPS location, device type, OS, gender, age, wireless carrier

## Ad Blocking

<b>Web</b>	<b>APP</b>
Easily susceptible to in-browser ad blockers	Ad blocking technology has not advanced to universally block in-app ads

28. How does the ad tech supply chain differ (if at all) between real-time bidding, programmatic direct, and private marketplace transactions?

With the IAB **initiatives** from 2017, all adtech vendors are held to a transactional **standard**. Implementing the following (each pertaining to who you **are in** the **ecosystem**) Ads.txt and Seller.json and supplychain. All programmatic transactions will only transact within participating businesses.

## Appendix A

Business Name	Guardian	Supply	Office in Austra	Display	Rich media	In app	Video	Native	PG Direct/PMP	Adblock recove	Australian Demand	Market Share %
Adcolony	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Adform	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Admixer	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Adobe	<input type="checkbox"/>	DMP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Adswizz (audio)	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Adthrive	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Adyoulike	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Altitude	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Appnexus	<input checked="" type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Beachfront	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Big Mobile	<input type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Blockthrough	<input type="checkbox"/>	Recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Medium	
BoncoX	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medium	
Bonzai	<input checked="" type="checkbox"/>	Creative platform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Brightcom	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Brightroll	<input type="checkbox"/>	DSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Centro	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Commscore	<input type="checkbox"/>	Brandsafety	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Criteo	<input checked="" type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
District M	<input type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medium	
EMX	<input type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medium	
ezmob	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
Freewheel	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Fyber (heyzap)	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	low	
Google Adaptive (audience :	<input checked="" type="checkbox"/>	DMP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medium	
Google Admob	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	70%
Google Ads (adwords)	<input type="checkbox"/>	DSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Google Adsense	<input type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	
Google Adx	<input checked="" type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	High	54%
Google EBDA (Opening Bid)	<input checked="" type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	High	
Google Ad Manager	<input type="checkbox"/>	Adserver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	70%
Appnexus	<input type="checkbox"/>	Adserver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High	20%
HIRO	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
IAS	<input type="checkbox"/>	Brandsafety	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medium	
Inmobi (aerserv)	<input type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medium	
Invite Media	<input type="checkbox"/>	DSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
IX	<input checked="" type="checkbox"/>	SSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	High	12%
Komoona	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	
<a href="#">Media.net</a>	<input type="checkbox"/>	SSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low	







Adtech Matrix / Business Name	Guardian	Category	Office in Austra	Australian Demand	Market Share %			
Moat (Oracle)	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High	40%	Brief :		
Smar+	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low		a) data management platforms		
Digital Envoy	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low		b) data brokers		
Tag Commander	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low		c) data analytics services, and		
Adomik	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	Medium		d) ad measurement and verification services		
MetaMarkets	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Nielsen	<input checked="" type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High				
Adaptly	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High				
SAS	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	High				
Geedge	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Metrixlab	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Oracale - Grapeshot	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	Medium				
Brightcove	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High				
Ghostery	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
whiteops	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Medium				
Signal	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Maxifer	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Burt	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Tradecast tv	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
The Mediastart	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	Low				
Enshighten	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
DV double Verify	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High (amazon)	10%			
Commscore	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	Medium				
Meetrics	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Dynata	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Sticky	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
TrustArc	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
IAS Integral Ad science	<input checked="" type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High	35%			
Flashtalking	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Medium				
Campaign Manager	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High				
Adjust	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	Low				
adinfinity	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Medium				
Peer39	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	Low				
Convertro	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Emma	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	High				
Quantcast	<input type="checkbox"/>	Ad measurement and verification services	<input checked="" type="checkbox"/>	High				

Adtech Matrix / Business Name	Guardian	Category	Office in Austr	Australian Demand	Market Share %			
Roy Morgan	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	High				
Local Measure	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Pureprofile	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Ebiquity	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Big Data	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Medium				
Radian6	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
AdxTracking	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Medium				
Appflyer	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Kantar	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	High				
Atlas	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	High (Facebook)				
Cake	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
GeoEdge	<input type="checkbox"/>	Ad measurement and verification services	<input type="checkbox"/>	Low				
Salesforce (KruX )	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	High				
Audience 360	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	High				
Oracle Marketing Cloud	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	Medium				
Merkle	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Quantium	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	High				
Corelogic	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Medium				
Adara	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Lightspeed	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
SSI	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
TEG	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	High				
Inivio	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Marchex	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Sensesdata	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Tipstone	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Lexar	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Amobee	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	High				
Datorama	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
lotame	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Cint	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Touchstone Labs	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Hitwise	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Eyeota	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Pureprofile	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	High				
Adatos	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				

Adtech Matrix / Business Name	Guardian	Category	Office in Austra	Australian Demand	Market Share %			
Rhythmone	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Low				
Quantcast	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	High				
icumius	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	High				
Spotx	<input type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	High				
Signal	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	low				
Liveramp	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	Hign				
Permutive	<input checked="" type="checkbox"/>	DMP Data management platforms	<input type="checkbox"/>	Medium				
Mparticle	<input type="checkbox"/>	DMP Data management platforms	<input checked="" type="checkbox"/>	Low				
Acxiom (Oracle)	<input type="checkbox"/>	Data brokers	<input checked="" type="checkbox"/>	High				
Quantium	<input type="checkbox"/>	Data brokers	<input checked="" type="checkbox"/>	High				
Datalogix (Oracle)	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	High				
Corelogic	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	High				
Ebureau	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	low				
ID Analytics	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	low				
Peekyou	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	low				
Recorded Future	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	low				
Red Planet	<input checked="" type="checkbox"/>	Data brokers	<input checked="" type="checkbox"/>	High				
Rapleaf	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	low				
Intelius	<input type="checkbox"/>	Data brokers	<input type="checkbox"/>	Medium				
Google Analytics	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>	High				
Moat (Oracle) Analytics	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>	Hign				
SAS	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>	Medium				
IBM	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Burt	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>	Low				
Mixpanel	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Impact Radius	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Funnel	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Quid	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Quantium	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>	High				
Adobe Advertising	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Accenture Analytics	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Marchex	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Ooyala	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Piwik	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Nanigans ( facebook, instagram)	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					
Convertible	<input type="checkbox"/>	Data analytics services	<input type="checkbox"/>					