The media and the challenge of programmatic transformation

Pepe Cerezo
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I. Introduction

Digitalization, as we have discovered over the last decade in many sectors and industries, has redesigned the chain of value transforming traditional agents and giving rise to new ones. This is exactly what is happening in digital advertising. The “mobile boom”, the impact of social media, video and the emergence of programmatic advertising are transforming the advertising ecosystem forever. Before programmatic advertising came on the scene, models and processes had hardly changed from traditional methods at all.

Programmatic advertising has changed everything as it alters the roles of the traditional agents in the advertising chain: advertisers-agencies-publishers, while simultaneously fostering new technological agents. The field is one of the most dynamic, innovative, technologically complex and advanced that exists, so it is clear that the present scenario is bound to undergo rapid changes as well.

Digital transformation alters the advertising ecosystem: advertisers act as media interacting directly with users, or media have taken over the role of the agents. The media have been incorporating programmatic advertising because their primary aim is to sell unsold or “remnant inventory” and then gradually focus on improving the inventory as a whole. The big names (mastheads) began the process in mature markets; gradually incorporating the rest, so that now programmatic has become not just an option but also an essential. The challenge is to adapt structures and processes at the same time as they add new value via data. In this document we will analyze this transformation from the sales perspective, in other words, how the publishers are responding to the arrival of programmatic advertising. In order to do so, we have conducted our own research aimed at giving a global vision of some of the most advanced markets, such as the US. In the process we have interviewed a range of agents and heads of programmatic advertising in such well-known media as the Financial Times, The Guardian and Univision.
II. The advertising landscape transformation

In brief, programmatic advertising is the automation of the purchase-sale (buying-selling) of advertising space among the agents involved. In other words, the relationship between the different agents which was previously manual is now conducted automatically by machines. So-called “ad-exchanges” do the job of interconnecting the supply of advertising inventory offered by the publishers with the demand for ads by brands and agencies. Automation allows for buying spaces in all the “ad exchanges”, publishers and web pages, using the same control panel with hardly any human intervention at all. In addition, thanks to RTB (Real Time Bidding) technology, this purchase-sale can be done through one bid in real time. This hyper-technological ecosystem requires the added incorporation of data to segment audiences and make advertising for brands more effective. Programmatic advertising has become the preferred method for buying and selling advertising online.

According to eMarketer\(^2\) 73% of advertising investment in display during 2016 – about 25.230 million dollars worth – will be programmatic. In addition, direct programmatic is consolidating and now represents 53% compared to 48% in 2014. This automation is not exclusively for graphic formats (display) either. During 2016 programmatic sales on video will transcend 50% of the total for the first time. In Spain, according to the latest available figures\(^3\) corresponding to the first semester of 2016, programmatic display advertising, although only just representing 14.5%, has increased more

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1 For more information on the terminology and main technical features of programmatic sales we recommend reading the “Libro Blanco de la Compra Programática”. IAB Spain 2014. [http://www.iabspain.net/wp-content/uploads/downloads/2014/09/Libro-blanco-de-Compra-Program%C3%A1tica-y-RTB.pdf](http://www.iabspain.net/wp-content/uploads/downloads/2014/09/Libro-blanco-de-Compra-Program%C3%A1tica-y-RTB.pdf)


than 25.6% with respect to the previous year. In this document we focus mainly on the role of publishers in the sales process. Programmatic advertising has involved a fundamental change for them. From the end of the 90s and beginning of the 2000’s digital advertising represented just a small part of their business—sometimes it was even given away as a complement to advertising in traditional formats. As digital audiences have grown, online advertising has become increasingly important and will continue to do so.

Programmatic advertising has followed suit but at a much greater speed. Initially the publisher’s first contact with programmatic advertising came via RTB (Real Time Bidding) campaigns generally aimed at selling unsold inventory. In fact, at first they began with foreign IP inventory in an attempt to preserve national inventory and brand safety. Automation allowed for the sale of remaining spaces of little value, which meant an overall fall in CPM (Cost per mille—cost per thousand) impressions. Nevertheless, as publishers began to see the “programmatic advantages” and to delve deeper into their development—such as those of the more innovative media in more advanced markets— they have managed to commercialize and optimize their inventory in general. Programmatic advertising initially seen as a way of complementing barely relevant income is starting to play a more and more prominent role.

This journey, as yet unfinished, has not been simple or the same in different markets and media. Given that they accept that programmatic advertising is an irreversible and unavoidable process, they now have to define the most strategic way of dealing with a highly innovative environment in constant flux.

**Internal obstacles**

Despite the fact that programmatic sales are clearly here to stay, their implementation and correct exploitation is still uneven. There are still obstacles, of varying types and degrees, to be overcome depending on the agent and place they occupy in the value chain. According to a study by the IAB while for advertisers the main obstacle for making the biggest profit remains the

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question of quality data, for the media, it is contracting the right staff with the most suitable profiles and skills, and an understanding of the impact of programmatic sales on the advertising business as a whole. And let’s not forget the technological aspects, both the problem of choosing the most suitable platforms to use, as well as the cost of their implementation. On an organizational level, the media have tried different options. Right from the start, the big groups tried to implement it internally, with the aim of getting rid of the agent as intermediary; smaller companies conduct programmatic sales using third parties –mainly agencies–, decentralized or hybrid models. One way or the other the process has involved enormous upheavals for the media. Both the vision of a strategic sales model as well as getting it up and running has meant that the introduction of programmatic sales has caused an internal transformation –to both teams and processes– which has only just begun.

Towards an integrated strategy

Despite its short life-span, the strategic position adopted by the media to deal with programmatic sales has evolved as obstacles have been overcome and technological and market maturity have consolidated. Although some media still rely on external teams and third-party networks, more and more are developing in house models or hybrids, which combine the two. According to the IAB study, publishers who defend the “in house” model do so claiming its sales process is more efficient and yields more profit on inventory. As technology and markets have matured, the different agents have consolidated. According to data from the IAB report a strategic evolution can be observed on the publishers’ part starting with a hybrid model or reliance on external partners and then gradually integrating internal programmatic both for operations and sales.

The development of “in house” programmatic sales models involves the process of adapting teams to the new environment. Not all of them have the capacity and resources to fully undertake this. In general it is the big groups so far that have been able to develop highly specialized teams. This is the case with Univision Communications Inc. and their new programmatic sales and

Evolution of publishers operational models

**Markets new to programmatic**

- **Outsourced to a network**
  - New markets: 11%
  - Mid developments: 8%
  - Advance: 3%

- **Hybrid**
  - New markets: 45%
  - Mid developments: 29%
  - Advance: 33%

- **Outsourced to an SSP**
  - New markets: 11%
  - Mid developments: 27%
  - Advance: 15%

- **In-House**
  - New markets: 34%
  - Mid developments: 35%
  - Advance: 49%

- **Hybrid**
  - New markets: 45%
  - Mid developments: 29%
  - Advance: 33%

Source: IAB 2015
operations team, Mosaico Trading. In the words of Fernando Rodríguez, Senior Vice-president of Sales, Operations and Development with Univision Digital, the leading media group for Hispanic audiences in the US, “Mosaico is a center of excellence in charge of the data and programmatic advertising strategy and operations for Univision’s digital portfolio. We see the value in establishing a highly specialized team as we build the data and premium programmatic business, trying to make it easy for clients to engage with Univision, and supporting our direct sales team as a technical resource”. The team is responsible for developing a best in class technical stack and to assist direct sales with data and programmatic operations. The group is organized in 3 teams, a small sales team, a data solutions team and a programmatic operations team. Their objective is to orient advertisers in their programmatic display and video campaigns. For Rodríguez “the programmatic technical expertise should assist direct sales to open up incremental advertising dollars, bringing automation and analysis alongside more sophisticated targeting”.

Combining direct sales strategies and programmatic seems to be the key to success and thus integrating sales teams who can use both models indiscriminately is essential. In order to find joint solutions for this strategy and promote team integration, the Financial Times has created the post of Global Director of Programmatic Sales. Elli Papadaki is the first person to hold this job. Her role, she told us, “is to be a hybrid between the ops and sales team, with a focus on simplifying internally and externally what programmatic technology does and what it means to us at the Financial Times”.

So, over the last year, the FT has adopted a strategy of sales teams that combine programmatic with direct sales. The aim, according to Papadaki, is “to establish a link between both areas rather than let them go their different ways”. The FT is unique in this as its business model is based on subscriptions and to a lesser degree on advertising. Papadaki maintains

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http://www.mosaicotrading.com/

The development of “in house” programmatic sales models involves the process of adapting teams to the new environment.
that the FT approach is different to other media in that right from the beginning they have been aware of not using it for monetizing “just any old unsold impression” but instead for offering advertisers “the opportunity to eliminate friction in the process, consolidate audiences and reach new ones”.

The nature of the FT itself is the reason why programmatic sales are below the fundamental mark. However, since the beginning of last year, this British newspaper has increased its investment in programmatic aimed at proving that “everything that can be sold directly can be done by programmatic too”.

In the case of The Guardian, as Daniel Spears, Director of Programmatic sales explains, the approach is quite different, as programmatic sales already exceed 75% of total digital display revenue and is expected to reach 100% by the end of 2017. The Guardian is both programmatic buyer and seller, with a specialist sales team that spans both functions. “In operating at both ends of the marketplace, we have direct experience of buyers’ needs, which informs everything from sales strategy, to product innovation and operational processes”. With programmatic expected to grow to become the publishers’ entire digital display business, the Guardian expects to continue investment in specialist sales, trading and operations skillsets.

With respect to this Daniel Spears poses an interesting question, “If the market imposes programmatic sales, the publisher has to decide what their strategy really is”. “In the past, it was the holding groups and their agency’s that the publisher’ considered their primary customer, but with the emergence of programmatic the vast majority of the markets’ aggregated demand now sits in 4-5 technologies. This raises a question as to focus of resource, and whether we need to shift our focus towards those technologies”. In other words, the new programmatic ecosystem ushers in a new phase altogether, as now clients can contribute or manage their own solutions for buying and selling spaces, while the role of the media is to offer them the best possible opportunity to do so.

Global programmatic spend by format

<table>
<thead>
<tr>
<th>Format</th>
<th>2016</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop Banner</td>
<td>44%</td>
<td>13%</td>
</tr>
<tr>
<td>Desktop Video</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Mobile Banner</td>
<td>21%</td>
<td>29%</td>
</tr>
<tr>
<td>Mobile Video</td>
<td>44%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: Magna 2016
At this time in our development, technology represents a fundamental component and competitive advantage in our business. There are a lot of different technologies and platforms available but they are pricey especially for small and medium publishers. However, as they mature and their use increases they gradually become a commodity. Programmatic directors consulted agree that there are endless solutions and technology suppliers that will be reduced down to just a few offering “full stack” solutions, and thereby simplifying the ecosystem. But, until that happens, technology will remain the obstacle for getting the best out of programmatic sales.

As processes become more automated and some of the work and sales functions can be done by machines, sales teams will have to adapt to this new, disruptive scenario. For The Guardian, sales teams continue to be very important but will evolve in their approach, and become more data driven. Their role will be to assess advertiser investments and make recommendations. They will have to become more like consultants than traditional sales people. So, the main skill sets sought by The Guardian for their programmatic sales teams will be “the capacity to interpret data and analyze it via the complex technology that underpins programmatic sales. Salespeople will be expected to have sophisticated investment conversations with a customer who is akin to an institutional investor”.

This focus on data makes it necessary to employ staff with new skill sets, such as data scientists and experts in big data. In fact, nowadays these are the jobs most in demand at agencies, large consulting companies, advertisers, and of course technical support systems. Although they might have different titles, it is becoming more and more frequent to find a head of global programmatic sales acting as the bridge between the sales and technical teams, with the main objective of uniting and coordinating direct sales strategies with programmatic sales. But if there is one thing all directors of programmatic
sales in the media agree on, it is the need for a transversal vision that permits a homogeneous strategy for fixing programmatic and direct-sale prices.

In the FT the programmatic team is made up of teams handling several different areas: the Operational team, in charge of implementing new programmatic technology, another in charge of campaign traffic – Trafficking team – and a Planning Insight team, which uses the actual data to enrich campaigns and optimize response. They also have a Emerging Channels team for finding new ways of incorporating business with third parties. "In this team there are two specialists in charge of the relationship with our DMP, who orient us towards the type of data they obtain and how to interpret it and relate it to the needs of our clients: in other words look for new opportunities via programmatic".

One of its other outstanding features thanks to increase in "brand content" and native advertising, is the growth of relationships between sales teams – business areas – and those in charge of content. Compared to the traditional media where these areas were completely separate, in the digital world the frontiers have overlapped so much that, in many cases, the lines are completely blurred. In this sense, TV and entertainment media present fewer obstacles than news or specialized media where there is a logical separation. One of the key factors in digital media will be how to integrate products and business while at the same time maintaining an independent editorial line. Here the Anglo-Saxon media, more mature and with a longer historical tradition, are once again more ahead of the game than the rest. Nevertheless, while technological know-how among sales teams is becoming more important, the sales component is also vital lest it become just another line on a spreadsheet.

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From the advertising point of view, despite the enormous problems publishers face as a result of the digital paradigm shift, there is also huge potential thanks to their ability to attract large audiences. Audiences are characterized not only by their sociodemographic profiles but by the fact they can be segmented according to their interests and tastes. In addition, new models of social distribution, mobile, etc. make it easier for the media and their brands to reach users directly. They interact with the media through various channels and technological systems, thus contributing to establishing innumerable points of contact able to supply valuable data. Although as far as monetization is concerned this is very inconvenient, it can become an exciting opportunity if technology is capable of giving it value. The combination of data and programmatic generates new business opportunities, particularly in the following areas:

1. Extension of inventory to new audiences
2. Optimization of the existing inventory
3. Increase in sales prices
4. Improvement in processes
5. New business models based on data

In other words, digital media, both global, or more local or niche, have a large capacity for generating qualified audiences, segmented by interests and interacting through a wide-range of channels and distinct formats. This leads to more points of contact with users and generates a huge body of data, which correctly used supplies much valuable information for advertisers.

As far as “first party data” is concerned i.e. the data obtained directly, FT has the clear advantage in that almost all its data is declared: “What we offer is 100% secure information on our clients. We have a lot of declared data given by clients when they register or subscribe”. According to Papadaki it’s “somewhat unique because the data is 100% accurate, no interference in regards to behaviour.

In this regard, Guardian News & Media have pursued data science and machine-
The potential of The Guardian in this sphere is evident as they capture in excess of "200 billion data events monthly" which are then made available for advertisers to buy as:

1. **Predefined**: off-the-shelf segmentations, which defined by combinations of demographic factors, interest or other characteristics.

2. **Advanced custom audiences**: leverages data science to deliver bespoke and self-optimizing audience segmentations to individual advertisers.

In Spears’ opinion, while some advertisers have the capacity to gather their own data in the future publishers’ data will become even more important than it is now: "The data that an advertiser can collect is often limited in scope and scale. They need quality data as means to recognise incremental audience opportunity, and so there is increasing advertiser interest in publisher’s audience intelligence."

For its part, Rodríguez of Univision thinks that first-party data is a fundamental asset of the publisher and they don’t want to decouple data from the media itself. As far as strategies to target the audience based on data, Univision’s VP warns of the possible risks of "too granular segmentation". It is obvious that data “is one of our greatest assets in getting to know our audience, but we must beware of getting too narrow a target where you will miss the scale”. He also warns that it is important "to be very careful when one acquires third party data, because it can be of poor quality. Not all data sources are the same".
V. Premium private markets

As markets gradually mature they become more organized creating more efficient and controlled environments. In the media the choice is for so-called PMP (Private Market Places) controlled purchase-sale advertising spaces where publishers offer premium inventory to select groups of advertisers. Compared to open markets, publishers have greater control over buyers and their inventory thereby limiting concerns about ‘brand safety’. That is to say, brands can be assured their advertisements will not be linked to certain types of web pages or inappropriate content. Given that in this environment advertisers compete for higher-quality inventory in reputable digital environments, the price of CPM (cost per thousand) impressions rises. At the same time, publishers are promoting sectorial alliances for the creation of their own PMP. In some countries the media have grouped together to offer buyers a safe quality environment.

Pangaea⁶ in the United Kingdom Trust X in the US or PMP Medios, PMP Aunia and Primedia in Spain⁷ are some examples. Although they have a common objective, joining forces to compete with Facebook and Google, their approaches differ. FT, the co-founder of Pangaea Alliance along with CNN, Reuters or The Guardian agree it is, "an alliance aimed at competing with Facebook and Google, offering buyers a secure environment, but the data belongs to each publisher individually. Consequently, what will be interesting over the following months, and is bound to become a tendency, is RTG (Real Time Guarantee) which allows for segmenting the population via data contributed by the buyers themselves".

The Guardian’s programmatic director thinks there are other strategic factors of no less importance for promoting sectorial alliances, “One of the challenges the

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⁷ [La estrategia programática de los publisher premium](http://inspirationalfestival.com/2016/11/18/la-estrategia-programatica-de-los-publisher-premium/)
media face is the cost of programmatic technology. Pangaea helps publisher’s work together to tackle some of those common challenges. And, although individual publisher’s strategies differ, Pangaea is a healthy and growing business to which The Guardian will continue to commit support.

Common interest has made it possible for direct rivals to work together. As far as the creation of protected environments is concerned, Rodriguez from Univision believes that they will become more relevant and sought after by premium clients in the United States. In the case of PMPs more automation does not undermine the importance of teams in operations. That’s why, according to Rodriguez it is “fundamental there is coordination between sales and operations”. Alliances between publishers like Trust X –promoted by Univision among others– are orientated towards creating “safe market places” in line with the principle that “not all inventory, nor all publishers, are alike” so the concept of trust is key for programmatic and data growth.

In addition, it is important to point out that private markets are the best way to reduce fraud associated with programmatic advertising such as false clicks and URL theft. For all the above reasons the logical evolution for publishers is to promote private environments that offer security and trust for all parties concerned.
VI. Media challenges and opportunities

Given such a dynamic and complex scenario, certainty and universal truths do not exist. The evolution, speed and degree of programmatic development depend to a large extent on the maturity of individual markets and the internal conditions of each organization. Nonetheless, we venture to highlight the main challenges and opportunities facing the media, those, which we think, will definitely make their mark on the programmatic advertising system of the future.

Transformation of sales teams

The more innovative media are already trying to integrate sales teams that conduct both direct and programmatic sales. This integration, or coordination and strategic aligning of direct and programmatic sales, involves training and upgrading teams. Directors of the most advanced media highlight the need for a coherent strategy between direct and programmatic sales. As we mentioned before, profiles for sales teams are evolving. They need to be more analytical, orientated towards data interpretation and able to assess and advise clients. In addition, new profiles such as data scientists are becoming necessary.

Transparency

There is general agreement that to make the programmatic advertising ecosystem more successful, above all for agencies, greater transparency is needed. The agents in the value chain, according to participants in this study, need to clarify as much as possible the risks they take in the value and pricing they apply in an area where much is hidden and where part of the brand budget does not reach publishers. In the United Kingdom according to Papadaki a great effort is being made “to make hidden costs applied by agencies for programmatic services more visible. I think not knowing how much money is being spent on an operation and how much on extra-premiums, is still a problem”. Agencies still play an important role for many companies unable to develop their own DSP or needing help on the technical side but the FT’s global director of programmatic sales concludes,
"If agencies do not improve transparency and risk evaluation, we will see a growing tendency of brands acting as trading desks in collaboration with publishers".

Data quality

Data is without doubt the key to the correct development of programmatic. In a market where quality “third party data” is expensive and difficult to find, the media possess a great asset. Knowing your audience and being able to target them via data analysis has become one of the principle objectives of the advertising business. So the media continue to play a fundamental role in the ecosystem in that they can potentiate quality “first-party data”. In this sense, those that have a subscription and registering model, in addition to an added means of income, can access a declared data source, which enriches the advertising business. Hybrid business models –advertising, subscription, events, e-commerce, etc.– are not only exclusive but potentiating in character. The media is definitely as valuable within the ecosystem as the data it affords.

Fraud and verification

Minimizing fraud continues to be one of the greatest challenges in the programmatic sales environment. Among the multitude of agents in the value chain there are a significant number who base part of their business on this type of activity⁸. There are so many cases of false URLs that they override the systems that collect advertising impact, traffic generated by bots, fraudulent clicks, etc.

In order to minimize fraudulent activity as much as possible we will have to empower tools and platforms able to verify if an ad has been downloaded and viewed correctly in the corresponding system, and under conditions agreed upon by both parties, even if this has been done automatically via machines. However, a lack of standardization in the way formats and platforms are measured, still generates considerable concern in the sector. According to a survey conducted by Adage⁹, 70,6% of those interviewed had information about visible impressions thanks to their verification supplier, but only 32,4% trusted its accuracy.

⁸ El fraude en el entorno de la compra programática. http://www.t2omedia.com/ideas/actualidad/el-fraude-en-el-entorno-de-la-compra-programatica/
Once more the solution comes not only from verification services but also from the rest of the players, especially agencies and publishers. Although responsibility for the verification of visibility and reduction of fraud falls mainly on the buyers’ side (DSPs) publishers must also actively contribute from the sales side (SSPs).

**Cross device**

Due to a large degree of fragmentation of channels and devices, the challenge for the media is being able to identify a user on the wide range of devices they might use. Knowledge of users on desktop is done via cookies downloaded in the browser. But this is not always possible if other devices are used such as cell phones, where there are different ways of identifying and tracking users. Once again media with large registers, generally those who have subscription models like the Financial Times and The New York Times, have the advantage. Another possibility is the development of lookalike systems, consistent with mathematical models that infer user behavior on different devices. Consequently, declared data and the creation of scientific data teams are becoming increasingly important.

**Viewability**

It is estimated that about 50% of online publicity, for a variety of reasons – browsing habits, technical problems, ad-blocking, etc. – is not visible to the user. One of the challenges facing the sector is how to measure whether an ad is really seen and then charge accordingly. This is what has become known as visibility or viewability. The IAB established that an impression in display format is considered “visible” then at least 50% of the ad has been seen for at least a second.

The FT calculates on average more than 60% viewability throughout their site but they are aware of the challenges that lie ahead especially when measuring cell phones and more specifically apps. In addition, according to Papadaki, “When you are buying at scale it is very hard to achieve high levels of viewability, so often buyers will consider 45-50% visibility a success.

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11 5 factors of viewability [https://www.thinkwithgoogle.com/infographics/5-factors-of-viewability.html](https://www.thinkwithgoogle.com/infographics/5-factors-of-viewability.html)
Buyers consider 45 to 50% visibility a success. But, although companies want to concentrate maximum visibility of their inventory, they need to be aware that they risk minimizing their scale.

Programmatic can have an impact on viewability, especially as far as header bidding is concerned because bidding increases the length of time pages are downloaded (latency), decreasing ad visibility. This is why The Guardian, taking site usability (UX) into account, does not habitually use header bidding. This is why The Guardian, taking site usability (UX) into account, has pursued what they regard to be “a superior server-side alternative to header-bidding”.

**Metrics**

Thus, in an increasingly complex and sophisticated context, metrics to evaluate efficacy more adequately are also required. The FT has established a new advertising metric called ‘Cost per Hour’ (CPH). This time-based system increases marketing effectiveness by measuring not just whether an ad is seen or not, but for how long. While CPM values every impression the same, CPH uses time to measure value. We think that campaigns based on CPM are not always a measure of success and so we have begun to talk about attention-based metrics (ABM).

**Adblockers**

The abusive use of intrusive advertising formats is giving rise to a surge in ad-blocker systems. It is estimated that more than 200 million users globally habitually use this kind of software for filtering and blocking advertising. The indiscriminate use of programmatic, oriented at optimizing remaining inventory, is one of the reasons for the increase in unwanted advertising and therefore stimulating an increase in ad-blocking. However, if the media’s bid to improve and optimize inventory, combined with the search for less intrusive formats leads to an improvement in effectiveness, programmatic might help to discourage ad-blocking.

Ad-blockers also affect programmatic advertising. These are an important barrier since we must not forget that filtering systems, in addition to advertisements, also block cookies and other key components for the new automated advertising model that is based on data and knowledge of the audience. To deal
with this "ad-reinsertion" publishers use the technology to place ads in browsers where adblockers are activated. This is a new solution some are considering to ensure delivery of ads for visitors to their sites. These actions, as part of the industry warns\(^\text{12}\), can have irreparable consequences.

**Header Bidding**

The maximum expression of technological innovation is technology that allows bidding in real time on the web page itself before creativity is requested from the adserver. In other words, bidding is not conducted via ad servers but directly on the web page, before it is downloaded, by entering a line of code in the top part of the header of the page. Several advertisers and agencies can bid at the same time (in milliseconds). This way publisher foments competition among advertisers ensuring higher returns. Future, which sells 70% of its more than 400 million monthly impressions via programmatic, is one of the groups that has proved that the time taken with bidding offers improved returns and fill rate\(^\text{13}\). Detractors of HB, such as Google, feel publishers are giving data up "for free" to third parties and also slowing down the downloading of their pages (increasing latency). The media, in need of additional income, have to experiment with and explore options that offer immediate returns, which strategically could mean less in the medium and long-term.

For over a year Univision has been experimenting with header bidding (HB) solutions that according to Fernando Rodriguez “means democratizing demand and creating more competition”. But, given the risks involved it is important to insert codes correctly and reduce latency so that the page does not download slowly. HB helps publishers connect their ad inventory more directly to advertisers who are buying it. This could benefit both big and small publishers. For the latter it would mean exposure to more advertisers; in addition, given competition is based strictly on the offers found on the page, the lowest margin can be sought, without any hidden incentives\(^\text{14}\).

\(^{12}\) Ad Reinsertion: For Better or Worse? [https://www.iab.com/news/ad-reinsertion-for-better-or-worse/](https://www.iab.com/news/ad-reinsertion-for-better-or-worse/)


Server to server

In order to avoid the latency problems which stem from header bidding, new models like “server-to-server” emerge, where bidding is done in the servers instead of the header. This helps to maintain one by one bidding and gets rid of the “waterfall” model, but instead of taking place on the website, it is done in the technological provider servers. This helps editors to maintain the advantages of pre-bidding while at the same time avoiding an increase in downloading time that is an inconvenience. These solutions will probably go on the rise soon.

RTG (Real-Time Guaranteed)

As the advertising market innovates and matures so do new models and solutions to fulfill the needs of different agents. On the one hand, buyers and sellers complain about the lack of scale on private market places and, on the other, the difficulties buyers have using their own data in guaranteed models. RTG has appeared to resolve these two problems by allowing advertisers to contribute their own data in SSP to improve scale while at the same time controlling inventory. There is a unanimous feeling among heads of publishing programmatic that guaranteed audiences would be one of the most important growth areas over the coming months.

New models and formats

Programmatic will spread to all channels and devices. Mobiles, programmatic advertising in TV and native advertising, permeating even content itself: creativity, the distinguishing feature of the media compared to other sectors. We are witnessing the start of a programmatic transformation, which though it began in the digital will inevitably spread to the world of TV— even more so as Smart TV is on the rise. When this happens we will experience the authentic transformation of the advertising ecosystem.

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VII. Conclusions

There is no doubt that the advertising ecosystem is undergoing a process of change in what is for the media an essential part of their business: digital advertising. Programmatic means a transformation in the value chain where the media play a fundamental role. The possibility of optimizing their position in that chain and improving generated income depends on the approach each media group chooses to take: In conclusion, these are the 10 main points to bear in mind for developing a successful programmatic strategy:

1. By 2020 most advertising sales – if not all – will be programmatic. Until that time we need to design and implement integration strategies and find the correct coordination between direct sales and programmatic.

2. Maturing markets are potentiating the move from open markets where unsold inventory was sold to the upsurge in private premium markets where each bid becomes more efficient for the support.

3. Although technology will remain a competitive advantage it will gradually simplify and become a commodity in the future. We will witness a process of technological consolidation with more simplification through unique and integrated solutions (full stacks) and thus fewer technology solutions providers.

4. The value of the media clearly lies in its capacity to generate quality audiences; that is to say collecting, treating and analyzing its own data. In the digital sphere hybridization of business models is a powerful enhancer. Subscription and registering are the best ways of enriching first data and consequently boosting advertising income.

5. The media have to find a balance between scale and segmentation to make the system run efficiently.

6. Sales teams must find a way of offering an integrated and coordinated strategy between direct sales and programmatic to address the present needs of advertisers.

7. The incorporation of new professional profiles is absolutely essential for the creation of teams that can address advertisers needs and design the processes that optimize the model as a whole.

8. The evolution of sales teams offering assessment and advice. This involves increased investment and training of sales staff so that they understand the needs of the client in the programmatic ecosystem.

9. As the ecosystem becomes more sophisticated, indicators and metrics must improve to evaluate the real impact of advertising.
10. Given the complexity of the ecosystem, to guarantee the programmatic advance a trustworthy and more transparent environment is needed. The media are essential for boosting validation and combatting fraud. At present programmatic is without doubt a last resort for the media whose viability as a business is at risk. However, they need to take into account that programmatic is not just a means of making a profit at any cost by selling remnant or unsold but of optimizing all the possible inventory. In order to do this it is essential to promote guaranteed models in premium environments and positions. This can be achieved by getting to know audiences very well via the most suitable data-based strategy for the purpose. As well as promoting a fraud-free market with more and more transparency.
**Addendum**

**Adexchange:** The technology platform that facilitates the buying and selling of online media advertising. In other words the meeting point between sales (all the technology that offers spaces on webs for advertising) and buyers of these spaces (advertisers and agents).

**Adserver:** Are the technology teams that provide creative advertising software to websites and monitor progress by counting impressions and clicks.

**Brand safe:** Keeping the image of the advertiser safe and protected to ensure brand recognition and higher returns.

**CPM:** Cost per thousand (cost per mille): standard for measuring and negotiating online advertising campaigns.

**Cookies:** Tiny files stored on browsers that send back user data when you visit a website (browsing habits, technical information, identifications, etc.)

**DATA Lake:** the ecosystem that is a repository of all the raw data of a company in its native format i.e. before it is treated or analyzed.

**Data providers:** (data suppliers) organizations that provide data to enrich programmatic buying.

**Data Science:** data scientists are professionals who collect, organize, structure and analyze data.

**Data management Platform:** in technical terms, a data management platform (DMP) is a centralized platform that aggregates first- and third-party data from cross-channel marketing efforts (CRM, webs, etc.).

**Direct Deal:** agreements reached directly between the buyer and the technology about the features of the campaign: price, frequency, target, etc.

**Display:** display or graphic advertising includes all the formats, such as banners, whose metrics are measured by CPM.

**DSP (Demand Side Platform):** technology that allows buyers to access in real time multiple inventories with different advertising options within seconds.

**First-party data:** all data obtained directly by the publisher: browsing data, ad-server, impressions, social spaces, registers, IDs, etc.

**First look:** the parts of the inventory downloaded first and consequently the first to be seen by users.

**Fill rates:** indicator that measures the level of the company’s delivery fulfillment to clients. In other words establishing a relationship between what was ordered and what was delivered to the client. This indicator can be calculated three ways: References, Units of Product and Orders.

**Yield:** This is a term used on stock
markets and refers to the financial returns from bidding or a campaign. It is expressed in percentages indicating how much is gained by each bid on the buying price.

Header Bidding: Bids made at the top of the page via the page labeling. Up until now bids where the price of a particular ad space was established, were conducted through the publisher’s ad-servers. With HB the exchange takes place in microseconds between the web and the SSP from which the user makes the request and downloads the ad.

Latency: is defined as the time a web page takes to download. It is an apparently technical feature but has important implications for the programmatic ecosystem. Innovations such as ‘header bidding’ involve more lines of code increasing download time. Although the delay may be just microseconds this waiting time for downloading of a page is crucial particularly when it refers to mobile Internet.

Look-alike: modeling based on similarities or resemblances. It’s used to increase audiences via knowledge of smaller segments. Knowledge of user data and browsing behaviour can be used to project and infer the characteristics of similar users.

Open Auction: when any interested buyer can participate freely in auctions for advertising space. Publishers offer spaces and any advertiser can bid for them in real time (RTB).

Preferred deals: When the advertiser and publishers agree on a fixed price, so there is no bidding for impressions as in RTB although the sale is not guaranteed. Only the price is fixed by both sides.

Private Auction: Are exclusive auction where only a small group of buyers may participate in them. Publishers offer premium inventory, establishing a minimum price for advertisers and let this small group of buyers compete for them. The minimum price is higher than that on the open market because top quality impressions are on offer.

Programmatic: according to the IAB white paper, programmatic is media buying online via bidding or fixed offers based on algorithms which determine the demand and are capable of making the most suitable buys possible for the objectives of a campaign. These are defined in terms of profiles, price, value or other fixed parameters, identified by the buyer and conducted in real time.

Programmatic Guaranteed: These are automated sales where volume and budget have been previously negotiated and guaranteed. In programmatic it is the closest to direct buying but in automated form.

Private Market Premium (PMP): Is a sales market for space sponsored by a group of publishers in which private auctions with a select number of advertisers are held offering preferential ads.

Real Time Bidding (RTB): Is the model for buying advertising inventory online based on bidding in real time for each impression.

Server-to-server: evolution of header bidding solutions in which the bidding is moved to a server with the corresponding decrease in latency.

Supply side Platform: Technological platforms corresponding to the sale of advertising which allows publishers and advertising networks to optimize the performance of their inventory automatically.
Trading Desk: The departments and teams in charge of managing and optimizing the sales of digital advertising inventory.

Third-party data: the data generated by other platforms such as, for example, websites. They are generally supplied by Data Providers and enrich the DMPs.

Transaction modeling in programmatic

Source: Libro blanco Compra Programática. IAB 2014