



Q2 2016 Programmatic Media Market Pulse

Programmatic Auction Volume Rises 151% Worldwide;

Digital Generates 55% Lift in Offline Sales

Accordant Media's Q2 2016 Programmatic Indexes

Compiled by Accordant Media's analytics team based on our ongoing exchange-traded media data, this quarter's Programmatic Market Pulse updates our buyer's perspective of the changing real-time media landscape, with insights for buyers and sellers alike.

This report incorporates aggregated data sets to showcase year-over-year and quarter-over-quarter trends. During Q2 2016, Accordant Media's Audience Targeting System ATS™ buying system evaluated ad impressions reaching hundreds of thousands of sites globally spanning display, video, social and mobile inventory on behalf of leading in-house marketing teams and media agencies.

We hope marketers will continue to find our quarterly assessments of the current buying opportunities within the programmatic media landscape a useful benchmark to gauge their own level of participation in an important, dynamic component of digital media.

Q2 2016 Headlines:

Overall programmatic media buying reached new impression volume records during the second quarter of 2016. Of note, smartphone placements continue to be the focal point of marketers' mobile strategies, and mobile ad sizes accounted for a larger percentage of overall volume. On the quality front, viewability increased year-over-year and non-human traffic continued to decrease.

Highlights include:

- ▶ Q2 2016 RTB media **auction volume increased 151%** year-over-year. North American exchange-traded inventory rose 103% year-over-year and 27% quarter-over-quarter.
- ▶ **Viewability rates improved 31%** year-over-year, and **non-human traffic (NHT) decreased by 59%**.
- ▶ The 320x50 mobile leaderboard ad unit accounted for **13% of all ads transacted programmatically** last quarter, including desktop-sized units.
- ▶ **Average CPMs increased 10%** in North America year-over-year, indicating the value of targeting higher-quality inventory.
- ▶ In our Q2 2016 Spotlight research, we examine how digital ads influence offline sales, revealing **35% incremental offline conversions**.

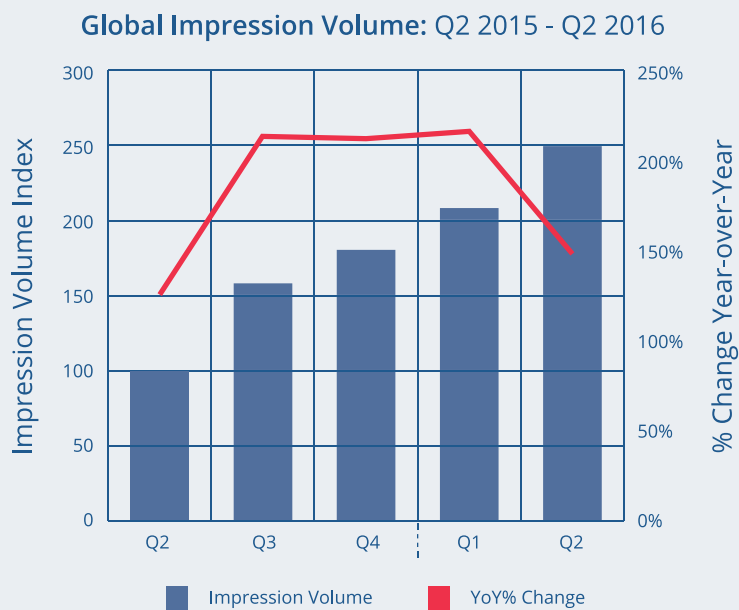
Data Points: Accordant Media's Q2 2016 RTB Key Market Indexes

	Q2'16 vs. Q2'15	Q2'16 vs. Q1'16
RTB Inventory (Global)	+151%	+20%
RTB Inventory (N. America)	+103%	+27%
Avg. CPMs (\$'s) (N. America)	+10%	-1%
CTR (%) (N. America)	-4%	-12%

I. Market Size Indexes

Global Ad Inventory Rises 151% Year-Over-Year:

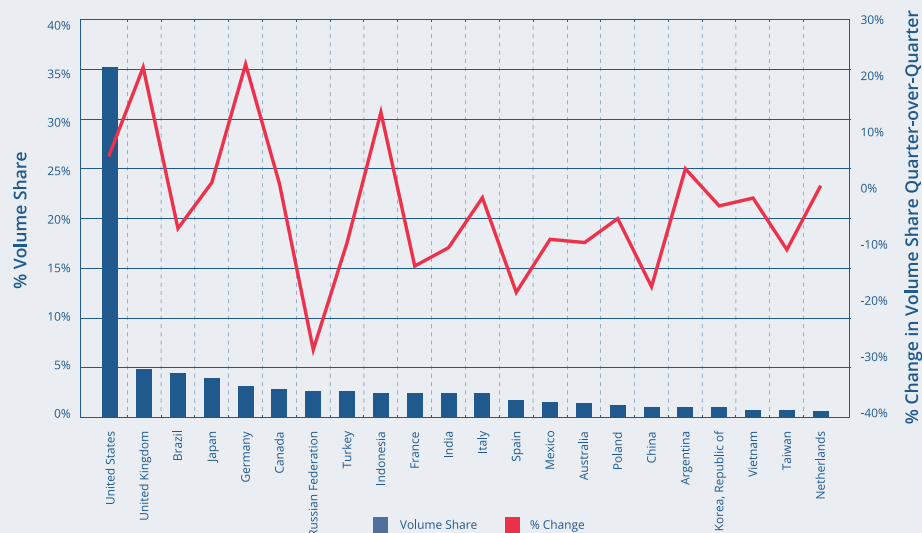
The total number of global exchange-based impressions rose 151% year-over-year and 20% quarter-over-quarter. The 20% quarter-over-quarter increase represents the highest single-quarter jump since Q2-Q3 2015.



Market Share: U.S. is 36% of Global Market; U.K. Moves Back into No. 2 Spot:

The U.S. global market share rose 6% quarter-over-quarter, making it one of the top five fastest-growing countries in terms of RTB market share in Q2 2016 (among countries with at least 1% of market share). The U.S. accounted for 36% of overall market share, more than all of the other top 10 countries combined. The U.K. took back the No. 2 spot, surpassing Brazil (No. 3). Japan and Germany rounded out the top five. Germany (24% increase) and the U.K. (23% increase) were the two fastest-growing countries in terms of RTB market share last quarter. Indonesia (up 15%) was the third-fastest growing country for the second straight quarter.

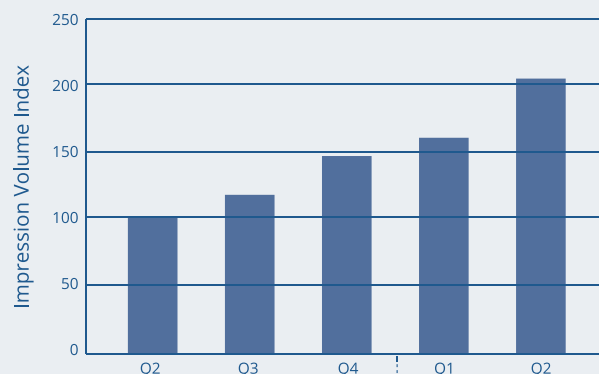
RTB Market Share by Country: Q1 2016 vs. Q2 2016



North America: Impression Volume Rises 27% in Q2 2016:

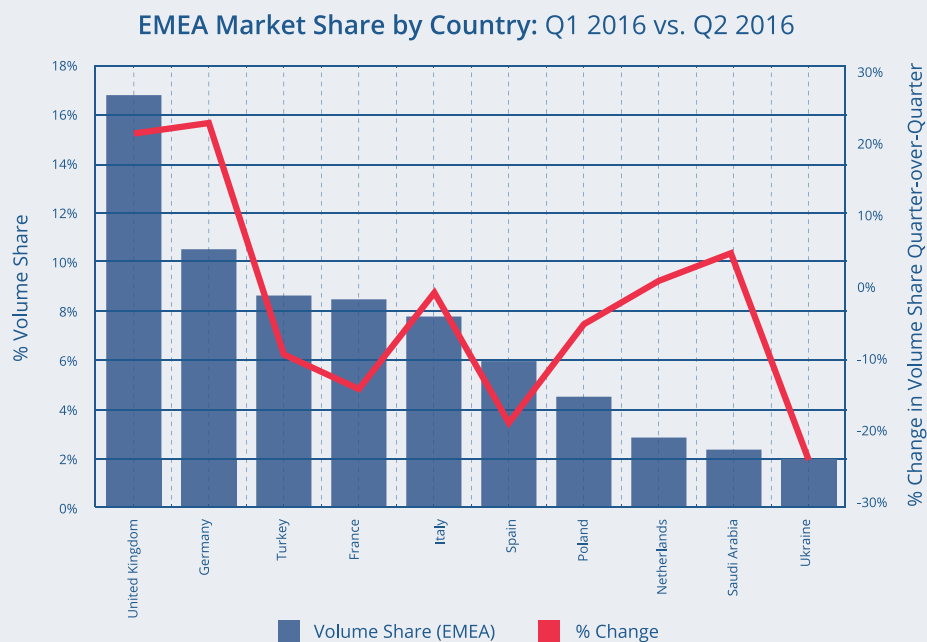
Programmatic impression volume in North America reached a new all-time high in Q2 2016. Impression volume increased 27% quarter-over-quarter and 103% year-over-year. Looking ahead, we expected to see continued rapid growth over the second half of the year. Last year, impression volume increased 45% during the second half of the year compared to the first half.

North America Impression Volume: Q2 2015 - Q2 2016



Europe: Germany Claims No. 2 Spot Behind the U.K.:

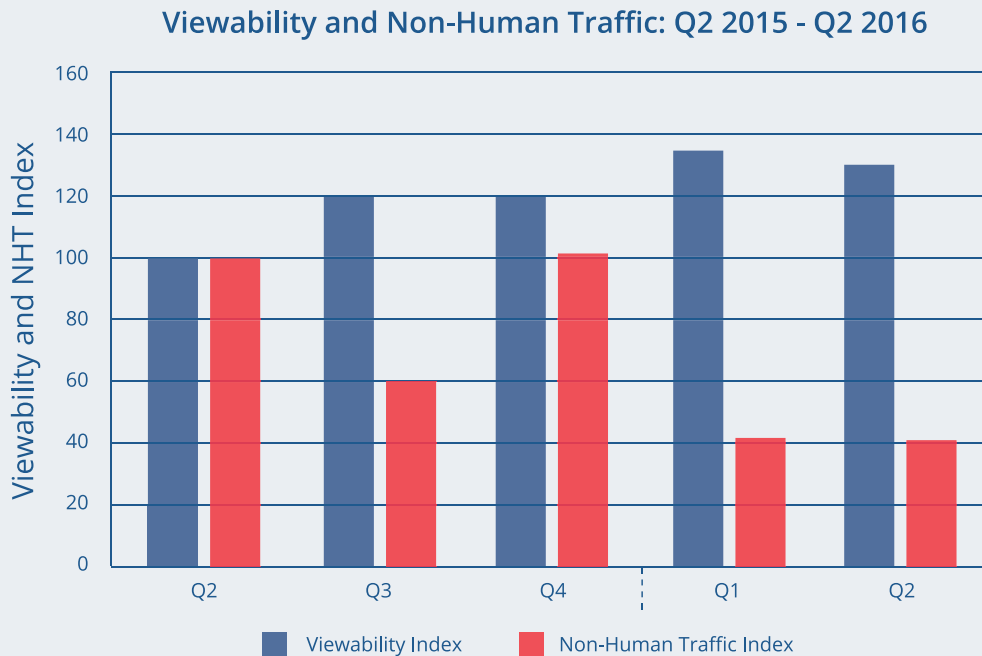
The U.K. accounted for 17% of the EMEA programmatic ecosystem in Q2 2016, followed by Germany (10%), Turkey (9%), France (8%) and Italy (8%). In Q1, France was the No. 2 country and Germany was No. 4, but the two countries swapped positions last quarter. Germany was the fastest-growing country in terms of RTB market share in Q2, rising 22%. The U.K. was the second-fastest growing country in the region, as its share of the market increased 21% quarter-over-quarter. No other countries in the top 10 saw their total share of the EMEA market increase more than 5% compared to Q1.



II. Programmatic Buying Indexes

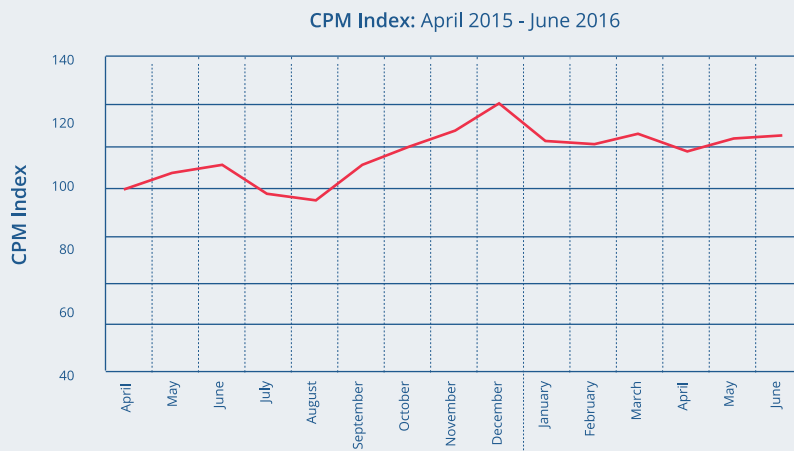
Viewability Up 31% Year-Over-Year as NHT Reaches New Low:

Our observed viewability rates in Q2 2016 were on par with Q1 2016 (down just 2%). Overall, viewability rates have increased 31% year-over-year. NHT rates hit a new all-time low in Q2 2016, falling 5% compared to Q1. Our observed NHT rates have decreased 59% year-over-year.



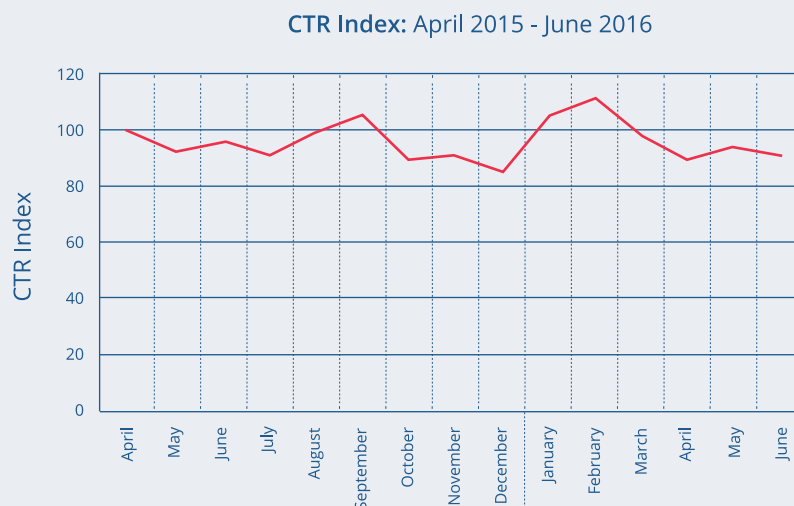
CPMs Flat in Q2 2016; Rise Over Second Half of Year Expected:

As Accordant's buyers experienced, average CPMs remained flat throughout Q2 2016. CPMs steadily increased over the second half of 2015 — jumping 29% in the second half of the year compared to the first — and we could see a similar trend to close out 2016.



CTRs Unchanged Year-Over-Year:

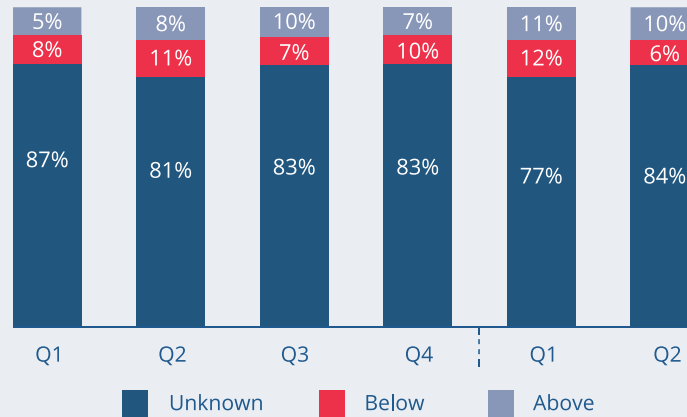
CTRs in North America decreased 7% in Q2 2016 compared to Q1. However CTRs were largely unchanged in Q2 2016 compared to the same period in 2015. CTR is not a primary optimization metric because higher CTR is not necessarily correlated to stronger marketing return on ad spend (ROAS).



Ad Transparency: Publishers Get Less Transparent in Q2:

Publishers provided pre-bid ad placement data (i.e. “above” or “below” fold) for only 16% of impressions at auction in Q2 2016, down from 23% in Q1. However, the Q2 2016 numbers were in line with all of 2015.

RTB Inventory Transparency: Publisher Placement



Ad Units: Mobile Sizes Take More Market Share:

As consumers have expanded across devices, marketers have tapped into new ad sizes to tell their stories across screens. The traditional “big three” ad units saw their share of the market decrease markedly quarter-over-quarter, while other ad unit sizes — including mobile sizes such as 320x50 and 300x600 — accounted for more of the market. To account for the growing number of ad units the industry can choose from, Accordant Media is benchmarking mobile ad sizes in addition to the traditional “big three.” The mobile leaderboard size — 320x50 — accounted for 13% of all programmatically-traded impressions last quarter, nearly twice as much as the 160x600 unit (7%) and close to the 720x90 desktop leaderboard (16%).

Size	Q4 2015 % of Impressions	Q1 2016 % of Impressions	Q2 2016 % of Impressions	% Difference
300 x 250	47%	44%	34%	-22%
728 x 90	18%	21%	16%	-26%
160 x 600	8%	12%	7%	-43%
320 x 50	-	-	13%	-
300 x 600	-	-	4%	-
All Others	26%	23%	26%	+15%

Inventory Breadth: Focusing on Just Over 700 Sites:

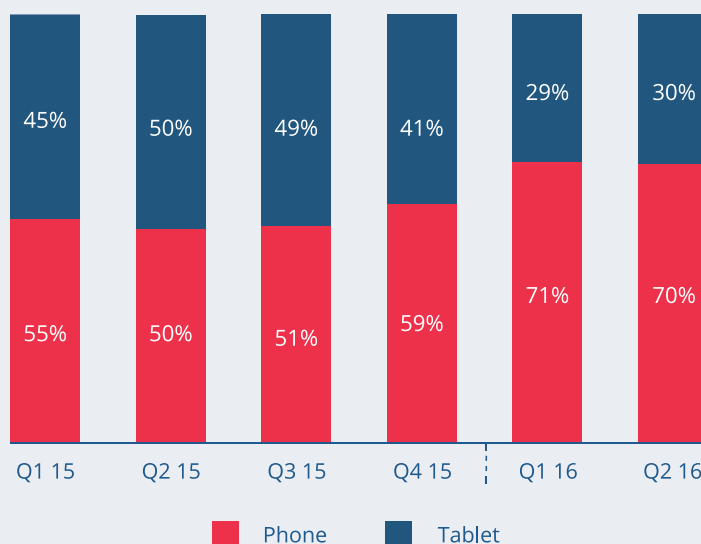
While Accordant bought advertisements on hundreds of thousands of websites in Q2 2016, the majority of our programmatic buying was done on 724 sites — down about 24% year-over-year and on par with Q1 2016.

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016
% in top domains	57%	58%	46%	55%	55%
Sites utilized to serve 80% of ads	951	1,015	966	717	724

Mobile Devices: Smartphones Supply Has Been Unlocked:

When it comes to mobile programmatic marketing, impression volume remains weighted toward smartphones over tablets. After sharing the market on a nearly 50-50 basis for years, smartphones began to separate themselves from tablets in the mobile programmatic space during Q4 2015, and the trend was made even more evident in Q1 2016. In Q2, smartphones again accounted for nearly three-fourths (70%) of the mobile programmatic market. Based on 2015 trends, we expected a small decrease in smartphone market share in Q2 compared to Q1, but the drop was only 1%, which was lower than expected.

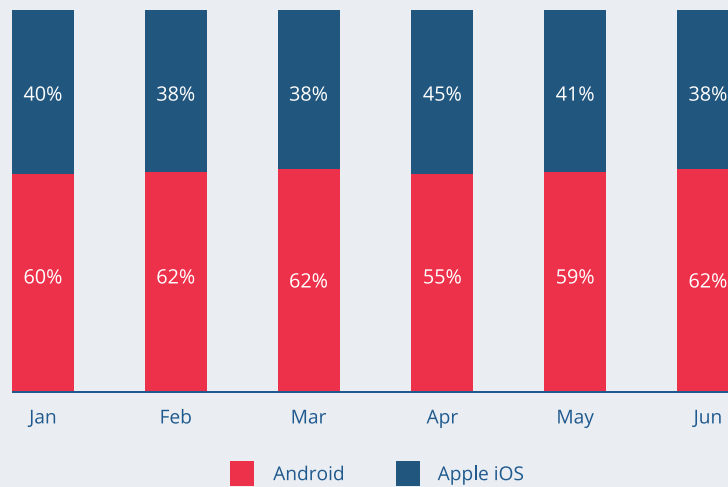
Supply by Mobile Device Type: Q1 2015 - Q2 2016



Mobile Apps by Operating System: Android Takes Two-Thirds of Market Share:

During Q2 2016, Android devices accounted for about two-thirds of the in-app mobile programmatic buying market. While Android's share of the market dropped below 60% for the first time this year in April, Androids regained their strong lead in the market by the time Q2 came to a close.

Mobile App Supply by Operating System: Q1 - Q2, 2016



III. Q2 Programmatic Buyers' Spotlight:

How Marketers Can Benefit From Linking Online Ads to Offline Sales

In this quarter's Spotlight, Accordant Media outlines how marketers can take advantage of today's measurement and attribution technologies. Marketers have intuitively known that digital ads help sell products both online and in brick-and-mortar shops, but they have not been able to accurately measure the relationship until now.

Completed during Q2 2016, our research examined the relationship between programmatically-purchased digital ads and offline conversion events to understand the incremental impact programmatic advertising has on offline sales throughout the entire purchase funnel.

Methodology:

Test group: We utilized offline-to-online cookie-matching data to translate offline sales to online cookies — and then matched those cookies to users exposed to our campaign. This provided us with users who were both exposed to our digital campaign and made an offline purchase.

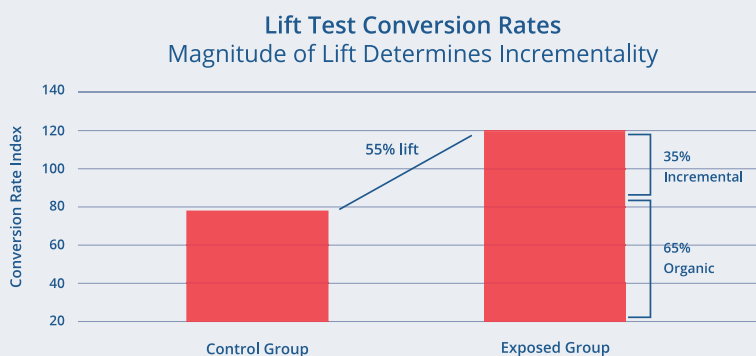
Control group: We used a proprietary methodology to identify a commensurate sample of cookies that matched campaign targeting criteria — but who were not exposed to our ads. This process provided us with a group of users who were not exposed to our campaign but still made an offline purchase.

Key Findings:

1. 55% lift in sales over control, with 35% incremental conversions: Our research unveiled that the digital programmatic campaign drove 55% lift in sales over the control group. Additionally, the campaign generated 35% incremental sales.

a. Lift over control reveals the conversion rate of the test group compared to the control group.

b. Incremental conversions reveals the percentage of total conversions that would not have occurred without the campaign.

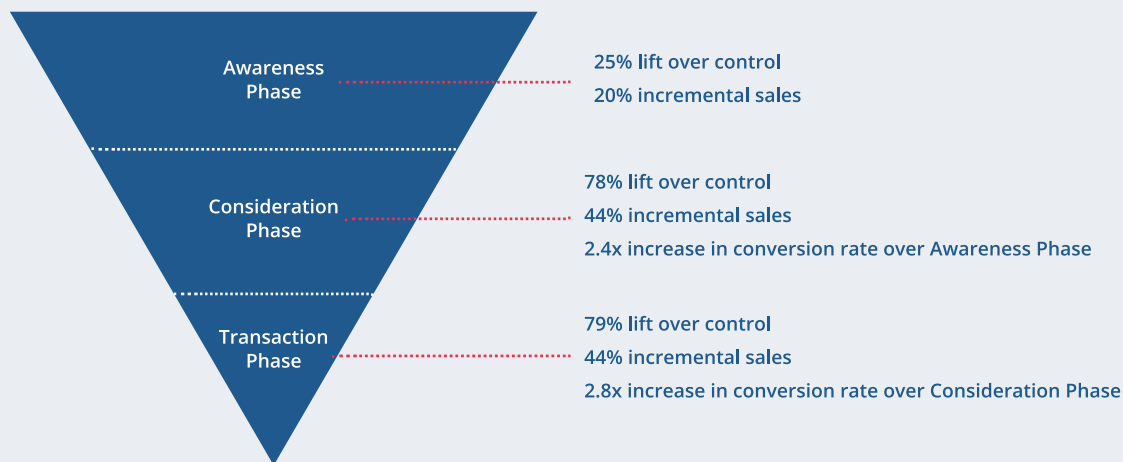


2. Both upper- and lower-funnel tactics generated lift and incremental sales: Our research proved that digital campaigns drive lift and incremental sales throughout all stages of the conversion funnel — from the Awareness Phase, to the Consideration Phase, through to the Transaction Phase. Additionally, our study found that the actual responsiveness of the audience follows the funnel, indicated by an increasing conversion rate as consumers moved “down the funnel” toward the Transaction Phase.

a. Awareness Phase: Upper-funnel tactics, such as prospecting for new customers, provided a lift in sales (25%) and incremental sales (20%) compared to the control group.

b. Consideration Phase: Connecting with consumers during the Consideration Phase — including on private marketplaces — generated results on par with the Transaction Phase, with 78% lift and 44% incremental sales. The conversion rate in the Consideration Phase was 2.4x higher compared to the Awareness Phase.

c. Transaction Phase: Lower-funnel tactics, including remarketing, drove the highest lift in sales (79%) and incremental sales (44%). The conversion rate in the Transaction Phase was 2.8x higher compared to the Consideration Phase.



Spotlight Summary:

1. Digital ads greatly impact offline sales: Our Spotlight research uncovers the link between digital programmatic campaigns and offline sales. Our study reveals that the link between digital ads and offline sales is large, indicated by the 55% lift over control and 35% incremental sales generated by the digital media.

2. Programmatic drives sales and incrementality throughout the “funnel”: If a marketers’ primary point of sale is offline, they may be hesitant to run lower-funnel digital tactics that are traditionally associated with direct response campaigns, due to the fact that the conversion event would not actually occur until a later date (and if it did occur, it would be difficult to attribute the conversion to the digital ad).

However, our research shows that targeting users in the Consideration Phase and Transaction Phase generate nearly 80% lift, 40% incremental sales, and higher conversion rates. This finding reveals the connection between each stage of the funnel and indicates that marketers should be integrating campaigns across all phases.

3. Create a granular offline-to-online feedback loop for continued optimization: When measuring offline data, marketers don't have to settle for the loss of granularity they have come to expect in the online world. Results can reflect actual user activity, not a predictive model, and can be attributed to specific aspects of a campaign. Instead of receiving a gross projection for lift — unattributed to any specific tactic — marketers can tie offline results back to discrete online data.

This valuable feedback can be used to optimize further efforts. Marketers can remove conjecture from the planning process and optimize their spend by seeing exactly how investments in one channel or tactic moves products across all channels and screens (including the real world). Lift testing is the most precise marketing effectiveness instrument that should be in every marketer's toolkit. A full "toolkit" — including lift testing, A/B testing, segmentation, propensity scoring, attribution and marketing mix models — is essential for generating data-supported marketing strategies.

Accordant Media's Q2 2016 Pulse Report keeps marketers up to date on the latest trends and developments in the programmatic marketplace. The latest Pulse Report indicates that marketers are increasingly utilizing new tools in the programmatic space across all channels. The fact that mobile ad units are taking a larger proportion of overall programmatic market share is representative of this trend.

Additionally, our research reveals that continued growth in the programmatic space is not relegated to countries new to the technology. The U.S. and the U.K. were both among the fastest-growing programmatic countries in the world last quarter in terms of market share. U.S. programmatic impression volume more than doubled year-over-year, while the U.K. has experienced 36% growth just since the start of 2016.

Over the second half of the year, buyers will continue to test the mobile waters and will utilize cross-channel and cross-device measurement technologies to fuse all marketing efforts together.

Q2, 2016 RTB Market Pulse Data

Accordant Media's RTB index data is compiled and compared in aggregate against the same quarter during the prior year, and against the prior quarter in order to reflect macro changes in the overall RTB marketplace. Some data may be influenced by Accordant Media's proprietary trading strategies. Examples include CPMs, CTRs, number of domains served, and conversion data.

About Accordant Media

Accordant Media makes advertising investments more successful for marketers by unlocking the value of audience data. Through a unique combination of sophisticated data management and activation technologies, expert service and industry-leading transparency, we give marketers more insights and accountability to drive (cost) effective results at scale.

Our comprehensive Accordant ATS™ solution has helped us attract leading marketing teams as our clients. Accordant, founded in 2010, was established by digital industry leaders from Avenue A | Razorfish, Aegis Media, Akamai and DoubleClick. Co-founded by digital agency execs Art Muldoon & Matt Greitzer, Accordant Media is based in New York City, with offices in San Francisco, Chicago and London.

We appreciate your feedback.

For questions or business inquiries, please reach us at: info@accordantmedia.com

Visit us at: www.accordantmedia.com