EXECUTIVE SUMMARY

» Measurement and attribution challenges have become top of mind for marketers.

» The road to marketing relevance demands that you unify marketing ecosystems and break down data barriers for closed-loop, incremental measurement.

» Although digital media generates lots of data, the fragmentation of technologies and platforms introduces a new set of measurement complexities.

» Brands seeking omnichannel campaign measurement capabilities should:

  • Select a measurement partner that understands omnichannel marketing and the unique challenges of digital vs. offline channels.

  • Invest in test and control experiments to get the right answers.

  • Bring their customer data together with a “unified data layer” (i.e., a data foundation for their marketing and advertising ecosystem).
WELCOME TO THE MEASUREMENT MAZE

When it comes to campaign measurement, the goal is simple — understand the incremental business impact of omnichannel marketing campaigns across digital and offline sales channels. Achieving this critical objective is anything but simple.

The experience can feel like navigating a maze. Within a maze, you do not have the birds-eye view you need to plot the correct course. Marketers have the same challenge — most lack the complete view of consumers that is essential for accurate measurement, resulting in lots of backtracking and dead ends.

The fragmentation that has spread data across dozens or perhaps even hundreds of data and technology silos makes obtaining this holistic understanding of the consumer very difficult. Mastering measurement has become an urgent imperative as it evolves into more than a tool for simply understanding campaign performance. More than ever, measurement shapes strategy and impacts budget allocations. According to Forrester, “measurement has decisively shifted from only measuring past performance to providing a quantitative basis for future investment decisions.”

Measurement underpins business success, but far too many marketers get lost in the measurement maze. For example, you may not know how to connect your digital advertising efforts to your offline sales when customers choose to convert in-store. You need help to understand how and why you can become disoriented, and what processes you can implement to reach your desired destination.

“Measurement has decisively shifted from only measuring past performance to providing a quantitative basis for future investment decisions.”

- Forrester Research
KEY TRENDS

Marketers have made measurement a top priority

Does it seem as though more marketers struggle to navigate the measurement maze? That’s not an illusion. We have been tracking this since IAB noted that measurement and attribution topped the list of industry challenges for 2017.3 So why has measurement suddenly become marketers’ chief concern? Because marketers and advertisers continue to shift their dollars into digital.

Digital ad spend now exceeds TV

For the first time, U.S. digital ad spend exceeded TV ad spend in 2016, and this gap is expected to widen significantly in coming years.4 As marketers begin to expend the lion’s share of their budgets in digital, they come under increasing pressure to justify this spending and quantify its impact. More than ever, they need to take into consideration other touchpoints beyond the one that immediately preceded conversion.

Consumers shift to digital media

The industry’s pivot to digital is for a reason — consumers’ media consumption habits have shifted in a major way. eMarketer reports adults in the U.S. are spending nearly half of their media time on digital media (47.2 percent).5 On average, consumers spend nearly six hours each day with digital media (desktop/laptop/mobile), compared to more than four hours with television. While brands have slowly begun to adapt to this shift in consumer behavior, many have caught on and realized it comes with its own set of challenges.

“For the first time in marketing history, in 2016 U.S. digital ad spend exceeded TV ad spend.”

- eMarketer
## CHALLENGES OF DIGITAL AND OFFLINE

Because digital media generates lots of data, people assume that it is highly measurable, and it is, taken one medium at a time. However, due to the fragmentation of technologies and platforms, digital introduces complexities that marketers must understand to achieve accurate and objective results. In contrast, offline channels may provide less user engagement data, but in some cases personally identifiable information (PII) enhances targeting precision due to a clearer portrait of consumer identity. From a campaign measurement perspective, the following table summarizes some of the challenges that marketers and their measurement partners must address.

### DIGITAL MEDIA

<table>
<thead>
<tr>
<th>Channel Type</th>
<th>Description</th>
<th>Measurement Challenges</th>
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</table>
| Display Ad   | Advertising channels (e.g., display and video) that leverage anonymous identifiers, including cookies or mobile IDs, to serve ads to consumers on their PC, smartphone, tablet, or connected device. | • Cookies (see glossary) are volatile because they expire and consumers may delete them. Mobile IDs (see glossary) can also be reset by the consumer.  

• Even if you match a consumer to a cookie, there is rarely a unique 1:1 relationship. Most consumers have multiple cookies, because they use multiple devices and browsers. Shared device usage can associate multiple consumers with a single cookie.  

• Anonymous identifiers used for targeting individuals lead to challenges with identity resolution (see glossary) for achieving closed-loop campaign measurement.  

• For mobile devices that use Apple iOS, third party advertising cookies are blocked by the Safari browser. |
| Display Ad   | Advertising channels (e.g., social display, authenticated video) that use PII to serve ads to consumers on their computer, smartphone, tablet, or connected device. Publishers that use PII include social networks and publishers where the user is authenticated to the service. As a subset of people-based, household-based channels like Addressable TV can serve ads to specific households with supported set-top boxes. | • Some people-based ad networks are criticized for “grading their own homework” since they do not support third-party measurement tags to enable verification of what is reported to marketers.  

• For most PII-based publishers, it’s not permissible to co-mingle ad exposure data with any other publisher’s exposure data to quantify unduplicated reach and truly understand comparable publisher performance — you can only look at aggregated campaign data side by side. |
| Search       | Search-based advertising matches keywords entered by the consumer to relevant ads for products and services. | • Marketers do not receive consumer-level ad “exposure” data to understand reach as search engines don’t use pixels for impression tracking and report on clicks. |
| Email        | Messages and offers delivered to consumers with an email address.             | • Spam filters can prevent delivery to intended recipients.  

• Large file sizes can distort open rate data.  

• Offline reading may not register in open rates. |

Table 1. Omnichannel Measurement Challenges
# OFFLINE MEDIA

<table>
<thead>
<tr>
<th>Channel Type</th>
<th>Description</th>
<th>Measurement Challenges</th>
</tr>
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<tbody>
<tr>
<td>Direct Mail</td>
<td>Often (but, not always) unsolicited advertising messages sent to prospects and customers using PII, such as name and postal street address.</td>
<td>- No exposure or impression data into who sees or opens mail in household. &lt;br&gt; - Mailers with coupons or promo codes may be shared with friends or other family members distorting response rates. &lt;br&gt; - Postal service may deliver to the wrong address. &lt;br&gt; - In most cases, you send mail to a household, even if it’s addressed to an individual.</td>
</tr>
<tr>
<td>Linear TV</td>
<td>A video ad (typically 30 seconds duration) that airs during designated portions of television broadcasts (i.e., one ad exposed to many viewers). National TV audiences are measured using Nielsen’s panel-based TV ratings, which is accredited by the Media Ratings Council (MRC).</td>
<td>- Measurement has traditionally been based on a panel or sample (Nielsen ratings) to generate aggregated, syndicated research. Because of this methodology, advertisers lack the flexibility to define true target audience segments and understand specific households that have actually viewed their ads. &lt;br&gt; - Due to the small panel size (&lt; 50K people), you will receive limited audience insights and post-campaign conversion measurement may not be possible due to the lack of scale.</td>
</tr>
<tr>
<td>Linear Radio</td>
<td>Audio ad that airs during designated portions of radio broadcasts. Radio audiences are measured by Nielsen.</td>
<td>- Listenership not measurable at the individual level, typically only get insights at a regional level. &lt;br&gt; - Sample only reflects small fraction of total population and is not random from a statistical perspective.</td>
</tr>
<tr>
<td>Print (magazines/ newspapers)</td>
<td>Static ads that are included in print media. Publications that have a known subscriber base can presume a portion of their readership to be “known” based on the evidence of being a paid subscriber.</td>
<td>- Readership is typically not measurable at the individual level since content may be read by multiple individuals within household.</td>
</tr>
</tbody>
</table>

As you can see, the complexities of omnichannel measurement should be clearly understood as you begin any measurement initiative. Let’s review some best practices that will help you get the answers to your key business questions about response, conversion, and revenue.
BEST PRACTICES FOR CAMPAIGN MEASUREMENT

You should ensure that your analytics team members are well versed in the nuances of digital and offline campaign measurement. In addition, your measurement partner should:

1. Use closed-loop measurement to understand impact of a specific marketing campaign in driving consumer response and conversion.

The ability to connect digital and offline transactional data underpins closed-loop measurement of marketing impact. We live in a world where many consumers may initially engage with your brand via digital channels; however, 88 percent of U.S. retail sales take place in stores.6 This makes it challenging to connect an offline transaction to related digital touchpoints. In other cases, consumers will choose to convert via digital channels after first engaging with offline media (e.g., direct mail, linear TV). Consequently, closed-loop measurement requires accurate identity resolution and the use of common identifiers for consumers as they interact with digital and offline channels.

RETAIL INDUSTRY SPOTLIGHT

Challenge:
• Leading retailer sought to reach known customers via social media advertising during the July 4th holiday weekend.

Solution:
• Execute campaign with Facebook’s Custom Audiences to find existing customers and deliver relevant ads to promote products on sales.
• Partner with Acxiom to define audience and measure closed-loop performance of Facebook ads on digital and in-store sales.

Results:
• Up to 2.2 X return on ad spend (ROAS).
• Measurement insights determined that ads influenced digital and offline sales across categories well beyond those advertised (e.g., outdoor and landscape products).
• The Fourth of July campaign generated significant topline incremental sales overall by driving higher sales per buyer via website.
2. Set up “test and control” experiments to assess whether marketing truly drove the decision to purchase.

Experimental design is a proven methodology that lets you answer questions like, “Did my marketing campaign actually drive more sales or would consumers have bought anyway?” Consequently, you should use test and control experiments (see Figure 1) for digital and offline marketing campaigns to objectively measure the lift in sales associated with your advertising. This methodology requires that you define a “test” group of campaign-exposed individuals and a “control” group of non-exposed individuals. The selection needs to ensure an “apples to apples” comparison between the two groups so they are statistically identical and isolates the effect of campaign exposure on conversion. Furthermore, marketers should ensure these groups are large enough to provide statistical significance.

![Figure 1. Test and control experiment](image-url)

**Test Audience**
(Your ad)

Result: 4% of audience converts

**Control Audience**
(No ad or unbranded)

Result: 2% of audience converts

Conclusion: Advertising campaign drives 2% absolute lift in conversion
3. Watch out for “exposure bias” during test and control experiments.

Of course, as with any experiment, the potential exists for inaccuracies to creep in during the campaign execution process (see Figure 2). From the initial definition of your target audience to the exposed audience that actually viewed your ad, small changes or “dropoff” can lead to large differences in the reportable audience. For example, you may not find 100 percent of the target audience during the data onboarding (see glossary) process of matching consumer PII to anonymous advertising identifiers from digital channels. Similarly, your demand side platforms (DSPs) may not find 100 percent of the onboarded audience for ad delivery and distribution.

Many marketers would like to measure campaign impact based on the individuals actually exposed to the advertising. But exposure is not a random selection process, creating openings for exposure bias — the inability to compare test group results to control group results due to the complexities in building comparable audiences. Consequently, marketers should seek guidance from measurement experts who understand the realities of exposure bias and can minimize its impact. For example, by developing modeled control groups that statistically mirror the reportable audience, your partner can ensure measurement accuracy.

Figure 2. Audience waterfall for a campaign execution process

As a campaign progresses, each step’s small changes are magnified, introducing biases. Moving from Level 1 to Level 5, you must understand how these changes require bias remediation.
4. **Minimize “audience dropoff” by working with DSPs and ad networks with higher match rates.**

Marketers must plan for exposure bias upfront in order to neutralize its impact. When reviewing match rates (see glossary) from ad networks or platforms prior to starting a campaign, request their definitions for the numerator and denominator as no industry standard exists. Your analytics team will need these definitions to evaluate each network properly. You should select DSPs that can help you reach your target audience. In addition, a good measurement partner can mitigate the impact of the biases generated by audience drop-off due to match rate variations.

5. **Audit your first party data in order to prevent GIGO (garbage in, garbage out) and ensure the accuracy of your analysis.**

No matter how many smart people you have analyzing and interpreting your campaign measurement output, the lack of good input data will lead to poor conclusions. For example, you may have data at different levels of granularity (e.g., individual vs. household), which prevents a true “apples to apples” analysis. Consequently, gather and audit your data across touch points so you have all the information to answer your measurement and attribution questions. Work with your martech and adtech vendors and IT teams to consolidate first-party data into one place.

6. **Find a champion who believes in data-driven marketing.**

Work with an executive sponsor who believes in data-driven marketing and can support your analysis. In some cases, without a champion, the Highest Paid Person with an Opinion (HIPPO) is more emboldened to say that results are B.S. (below standard). Teams that own specific channels may not like the conclusions (e.g., reduce spend on TV). Consequently, you need strong leaders and teams properly aligned to the greater good of driving cost-effective, top-line performance for the brand.
INTRODUCTION TO ATTRIBUTION ANALYSIS

Once you understand campaign lift, you should pursue attribution analysis. Attribution focuses on understanding the impact of omnichannel campaigns over a longer period of time and assigning credit to the channels or campaigns that “touched” the consumer along their journey (typically resulting in a conversion event). Think of it as backtracking how you arrived at the center of the maze and what led you there.

Major approaches include:

- **First-touch attribution** – Credits the first channel a lead engaged with.
- **Last-touch attribution** – Credits the last campaign a lead engaged with before converting.
- **Multi-touch attribution (rules-based)** – Shares credit across all of the touches along the buyer’s journey, based on a set of pre-defined rules. However, this approach is not robust because rules can be modified to give more credit to channels that are favored by marketing decision makers.
- **Multi-touch attribution (algorithmic)** – Splits credit among all of the touches along the buyer’s journey, using an algorithmic approach that is based on a statistical model.

Attribution analysis requires that you get your data in order across media channels, campaigns and over a longer period of time. Since the topic requires in-depth examination, we will discuss more in a future paper.
RECOMMENDATIONS

Solving the measurement maze is no walk in the park. But the ability to measure the incremental impact of your campaign in driving sales and conversion provides a competitive advantage in today’s rapidly evolving marketing and advertising landscape.

To build strong omnichannel measurement capabilities, you should:

- **Select a measurement partner that understands omnichannel marketing and the unique challenges of digital vs. offline channels.** Uncovering insights about your customers, what they want, why and where they engage across all channels requires teaming up with a trusted, knowledgeable partner. Choose a partner equipped to guide you through the measurement maze and the unique challenges of digital and offline media (see Table 1). Ideally, a partner will have decades of experience and skills in campaign analytics to help you understand the incremental impact of your campaigns across all media and customer segments.

- **Invest in test and control experiments to get the right answers.** Essential for incremental measurement, test and control provides definitive answers to campaign performance questions. You should invest a portion of your marketing budget and execution timelines to account for the resources required to conduct these measurement experiments.

- **Bring your data together with a “unified data layer” to support privacy-conscious, omnichannel measurement.** A unified data layer provides a foundation for your omnichannel marketing and advertising ecosystem. It brings together data from digital and offline channels, known and anonymous consumers, along with prospects and customers into a single, foundational and privacy-conscious data repository. By using identity resolution capabilities, the unified data layer provides a complete view of the customer that enables your analytics team to perform closed-loop measurement. Since ethical data use is a critical requirement, a unified data layer supports your measurement objectives while respecting consumer privacy. It also provides data to support multi-touch attribution, customer journey and time series analysis via your business intelligence and analytics tools.
ACXIOM: YOUR PARTNER FOR MEASUREMENT

Acxiom provides the data and technology foundation for the world’s best marketers. We enable people-based marketing everywhere through a simple, open approach to connecting systems and data to drive better customer experiences for people and greater ROI for business. A leader in identity, customer data management and the ethical use of data for more than 50 years, Acxiom now helps thousands of clients and partners around the globe work together to create millions of better customer experiences, every day. Acxiom is a registered trademark of Acxiom LLC and is part of The Interpublic Group of Companies (IPG). For more information, visit acxiom.com.

GLOSSARY

Cookie
Anonymous, device-specific identifier attached to a person’s internet browser to track the websites he or she visits via PC, smartphone, or tablet.

Mobile ID
Anonymous identifier that is used for tracking ads delivered to “mobile apps” on smartphones, tablets, and connected devices. Mobile IDs include Apple’s Identifier for Advertisers (IDFA) and Android’s Advertising ID.

Identity Resolution
Identity resolution is the process of leveraging an “identity graph” to resolve anonymous identifiers to a single, known individual in a privacy-conscious way.

Consumer Data Onboarding
The process of matching (temporarily linking) known consumer data (PII) with consumers’ corresponding digital attributes (such as cookies, IP addresses, mobile IDs and other identifiers) to create a cohesive and comprehensive identity for more actionable marketing.

Match Rate
The percentage of individuals from a file (e.g. list of email addresses) whom a data onboarder can find and anonymously tag with data. Match rates vary by publisher, partner, and platform. Consequently, it is vital to understand the definitions for numerator and denominator used in match rate calculations.
References


4. “US Digital Ad Spending to Surpass TV this Year: Digital will represent 37% of US total media ad spending,” eMarketer, Sept 2016


6. “Report: E-commerce accounted for 11.7% of total retail sales in 2016, up 15.6% over 2015,” Marketing Land, Feb 2017