This research would not have been possible without the significant contributions of dozens of U.S. advertising, marketing, media, information and technology industry leaders who generously offered their time, insights and feedback in support of this effort. Though their names are not included in this report, they represent some of the most respected and innovative brands and service providers in advertising and marketing today.

Additionally, we would like to recognize our partners, the Data & Marketing Association and Interactive Advertising Bureau’s Data Center of Excellence, as well as our project sponsors:

**The Winterberry Group Research Team**

Bruce Biegel  
Samantha Braverman  
Chloe Davis  
Michael Harrison  
Daniel Karson  
Jonathan Margulies

**NOTICE**

This report contains brief, selected information and analysis pertaining to the advertising, marketing, media, information and technology industries and has been prepared by Winterberry Group LLC in partnership with the Data & Marketing Association (DMA) and the Interactive Advertising Bureau’s (IAB) Data Center of Excellence. It does not purport to be all-inclusive or to contain all of the information that a prospective manager, investor or lender may require. Projections and opinions in this report have been prepared based on information provided by third parties. Neither Winterberry Group, DMA, IAB nor their respective sponsors make any representations or assurances that this information is complete or completely accurate, as it relies on self-reported data from industry leaders—including advertisers, marketing service providers, data providers and technology developers. Nor shall any of the foregoing (or their respective officers or controlling persons) have any liability resulting from the use of the information contained herein or otherwise supplied.

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For many years now, data has been reshaping the way that brands (and especially the folks concerned with their marketing, advertising, media sales and other customer-centric functions) build and engage with their addressable audiences.

That story—of Big Data and its proliferation across use cases—has been told many times. But less well known is how audience data is fundamentally changing the organizations that rely on it. With every new data asset or technology platform they onboard, after all, data practitioners are also driving a fundamental change in their business-as-usual, often upending years of precedent guiding how they allocate resources, establish budgets and measure the impact of those investments against peers.

Complicating matters further, marketers and publishers looking to become “data centric” have had little choice but to embark on that titanic change effort without the benefit of clear and complete intelligence; the inherent complexity of data and its myriad applications has previously made accurate reporting—on how users are investing in data, putting it to work and evolving their marketing approaches in turn—too challenging to accurately compile.

This report represents the first industry-wide effort to address that gap. By providing credible, practitioner-informed insight, we hope to demystify how U.S. companies are investing in audience data (and its associated support functions), helping practitioners benchmark their own spending against industry norms and establish a firmer basis for future investments.

To the many contributors, reviewers and market participants who lent time, insight and information to make this report possible, we offer our most sincere thanks. And to our readers: we hope you find this analysis useful. We look forward to your feedback as we aim to expand this effort (and its granularity) over the coming years.
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Executive Summary: U.S. Firms Invest More Than $20BB Annually in Third-Party Audience Data and Data Activation Solutions

Companies in the U.S. will conclude 2017 having invested a total of $20.2BB through the year in third-party audience data and data activation solutions supporting their advertising, marketing, media sales and associated efforts.

Reflecting the inherent complexity associated with collecting, managing, cleansing and deploying a dynamic set of data assets, users will invest a majority of their data budgets—some $10.1BB—on services and technology offered by third-party providers to support the activation of audience data (rather than on data itself).

Across data types, marketers will invest most significantly ($3.5BB) on datasets that deliver a range of “omnichannel” identifiers, supporting their ability to identify and engage with consumers across media touchpoints—including direct mail, email, display advertising, website content and other channels.

Across data activation categories, 2017 expenditures will be split relatively evenly between hosting and management solutions, which include CRM databases, data management platforms and tag management for digital marketing—and the solutions focused on processing, cleansing, integrating and securing those data sources ($4.2BB and $4.3BB, respectively).

Analytics, including modeling and segmentation, accounts for a relatively small portion of outsourced data budgets ($1.6BB), likely stemming from two factors: the tendency of many enterprises to “insource” their marketing analytics work, and the common approach among service providers to “bundle” such efforts with paid media, campaign strategy and other offerings.

### 2017 U.S. Third-Party Audience Data Spending (Supporting Advertising, Marketing, Media Sales & Associated Objectives) ($BB)

<table>
<thead>
<tr>
<th>Audience Data (by type)</th>
<th>$10.054</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Omnichannel</td>
<td>$3.530</td>
</tr>
<tr>
<td>• Transactional</td>
<td>$2.997</td>
</tr>
<tr>
<td>• Digital</td>
<td>$2.078</td>
</tr>
<tr>
<td>• Specialty</td>
<td>$0.886</td>
</tr>
<tr>
<td>• Identity</td>
<td>$0.563</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Activation Solutions (by function)</th>
<th>$10.132</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Integration, processing and hygiene</td>
<td>$4.300</td>
</tr>
<tr>
<td>• Hosting and management</td>
<td>$4.200</td>
</tr>
<tr>
<td>• Analytics, modeling and segmentation</td>
<td>$1.632</td>
</tr>
</tbody>
</table>

| Total                                  | $20.186 |
Research Overview: What is “The State of Data”?

Why was this research developed?

The State of Data was designed to help the U.S. advertising, marketing and media communities better understand the extent to which they and their peers are investing in audience data as a fundamental pillar of their customer acquisition and engagement efforts.

What does it hope to achieve?

Leveraging the results of an intensive industry data request and modeling effort, The State of Data:

- Examines the use of audience data through the lens of budgetary expenditures directed to third-party data assets, services, technologies and hybrid activation solutions that support downstream consumer and B2B touchpoints.
- Aims to help practitioners benchmark their own investments and performance.
What is “Audience Data”?

For the purposes of this analysis, “audience data” will refer to any kind of commercial information used to identify:

Who consumer and B2B audience members are, as defined by a vast range of both structured and unstructured identifiers that may include name, email address, postal address, IP address, device ID, demo- and psychographic attributes, historical behaviors and expressed and/or inferred preferences; and/or...

How these audience members interact with commercial brands, as potentially illustrated by all of the aforementioned elements, plus previous purchase/transaction activity, media consumption behaviors and communication preferences

This information may be originated offline or online, inferred (probable) or actual (deterministic) and geared primarily for use in:

Developing actionable insights to support the planning, segmentation, targeting and execution of audience-centered advertising, marketing and media efforts
In developing the findings presented in this report, Winterberry Group undertook an extensive data collection and analysis effort—beginning in May and continuing through November 2017—that incorporated:

- Development and distribution of a detailed, confidential information request to harvest sales and other financial information from product, service and technology providers representing virtually every segment of the U.S. audience data marketplace

- Aggregation of the data provided in response to the information request, as well as publicly available information sources on data product investments, public company revenues and associated financial dynamics

- Development of complementary quantitative models geared to estimate spending on third-party U.S. audience data and data activation solutions

  - Models addressed a range of viewpoints, including a “bottom-up” perspective (estimating the collective data-related revenues of commercial data and other service/technology providers in the U.S. market), as well as a “top-down” approach (that considered the proportionate share of data associated activation solutions across a range of addressable paid and owned media channels)

- Reconciliation of model conclusions with thought leader feedback to support conclusions that align with “real-world” experiences
The Approach: Sizing the U.S. Audience Data Market

What’s being measured?
- Aggregate U.S. expenditures on third-party audience data and data activation solutions that support advertising, marketing, media sales and associated use cases

What’s included?
- Spending on data assets licensed from third-party providers, as well as service- and technology-oriented offerings (provided by third parties) that support the use of audience data for U.S. marketing and advertising purposes, including:
  - Commercially-licensable data and/or audience segments, typically corresponding to actionable downstream deployment media (including direct mail, email, digital display advertising, website content optimization, addressable TV, etc.); and
  - Any third-party solution supporting the collection, management, segmentation, analysis and/or deployment of audience data. These activation solutions may support the use of various data types, including “first-party” (proprietary to the data user), “second-party” (acquired through a commercial partner) or “third-party” (licensed on the open marketplace)

What’s not included?
- “Insourced” data-related investments, including spending on talent and development of homegrown technologies
- Data-related expenditures that support market research and other aggregate insights, rather that campaign-oriented marketing
- Data-related expenditures that are inherently bundled with (and incapable of being divorced from) media assets, including custom audiences associated with large social networks and other publishers
- Data-related expenditures that are directed principally to enterprise priorities other than advertising, marketing or media; these may include financial, compliance, risk management, product management, underwriting and others
U.S. firms invest in a wide range of third-party audience data types and associated data activation solutions, typically corresponding to their associated use cases, vertical market applications and providers. For the purposes of simplicity, we have bundled these myriad classifications into eight core categories—with five corresponding to audience data types, and three corresponding to the associated activation solutions. They include:

- Omnichannel
- Transactional
- Digital
- Specialty
- Identity
- Integration, processing and hygiene
- Hosting and management
- Analytics, modeling and segmentation

Note: Segment descriptions are included on pages 13 and 14
In Brief: 2017 Expenditures on U.S. Third-Party Audience Data and Data Activation Solutions

- **U.S. firms** will close out 2017 having invested a total of **$20.186BB** through the year on third-party audience data and activation solutions that support their advertising, marketing and media-related data initiatives.

- **Almost equal shares** of that spending are being allocated to data and the third-party solutions that support its activation, including hosting and management, hygiene, data processing and analytics.

![Diagram showing 2017 Expenditures: U.S. Third-Party Audience Data and Data Activation Solutions* ($BB)](image)

*Supporting advertising, marketing and media sales use cases*
## U.S. Third-Party Audience Data Expenditures: By Data Type

<table>
<thead>
<tr>
<th>U.S. Audience Data Types</th>
<th>2017E ($BB)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Omnichannel</td>
<td>• Personally identifiable (“PII,” including name, address, email address) and “non-PII” (interests, preference and certain behavioral) information used to identify customers and prospects and indicate ways to engage with them; typically for use across traditional (direct mail, offer optimization) and digital (email, display advertising, site experience, etc.) channels</td>
</tr>
<tr>
<td>Transactional</td>
<td>• Purchase history associated with audience members/segments; often provided in aggregate, used to determine interests and needs and used to support segmentation for targeted marketing (includes credit, prescription and cooperative datasets that support marketing)</td>
</tr>
<tr>
<td>Digital</td>
<td>• Online behaviors of customers and prospects (as transmitted through IP addresses, device IDs and other unique identifiers) indicating how these users interact and are likely to interact across digital devices and associated media channels</td>
</tr>
<tr>
<td>Specialty</td>
<td>• Insights into customer and prospect behavior across new and emerging channels and specialty functions not easily integrated with other data types (including addressable TV, “Internet of things”/wearables, etc.), enabling customer/prospect profile enhancement, segmentation and marketing engagement planning</td>
</tr>
<tr>
<td>Identity</td>
<td>• Information that supports the reconciliation of customer and prospect profiles built across a range of disparate touchpoints; can support onboarding of identity profiles in support of unification/optimization of cross-channel marketing engagements</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$10.054BB</strong></td>
</tr>
</tbody>
</table>
### U.S. Audience Data Activation Solutions (Provided by Third Parties):
#### By Functional Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>2017E  ($BB)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Integration, processing and hygiene</strong></td>
<td>• Functions geared to maximize accuracy and actionability of a given dataset, thus improving efficiency in execution; may include de-duplication of records, merge/purge, national change of address (NCOA), suppression and various processes supporting contextual brand safety</td>
<td>$4.300</td>
</tr>
<tr>
<td><strong>Hosting and management</strong></td>
<td>• Managed services and technologies related to building and maintaining customer and prospect databases and other data resources, enabling profile creation, customer relationship management (CRM) and structuring of data to support optimal campaign management in support of marketing and audience engagement; includes DMP and tag management services for digital properties</td>
<td>$4.200</td>
</tr>
<tr>
<td><strong>Analytics, modeling and segmentation</strong></td>
<td>• Managed services (and fees associated with underlying toolsets that may be dedicated to marketing purposes) that support development of audience insights through segmentation (for targeted marketing efforts and media planning), predictive modeling, measurement and spending/campaign attribution</td>
<td>$1.632</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$10.132BB</td>
</tr>
</tbody>
</table>
In Conclusion: Managing Interplay Between Data Investments, Media Activation and Infrastructure Should Represent a Key Priority for Any “Data-Centric” Organization

- From a budgetary perspective, data and its associated activation solutions collectively represent a significant line item for marketers, publishers and other data users—eclipsing a number of downstream media channels in their command of organizational resources.

- In fact, U.S. data users invest more dollars in their efforts to manage, process, segment and analyze data than they do on the underlying data itself—suggesting that such budgets ought to be managed with a high level of oversight.

- Despite their size and importance, data budgets tell a relatively one-dimensional story. So much that is essential to unlocking the actionable insights and value that data can drive, after all, is associated with how organizations manage and share these assets. Those are fundamentally internal optimization functions, and their impact is thus impossible to correlate to third-party expenditures.

- Further, standalone data budgets don’t account for the enormous (and fast-growing) impact of media that cannot be distinguished from the datasets that drive their activation. In particular, “walled garden” alternatives—such as the custom audience products offered by social media platforms and large publishers—exist outside most users’ direct sphere of influence, further complicating questions about who ought to have a role in data’s management.

- Nevertheless, the widespread availability of high-quality audience data (and maturation of an omnichannel marketing data ecosystem in the U.S.) suggest that audience data will play an increasingly critical role across virtually all commercial interactions—demanding that marketers and publishers respond in kind with strategies, infrastructure and other resources that reflect data’s importance across their customer engagement efforts.
In 2016, Winterberry Group—in partnership with the DMA and IAB’s Data Center of Excellence—published their inaugural research report on “data-centric” organizations, exploring the ways companies are evolving their business processes and organizational structures to better leverage data across audience engagement efforts.

In early 2018, the partners will publish the second annual edition of The Data-Centric Organization, aimed at:

- Enhancing understanding of how data and data-driven solutions are transforming the way advertising and marketing is practiced
- Updating our perspective on the roles that people, technology platforms, supply chain partners and organizational processes play in supporting “data-centric” business transformation; and
- Providing industry intelligence that business leaders may leverage to build and/or enhance their own frameworks for utilizing their audience data assets in support of marketing, advertising and/or media sales efforts

The Data-Centric Organization 2018 is supported by:
About Us
Our Partners and Sponsors
About Data & Marketing Association

Founded in 1917, DMA is the community that champions deeper consumer engagement and business value through the innovative and responsible use of data-driven marketing. DMA’s membership is made up of today’s leading tech and data innovators, brand marketers, agencies, service providers and media companies. By representing the entire marketing ecosystem—from demand side to supply side—DMA is uniquely positioned to bring win/win solutions to the market and ensure that innovative and disruptive marketing technology and techniques can be quickly applied for ROI.

DMA advances the data-driven marketing industry and serves its members through four principal pillars of leadership: advocating for marketers’ ability to responsibly gather and refine detailed data; innovating to bring solutions forward for marketers’ most vexing challenges; educating today’s marketers to grow and lead marketing organizations in the ever-increasing omnichannel world; and connecting industry participants to stay current, learn best practices and gain access to emerging solutions through &THEN—the largest global event for data-driven marketing—and DMA’s portfolio of other live events.

For more information, please visit theDMA.org
About IAB’s Data Center of Excellence

The Interactive Advertising Bureau’s Data Center of Excellence is an independently funded and staffed unit within IAB. Founded to enhance existing IAB resources and to drive the “data agenda” for the digital media, marketing, and advertising industry, the Data Center’s mission is to define boundaries, reduce friction, and increase value along the data chain, for consumers, marketers, and the ecosystem that supports them.

IAB Data is focused on:

• Gathering industry thought leaders to set and drive the “data agenda”
• Funding industry research to provide benchmarks and actionable insights on data management across platforms including mobile, programmatic, and the internet of things
• Developing industry best practices, guidelines, and standards for privacy, data security, and consumer data protection
• Creating educational materials including certification, infographics, videos, webinars, and seminars to demystify data for marketers and advertisers
• Hosting data focused events that feature industry luminaries to discuss data related topics

For more information, please visit iab.com
Winterberry Group is a unique management consultancy that supports the growth of advertising, marketing, media, information and technology organizations—helping clients create custom strategies, capitalize on emerging opportunities and grow their value. Our services include:

**CORPORATE STRATEGY**
- Business assessment
- Strategic development
- M&A target identification and qualification

**DATA-DRIVEN MARKETING TRANSFORMATION**
- Data activation strategy
- Marketing process and platform architecture, design and RFP management
- Marketing org. process engineering

**M&A TRANSACTION SUPPORT**
- Market landscaping
- Target company assessment/customer due diligence
- Strategic roadmapping

**MARKET INTELLIGENCE**
- Custom research
- Thought leadership

Additionally, Winterberry Group is differentiated through its affiliation with Petsky Prunier LLC, the leading investment bank serving the technology, media, marketing, e-commerce and healthcare industries. Together, the two firms provide one of the largest and most experienced sources of strategic and transactional services in their addressable markets.

For more information, please visit [www.winterberrygroup.com](http://www.winterberrygroup.com)
About Criteo

Criteo (NASDAQ: CRTO), a leader in commerce marketing, is building the highest performing and open commerce marketing ecosystem to drive profits and sales for retailers and brands.

More than 2,700 Criteo team members partner with 17,000 customers and thousands of publishers across the globe to deliver performance at scale by connecting shoppers to the things they need and love.

Designed for commerce, Criteo’s Commerce Marketing Ecosystem sees over $550 billion in annual commerce sales data.

For more information, please visit www.criteo.com

About Deluxe

Deluxe Financial Services is a trusted partner to more than 5,600 financial institutions across North America.

We help our clients succeed in a competitive landscape through a diverse portfolio of best-in-class financial technology solutions. These solutions help clients target, acquire and retain customers; enhance the customer experience; improve efficiency; and optimize commercial and treasury operations.

For more information, please visit www.deluxe.com
About Epsilon

Epsilon is an all-encompassing global marketing innovator. We provide unrivaled data intelligence and customer insights, world-class technology including loyalty, email and CRM platforms and data-driven creative, activation and execution. Epsilon’s digital media arm, Conversant, is a leader in personalized digital advertising and insights through its proprietary technology and trove of consumer marketing data, delivering digital marketing with unprecedented scale, accuracy and reach through personalized media programs and through CJ Affiliate by Conversant, one of the world’s largest affiliate marketing networks.

Together, we bring personalized marketing to consumers across offline and online channels, at moments of interest, that help drive business growth for brands.

Recognized by Ad Age as the #1 World’s Largest CRM/Direct Marketing Agency Network, #1 Largest U.S. Agency from All Disciplines, #1 Largest U.S. CRM/Direct Marketing Agency Network and #1 Largest U.S. Mobile Marketing Agency, Epsilon employs over 8,000 associates in 70 offices worldwide.

Epsilon is an Alliance Data® company.

For more information, please visit www.epsilon.com

About Equifax

Equifax is a global information solutions company that uses trusted unique data, innovative analytics, technology and industry expertise to power organizations and individuals around the world by transforming knowledge into insights that help make more informed business and personal decisions.

Headquartered in Atlanta, Ga., Equifax operates or has investments in 24 countries in North America, Central and South America, Europe and the Asia Pacific region. It is a member of Standard & Poor's (S&P) 500® Index, and its common stock is traded on the New York Stock Exchange (NYSE) under the symbol EFX.

Equifax employs approximately 10,000 employees worldwide.

For more information, please visit www.equifax.com
About LinkedIn

Founded in 2003, LinkedIn connects the world's professionals to make them more productive and successful.

With more than 530 million members worldwide, including executives from every Fortune 500 company, LinkedIn is the world's largest professional network on the Internet.

The company has a diversified business model with revenue coming from Talent Solutions, Marketing Solutions, and Premium Subscriptions products.

Headquartered in Silicon Valley, LinkedIn has offices across the globe.

For more information, please visit [www.linkedin.com](http://www.linkedin.com)