



Vantage Points

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Data-Driven Audience Planning & the
Local Market Advantage

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Executive Summary

Up until a few years ago, advertisers emphasized *media environment* (e.g., placement in a TV show, magazine editorial or radio format) to reach their desired audience. Today, with the advent of digital advertising, the environment criterion is being trumped by *data-driven placement* and a promise to automate the match of relevant ads to preferred target audience segments. The shift to automated ad tech has made the complex activity of a sale between an advertiser and media channel more effective and efficient while directing spending away from traditional media channels. The latter provide a trusted editorial environment, but fall short in delivering the comparative data-driven metrics offered by digital platforms. In a sense, we are seeing the clash between the old model of “buying the environment” and the new “buying the audience” approach.

So where are we in this transition?

Investors, marketers, advertising agencies and media companies are accelerating their efforts to partner with potential leaders in

the ad tech economy. As their investments grow, these companies will become vulnerable to sustainable growth targets and defending against new competition. Simultaneously, the industry is grappling with a host of issues in this new marketplace, including transaction transparency, ad tracking validation, and potential fraud. All this while balancing legacy media channel advertising against new media investments.

The continued rise and growing influence of the ad tech sector confirms the importance advertising holds among marketers and the media ecosystem. Despite growing fragmentation of content distribution and consumer device usage, it is unlikely that traditional and new content providers will be able to prevail without support from sustainable advertising investment. To this end, the ad tech category has provided an avenue through which marketers and the supporting ecosystem of media providers can better connect advertisers to appropriate targets. It has also provided us with data-driven audience planning, a new form of communication measurement.

Data-driven audience planning uses quantitative and qualitative measures to define, target, and expose advertising to consumers. For example, we can now more directly segment and isolate specific purchasers of a product or service and more accurately determine their individual media and content preferences in order to signal the most relevant advertising messages. Although still evolving, the application of audience data and ad technology show promise of enhanced analytics to better support advertising investments. However, the key to expanded adoption of audience planning require broad functionality across traditional and digital channels as well as universal guidelines and standards.

We expect data-driven audience planning and buying will become the preferred metric for all advertising investments as technology advancements enable defined targeting options across traditional and digital services. For this reason, it is imperative that the industry acknowledge and improve the standards and business practices for data collection, data enhancement and data-driven audience definitions within the next three years. To be successful, the foundation for these decisions should originate and be validated by local market advertising and media stakeholders.

The successful integration of these new waves of marketing and advertising technology require development and best practices to deliver secure, trusted and consistent local market data collection, data enhancement and utilization across the advertising and marketing ecosystem.

This report provides insight and perspective on the intersection of how disruptive ideas and technology trends are creating an event to realign advertising industry emphasis toward local market data as a principle driver for development. There is a window of opportunity for local advertising and media stakeholders to define solutions and recommend bridges that align traditional and new measurement metrics to inform foundational standards and the future of data-driven audience planning.

The Emergence of Data-Driven Audience Planning

Disruption occurs as new business models directly confront an existing ecosystem.

For the past half-century, advertisers have utilized different media channels for varied but specific purposes while expanding their understanding of how each channel may compliment the other to improve message delivery. For example, radio provides an ability to reach people in the car during a daily commute to remind consumers of a message they may have seen on television or in print. Decades of industry research have also shown the value of increasing audience reach by utilizing multiple media channels at the same time.

The proportion of channel use is often limited by the advertiser's budget as well as the unique audience gained by expanding the media mix for a campaign. Within each channel silo, deeper research and measurement has supported the capabilities of the channel to reach prospective audiences in a specific environment and enabled an evaluation based on creative messaging capability,

production time and the cost of execution. Using the radio example again, the advertising copy can often be written and replaced at a station within twenty-four hours while a television commercial that requires modifications will take several days, and much higher cost, to edit and redistribute. As digital enables real time copy changes, it is also demonstrating new criteria for channel comparison.

Marketers traditionally have identified a refined description of their desired target audience through qualitative data. For illustration purposes, we can assume a cleaning product begins by identifying the proportion of men and women in the market who may consider the product, their economic status and their willingness to consider switching to a new line extension. This is accomplished by building a portfolio of traits that identify the purchaser based on how often they may or may not use a product as well as the benefits they seek in a specific cleaning product. Further refinement may also define how these individuals feel about cleaning chores as well as the safety and environmental benefits. Overall, it creates a three dimensional view of the audience so that the brand speaks to a more defined consumer versus a broad age and gender demographic.

This target definition is necessary to design packaging, align product attributes, and support the overall creative, brand or service message that will drive consideration and purchase. The data that historically fueled this description was heavily reliant on time-consuming surveys and focus groups, as well as ongoing refinement and analysis that often took months and years of development time. It was then translated to a media strategy against broader demographic targets for execution.

Access to granular sales, purchase and consumer data has improved over the past two decades and ushered in the need for data modeling and analytics around predictive advertising spend. However, the media budgets and metrics used for channel allocations were still limited to expressions of broad population and demographic samples. With online and digital targeting becoming more prevalent in the market, the utilization of user centric data to inform segmentation of audiences has shifted importance away from broad demographic planning strategies toward audience planning and near term optimization of target delivery.



The introduction of ad tech and significant access to consumer data has caused instability among both new and old media channel stakeholders. Marketers and advertising agencies seek to improve their influence in the space by identifying a direct correlation between the purchase path and attribution for the advertising investment; while new technology and data partners clamor for consideration. Competition is expected to control market pricing against these new entries but has also sparked significant confusion around the responsibility of transparency and validation standards.

At the same time, the legacy channels that almost exclusively depend on advertising as the main revenue source now find themselves perceived as redundant or insufficient when stacked against new metrics that define data-driven audience planning. This has initiated a marketplace where traditional and digital stakeholders seek more definitive business rules and guidance to shape products and services for survival.

Through adoption of data-driven audience planning, marketers have the ability to define robust target segments by attaching comprehensive audience traits that define their customers. With knowledge of a target's media channel behavior, the advertiser can send relevant messages in concert with online behaviors that mitigate waste and concentrate on desired prospects and customers. Conversely, the limitations of demographic media planning rely on targeting broader audiences without the ability to discern those within and outside the desired target group. This contrast offers perspective on why some of

the new media channels continue to see increased ad spend demand while traditional channels have experienced share loss. It also demonstrates the lack of harmonization between traditional media planning and evolving data-driven audience planning practices.

The industry acknowledges the imbalance between traditional media planning and the emerging practice of data-driven audience planning but the task of bridging the gaps is likely to be slow. To be successful, it will require adoption of a multi-disciplined collaborative to insure interdependent values are supported across the advertising ecosystem.

Why Data-Driven Audience Planning Offers Value

For over one hundred years since John Wanamaker confessed that he knew that a portion of his advertising investment is wasted but wasn't clear on what portion that is, advertisers have been seeking the answer. Despite improved metrics over the years, data-driven audience planning represents the catalyst to finally capitalize on this deliverable.

The goal of advertising remains the same regardless of the media mix. Find audiences, convert them to customers and keep those customers engaged as future buyers and ambassadors to attract new buyers. Advertisers want to sell more product in the most effective and efficient manner to both existing and new consumers. Technology evolution now offers advertisers a new way to more precisely qualify that the right audiences

were not only targeted but followed through and purchased the product.

Despite the values that data-driven audience planning offers for the advertising industry, its effectiveness will be limited without a mechanism to enable the inclusion of traditional media channels to successfully dissolve demographic media planning. With a rise in media fragmentation, the current metrics that support a traditional (television, radio, print, and out of home) channels' ability to reach specific audiences has become less relevant or authentic.

The migration toward precise audience targeting and planning is still in a development stage for the industry but demonstrates a dramatic event for advertisers, agencies and media companies.

Traditional Measurement: Insufficient For Audience Planning Today

Traditional advertising audience measurement across various channel practices has been grounded in a form of methodical analysis and compliance with industry recognized validation of process and reporting. However, these methodologies have not proved sufficient to compensate for the shift in audience behavior and content distribution.

With the introduction of new technologies and techniques, as well as changes in media consumption habits, the advertising research communities have come together to address the challenges and value of current and evolving services. The

Advertising Research Foundation (ARF) includes hundreds of members across marketers, agencies, media, research, trade associations, academia and consulting with a common mission to lead and showcase new solutions while challenging conventions to yield meaningful and actionable results.

Despite industry involvement, the ability to regenerate legacy measurement infrastructures with modern techniques is difficult due to the embedded business models that often paralyze innovative and collaborative action. This is most common in local markets where stakeholders are not only spread across channels but across markets that deliver varied economic value as well.

Approximately 75 percent of traditional advertising revenues are projected to decline by a minimum of 12 share points over the next five years. Audience planning capabilities that enable differentiation of dynamic audiences through digital channels is a key reason behind this projection. Online advertising is expected to continue growing even though there is a long way to go before the broad viability of online advertising metrics is secure.

This does not diminish the ability for traditional media to improve targeting capabilities by delivering the tools and data necessary to advance audience planning. Success will require significant transition time due to embedded business practices and existing metrics.

Enabling a data driven marketplace requires working together to create the blueprints for converting from the existing model to a





data driven hybrid solution, and for managing expectations along the way.

Adopting governing standards will provide all participants, established and new, the guidance to develop long term solutions against acceptable terms and objectives. It will also provide rational comparison

against traditional metrics that are insufficient to support data- driven audience planning today. This process should be iterative and inclusive across media channels and institute wide adoption of the parameters and consistent definition of foundational audiences within all local markets.

Traditional Measurement Techniques

Table 1 – A Comparison of Channel Measurement Techniques

Channel	Measurement Technique	Pro/Con
	Traditional Local TV Measurement uses household and persons survey data based on a sampling of market population as conducted by Nielsen, the industry accepted standard. Specific collection techniques vary by market across the US where a combination of household set meters or paper diaries reports on demographic tune-in of those who view a station and program a minimum of five minutes within a fifteen minute period. Program viewing is only captured daily within a set meter household that contain set meters. Paper diaries are limited to a four week period each quarter.	Pro: Recognized standard for negotiations Con: Outdated methodology, insufficient data and samples limited to broad demographics
	Traditional Radio Measurement uses household and persons survey data based on sampling of metro market population as conducted by Nielsen, the industry accepted standard. Collection techniques vary by market and include portable meters that report passive listening or paper diaries issued quarterly to report station tune in to a station and program for a minimum of five minutes within a fifteen minute period.	Pro: Recognized standard for negotiations Con: Outdated methodology, insufficient data and demographics
	Traditional print advertising is measured using daily circulation guarantees as well as readership estimates. Circulation is audited by recognized industry auditors that include Audit Bureau of Circulation.	Pro: Simple metric based on audited circulation Con: Broad circulation and demographics
	Out of Home advertising is based on average traffic measurement that passes the posting. In recent years the industry has developed methods to incorporate demographic audience reports in conjunction with the traffic audit bureau verified circulation.	Pro: Evolving measurement Con: Broad circulation and demographics

Source: BIA/Kelsey 2015

Data and Ad Technology Enable Audience Planning

Robust data sources that enable targeted options to reach the desired audiences will continue to be the primary goals of media and marketing plans moving forward. Demographics that limit discovery to a bird's eye view of age and sex qualifications will be ruled obsolete. This new precision will add more rigor and the capability to drive better scheduling and tactical insights around data-driven audience planning tools.

Media fragmentation has motivated the advertising industry to seek audience targeting solutions, which have presented splintered ad tech and data offerings as the sector matures. The rise in ad tech solutions that are fueled by multiple datasets offer a promise of single source answers to audience targeting, tracking and validation; but have yet to be fully realized.

The burgeoning digital tech sector has created varied investment scenarios that span the gamut of build your own or engage a partner who may be perceived to have advanced a position in the market or hybrid solution. The criteria for selection are often based on multiple business and financial factors and market commentary. Overall, confusion will continue to prevail until a majority of stakeholders understand and align on the necessary foundational inputs that enable comparable service offers.

The complexity of the marketplace will continue to challenge perceptions as agencies and marketers seek to measure segmented audiences and optimize for

success. Technology offers beneficial solutions, but is proving to be expensive and time consuming. The desire for more tangible proof that the marketing mix and channel choice is delivering cost effectiveness has also spurred development and advancements around data and ad technology stacks.

Within the online channels, the collection mechanism to build a language of audience attributes is referred to as the data management platform (DMP) and can serve as a central hub for collecting, integrating, managing and potentially activating large volumes of data. Growth in building or securing a DMP has extended across media companies, agencies and individual marketers who see value in managing their own datasets. In the long run, this practice of independence will likely prove unsustainable due to investment and stewardship costs. Without access to universally comparable foundational data sets against verified industry market data sources that fuel the audience segments, it will be difficult to scale a unified practice in the market.

To prepare for the future where data-driven audience planning is possible across traditional as well as new media channels; the industry stakeholders must work together. This action will not prevent or delay individual capabilities among sectors; but long term success will depend on unified guidance for data collection, verification and modeling techniques against open and anonymized datasets.

This is one of the key opportunities that local media and advertising stakeholders have to interject value and vital knowledge

that supports proper representation across the entire United States. People live and consume products and services as well as media in local markets. Without considering the source of the data, and the context within the market, the long term value of the data that fuels audience planning may not demonstrate the true value of all consumers.

Data Literacy and Reliance on Automation

As the industry becomes more comfortable with using data-driven audience planning, there is an acceptance by advertisers, agencies and media vendors that this data is a valuable component to structuring audience composition and associated media habits with advertising message response.

The audience structures are built by matching data elements from anonymized third party providers who enable the

formation of traits that consist of general demographics like age, sex, income, and education level. Other specific data points related to their purchase habits, general preferences and location are included as well. These characteristics can also be matched to media usage with the most specific tracking available online and more general relationships offline.

Marketers also enable proprietary criteria and deeper relational value by layering in their own first party data. The goal in merging these data layers is to arrive at a supportable view of the preferred target group most likely to desire the service or product while gaining better intelligence of the purchase path through analysis of media and shopping habits. This approach demonstrates the various uses of different modeling behavior and suggests the reliance on datasets and incomparability across defined audience segments due to personal data and modeling techniques.

Table 2 - A Comparison of 1st, 2nd and 3rd Party Data

Data Type	Definition
1st Party Data	Data that is generally proprietary information to the business regarding the actions taken by customers interacting with the business. e.g. digital registration
2nd Party Data	While minimized in discussions, it refers to data that is someone else's first party data that is anonymized and used for competitive marketing. e.g. advertising lists
3rd Party Data	This data is generally anonymized data that includes characteristics about people including demographic, behavioral, location and contextual. Sourcing this data can vary considerably depending on the data aggregator and what enhancements are applied. e.g., Acxiom, Experian, etc.

Source: BIA/Kelsey 2015

Despite varied access and use of different sources, it does not suggest that robust datasets are not warranted or useful in the advertising ecosystem. The point is that the broad availability of data and a rise in technology platforms must be analyzed through wider collaborative conversations. Regardless of industry talk about big data and ad tech, there is a large majority across the ecosystem with very little understanding of how to derive insights from the data. This data illiteracy has created a need for data scientists and analysts who understand the components of data stacks, algorithms and the complex information it delivers. However, it is equally important for a broader majority to be informed and knowledgeable of the benefits and limitations when evaluating a data driven audience plan. All industry participants should be more literate in the variables of data collection and modeling to insure comparability and validation of information that informs these decisions

Why Data Standards are Important

In general terms, standards are sets of topic-specific rules and definitions that guide the collection and documentation of metadata so resulting datasets have constant structure, nomenclature, criteria, etc.

Every system has its own way of representing data. For example, relational databases have their own schema for defining tables and fields. Semantic interoperability, or the ability to exchange data with meaning, is essential as data move from place to place to inform and

enhance the datasets used by advertisers, agencies and media companies. Harmonizing disparate information systems requires data standards and some regulatory framework that promotes their use.

Traditional and modern techniques are being used to measure media today with variables unique to specific channel measurement tools. In order to insure long term value and transitional success in data-driven audience planning across the traditional and new media ecosystem, it is important to develop universal standards that insure proper representation and enhancement of data across geography as well as platform to enable comparison against both small and larger sample aggregations.

Protecting Advertising Revenue

Advertising revenue remains the critical mechanism for traditional and new media channels as consumers are reluctant to widely support or sustain subscription content models. As new devices and content distribution proliferate, the advertising and marketing ecosystem has grown more complex and competitive.

The industry has reached a crossroads in the trade of advertising purchase and sales. New channel options and entries across digital and mobile may be benefitting from a more scientific opportunity to demonstrate advertising ROI in the short term; but it is short sighted to believe traditional channels should be discounted or proposed obsolete because of

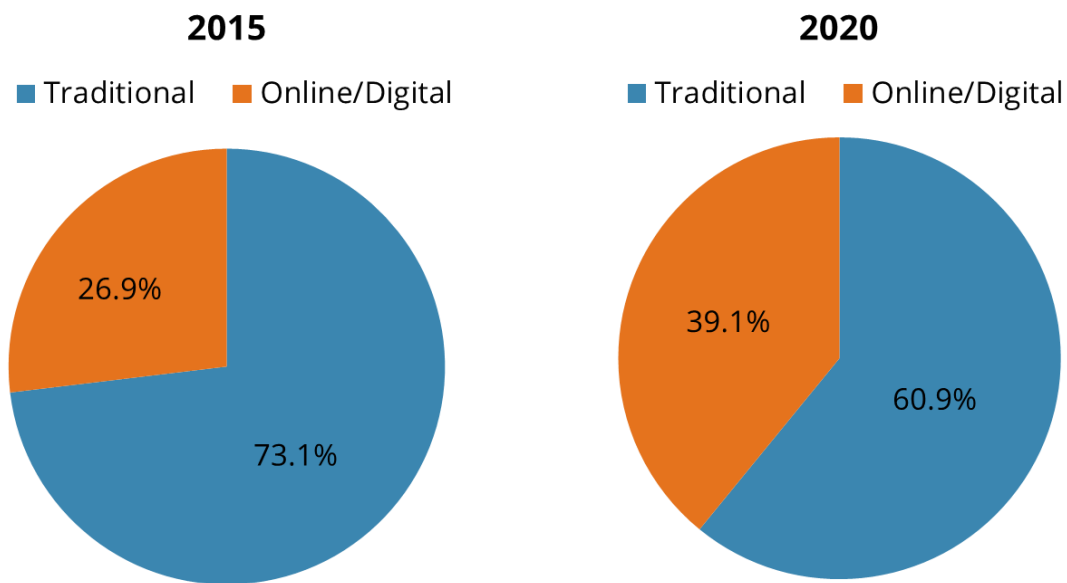
incomparable measurement traits. At this stage, despite the explosion of press commentary among veterans and newcomers, no one has figured out the optimal media channel mix.

Many traditional and new channel providers understand that advertising dollars are shifting toward audience metrics and all sides remain committed to retaining and growing advertising spend. The challenge results when these same providers view their competitive share against their closest rival within the appropriate silo. This could prove destructive without collaborative

vision and intervention to support the strength of the entire ecosystem.

BIA Kelsey has studied advertising investments across local markets for years and provides updated five year projections twice a year as new intelligence is received. Over the next five years, BIA Kelsey predicts a continued shift in ad revenue away from traditional media channels to the benefit of new media. With expectations that the share split widens by an additional 12 to 13 percentage points by 2019, it is expected that the two sides will reach parity in less than 12 years (average 2.5 percent CAGR).

Figure 1- 2015 vs. 2020 Traditional and Online/Digital/Mobile Media Growth



Source: BIA/Kelsey 2015 Local Media Forecast

Fundamental to successfully protecting advertising revenue during this shift will be the ability to better define, attract, and validate audiences who consume the various forms of content that are distributed by traditional and new media channels. Marketing and advertising

budgets often represent a sizable investment for businesses as they compete to attract and retain their customer base. As technology and data advancements enable access to data driven audience planning and buying, these budgets have been tasked with delivering more definable key



performance indicators and optimal return on investment. While this advancement is welcomed by the majority of stakeholders in the ecosystem (advertisers, media companies, technology providers, data collection, agencies and tech firms), it has also fueled confusion and complexity along with investment risk aversion.

Controlling advertising revenue can be difficult to project in a data-driven audience planning evolution. Marketers desire to keep advertising budgets more fluid and targeted by using the best optimization techniques has made it harder for individual markets and geographies to compete without the proper data and tools. As the share of business begins to weaken for traditional media channels, the need for universal audience planning and validation metrics will be critical to stemming losses. The additional burden of having advertising agencies and marketers use their own proprietary audience modeling will also breed uncertainty for local market channels to compete or even compare their value.

The last few years have seen a steady flow of marketing/advertising budget allocation away from traditional forms of advertising (TV, print, radio) and toward the new channels that include digital online and mobile. These sectors are actually blending together as traditional channels extend their content offerings to new devices, which requires many to transact business across old and new marketplace platforms. With this transition, there are opportunities to invest and improve the foundational architecture that will feed both data collection and advertising audience definitions.

The Need for Common Language and Terminology

One important trend to note is that the increase availability in ad tech has created a generation of practitioners reliant on proving outcomes through an ever expanding and diverse data pool. As more iterations of datasets are produced, it also fuels a new and guarded dependence by this practitioner group that their analysis is

reliable. This thinking could prove problematic as more questions surface about the source and integrity of the data used in these scenarios. Despite the abundance of new tools that flood the advertising and marketing ecosystem, the glue that will reinforce and bind them requires more collaborative business standards to insure long term function and successful integration. To date, this effort has been largely addressed in disconnected silos which generally fuel additional questions and indecisiveness. The real goal moving forward is to develop a common blueprint that can be used across the marketing/advertising/media ecosystem by incorporating common language and understanding to bring unity and success.

The media ecosystem is primarily supported by traditional channels that are still locked into using out of date measurement models and definitions versus new media challengers who have introduced data-driven audience planning options with varied measurement models and definitions.

The ultimate goal for any advertising is to define how and where advertising money is best spent and eliminate the perceived waste against areas that may not be relevant to the mix. As the measurement divide widens between media channels it has created a chasm of indecision around data, tech and advertising investments that cannot be compared or analyzed by similar metrics.

The key reason it has become so difficult to arrest is due to the blurred perceptions and contradictory press about new models and

tech solutions. The impressive sophistication of the various ad tech companies and increase in access to macro and granular level data has warranted a belief that automation and algorithms are going to revolutionize the business practice and displace much of the manual and perceived labor costs associated with yesterday's models. This is well placed logic in the current business cycle, but could prove insufficient without considering the value of capturing this view across all channels within the ecosystem.

Protecting or Isolating Channel Silos Could Be Detrimental to Success

As the marketing and media ecosystem has evolved from technological and consumer change, the practice of each channel silo defending and protecting similar business rights is proving to be destabilizing. Decades of building infrastructure, research centers and system software may also inhibit investment in new data and technology. Mergers and acquisitions across the industry enabled some consolidation of resources but more often, it has created a wait and see attitude where the status quo is either ignored or unchallenged.

Much as crowd funding and open platforms are changing and accelerating new business models that sustain themselves by using excess capital or shared knowledge, the same must take shape in the marketing and media industry. The fear of many may be that this will give them less protection or competitive value, but the other side of the argument is that if ignored, many businesses and processes may be undermined and eliminated or perceived obsolete.



Transparency Objectives Require Collaborative Development

Data-driven audience planning has revealed significant benefits by fueling automated marketplaces and ad tech sectors. However, as the market matures, and advertising investments increase, the question of data and transaction transparency are multiplying. Some of the issues are being addressed by task forces and industry trade associations that service the industry by issuing points of view and analysis for the respective constituents they serve. While these efforts are viewed positively, there are still limited resources to collectively resolve the underlying issues that contribute to the confusion.

One consideration to inform broader transparency compliance in the industry is an example currently utilized by the US Government and the Federal CIO Council of Innovation Committee. In an effort to bridge the technology and data collection standards divide the committee developed

the Open Data Prioritization Toolkit to encourage standards compliance and data prioritization across agencies. Through a set of questions, the toolkit is designed to encourage government agency stakeholders to consider the data inventory they control and its potential value related to collection cost, format, frequency, operational maintenance and security that will be necessary to support an open data stack. While designed to enable cross department standards, they also determine the ultimate imports of the final product to enable open data transparency. (See Appendix for set of questions)

A similar approach can be initiated by the advertising and media industry stakeholders by consolidating the objectives of improved data transparency in support of detailed standards toward supplying answers to a set of agreed upon questions. While not exhaustive, the following include a suggestion about the type of questions to get the thinking started.

- **What data sources are used to build the target audience segment?**

Specifically list the data, geo-target level sourcing as well as gaps that may exist within the data source.

- **How clean is the data?** Transparency cannot exist if data is merged and modeled inconsistently across sources without adhering to collectively trusted techniques. This may require creation of an industry identifiable grid or template that can be easily supported to understand what enhancement techniques are applied to raw data to smooth data gaps.

- **Defining audience segments.** This will be the most helpful in enabling all parties to participate with a common attribute to compare value across media channels. Without understanding standard definitions it is likely to create less transparency when deliverables are examined.

- **Building scale with data.** The ability to have consistent guidelines and definitions for audience targets at a metro level will enable similar data to be aggregated and scaled to report flexible geo-footprints or the entire nation. By understanding that the data originates from similar building blocks, it will ensure better comparison cross region.

- **Keeping data updated and relevant.** Timing of data collection and integration could dramatically impact results without knowledge of these details.

- **How is cross channel data compiled and integrated?** This is an area that enables better evaluation of an effective campaign and the investment options. Without some standards for layering and

modifying data that originates within or across markets the results could be misleading or skew delivery.

Absent of building open and collaborative standards to insure representative and consistent data collection techniques, the question of transparency is likely to linger and escalate.

Creating Opportunities with Open Data

Without the right data, decisions can often be guesses. Although it is important to apply context around data analysis, it is imperative to garner enough data to make an informed decision. No one denies that increased access to better data has improved business decisions as well as policy decisions. However, as data points increase it has also uncovered the need for more coordination and collective guidance and standards around the collection, retention and release of data.

As early as 1968, there has been interest and persistence by the public to enable more transparency and access to government data. The first efforts took place in California but did not really gain traction until 1998 as more federal legislation took hold but did little good to the majority due to the manual labor needed for collection, formatting and release. This legislation preceded the technology and storage efficiency that enable faster and more accurate collection today.

Over the past few years, there has been a strong and growing movement to open up data access to everyone while garnering more efficiency in government for sufficient

and comparable data across the 3,000+ counties in the United States. The commerce department has been a strong proponent of open data for economic and trade development purposes, but it has also been valuable to health and human services groups. Since the federal government issued its 2013 memorandum on open data and improving transparency across government agencies there has been broad collaboration across multiple government and private groups to improve and collectively share open standards around data.

The Project Open Data is just one example of a collaborative, open source project that encourages majority participation. Managed by the Office of Management and Budget and the Office of Science and Technology Policy it is a direct link to the President. Perusal of the site offers definitions, suggestions and collective input around code, best practices as well as case studies to demonstrate the benefits of adopting the framework of the Open Data Policy (<https://project-open-data.cio.gov/>).

Simultaneously, in an effort to strengthen the open data discussion and drive broader adoption across public and private initiatives there are efforts to reinforce the value of government data to business development. One vocal participant is Joel Gurin, author of *Open Data Now* and founder of the Center for Open Data Enterprise. Gurin and others believe that the key to US innovation is directly linked to accessible open data that can be used to launch new ventures, make data-driven decisions, solve more complex problems and analyze trends.

Gurin's previous work at Consumer Reports and head of the FCC consumer bureau as well as chair of the White House Task Force on consumer data and information, validates his voice in the market. This is clearly a positive direction for the advertising industry as well as local market stakeholders who will benefit from cost effective and standardized data stacks to fuel foundational information for audience planning.



Taking Notice of Government IT Trends

In a recent post by Zac Bookman, the co-founder of OpenGov, he mused that “the public sector today looks a bit like the consumer industry of 1995 and the enterprise space in 2005: it is at the beginning of a large-scale digital metamorphosis.” To Bookman, this metamorphosis is the result of five trends that will define the government tech transformation.

- The shift to real time operations
- Smart cities and the infrastructure that is supporting them
- Higher citizen engagement with local government
- Advanced reporting software for governments
- Improved inter-governmental communication

The U.S. Government is one of the largest collectors of local data and is estimated to spend over \$78 billion a year on technology with a directive to better align agencies and redefine a set of standards and practices that use technology and data to improve individual and intra-departmental decision making. With an emphasis on technology investment, it is expected that local market data comparisons across a wide cross section of characteristics will be easier to use within a faster period of time than the current data lag of eighteen to twenty-four months.

The value of these steps to the marketing and advertising sector is the ability to obtain more consistent and timely contextual data

that may have otherwise been difficult to obtain or costly to convert into machine readable formats.

Focus on Local Markets Will Define Better Data Output

As traditional media owners across broadcast, print and out-of-home invest in a future that will require the migration of their content across digital delivery platforms, it sparks questions regarding the validity of building individual capabilities, partnering with established ad technology services or taking a wait and see attitude. Pegging success on any investment is difficult and without industry support and broader collective standards beyond individual business silos, the ecosystem risks many more years of trial and confusion.

Some of the key questions hovering around ad tech today relate to efficacy of data and the ability to validate the source and data enhancement practices. Additional concerns rise up as new industry legislation, rising technical fraud and content violations signal cautionary movements. These are part of the process of any new business model and it is not expected to stop investment. But it should be the catalyst for developing structural standards now versus waiting.

Building foundational support for data and tech investments is the necessary next step in the evolution. All data originates in local metros which provide context for how place influences behavior. It also provides smaller subsets for data and technology analysis and validation and categorization prior to

feeding a national composite. The federal government agencies have instituted various data collection standards for decades in order to insure comparable definitions and collection ID's to serve both local and federal needs. Yet they are also instituting new procedures for cross agency and department comparability to upgrade ease of access and use. This practice is an important example of how the emerging data and modeling techniques deployed by ad tech and data enhancement services could benefit from similar open standards.

To many this may seem like an argument for tighter regulation. It is really a suggestion for business governance that enables all parties to collaborate and manage the process together for better valuation and transparency.

Standardizing Local Data for Stronger Outcomes

Local markets are microcosms of the U.S. that dynamically reflect variable subsets of the data identified in broader national views. These individual traits are not only important to public policy, national elections and economic development; they are critical to the foundational insights that support the marketing, media and advertising industry. Understanding the differences that distinguish each market has historically been a time consuming process for marketers due to the lack of comparable datasets, insufficient advertising channel measurement and the labor necessary to synthesize the information across more than 300 local metro economies.

These issues are less obstructive today with broader data and technology solutions, but demand critical leadership decisions to unleash the potential value these metros represent to marketers. The advertising ecosystem is at a crossroads in which prescriptive audience targeting is the preferred choice of defending advertising investments versus the traditional terms of environment and broad audience reach.

Precedence for shifting perception is underway across the multiple business sectors outside the advertising industry and provides some worthwhile examples of how valuable uniform and comparable traits within and across markets are improving investment and commerce in the U.S.

In 2014, the U.S. Cluster Mapping Project was funded and launched by the U.S. Commerce Department around the cluster mapping work pioneered by Professor Michael Porter of Harvard's Institute for Strategy and Competitiveness with assistance of teams from MIT Sloan and Temple Fox School of Business. The culmination of this work provides a robust cluster mapping database using the latest census and industry data to develop an algorithm that defines and standardizes cluster categories covering the entire U.S. economy to enable comparative analyses between any regions in the United States. The results of this effort are available through the Cluster Mapping website (www.clustermapping.us). The outcome is an iterative, open source product that provides a way for businesses and organizations to connect with common starting points.

Figure 2 - U.S. Secretary of Commerce Penny Pritzker



“Across the country, our cluster mapping tool gives us the ability to reinvent and modernize economic development strategies-all driven by open data.”

*U.S. Secretary of Commerce
 Penny Pritzker*

Source: <http://www.clustermapping.us/about>

The goal of the cluster maps is to integrate comparable data and metrics on economic performance that highlights regional strengths and opportunities that were difficult to access before the project debut. For the U.S. Commerce department, it has reinvented and modernized economic development strategies through the use of open and accessible data which not only enables local officials to make strategic investments but also creates more synergy to compete globally. The benefit of this open source data is achieved by developing a way to deliver data-driven models of information through standard development practices.

Although the cluster definitions themselves are broader by design, they do not prevent the shared formation of sub regional or sub cluster definitions as long as the participants offer criteria for these new definitions. It demonstrates the value of building connective guidelines and standards of practice in order to secure better business and policy design.

Organizations are encouraged to test the boundaries of the cluster mapping data and develop enhancements and/or highlight inconsistencies. A major benefit has been the ability to draw on reliable cluster definitions to review and compare regional economic analysis and forecasts. This is simplified in the ability to gain background on cluster theory and benchmark definitions as well as export the data and use application programming interface (API) to enhance and combine with other data.

The U.S. Cluster Mapping project is a demonstration of how open standardization of local data enables broader collaboration and business development. Since the data originates at the county level and supports data relationships within and across metropolitan statistical areas, it enables users to feel confident that comparable data is feeding the analysis both at the micro and macro level. This exhibits how similar practices in the advertising ecosystem could improve the foundation for data-driven audiences to structure

Figure 3 - Traded vs. Local Clusters

Traded vs Local Clusters



Industries are first classified as "traded" or "local." Traded industries are industries that are concentrated in a subset of geographic areas and sell to other regions and nations. Local industries are industries present in most (if not all) geographic areas, and primarily sell locally. Within the two large groups, sets of traded industries are then organized into traded clusters based on an overall measure of relatedness between individual industries across a range of linkages, including input-output measures, use of labor occupations, and co-location patterns of employment and establishments. Local industries are grouped primarily based on similarities in activities reflected in aggregated U.S. industry categories.

In order to more effectively compete, regions need to understand their cluster strengths as compared to other areas. To accurately make this comparison, a consistent, national set of cluster definitions that mark the industry boundaries of each cluster is required. A good set of cluster definitions should group closely related and supporting industries that capture as many linkages as possible (e.g., technology, skills, supply, and demand).

Source: Methodology, US Cluster Mapping, <http://www.clustermapping.us/>

standard audience descriptions and techniques similar to those found in a unique economic cluster.


According to the methodology described by Porter and his team, the cluster definitions are designed to be benchmarks to use across regions but within a specific market area, the cluster may reveal dimensional support for hybrid elements specific to the market. An example is the Biopharmaceuticals cluster in Boston where if compared to the national trends for Biopharma it would only cover those industries that are relatable across all U.S. regions. However, if analyzed in Boston, the Biopharma cluster demonstrates significant share of the legal and financial services in the region that are specifically dedicated to the Biopharmaceuticals industry.

This analogy is important for business development but also points to the fact that deeper market analysis reveal varied strengths and opportunities that may not be apparent when reviewed in aggregate.

Local Markets Are Relatable

When someone asks where you live, how do you normally respond? Do you say I live in the U.S.? It is likely you offer up more facts about a region or specific city given the fact that everyone lives and works in a certain metro or sub metro area of the U.S. In fact, the U.S. Census Bureau defines up to 536 recognized *micropolitan* areas in the U.S. that are made up of still hundreds more cities and towns. Each of these areas include different household characteristics, spending habits, leisure time activities, educational needs and overall lifestyle experiences that have contextual value

Figure 4 - US Metropolitan and Micropolitan Statistical Areas



**United States
 Census
 Bureau**

US Metropolitan and Micropolitan Statistical Areas

The United States Office of Management and Budget (OMB) delineates metropolitan and micropolitan statistical areas according to published standards that are applied to Census Bureau data. The general concept of a metropolitan or micropolitan statistical area is that of a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. As of February 2013, there are 381 metropolitan statistical areas and 536 micropolitan statistical areas in the United States. In addition, there are 7 metropolitan statistical areas and 5 micropolitan statistical areas in Puerto Rico.

Source: U.S. Census Bureau

within these markets. Invariably, these characteristics are influenced by the activity and subtle trends experienced in everyday life through direct and indirect connections that are rooted in these communities.

Despite the benefits of online shopping, the majority of purchases are still completed offline and within a local market trading area. Local markets have always played a key role in advertising a product or service.

As recently as 20 years ago, the majority of retail and consumer product distribution was directly impacted by the regional and local tastes inherent to a market. Advertising messages were often tailored to these regional tastes and sales could be influenced more directly by competitive movements within these markets.

These patterns began to give way to national aggregation strategies in the early 2000s as regional companies merged and corporations gained wider distribution

coverage across the US; and technology brought efficiency to supply chains and product sales. In response to these developments, there was an emphasis on building recommendations that scaled the advertising spend and execution costs versus what was considered redundant regional or local advertising spend to improve overall efficiencies. For a time, this offered some budget relief but never diminished the impact local audiences and relevant messaging has on the purchase decision making process.

The benefits of the evolving precision targeting and optimization practice has provided advertisers some alternatives with data-driven location advertising, but is limited to a subset of data that may or may not be representative of the local marketing area. The context of how these efforts work within the local market ecosystem deserves study because all products and services are

still being used by people who live within a certain market.

Collaborative Platforms Are Necessary to Link Silo Businesses

When there is innovation, there is investment. This has driven support for ad tech and data collection ventures spurring new entries and opportunities across the ecosystem. Although an abundance of experts who firmly believe that traditional metrics and media platforms are doomed, there are others who are pursuing transitional opportunities and partnerships.

Despite partnerships, acquisitions and potential business agreements, the media ecosystem has remained relatively loyal to individual silos and channel practice. Profitability is centered within the silo businesses and interaction between them is still very separate, even if the channels are owned by the same company or they service the same markets. There has been talk among advertising buyers about building agnostic cross channel negotiations but it is still difficult to execute until all platforms are able to transact against comparable audience metrics.

A possible solution to this dilemma can be taken from those in practice within the collaborative economy, simply referred to as platforms. These differ from traditional vertical business practices as they encourage shared learning and resources. Similar to open source technology development, a conduit is established within the platform to exchange and share information, open discussion and enhancements.

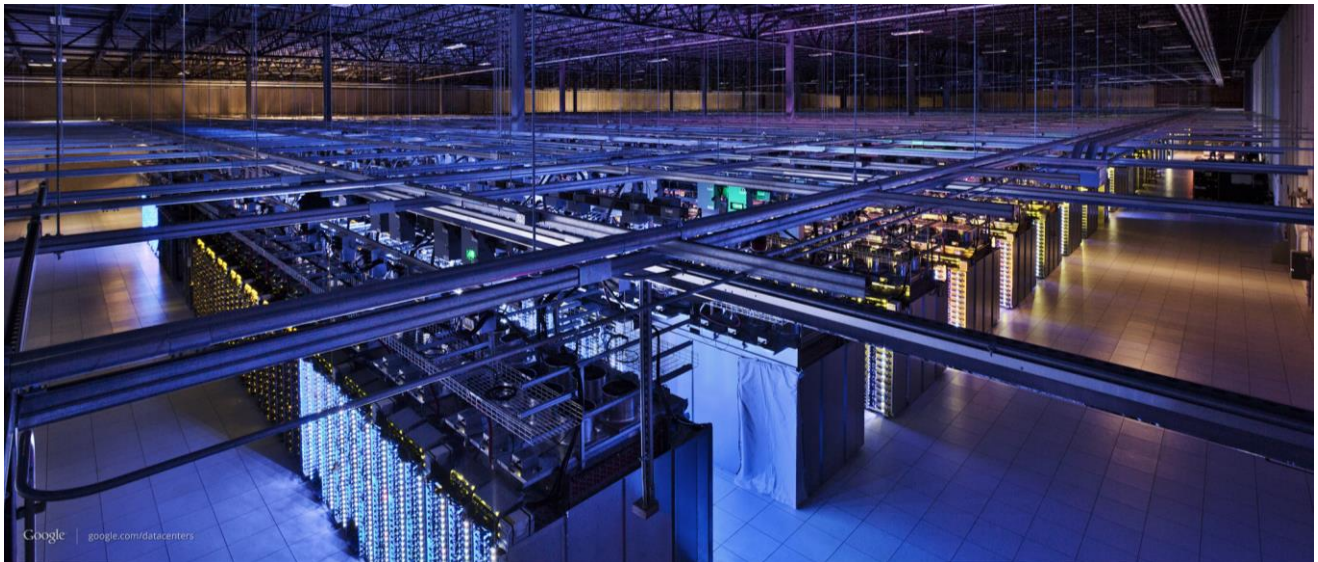
A shared purpose is multidimensional, pragmatic and iterative. Working in this capacity advances a shared goal through what they individually or within their business expertise offer toward this shared purpose. In order to advance any product or concept, it requires all stakeholders to understand the full lifecycle and improve the design and engineering as it advances through the ecosystem. It requires cooperation and competing values to be moved aside for the larger platform goals and sustained, large scale efficient innovation.

Initiating the Changes Necessary to Drive Full Adoption of Data-Driven Audience Planning

Digitization has enabled all forms of traditional content distribution to collect usage and behavioral data but the benefits will remain limited until more consumers replace old products and devices. Despite the lag time toward new product conversion, the ecosystem must prepare for the evolution and ability to manage improved datasets. One of the key steps that can be taken in the interim is to build standardization around data collection and reporting across all US local markets. While initial mechanisms for collaboration may require some formalized development tactics, they are not insurmountable. The first step is to develop a way to tie initiatives together. It can begin with the varied stakeholders adopting representatives to form a working body to initiate the dialogue.

- **Local Media Ownership Groups:** As a whole, this group holds the largest stake in advertising revenue along with legacy linkage to out dated measurement metrics. By identifying key leaders to join a working body, these leaders can also engage their prospective trade associations to engage and perhaps carry forward participation in building a collaborative blueprint.
- **Advertising & Marketing Leaders:** There are thousands of practitioners with local investments that are executed across various budget objectives. Through carrying forth a willingness to push for industry solutions, these individuals can posture to have direct involvement or surrogate interest through their associated trade groups. Either way, by agreeing on a mandate to build data standards with local markets as the foundational base, the industry will take notice and align behind these objectives.
- **Measurement and Technology Companies:** Between the thousands of new ad tech entries and established services that have supported the various media channels over the years, these companies must demonstrate a willingness to encourage open and definable standards for data collection and enhancement to enable proper representation within and across local markets. In doing so, these companies will also be supporting better business and competitive practices that will enable their products to survive or adapt as necessary to future needs.

In summary, the industry must take action soon to enable stronger foundational standards for successful transition to data-driven audience planning. BIA Kelsey is dedicated to enabling these discussions and helping the industry accelerate their path to successful outcomes.



About the Author



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A 25 year media, marketing and advertising veteran, Maribeth serves as Executive-in-Residence to BIA/Kelsey. She advises the company and participates in its practice areas including industry coverage, research, consulting and forecasting projects related to local media strategy and investment. Her areas of specific concentration will be local activation of national brands and overall media strategy as it relates to local measurement and investments.

About BIA/Kelsey

Local media is one of the fastest moving industries of our time. And BIA/Kelsey has been at the center of it for more than 30 years.

BIA/Kelsey is the leading research and advisory firm focused on the advertising and marketing marketplace. We have proven advisory services and consulting methods that put our clients in the best possible position to compete and stand out in today's multiplatform, interactive world.

Clients value our cross-discipline expertise, from traditional to digital media, sales and finance and technology and regulatory environments.

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