



MAKING LOCATION INTELLIGENCE ACTIONABLE FOR PARTNERS, BRANDS & AGENCIES

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Executive Summary

Mobile devices, apps, and location signals have disrupted both consumer and marketer use of digital media. Turn-by-turn driving directions, geofenced mobile ads highlighting preferred merchants to consumers passing along the sidewalk, discount offers based on mobile search history, and personalized ad messaging driven by your recent locations are common place.

Digital advertising is the growth engine in the advertising economy overall, but within that story mobile advertising is driving the headlines. BIA/Kelsey forecasts that geotargeted mobile advertising will nearly triple from \$12.4 billion in 2016 to \$33.3 billion in 2021. This amounts to 45 percent of total mobile ad spending by 2021.

Location as the main indicator of intent is important because as marketers decide on their tactics to reach the right consumer, mobile is *crucial* in reaching people when they are in the frame of mind to make a purchase. With 90 percent of commerce still happening offline, mobile can serve as the impetus to drive your consumer inside the building as they're passing by — bridging the online and physical world. About half of marketers (46 percent) and agencies (47 percent) see location data as critical; and another 50 and 43 percent, respectively, see it as important.

Forbes's chief insights officer, Bruce Rogers, concludes that, "The location infrastructure in place today generates a variety of local intelligence signals that can contextualize other data to empower deeper consumer understanding and profiling by marketers. These insights, combined with data-driven audience buying platforms, allow marketers to optimize local media investment and activation. This is a game changer for location-based marketing."

A recent study highlights how using mobile location data has been "very" or "extremely helpful" in meeting goals set by 60 percent or more of marketers surveyed including improving campaign ROI, acquiring, and retaining customers, maximizing customer relationships, and increasing conversion rates.

Four key types of location data-driven audience segments that have proven useful to marketers include:

- **Behavioral Audience Segmentation:** built by using real-world location indicators combined with demographic information mapped to device IDs and derived from visitation patterns.
- **Location Audience Segmentation:** based on consumers past visitations to specific business locations or other points of interest.
- **Neighborhoods:** Using location data marketers can make meaningful inferences about the people who visit their locations by understanding the areas where they are coming from.
- **Proximity Targeting:** based on their location proximity to businesses or other points of interest to deliver relevant messaging to impact immediate or future behaviors.

Increased consumer and market usage of mobile and location data points to heavier reliance on location data in marketing plans and budgets.



Mobile Devices and Location Intelligence are Industry Disruptors

Consumers and marketers are in a mobile-first world. They are rarely without their mobile devices. From waking up to an alarm, to searching for new gadgets, to streaming and podcasts at commuting diversions, to a quick catch-up with friends on social apps at day's end... mobile devices have become embedded into consumer lifestyles.

Mobile devices, apps, and location signals have disrupted both consumer and marketer use of digital media. Turn-by-turn driving directions, geofenced mobile ads highlighting preferred merchants to consumers passing along the sidewalk, discount offers based on mobile search history, and personalized ad messaging driven by your recent locations are commonplace. The ability to use mobile to generate consumer graphs that are richly textured and actionable for marketers has disrupted their expectations for mobile as a platform and therefore their investments in mobile.

Consumers have growing expectations for their mobile phones to know who and where they are and what they want. Marketers certainly must protect consumers' privacy and avoid a sense of intruding. But mobile and location intelligence combine to create new and powerful tools for marketers. The growing use and reliance on mobile by consumers creates a rich array of touchpoints for marketers during their path to purchase.

Mobile has been measurably disruptive and increasingly engrained in both consumers' media behaviors and lifestyles. In fact, with a 71 percent share of consumers total digital time, comScore was encouraged to conclude that, "In 2017, mobile devices have an unquestionable role as consumers' primary digital tool." According to GroundTruth's 2016 Mobile Path to Purchase Study, the majority of respondents said their smartphone is the most important media device to use when deciding on a purchase to make.

This finding makes mobile irresistible for marketers. The ability for marketers to target consumers on mobile devices, where they spend most of their digital time, while using location signals and interactivity to optimize campaign executions is a deeply attractive proposition.

Digital advertising is the growth engine in the advertising economy overall, but within that story it is mobile advertising that is the headline. BIA/Kelsey forecasts that geotargeted mobile advertising will nearly triple from \$12.4 billion in 2016 to \$32.4 billion in 2021.



Location Defines Who You Are

Using machine learning algorithms, a set of observed behavioral data can be modeled to develop insights and probabilistic conclusions about people by piecing together data, context, device, and location. Developing a daily graph of our whereabouts is quite revealing about who we are, what we do, and perhaps why. Where you go *is* who you are. Sure, a bold statement, but if you think about it for a second...it makes perfect sense.

Data scientists can contextualize mobile device usage with location data to create probabilistic insights to build audience segments:

- You frequent an airport multiple times a month. You stop by Hertz sometimes once a week and you visit hotels all over the United States. **You're a business traveler.** GroundTruth's audience insights reveal that business travelers are an on-the-go, active, weekday audience who also frequently shop at luxury retailers, grocery stores, and pharmacies.
- You drop by your local 24-hour Fitness on weekday mornings. Perhaps one or two times a week you'll grab some healthy snack from Whole Foods. Once a month you'll splurge and purchase new gym attire at a Dick's Sporting Goods. **You're a fitness**

enthusiast.

- On Saturday AM, you're scanning the new models at a Toyota dealership. Later that afternoon, you're doing the same at a Ford lot. You weren't completely convinced of your research, so on Sunday, you're back at it at the local Volkswagen dealership.
You're an auto intender.

Location-based audience segments can be built by matching on more audience attributes such as demographic, first-party, and third-party data to create personas that are extremely compelling to marketers.

Let's say an auto marketer wants to target an audience segment of "auto intenders." Even better if they can be further qualified as particularly in luxury vehicles. Consumer graphs can be built from stitching together website, social, and search data. For example, a consumer may view multiple car-related pages including models, financing, and local dealers. They may "like" Mercedes-Benz on Facebook, "follow" a luxury auto blogger on Twitter and have a search history around "2017 Mercedes-Benz E-Class." This pattern certainly supports a profile of a consumer interested in purchasing a car, perhaps a Mercedes.

Can we assume this observed interest will convert into intent? Location intelligence helps us to elevate a consumer persona from *interested* to *intender*.

How so? If their mobile device shows that they've been to three regional Mercedes dealers in the past week, we could infer given the pace and type of activity this person is (a) an auto intender because of multiple dealer visits in a week; and (b) a Mercedes intender given the cluster of dealer visits to this brand. If you're on a Mercedes-Benz lot three times in a week, chances are, you're considering a big-ticket purchase soon. This observation, while probabilistic since we don't know for certain, is a very helpful clue to marketers. And not just to Mercedes dealers. Other luxury car dealers would certainly want to target this consumer and attempt to convert them to a preference for their brand.

Location is intent, or at least an extremely strong predictor of intent.

According to GroundTruth's 2016 Mobile Path to Purchase Study, 75% of respondents visit a store location after researching information on their mobile device. Location as the main indicator of intent is important because as marketers decide on their tactics to reach the right consumer, mobile is *crucial* in reaching people when they are in a frame of mind to make a purchase. 90 percent of commerce still happens offline and mobile can serve as the impetus to drive your consumer inside the building as they're passing by to bridge the online and physical world connection.



Location is at the Core of Mobile's Promise for Marketers

Although targeting is location data's key application, marketers also use it for insights, measurement, and attribution. Indeed, the Mobile Marketing Association (MMA) [survey of marketers and agencies](#) shows that, "Data is overwhelmingly seen as a key component of mobile advertising, especially by marketers who have reached a higher level of mobile maturity. Nearly all marketers and agencies view location data as core to mobile advertising platforms.

About half of marketers (46 percent) and agencies (47 percent) see location data as critical; and another 50 and 43 percent, respectively, see it as important.

How does this work?

Forbes' chief insights officer, [Bruce Rogers](#), advises CMOs on strategic thought leadership and brand marketing. He also serves as an expert industry adviser to BIA/Kelsey. Rogers [shared with BIA/Kelsey](#) why he believes location data adds so much value for marketers trying to separate signal from noise in all the data they work with.

Based on his research and work with CMOs, Rogers concludes that:

The location infrastructure in place today generates a variety of local intelligence signals that can contextualize other data to empower deeper consumer understanding and profiling by marketers. These insights, combined with data-

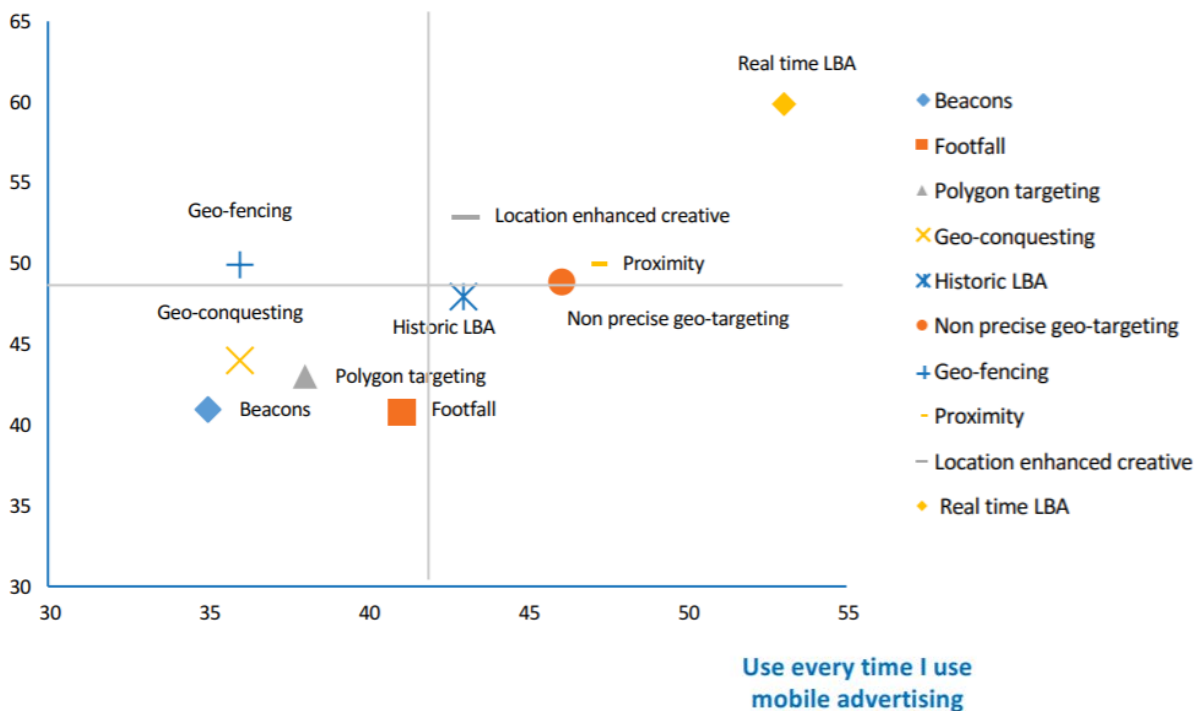
driven audience buying platforms, allow marketers to optimize local media investment and activation. This is a game changer for location-based marketing.

The MMA survey also indicates that about two-thirds of marketer rate location data "important" for targeting (61 percent) and most (59 percent) used location data for marketing in the past 12 months. Four of five marketers (59 percent) say location data is "valued as a way to improve insights" and over half say location data is "useful for understanding the path to purchase."

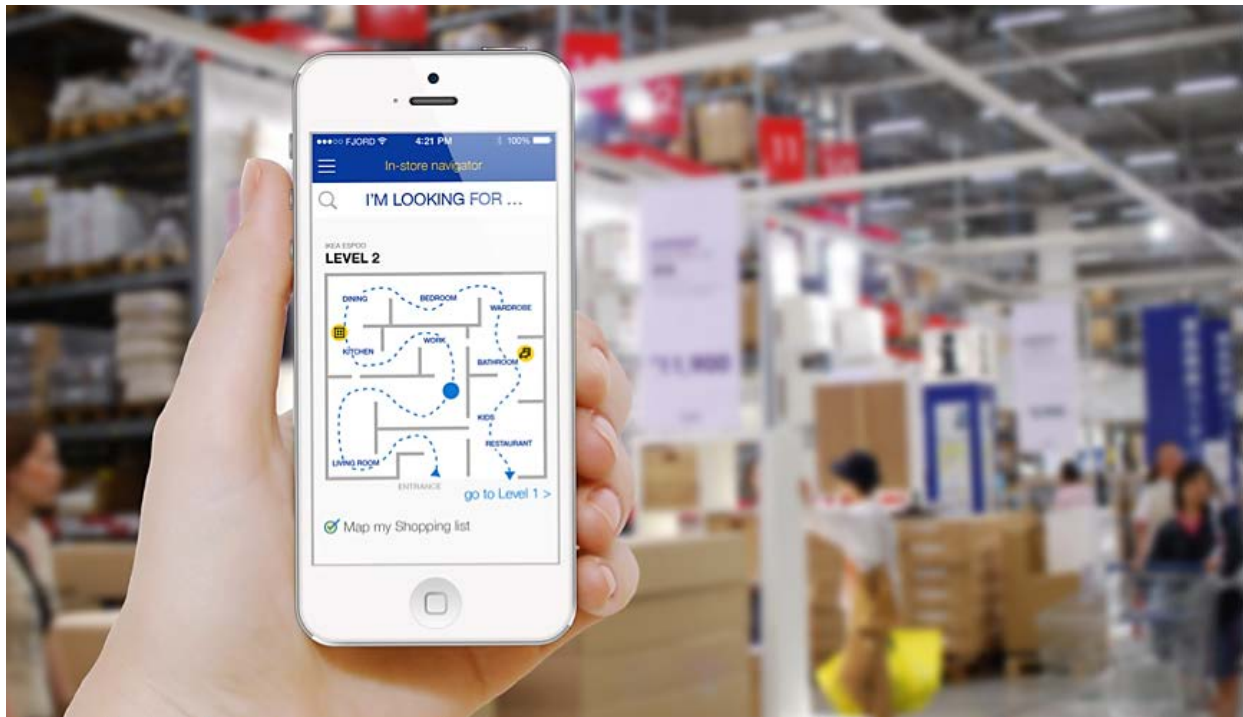
The chart below compares how valuable marketers judge different types of location data to be and how frequently they use different types of location. The clear winner is Location-Based Advertising (LBA) that integrates mobile advertising with location data. Marketing practices such as geofencing and geoconquesting, while seen to be relatively valuable, are used less frequently.

Figure 1 - Marketers Use and Assessment of Mobile Location Intelligence

Extremely Valuable



Source: Mobile Marketing Association, November 2016



Mobile Enhances the Location-Based In-Store Experience

Location-targeted mobile advertising is based on a user's location or includes proximity-relevant content to trigger local offline conversions. It includes large national advertisers, SMBs and mid-range businesses that are "in-market" (i.e., regional car dealership group). Location-specific ad copy or calls to action (e.g., call local store) will classify a given ad as location targeted. Audience targeting is an emerging application of location data that uses historical (not current) location as a targeting trigger. This is included in BIA/Kelsey's measurement of location targeted advertising.

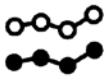
Mobile will continue to be one of the most powerful tools that marketers can leverage to engage with their audiences in-store.

The use of technology in-store can dramatically increase the chance that they'll purchase on the spot. According to the Data & Marketing Association, 80 percent of millennials use their phone in-store and 74 percent are willing to receive location-based mobile alerts. This usage and engagement profile allows marketers to activate in-store coupon campaigns to targeted shoppers. In addition to coupons, retailers can further integrate the online and in-store experiences by providing location-based data to mobile phones such as price comparisons, ratings and reviews, and item locators.

The Mobile Marketing Association highlights four location data use cases for how mobile and location marketing innovation is evolving:



Proximity Targeting: Delivering ads based on users' real-time location, typically defined as proximity to specific place(s). For example, "all users within 100 meters of a Ford Dealership" or "users in California who are currently at a Taco Bell."



Location-Based Audiences: Deriving an understanding of a user, based on analyzing that specific user's location history. Analysis of geo-behavioral patterns can be used to infer demographics, behavioral attributes, and geographic attributes (i.e. where the user lives or works). Third party data (e.g. purchase data, TV viewership, car ownership etc.) can be joined to provide an understanding of home location. (MMA Location Committee Guidance Report: Location Audience Targeting).



Attribution: Measuring store visitation or attaching purchase data (as described above) from location data. These metrics can be used to measure the ROI of ad campaigns.



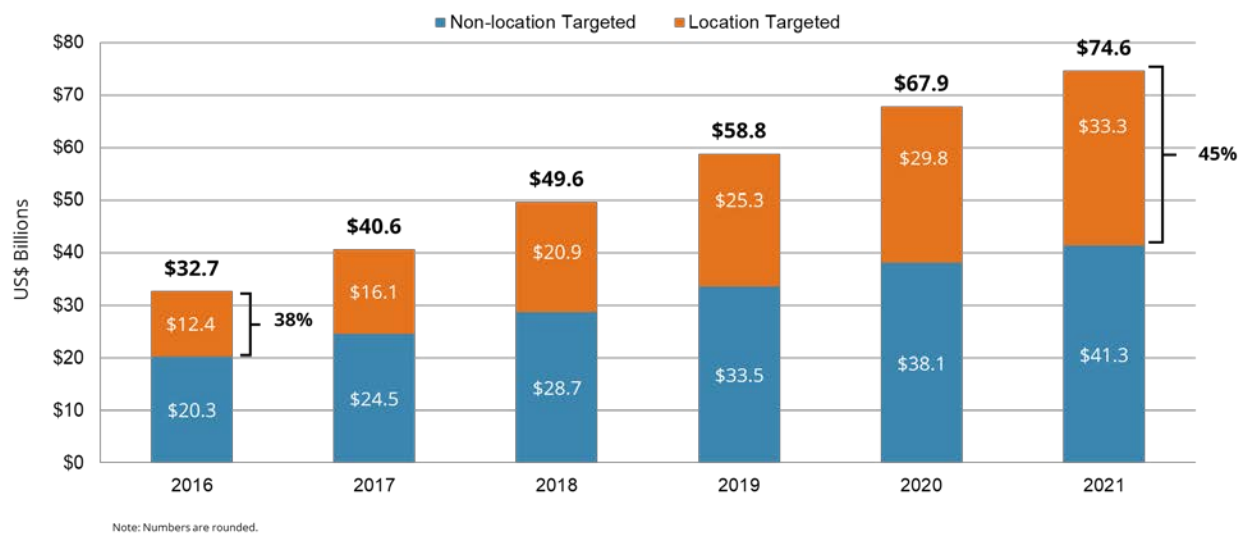
Location-Based Creatives: Dynamically modifying ad creative based on the user's location. Typically, this breaks down into two categories: modifying the creative itself (e.g. inserting the address or phone number of a location in the creative or inserting a localized offer) and modifying the click action on the creative (e.g. click-to-call and click-to-map/navigation actions).



Marketers Increasing Location-Targeted Ad Spending

BIA/Kelsey's forecast for advertising targeting local audiences shows that location-targeted mobile ad spend will nearly triple from 2016 to 2021 from \$12.4 billion to \$33.3 billion. This amounts to 45 percent of total mobile ad spending by 2021.

Figure 2 - Location vs. Non-Location Targeted Mobile Ad Spending 2016-2021



Source: BIA/Kelsey, 2017

A recent study highlights how using mobile location data has been "very" or "extremely helpful" in meeting goals set by 60 percent or more of marketers surveyed including improving campaign ROI, acquiring, and retaining customers, maximizing customer relationships, and increasing conversion rates.

Figure 3 - Location Data and Mobile Marketing Goals

Marketing Goals that Mobile Location Data Has Been Helpful in Achieving According to Digital Marketers in North America, March 2017

% of respondents

Improving the ROI of marketing campaigns	68%
Acquiring new customers	66%
Retaining customers	66%
Maximizing customer relationships	64%
Increasing conversion rates	60%

Note: among those who prioritize each goal; "very" or "extremely helpful"
Source: Forrester Consulting, "Pursuing the Mobile Moment" commissioned by Verve, June 27, 2017

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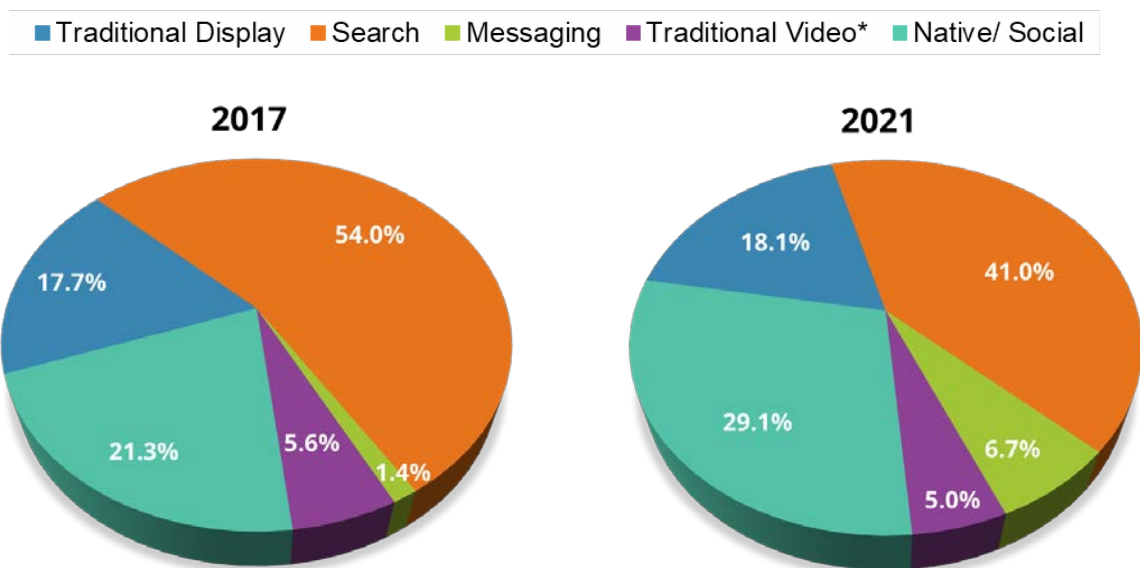
Source: eMarketer, 2017



Fastest-Growing Segment in Mobile: Native/Social Advertising

In the chart below, BIA/Kelsey's mobile ad forecast to 2021 shows how native mobile social ad units will grow from 21.3 percent of mobile ad spend to 29.1 percent. This comes largely at the expense of spending in mobile search, declining from 54.0 percent to 41.0 percent of the mobile ad pie targeting local audiences.

Figure 4 - Mobile Ad Forecast by Type of Inventory

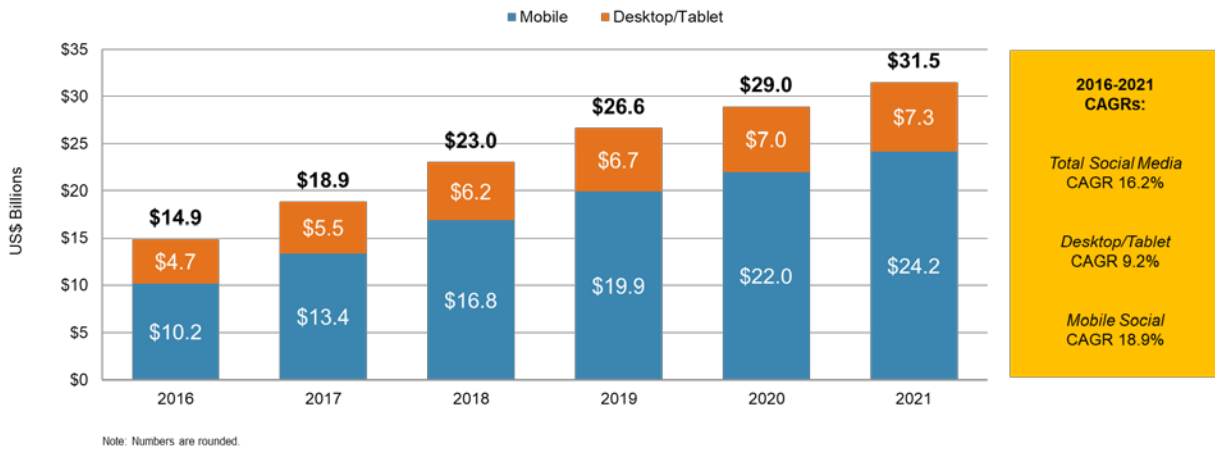


Source: BIA/Kelsey, 2017

According to comScore, 57 percent of all digital usage is either with mobile apps (50 percent) accounting for 2.4 hours per day, or the mobile web (7 percent). A shrinking percentage of time and ad spend is going to the desktop. Overall, mobile ad spend will grow from \$10.2 billion (68 percent) to \$24.2 billion (77 percent).

Another analysis of digital spending by marketers is the overall shift from desktop to mobile channels as we show in the chart below.

Figure 5 - Mobile vs. Desktop Ad Spending



Source: BIA/Kelsey, 2017



Audience Building

Location data allows marketers to build targeting solutions driven by the real-world places that consumers visit. By defining audiences in terms of their locations, marketers can segment and reach people based on where they've been *and* where they are. Use location as a tactic to extend reach, support and supplement your media, and offer meaningful consumer experience linked across advertising channels.



Radio: Location allows marketers to reach their audiences even when they're not tuned in.



Out-of-Home: Out-of-home is the original location based ad. Leverage location so you have a better understanding of who passes your billboards – where they've been, where they are, and, potentially, where they're going.



TV: Reach people when they're finished watching their program. Location will give you the ability to target your audiences to influence them to make a purchase, come inside your store...or both.



Print: Have a better idea on who your subscribers are. Where they've been can dictate your messaging.



Building Audience Segments from Location Targeting Data

Mobile and location data have changed the marketing landscape based as marketers followed consumer use, engagement, and in-store activations of their mobile devices based on their locations. Even as consumers and marketers continue to rely more heavily on their mobile devices and have greater expectations for how location signals play into a more customized and enriched consumer experience, there are challenges. From a location data perspective, the biggest challenge is the whole issue around accuracy.

The Mobile Marketing Association developed a chart to describe the different types of location data, their traits and use cases as highlighted below. An essential point for marketers to understand is that not all location data is equal in terms of accuracy or applicability to particular use cases.

Figure 6 - Location Data Types and Use Cases

Source	Location Data Traits	Use Cases
Beacons	Very accurate and precise data, capable of identifying user location to within a matter of feet. Currently lacks scale for broad marketing opportunities	In-store targeting by department or aisle, verification of store visits
GPS	Very accurate and precise data under the right conditions, capable of identifying user location to within 10-100 meters (in most ad platform scenarios). Large scale but dependent on publisher and user enablement of GPS The quality of a GPS signal degrades significantly indoors or in locations that do not have an unobstructed view of multiple GPS satellites	Numerous targeting opportunities based on user location & context
Wifi	Very accurate and precise data, particularly in signal-dense environments (e.g. buildings and malls) Capable of identifying user location to within 10-100 meters when wifi signals are present	Numerous targeting opportunities based on user location & context
Cell Triangulation	Accurate but less precise data. Typically capable of identifying user location within a zip or neighborhood area	Targeting over a broader geo-area such as a DMA, city or zip code
IP Addresses	Not reliably accurate or precise. Typically based on IP address of app server which can vary significantly from true location of mobile user	Not relevant for real-time or behavioral targeting
Registration data	Not relevant for real-time or behavioral targeting Typically relevant only for a mobile user's home zip code at time of registration	Targeting at the zip code or DMA level

Source: Mobile Marketing Association, "Demystifying Location Data Accuracy"



Location Data-Driven Audience Segmentation

We'd like to conclude our report by summarizing what we see as four key location data-driven audience segments for addressing marketing goals. These audience segments can be built in part based on the kinds of location data shown in the table above. But other data can complement the basic location signals, and sophisticated modeling and algorithms are used to further refine actionable audience segments for marketers.



Behavioral Audience Segmentation: Behavioral audience segments are built by using real-world location indicators combined with demographic information mapped to device IDs and derived from visitation patterns.



Location Audience Segmentation: Location data is useful, even if it is historical. Knowing a consumer's previous sets of locations is extremely helpful to understanding more about that consumer. Location segmentation is based on consumers past visitations to specific business locations or other points of interest. For example, a consumer that regularly visits the gym could be a key audience segment for health and fitness lifestyle marketers.



Neighborhoods: Understanding the areas, including their neighborhoods, where consumers come from allows marketers to discern meaningful characteristics about them. Beyond geographic segmentation and household income, insights into these areas where consumers dwell allows marketers to identify visitor trends and patterns.



Proximity Targeting: Mobile devices can be targeted based on their location proximity to businesses or other points of interest to deliver relevant messaging to impact immediate or future behaviors.



Conclusion

Mobile devices will continue to become even more powerful in terms of display, storage, processing, and data speeds combined with greater use of location intelligence from built-in GPS, beacon, WiFi, and other sensors. The attractions only grow for both consumers seeking personalized experiences and marketers who want to connect with these consumers in contextually powerful extensions of their brand.

Audience targeting based on household and consumer data is a growing industry. What distinguishes location data and mobile devices is the ability to apply data science reaching across several major types of first and third-party data to build extremely compelling and useful audience personas or segments. These audience segments based on behavioral, location, neighborhood and proximity targeting, provide marketers with nearly surgical precision for their attempts to target audiences with relevant and engaging messaging. These are the characteristics in location and mobile use cases that will drive dramatic increases in marketing investments and activations in mobile.

About the Author

Rick Ducey

**Managing Director
BIA/Kelsey**



Rick Ducey is managing director, leading BIA/Kelsey's strategy consulting practice. He assists clients with their business planning and revenue models, strategic research, market assessment, and designing and implementing strategies for leveraging video media assets and inventory in local markets. Ducey is a sought-out expert for his coverage and analysis of how disruptive technologies, emerging competition, shifting consumer demographics and media usage trends drive changes in the

media ecosystem.

Prior to joining BIA/Kelsey in 2000, Ducey was senior vice president of NAB's Research and Information Group. Ducey was recognized in academia as the 2011 Shapiro Fellow at George Washington University, where he teaches entrepreneurship in new media. He has also taught on the faculties of Michigan State University, George Mason University and the University of Maryland. Ducey received his B.A. from the University of Massachusetts at Amherst, M.S. from Syracuse University and Ph.D. from Michigan State University.

More Local Advertising Research

This report and much more of BIA's local advertising research and analysis available in:



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BIA ADVantage is an online dashboard that provides extensive, quality data along with expert analysis to reveal the advertising trends and opportunities in local markets and nationwide.

Learn more at <https://dashboard.biakelsey.com>.

Interested in a demo? Email advantage@biakelsey.com.

About BIA/Kelsey

BIA/Kelsey is at the forefront of local media analysis, creating and delivering unique data to examine traditional and digital advertising, advertiser trends and activities, local market profiles and station ownership/operational details.

We offer comprehensive local and nationwide advertising research, competitive intelligence services and strategic and valuation consulting. New for 2017 is our advertising dashboard - [BIA ADVantage](#) - that provides direct access to our comprehensive industry intelligence and quarterly briefings.

For clients, our promise is to combine quality data with high-powered analytics to help them capitalize on new sources of revenue and make smart, better decisions.

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GroundTruth is the leading global technology platform driving offline visits and sales by leveraging location as the primary source of intent. We believe in the power of place. Build your brand, increase sales and grow your business by building off what real people are doing in the real world, mapped using our proprietary Blueprints technology. Through its data foundation, GroundTruth sees 2 out of 3 smartphone users in the U.S. and more than 20 billion physical visits annually across 21 countries globally.

To learn more about GroundTruth, please visit www.groundtruth.com.