Digital Marketing and Advertising Hype Cycle 2016

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Improved customer experiences with contextually relevant messages built on complete profiles of customers and prospects point to a data-centric future for marketers. This year’s Hype Cycle spotlights technologies that marketers can harness to drive data-enriched strategies and campaigns.

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Analysis

What You Need to Know

For 2016, Gartner has combined the Digital Marketing and Advertising Hype Cycles into a single report. This reflects the growing need for marketers to consider advertising technologies as integral to, rather than segregated from, their main operational technologies. As marketers embrace data-driven marketing strategies to improve customer experience through coherent content and messaging, and advertising adopts programmatic practices and real-time bidding markets, customers expect consistency and coordination from all branded communications. Real-time and event-triggered marketing, as exemplified by the interest in proximity marketing via beacons, are dominant aspirations for marketers and advertisers. As all forms of marketing pursue greater efficiency and effectiveness, predictive analytics are rapidly gaining the attention of advanced marketers and providers.

A focus on measurability of performance feeds increasing demands from business leaders for marketing and advertising to show proof of the business value delivered by the investments in digital technologies made in recent years. Consumer adoption of mobile devices gives marketers new opportunities to engage with customers and prospects in real time, yet accurately measuring mobile interactions to a point where marketers can repeatedly and regularly create compelling engagements aligning time, location and need remains a challenge. Meanwhile, consumer adoption of social apps and ad-blockers hinders publishers’ and advertisers’ ability to track them across web and app properties. Still, marketers are starting to figure out how to effectively personalize and optimize experiences across channels and contexts — at least for those consumers that want them.

The Hype Cycle

A number of key forces are driving the evolution of emerging marketing and advertising technologies since the 2015 Hype Cycle was published. These forces are:

- The convergence of Martech and Adtech. Their respective evolutionary paths have been governed by the growing dependence on data-driven strategies and tactics. At the strategic level, this convergence is the result of a continuing focus on delivering compelling and valued
customer experiences, regardless of the market or the product or service being pushed. Product categories such as data management platforms (DMPs), marketing analytics, marketing automation and predictive analytics are increasingly shared in Martech and Adtech stacks. Digital Marketing Hubs and Data-Driven Marketing are both at the Peak of Inflated Expectations.

- Event-triggered and real-time marketing techniques are at the top of the aspirations multichannel marketers have for their efforts. This drive to be able to react in the moment and move the customer or prospect along the path to purchase and advocacy puts the focus on mobile marketing and predictive analytics.

- Though it has proven elusive to most marketers, the ability to engage on a one-to-one basis with prospects and customers is starting to become more reality than fiction. Personalization and "personification" technology profiles are maturing at a rapid clip, as marketers look to create that one-to-one opportunity while balancing consumer concerns about privacy and security.

- Use of the contextual cues signaled by consumer and prospect usage of mobile devices — cues such as the local weather, their presence near a mall or retail district — is driving marketers' overall interest in proximity marketing, the Internet of Things (IoT) and wearables.

To illustrate these trends, we've added the following technologies to this year’s Hype Cycle (see Figure 1):

- Ad Blocking
- Predictive B2B Marketing Analytics
- Mobile Wallet (with an expanded definition in this year's edition)
Figure 1. Hype Cycle for Digital Marketing and Advertising, 2016

**expectations**
- Shoppable Media
- Predictive Analytics
- Mobile Marketing Analytics
- Multidimensional Campaign Segmentation
- Marketing Talent Communities
- Customer Journey Analytics
- Augmented Reality Marketing
- Programmatic Direct Advertising
- Virtual Personal Assistants
- Cross-Device Identification
- Programmatic TV Advertising
- Personification
- Real-Time Marketing
- Customer Data Platforms
- Ad Blocking
- General-Purpose Machine Intelligence
- Digital Marketing Hubs
- Predictive B2B Marketing Analytics
- Voice of the Customer
- Data-Driven Marketing
- Mobile Commerce
- Bluetooth Beacons
- Multitouch Attribution
- Tag Management
- Wearables
- Multichannel Marketing
- Event-Triggered Marketing
- Responsive Design
- Advocacy Marketing
- Data Management Platforms (Advertising)
- Native Advertising
- Content Marketing
- Social Marketing
- Dynamic Creative Optimization
- Digital Out-of-Home
- Personalization
- Online Advertising Data Exchanges
- Real-Time Bidding (Advertising)
- In-App Advertising
- Social Analytics

**Plateau of Productivity**

**Plateau will be reached in:**
- ○ less than 2 years
- ⊱ 2 to 5 years
- ● 5 to 10 years
- ▲ more than 10 years
- ✗ obsolete

As of July 2016

Source: Gartner (July 2016)
The Priority Matrix

Our Priority Matrix will help you decide which technologies to look at today, based on their potential impact (see Figure 2). One transformational profile, Real-Time Bidding (Advertising), is very close to hitting maturity and moving off the Hype Cycle to the Plateau of Productivity. In-app advertising, while it carries a moderate benefit rating, is a crucial revenue opportunity for app publishers and developers and, as such, is receiving significant press coverage. Given in-app advertising’s rapid maturation, app-marketing teams or app publishers who are hesitating or only "dipping their toe" into in-app advertising need to move quickly as they are likely losing competitive advantage. Two fast-moving, high impact and, consequently, well-hyped areas, customer journey analytics and real-time marketing, promise new levels of efficiency and effectiveness. However, their inherent complexity means that they will take longer to mature than most marketers think.

As always, we caution readers not to make decisions about where to invest based solely on a technology’s position on the Priority Matrix. Focus first on your business objectives — evaluate all technologies that support your objectives, regardless of their impact and time to maturity. Remember, split your emerging technology investments among sure-bets, potential game-changers and experiments.
### Figure 2. Priority Matrix for Digital Marketing and Advertising, 2016

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<tr>
<th>benefit</th>
<th>years to mainstream adoption</th>
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<td></td>
<td>less than 2 years</td>
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<tr>
<td>transformational</td>
<td>Real-Time Bidding (Advertising)</td>
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<tr>
<td>high</td>
<td>Content Marketing</td>
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<td></td>
<td>Cross-Device Identification</td>
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<td>Data Management Platforms (Advertising)</td>
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<td></td>
<td>Event-Triggered Marketing</td>
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<td>Mobile Commerce</td>
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<td>Multichannel Marketing</td>
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<td>Social Analytics</td>
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<td></td>
<td>Tag Management</td>
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</tbody>
</table>

As of July 2016

Source: Gartner (July 2016)
Off the Hype Cycle

Market developments and moves by technology vendors lead to Gartner renaming or merging technology profiles to more accurately reflect these changes. The affected profiles are:

- Advocacy/Loyalty (now Advocacy) — We separated these two distinct practices. Loyalty marketing is well-established and on the Plateau of Productivity. Advocacy marketing, however, is still maturing, hence it being positioned as "Adolescent" and just past the Peak of Inflated Expectations.

- Campaign Segmentation is now Multidimensional Campaign Segmentation — Segmentation has morphed into Multidimensional Campaign Segmentation to better describe the manifold data points marketers can leverage to create a fuller picture of a customer or prospect.

- iBeacons and Bluetooth Beacons is now just "Bluetooth Beacons" (see the profile for greater detail).

One technology has matured and moved off the Hype Cycle:

- Mobile Advertising

We also removed some technologies that were not maturing quickly enough or were less relevant for digital marketers:

- Digital Commerce Marketing — Digital commerce has grown in importance to marketers and is a leading area of marketing technology investment. However, that technology is not a single, discrete system, platform or software application, but rather a strategy and use case that extends across multiple technologies.

- Automatic Content Recognition (ACR)

- Social TV

- Gamification

- Sharing Economy

- Neurobusiness

- Privacy Management Tools

- Lead Management

On the Rise

General-Purpose Machine Intelligence

*Analysis By:* Tom Austin

*Definition:* Machines appearing to have capabilities similar to people in areas such as learning, reasoning, adapting and understanding are labeled "intelligent." General-purpose machine
intelligence (GPMI; aka "strong AI") is applicable to a very broad range of use cases. Special-purpose machine intelligence ("weak AI") is limited to specific (narrower) use cases. GPMI is not fundamental to smart machines. Machines with GPMI that are able to control their own means of maintenance and reproduction exist only in science fiction.

**Position and Adoption Speed Justification:** Progress on machine intelligence has been limited to special-purpose smart machines. Thus, position and adoption speed remain unchanged year over year.

No AI system today can pass a general-purpose test for equivalence to human intelligence (there is also no fully acceptable measure of human intelligence against which to test them). This is not to say it will never be possible to build a machine that approximates the cognitive capabilities of humans, but we are likely decades away from having completed the necessary research and engineering.

GPMI is often entangled in cognitive-computing discussions. Cognitive computing means different things to different people. It’s either a set of machine capabilities (GPMI), a specialized type of hardware (as in neuromorphic or other highly parallel, short propagation path processors), or the use of information and communication technology (ICT) to enhance human cognition (Gartner’s preferred use of the term "cognitive computing").

**User Advice:** Focus on special-purpose smart machines or technologies that appear to perform some tasks previously thought of as the domain of only humans, that are capable of autonomous operation, that learn from experience and that appear as though they have learned (by virtue of acting on it, in at least a semiautonomous fashion). These machines operate on "big data," employ at some level deep neural networks (precursors may be based on expert systems instead) and make probabilistic predictions of future states.

Examples include autonomous vehicles, virtual personal assistants, smart advisors and selected conversational agents. Special-purpose smart machines will have a huge and disruptive impact on business and personal life.

End-user organizations should ignore GPMI until such time that GPMI researchers and advocates demonstrate significant progress.

**Business Impact:** General-purpose machine intelligence will likely not emerge in the next 10 years. When it does, it will likely be the result of the combination of many special-purpose smart machines. In the next 10 years, we will see continued research, and in the long run, when general-purpose machine intelligence is available, the benefits will likely be enormous (and some of the economic, social and political implications will be disruptive and likely not all positive).

Because this is an embryonic area, there are no vendors selling systems exhibiting general-purpose machine intelligence. There is an active area of basic research, but it has not yet advanced to the point where there are real products.

**Benefit Rating:** Transformational
Market Penetration: Less than 1% of target audience

Maturity: Embryonic

Recommended Reading: "Smart Machines See Major Breakthroughs After Decades of Failure"
"How to Define and Use Smart Machine Terms Effectively"

Ad Blocking

Analysis By: Andrew Frank

Definition: Ad blocking is the use of software to remove or filter the delivery of content identified as advertising from material published on the internet. We also consider software and techniques designed to defeat ad blockers within this category.

Position and Adoption Speed Justification: Ad blocking is rooted in a long sequence of ad avoidance behaviors, but its soaring adoption and controversial status are generating a new wave of hype. While it pits consumer benefits and complaints against publishers’ revenue and viability, marketers and their tech and service providers seek to balance customer experience advocacy with a need to reach elusive consumers and suspicions that some ad blockers may be running a protection racket.

In 2015, PageFair and Adobe estimated ad revenue blocked would rise from $5.8 billion in 2014 to $20.3 billion in 2016. That represents about 12.5% of the 2016 global internet advertising revenue forecast by PwC. While some developers express regret over the economic impact of ad blocking on publishers, many blame the industry for unleashing excessively intrusive — and occasionally malicious — ads that undermine the usability of mobile content in particular. Meanwhile, some publishers, such as Forbes, Wired and The Washington Post, have begun denying ad blocker users access to their content as they investigate workarounds, such as requesting payment for content from readers who choose to block ads.

On the technology front, an escalating arms race of countermeasures is predictably underway. This is pushing the prevailing model for delivering ads — especially video ads — toward server-side ad insertion (SSAI) and native formats, which will raise significant new barriers for ad blockers. Although SSAI also raises some new challenges for publishers and advertisers — combined with improvements in targeting and creative formats, and perhaps heightened publisher and advertiser sensitivity to usability concerns — it will likely temper the effects of ad blocking within the next two years. This contradicts some more dire forecasts.

User Advice: Marketers must first assess the extent of ad blocker adoption among their target audience. There appears to be substantial variance in adoption among demographic and geographic groups.

- Capture data from ads to understand the impact your advertising is having on user experience. Measure load times and latency, bandwidth consumption, bounce and skip rates, buffering, and everything else that might fuel a perception that your advertising is a burden on consumers. Set limits on ad weights and other performance-diminishing factors.
- Look for opportunities to eliminate ad placements that are likely to present frustrating roadblocks to mobile users attempting to accomplish a goal, such as using a utility application.

- Identify and filter out publishers with low advertising standards. Use programmatic blacklists to assure your ads don’t show up among objectionable material, including other ads that your customers might find questionable.

- Work with publishers on native solutions that complement content experiences rather than simply interrupting them. Use contextual indicators such as location and topical interest to improve relevance.

- Investigate SSAI for video advertising (offered by many video ad servers) to assure delivery of in-stream video ads.

- Educate end users about how your ad targeting works, and offer opt-outs and corrections to any data collection.

- Take advantage of free whitelisting services offered by ad blockers, but never pay to be whitelisted.

**Business Impact:** When Apple revealed that iOS 9 would feature what it called "content-blocking Safari extensions," many critics saw more than a motivation to improve user experience. Some interpreted Apple's move as an attempt to drive publishers toward app-store-based distribution and consumer-paid subscription models (where Apple earns a cut), and as a competitive move against Google whose revenue remains predominantly rooted in web advertising. Apple's content-blocking feature also clouds the picture for carrier-based network ad-blocking (at least in the U.S.), which some carriers are experimenting with, intending to charge advertisers for carriage — a variation of the technique known as zero-rating. Consumer groups have deemed zero-rating incompatible with net neutrality, but some carriers consider ad blocking capable of tilting public opinion in its favor.

Groups such as the Interactive Advertising Bureau (IAB) have denounced ad blocking as both economically damaging and ethically questionable. In response, ad blockers such as Eyeo, which markets Adblock Plus, have deployed "Acceptable Ads" programs aimed at whitelisting ads based on quality. However, The Financial Times reported that Google, Microsoft, Amazon and Taboola paid Eyeo substantial sums to unblock ads. Some publishers may choose to embrace Apple’s subscription model rather than battle over mobile ad revenue, but the internet’s long tail is unlikely to find a better source of funding than advertising. Adding ad blocking to the challenges of mobile targeting dims the long-tail revenue picture, and the cumulative effect will make it more costly and difficult for advertisers to reach certain audiences, at least temporarily.

To address the charge that they brought this on themselves, advertisers and publishers will need to focus on improving the quality and relevance of ads, especially on the mobile web, or risk seeing entire sites demoted toward obscurity in search and social feeds. Still, the main impact of ad blocking will be to spur the development of more secure ad delivery technologies.

**Benefit Rating:** Moderate

**Market Penetration:** 1% to 5% of target audience
Maturity: Emerging

Sample Vendors: Adobe; Alliance for Audited Media; Apple; BlockAdblock; Brightcove; Comcast; Eyeo; PageFair; Shine; Verizon

Customer Data Platforms

Analysis By: Christi Eubanks

Definition: A customer data platform is an integrated customer database managed by marketers that unifies a company’s customer data from marketing, sales and service channels to enable customer modeling and drive customer experience.

Position and Adoption Speed Justification: Coined in 2013, customer data platforms recently picked up enough momentum to land a spot on the Hype Cycle. A bridge between the traditional marketing database or postsales CRM system and multichannel campaign management execution engines, the customer data platform arose from the need for a solution that could be controlled and deployed by marketers to unify customer identity in a privacy-compliant way, manage first-party data and connect execution across multiple point solutions.

While the term "customer data platform" seems to have taken off in the last year among vendors, marketers’ understanding has not. Confusion is significant and capabilities overlap with a number of more mature technologies. Smaller vendors seeking a new niche in the crowded landscape of marketing technology have seized on a contested region of functionality that is also claimed by expanding categories such as tag management, data management platforms (DMPs), personalization, CRM and Master Audience Profiles (a term Gartner uses to describe the data capabilities of a digital marketing hub).

The customer data platform addresses an acute need for modern marketers, who, tasked with revenue accountability and customer experience, are ever in search of that elusive complete view of the customer, beyond the acquisition stage. If major digital marketing hub vendors adopt this terminology, customer data platforms will accelerate in step, otherwise the category is likely to be subsumed by neighboring offerings before reaching the plateau. A threat to the customer data platform is its disconnect from anonymous profiles, third-party data and cookie/device data used for targeting. As more marketers look to unite multichannel marketing with advertising and optimize toward common campaign goals and segments, having separate systems for known and unidentified individuals will make little sense.

User Advice: Understand the nuances of what defines a customer data platform before buying into the accelerating hype and talk with your existing vendors about whether they have offerings that align with customer data platform capabilities.

Separate analytic from operational use cases, and evaluate solutions based on these. Systems optimized for high-performance real-time decisioning and execution are not always ideal for complex analysis, and vice versa. Where multiple audience data stores are used, carefully consider how they will be synchronized.
Evaluate each vendor’s offerings with a careful eye toward integrations with your preferred platforms, the number of channels it can support, and the skill sets required for the marketer to deploy and manage it. Treat this technology investment as a system of innovation, as it is still nascent, and expect convergence with adjacent categories.

**Business Impact:** Marketers struggled to unify siloed data long before digital marketing exploded across channels and devices. But the modern marketing landscape and modern CMO expectations make that challenge more pressing than ever. The customer data platform promises to provide the necessary connective tissue between and among tools in the marketer’s stack, particularly for those marketers that use point execution solutions, rather than multiple tools within one of the "clouds." However, given the significant overlap in capabilities with better adopted tools, marketers will struggle to justify investment in this new category and to isolate its business impact.

**Benefit Rating:** Moderate

**Market Penetration:** Less than 1% of target audience

**Maturity:** Emerging

**Sample Vendors:** BlueConic; Lytics; Salesforce; Tealium

**Recommended Reading:** “Magic Quadrant for Digital Marketing Hubs"

"Critical Capabilities for Digital Marketing Hubs"

Real-Time Marketing

**Analysis By:** Adam Sarner

**Definition:** Real-time marketing describes an organization’s ability to interpret and respond to opportunities within time frames that impact business advantage. Real-time marketing is enabled by the tools, technologies and processes that monitor and analyze information in real time. It helps marketing leaders prioritize these engagement types of opportunities — and to discern which events require real-time response and which do not.

**Position and Adoption Speed Justification:** Rising consumer expectations, along with advances in technology, are creating an environment characterized by marketing "on-demand," not just "always-on." Search technologies and social media (especially microblogging tools such as Twitter) make it easy to share, compare and rate experiences while they are happening. Ignoring the real-time nature of customer behavior and expectations leads to lost opportunities, or worse, development of full-scale media crises.

Many organizations are combining behavioral analytics and marketing automation to serve up the right offer at the right time based on specific customer behaviors. The ability to get to buyers faster, with more-relevant offers, is already becoming a primary differentiator in travel and hospitality, financial services, insurance, and the services sector. Most real-time marketing use cases, however,
occur in postproduct development activities that focus on demand generation, advertising, promotion and sales.

But real-time marketing also can be applied further upstream to product development, dynamic pricing and distribution to take on a broader definition, where speed is used to improve business advantage across the entire marketing mix. In many cases, real-time marketing is achieved by companies mimicking the behavior of software companies — for example, music and home entertainment is delivered in real time across digital networks. Auto companies are exploring the idea of field upgrades, many occurring over the internet as upgrades to onboard systems (e.g., upgrades to resident GPS systems in real time). Other sectors are digitalizing big pieces of their sales processes (e.g., real estate, travel, hospitality and healthcare) to significantly accelerate the path to purchase. Making products easier to buy, through speed, is also becoming a competitive differentiator in consumer packaged goods, retail subscription services and telecom.

**User Advice:** Use real-time marketing concepts to build speed and rapid response into your entire customer life cycle. Don't limit real-time marketing to promotional, customer experience and customer service activities; apply speed as a competitive advantage to areas such as product development, pricing and distribution.

Go through each major marketing process with your lead managers; create a list of the previous year's events where the lack of rapid response compromised an important event, whether related to time-to-market issues, declining conversion rates or the acquisition of a major account. Identify why you were late in realizing such opportunities.

Rethink how you've organized. Building an organization with the agility to respond faster to change than competitors is proving to be more practical than trying to predict what lays ahead. For example, Spanish apparel retailer Zara has reorganized its processes and supply chain to get new designs to market in weeks versus months, resulting in a profitability four times that of its competitors.

If you do a lot of business online, increases in shopping cart abandon rates can signal lack of real-time response to digital purchase issues. A dip in retention rates could also signal customers leaving due to the real-time capabilities of a primary competitor. Ensure that you have clear corporate (or departmental) missions in place to help people discern which processes could create business advantage through speed.

**Business Impact:** The nontechnology sector's borrowing of best practices from software companies has led to the term "business becoming software," where marketers conduct activities not just less expensively, but faster and with a higher quality customer experience. Companies that adopt real-time marketing techniques across their larger value chain will outperform competitors in operations and their ability to deliver more rapid and relevant offers to customers.

Organizations that are honing skills in real-time marketing are already using rapid response to take share from primary competitors. Large organizations stuck in older, slower ways of doing things due to rigid hierarchies are particularly vulnerable to agile organizations that use speed to respond to customer demands faster than competitors.
Real-time marketing is forcing organizations to form cross-discipline teams, often on the fly, empowered to make rapid decisions once they’ve assessed a situation, problem or opportunity. This impacts process and governance, and how people are evaluated, as well as challenges or organizational cultures that limit big decisions to senior levels.

**Benefit Rating:** Transformational

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Emerging

**Sample Vendors:** iCrossing; IBM Interactive Experience; Pega; Percolate; Razorfish; Rubicon Project; SapientNitro; Thunderhead; Turn

**Recommended Reading:** "Multichannel Marketing Survey Results 2015: Marketers Double Down on Real-Time Strategies"

"Survey Analysis: How Leaders Manage Their Multichannel Marketing Activities"

"Magic Quadrant for Multichannel Campaign Management"

**Personification**

**Analysis By:** Andrew Frank

**Definition:** Personification is the delivery of relevant digital experiences to individuals based on their inferred membership in a defined customer segment rather than their personal identity.

**Position and Adoption Speed Justification:** Personification aims to resolve what is commonly referred to as the privacy-personalization paradox: a condition where consumers are wary of being tracked yet desire personalized experiences that require observation. Personification relies on nonunique identifiers to offer the relevance of a personal experience without penetrating an individual’s anonymity. By recognizing features such as demographics, behavioral patterns, context, customer journey stage or any other observable characteristic, personification achieves relevance by determining an individual’s membership in a segment described by a persona in experience design.

The technologies for achieving this include data collection, analytics, cryptographic collaboration, multichannel orchestration and real-time algorithmic operations. These vary in maturity, but many trail the migration of consumers to mobile channels and the proliferation of data collection points in digital business. Personification faces organizational barriers, lack of standards, identity and mobile platform hegemony, and regional variations in privacy laws and norms.

Nonetheless, the technologies are moving rapidly, drawn by strong demand from marketers and a climate of innovation.

**User Advice:**
Familiarize yourself with the principles of privacy by design and institutionalize them in your marketing organization.

Distinguish between personified and personalized experiences, and avoid crossing the line of identification that separates them.

Ensure that segments and personas are derived from real data, and that they are sufficiently aggregate and anonymous to avoid reidentification.

Always offer customers transparency to discover why they’re receiving certain content, and choice and control over data and membership in persona classes.

Avoid using sensitive data to construct personas.

Use personas to activate marketing partnerships and service relationships without revealing personally identifiable information (PII).

**Business Impact:** Proliferation of personal data on the internet and mobile devices creates a risky climate for everyone. Marketers are often torn between the need to drive outcomes using targeting and the need to stay within legal and social boundaries that are often fuzzy and complicated. Personification reduces risk by formalizing compliant practices without sacrificing performance enabled by relevance. It makes one-to-one marketing principles scalable to larger audiences, while containing the cost and complexity of content development and management, by focusing on personas rather than individuals. Its operational component — real-time targeting and experience delivery — distinguishes it from segment-based marketing and use of personas in design. This is achieved by adding a recognition and programmatic decisioning component that’s unique to digital media — specifically digital advertising, app-based messaging, social audience targeting and website personalization.

For consumers, it offers more control to optimize the trade-off between desirable personalized experiences and unwanted tracking.

**Benefit Rating:** High

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Emerging

**Sample Vendors:** Acxiom; Adobe; Epsilon; Experian; Facebook; Nielsen; Oracle; Salesforce

**Recommended Reading:** "Rethinking Personalization: The Principles of Personification"

**Programmatic TV Advertising**

**Analysis By:** Andrew Frank

**Definition:** Programmatic TV (PTV) advertising is the application of real-time digital automation and algorithmic techniques to the planning, sale, specification, delivery and insertion of commercials into TV shows.
**Position and Adoption Speed Justification:** Programmatic TV continues to accelerate, with many providers offering solutions, and many marketers and media companies getting involved. At present, however, hype outpaces capabilities, and considerable confusion persists regarding what’s possible or economically sound.

There’s enough slack in the definition of PTV to accommodate a wide spectrum of solutions, from automating certain inefficient aspects of the traditional TV ad-buying process to the ultimate goal of fully addressable real-time ad insertion in any kind of programming (live, linear or on demand). In the middle are a variety of approaches that refine target audience definition parameters beyond the age/gender proxy established by traditional Nielsen Gross Rating Points and achieve household addressability for prepaid inventory using a variety of set-top box (STB) techniques. Some PTV offerings substitute true addressability with refined data-driven buying operations, while others are constrained to run against a limited universe of video on demand (VOD) and over-the-top (OTT) programming. What they have in common is a focus on use of data to achieve greater efficiency in a medium whose once-universal broadcast reach is slipping.

PTV faces stiff headwinds due to the size and complexity of the global $200 billion TV advertising market. National broadcasters, TV station groups, cable networks, multichannel video programming distributors (MVPDs), which include cable, satellite and IPTV operators, and OTT programmers all have a significant stake at risk. On the buy-side, media agencies and measurement companies face potential disruption and disintermediation from new PTV providers supporting in-house solutions. Pressure is building, and the resulting uncertainty will keep many marketers and agencies in an experimental mindset until the dust settles.

The fate of PTV is ultimately connected to the long-term migration of TV delivery to Internet-Protocol-based networks, which still face major institutional, infrastructure and regulatory barriers. Still, the inevitable turnover cycle of television sets assures there will soon be a critical mass of connected TVs with the ability to overlay targeted advertising in any programming context, restricted only by legal factors and the challenges of delivering high-speed internet to a few rural geographies. As average consumer internet bandwidth continues to improve and OTT TV services continue to attract consumers and stimulate cable-cutting behavior, the case for PTV grows stronger. The most likely three-year scenario remains focused on automation of TV ad decisioning and buying workflows, as the core legacy business persists through PTV’s long trough and rough climb to its eventual full impact.

**User Advice:** Avoid thinking of TV as a dying legacy medium with ad budgets to be plundered for digital investments. Instead, consider the role it might play among the audience you’re trying to reach. PTV offers the opportunity to treat TV as a component in a broader multichannel journey, from awareness through adoption, and reach a targeted segment that may not be as digitally fixated as the average networked millennial.

Use PTV targeting to construct experiments to test TV’s lift when paired with other digital media in similar markets, and build it into your multitouch attribution models.
It's premature for most marketers to consider PTV as a way to take TV buying in-house and away from media agencies, but marketers with significant TV budgets should press their agencies for details about their plans and capabilities to leverage PTV opportunities.

High-consideration consumer sectors such as automotive, financial services, specialty retail, entertainment and luxury goods will lead the way in PTV. Digital marketers in these categories should allocate time and budget to PTV trials, but don’t expect major scale within the next two years. Work with agencies to automate processes and migrate teams from clerical to analytic and creative tasks, while re-evaluating the role of the traditional media agency in targeted media buying operations.

**Business Impact:** PTV could ultimately usher in a renaissance in video programming and advertising by combining high-resolution impact with digital efficiency, precision and interactivity through integrated experiences enabled by simultaneous use of mobile devices, bringing back many marketers.

PTV will also contribute to an overall reformulation of the TV ecosystem. MVPDs will grapple with disrupters, resulting in a mix of acquisitions (like Comcast FreeWheel and Verizon AOL) and competitive incursions (like Roku and Amazon Prime). Meanwhile, regulatory developments, such as the FCC’s current proposal to unlock the STB, could open the door to new competition from manufacturers. Ultimately TV — or whatever we wind up calling video content delivered to a large, in-home display — will always be an important showcase for brands and products, even as the models for discovery, delivery and monetization of content change. Programmatic capabilities speak to improvements in efficiency, but are no substitute for high-value content.

**Benefit Rating:** High

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Emerging

**Sample Vendors:** AOL; AudienceXpress; clypd; Comcast; Google; Simulmedia; TubeMogul; Videology; WideOrbit; Xaxis

**Cross-Device Identification**

**Analysis By:** Mike McGuire

**Definition:** Cross-device identification (XDID) comprises a number of techniques for associating device identifiers with unique individuals as they access digital content and services via multiple devices. Device identifiers can be explicitly supplied by the device OS (deterministic) or inferred statistically from observable characteristics (probabilistic). This capability is important for mobile ad targeting, multichannel campaign management and customer experience (CX) management.

**Position and Adoption Speed Justification:** As noted in the 2015 Hype Cycle, XDID is a fast mover, and we have it moving rapidly toward the peak in its second year on the Hype Cycle. Few strategic imperatives are as starkly defined for advertisers, marketers and publishers as the ability to more accurately track customers or prospects as they use different devices and different
combinations of apps and browsers to find and consume content and services. Vendors have noticed:

- **February 2016**: Telenor Group, a Norwegian telecommunications company, announced it was paying $360 million for Tapad, a venture capital (VC)-funded cross-device marketing technology and mobile advertising provider.

- **March 2016**: Adobe announced that its Marketing Cloud Device Co-op, built on top of its analytics platforms, will be available to Adobe Marketing Cloud customers. (It is scheduled to roll out to customers in the second half of 2016.)

- **April 2016**: Oracle announced the acquisition of Crosswise for $50 million. Crosswise is a startup that uses machine learning to help marketers match different devices to the same user.

Much of this activity is a reaction to the control the major mobile OS platform (iOS and Android) vendors exert over their ecosystems. Both Apple and Google have developed proprietary identifiers for their mobile advertising and mobile device identifiers. Facebook and Amazon have huge audiences that voluntarily log in from whatever devices they are using.

**Key challenges facing cross-device identification:**

- **Nonstandard device identification** (type of device; for example, iPhone 6 with iOS version 9.1) among four principal competitors (Google, Apple, Facebook and Amazon).

- **Multiple and varied device mapping service providers and data brokers.** Device mapping associates these types of identifiers (device identifiers) with individuals across all of the devices they own or use.

- **Consumer migration to a proliferation of devices and device types,** with the average U.S. consumer owning 5.2 devices including connected TV.

The long-term future of mobile advertising and personalized marketing across all channels is tied to the evolution of cross-device identification methods. XDID’s potential is its ability to answer advertisers' and marketers' concerns with measuring mobile channels and attributing ad impressions and engagement throughout purchase journeys and over the lifetime of a customer relationship.

**User Advice:** Marketing teams, particularly those with digital advertising and digital marketing disciplines, should investigate cross-device identification solutions to provide a more complete understanding of customers and prospects. The deterministic method is particularly useful for brands, advertisers and marketers looking to leverage the potentially deeper and richer information about each customer (or prospect) linked to the specific username or email address typically required for site or mobile app registrations. For advertising purposes, ad teams and marketers should investigate probabilistic approaches that utilize a variety of data mining tools to track the traffic of online ads served to smartphones, tablets, notebooks, desktops, smart TVs and over-the-top set-top boxes to estimate the identity of a user and his or her various devices.
Cross-device identification will contend with privacy and usability obstacles, and the long-term requirement for more standardization. The ultimate goal won’t be perfection, but a more reliable, secure, privacy-friendly method for achieving the technology’s promise.

**Business Impact:** Cross-device identification's importance to mobile advertising and digital engagement — particularly by enabling the retargeting of users across their various devices — will remain constant for the foreseeable future. However, cross-device identification's persistent value extends beyond ad retargeting and will be important for “anonymous personalization” (aka personification) and delivering an engaging digital customer experience. But marketers must be cautious in making assumptions about identity that haven’t been explicitly authenticated by a user.

Gartner expects cross-device identification capabilities — particularly deterministic approaches — to become components of any detailed CX strategy as CX specialists demand the ability to create event-triggered engagements and ever-more-precise contextual information.

**Benefit Rating:** High

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Emerging

**Sample Vendors:** Adobe; Apple; BlueCava; Drawbridge; Facebook; Google; Oracle; Tapad

**Recommended Reading:** "Three Steps Toward a Connected Mobile Marketing Strategy: Step Two, Mobile Marketing Analytics"

"What the Growth in Mobile Commerce Means to Marketers"

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**Virtual Personal Assistants**

**Analysis By:** Tom Austin; Van L. Baker

**Definition:** A virtual personal assistant (VPA) performs some of the functions of a human assistant. With a user’s permission, it:

- Observes user content and behavior
- Builds and maintains data models (drawing inferences about people, content and contexts)
- May predict users’ needs
- May act autonomously on the user’s behalf
- Gradually learns from user behavior and as a result builds trust

VPAs make everyday tasks easier (by prioritizing emails, for example), and its users more effective (by highlighting the most important content and interactions).

**Position and Adoption Speed Justification:** VPA adoption grows as users get more comfortable with them, as the technologies improve and as the variety of approaches multiply:
Unobtrusive VPA-like features such as Gmail’s Smart Inbox, embedded in existing products, are growing, as are narrow-purpose VPAs (such as personal financial advisors, health and wellness coaches, and calendaring agents).

VPAs are becoming centerpieces of cross-platform platforms (such as Microsoft’s Cortana Intelligence Suite).

General-purpose VPAs (such as Siri, Google Now, Alexa and Cortana) have room to grow and evolve. Today, they deliver only a fraction of what we expect by 2020.

VPAs act on behalf of both consumer and business users, but more enterprise-oriented VPAs are now also emerging (such as Openstream’s EVA).

Virtual customer assistants (such as IPsoft’s Amelia and Go Moment’s Ivy, which is a virtual hotel concierge) are similar to VPAs, but they serve, first and foremost, as agents of the businesses that employ them.

**User Advice:** IT leaders should:

- Anticipate that many different types of VPAs will be available and that a single "winner take all" success is unlikely to happen. Individuals may use several VPAs with different specializations, such as:
  - Health-related VPAs to help with diet, exercise, the quantified self, relationships and psychological well-being
  - VPAs to serve as personal shoppers
  - Personal-career development and financial-management VPAs
  - VPAs for office-specific tasks like calendar management, email handling and external information monitoring
  - Encourage experimentation while creating opportunities for employees to share experiences and recommendations. Lead by doing.
  - Prepare for mail-centered VPAs first, followed by blossoming of the full range of capabilities.
  - Recognize that privacy, security and innovation are at odds, but encourage experimentation with guardrails. Imposing too many controls too soon due to a lack of trust in your employees could eliminate the opportunity to outflank competitors.
  - Look for opportunities to leverage VPAs to improve the appeal of business apps for users especially in the mobile app segment.
  - Carefully measure the impact of VPAs on people’s behavior and performance. Use an ever-evolving set of metrics, identified by observation and crowdsourcing.

**Business Impact:** VPAs have the potential to transform the nature of work and structure of the workplace. They could upset career structures and enhance workers’ performance, but they have challenges to overcome beyond simply moving from research labs to functional products. It is far
too early to determine whether or how they will overcome privacy concerns (although opt-in
requirements make sense). Individuals will think long and hard about what they want each VPA to
see and who else might view that information. Similarly, enterprises will be concerned about
employees exposing confidential information via VPAs and should determine the extent to which
information is retained by VPA providers.

**Benefit Rating:** Transformational

**Market Penetration:** Less than 1% of target audience

**Maturity:** Embryonic

**Sample Vendors:** Apple; Google; IBM; Microsoft; Nuance; x.ai

**Recommended Reading:** "Smart Agents Will Drive the Switch From Technology-Literate People, to
People-Literate Technology"

"IT Strategists Must Prepare for the Rise of Virtual Personal Assistants in the Workplace"

"Entering the Smart-Machine Age"

**Programmatic Direct Advertising**

**Analysis By:** Andrew Frank

**Definition:** Programmatic direct advertising refers to technologies that automate the trafficking and
real-time placement of digital advertising based on contracts negotiated directly between parties
(advertisers or agencies and media companies or their representatives).

**Position and Adoption Speed Justification:** The rapid rise of programmatic direct was driven by
demand to apply precision data and automation to advertising without having to transact through a
real-time, often blind auction. Both advertisers and publishers have incentives to deal directly with
counterparties in advance of ad delivery to lock in negotiated prices, guarantee preferred
placement, and eliminate intermediary fees and risks associated with open markets. This was
accomplished technically by exposing APIs in publisher ad servers that allow preferred advertisers
to evaluate impression opportunities, and upload campaigns and parameters in real time.

The introduction of a technique known as header bidding in 2015 offered the selective "first look"
advantage of programmatic direct without the complexities of advanced commitment, tempering
some enthusiasm for programmatic direct. However, the technique got a boost when the largest
real-time bidding (RTB) exchange operator, Google, announced a programmatic direct initiative
called "Marketplace" and made it generally available early this year. (Google often refers to this
capability as "Programmatic Guaranteed," while the Interactive Advertising Bureau has standardized
on "Programmatic Direct" nomenclature.)

Hurdles remain. Systems for managing direct buys still often require manual processes to bridge the
gap with programmatic ad tech, and the proliferation of mobile devices complicates the targeting
process. The goal of end-to-end, straight-through efficiency remains elusive. Adoption is also tied to
the progress of alternative programmatic media such as programmatic TV and digital out-of-home where direct markets and practices are more firmly entrenched and new technical challenges abound. Nevertheless, we expect market pressure to spur the technology and practice toward maturity within four years.

**User Advice:** Marketers and their agencies need to carefully examine the processes underlying programmatic direct to minimize operational risks and inefficiencies. Start with data integrations with a few premium publishers to determine optimal targeting strategy and deal format. There are several variations on deal structures that can be supported by programmatic direct solutions that marketers and publishers need to evaluate and negotiate. Try to avoid having to support a multiplicity of complex deal types.

Marketers should:

- Formalize criteria for evaluating potential programmatic direct publishing partners. Understand their allocation process and potential competing sponsorships.
- Investigate how programmatic direct deals can support native formats and potential dynamic creative variations based on audience data or external conditions (e.g., weather).
- Ask your media agency about its programmatic direct approach, and insist on transparent deal structures and take-rates.
- Look beyond media to how data will be used to optimize placement, creative and audience targeting when considering programmatic direct relationships.

**Business Impact:** Programmatic direct is helping to amplify the role of data in media strategy. Specifically, it helps:

- Mitigate fraud and questions of appropriate placement endemic to blind auctions
- Use content to compensate for the lack of targeting capabilities on the mobile web
- Simplify and lower risk of media planning with guarantees
- Lower the overhead associated with legacy media negotiations
- Build more strategic relationships between brands and publishers, which can enhance value for both

Still, it can’t escape the scalability issues that gave rise to ad networks and exchanges in the first place. Audience fragmentation and open access have robbed publishing enterprises of the audience reach they enjoyed in the mass media era, and concentrated reach and targeting power in large entities like Google and Facebook that can maximize their value through open auction-based exchanges.

Thus, programmatic direct shows the most promise in areas like sector-specific and high-consideration B2C categories, such as automotive and financial services, where publishers can offer specialty products that more reliably deliver specific audiences. These audiences offer higher yields to publishers and more accountable performance to advertisers. The programmatic aspect of
the relationship allows marketers to adjust parameters "on the fly" and experiment with variations while minimizing the likelihood of being outbid for key positions or prospects.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Emerging

**Sample Vendors:** AppNexus; Google; OpenX; PubMatic; Rubicon Project; SpotXchange

**Recommended Reading:** "Market Guide for Ad Tech"

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**Augmented Reality Marketing**

**Analysis By:** Augie Ray

**Definition:** Augmented reality (AR) uses smartphones or dedicated hardware to layer digital information, such as text, images, video and audio, on top of the physical world. For example, a consumer points an augmented reality app at a movie poster to view its trailer or buy tickets. This real-world element differentiates augmented reality from virtual reality (VR).

**Position and Adoption Speed Justification:** AR merges digital information into the user’s physical environment via a smartphone (using the camera for input and screen for output) or a head-mounted display (such as Google Glass, Microsoft HoloLens or RideOn ski goggles). AR devices and apps combine a number of geolocation services and audio/video tools to enhance users’ view of the real world.

While AR apps have been available on smartphones for years — Yelp launched its Monocle feature in 2009 — the market for custom AR hardware has developed slowly to date. Google made headlines selling its first version of Glass in 2013, but has been largely silent since. Although there has been little development in the marketplace in the past year, it is evident much will change in the years ahead as large tech players make investments. In the past 12 months, Apple acquired AR startup Metaio, Google led an investment round in Magic Leap (another AR startup that has raised over $1.3 billion) and at Facebook’s 2016 F8 conference, Mark Zuckerberg spoke of social experiences that could be available on future hardware that combine AR and virtual reality (which replaces rather than enhances the user’s view of the real world).

**User Advice:** Marketers will be excited by AR (and VR) capabilities, but it is vital they plan carefully for the current state of hardware, audience adoption and preference, measures of business value, extensibility of AR content into other media, usability testing, and promotion. Be careful of ideas that use augmented reality as just a technology gimmick — AR is best applied to furnishing functional benefits that improve your brand’s customer experience.

Brand marketers should assess how augmented reality contributes value to your organization and customers through branded information overlays. For consumers, assess how AR can bridge
physical and digital marketing assets to add value to your customer experience. For example, augmented reality can allow consumers to visualize 3D furniture and appliances in their homes, or help customers envision how clothes and accessories will look on them. AR can also improve the efficiency of employees who are mobile (including sales, factory, field service, emergency response and medical staff). Identify how augmented reality can deliver context-specific information for real-time decisions.

Communications service provider marketers should partner with augmented reality developers by integrating professional services for specific vertical markets such as education, healthcare and real estate. Keep in mind that a controlled hardware and software stack from database to device will ensure a quality user experience for these sectors.

Mobile device marketers should have discovery-oriented discussions with developers about the possibility of preinstalling augmented reality clients on your devices. Document how developers would access device features to add value to the customer experience. Ally with game developers for exclusive AR applications and services for your devices. Look for ways to integrate AR into your user interfaces or operating systems to make experiences even more elegant and seamless.

**Business Impact:** Augmented reality is often discounted as gimmicky or promotional — and it can be — but this perception is changing as the technology matures and shows promise as a means for innovative functionality in gaming, medical, mobile, automotive and manufacturing. As a result, new opportunities are providing value and content to prospects, customers, employees and partners across the whole value chain. For example, AR enhances education and training, field maintenance, and other environments that require human collaboration. AR will increasingly be used by retailers and marketers from every sector to enhance physical world events with digital assets.

Communications service provider marketers may leverage augmented reality’s ability to enhance the user experience within their location-based service offerings. This could drive revenue via set charges, recurring subscription fees and advertising, but will face substantial competition from app makers. Handset vendors can incorporate augmented reality to enhance user interfaces and use it as a competitive differentiator in their device portfolio.

**Benefit Rating:** High

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Aurasma; Intel; Layar; Magic Leap; Marxent; Microsoft; NGRAIN; Total Immersion; Vuzix; Wikitude

Customer Journey Analytics

**Analysis By:** Jason Daigler; Brian Manusama

**Definition:** Customer journey analytics is the process of tracking and analyzing the way customers and prospects use a combination of available channels to interact with an organization over time. It
covers all channels the customer has used, including those with human interaction (such as a call center), those that are fully automated (a website), those that provide assisted help to the customer (live chat and co-browsing), those that are operated in physical locations (a retail store) and those with limited two-way interaction (display advertising).

**Position and Adoption Speed Justification:** Customer journey analytics strategies and technologies are attracting an increasing amount of interest in several different industries and from multiple functions or disciplines (such as IT, customer experience, marketing, sales). While the technology is progressing at linking, analyzing and affecting the journeys of authenticated customers (for example, those who log into accounts in various channels), it is still immature in its ability to infer likely connections between interactions with "unknown" customers and prospects and even with known customers who use multiple devices. Similarly, many organizations are just beginning their efforts to understand customer identities and their journeys across channels and devices. Many organizations imagine the customer journey as a concept for experience design purposes rather than truly tracking and measuring it. Without a clear strategy for capturing and linking the right data in each channel, organizations will lack a true understanding of the customer journey, beyond the interactions in which the customer is forced to reveal their identity.

**User Advice:** Organizations should not assume that continual investment in understanding customer behavior within a single channel will deliver more valuable insights than understanding the combination of channels that customers are using. Similarly, organizations should be wary of key performance indicators (KPIs) that fail to consider cross-channel implications, such as single-channel conversion rates. Starting with customer identification and journey mapping across only two to three channels, where data is both available and valuable, is an excellent way to start with customer journey analytics (for example, customers abandoning a website to call the service center, or moving from a digital commerce site to pick up a product in-store). Organizations should avoid beginning with implementation on a massive scale that seeks to understand interactions in every available channel at once.

**Business Impact:** Organizations can obtain the following benefits from customer journey analytics:

- Higher customer satisfaction from more seamless and personalized interactions across channels.
- Better understanding of the benefits that each interaction delivers to the overall journey, resulting in better allocation of investment to supporting the overall relationship.
- Better allocation of investment in functionalities and capabilities for each engagement channel, to ensure the customer’s needs are met at the earliest opportunity.
- More accurate customer segments, based on data from multiple channels as well as real-time data and predictive modeling, thereby increasing the effectiveness of marketing campaigns.
- More successful personalization tactics — whether on commerce sites, communication channels or elsewhere in the customer experience — based on data that gives a more complete view of the customer’s activity in multiple channels instead of a single channel.
More relevant and efficient customer service for customer-facing agents who have a more complete view of the customer’s activities and difficulties, based on data from multiple channels.

More effective advertising retargeting, allowing paid media channels to be an extension of customer communications.

**Benefit Rating:** High

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Emerging

**Sample Vendors:** Adobe; APT; ClickFox; IBM; Kitewheel; Nice Systems; Salesforce; SAP; Thunderhead; Verint Systems

**Recommended Reading:** "Technology Overview for Customer Journey Analytics"

"Market Guide for Customer Journey Analytics"

**Marketing Talent Communities**

**Analysis By:** Christopher Ross

**Definition:** Marketing talent communities are managed, often domain-specific, marketplaces that enable brands and marketers to find, engage and collaborate with qualified writers, designers, strategists, data architects and other freelance talent on an on-demand basis.

**Position and Adoption Speed Justification:** Despite the obvious technology challenges that digital marketing leaders face, human beings are often the greatest bottleneck. This is clearly the case in the executive ranks, where marketing organizations are actively filling gaps to lead digital transformation. But it's also the case in the trenches, where disciplines like content marketing, data-driven marketing, visual storytelling and social marketing put pressure on already-constrained human resources and often become the gating factor to executing at speed and scale. Following the example set by IT talent marketplaces for filling similar operational gaps, marketing talent communities have officially arrived. Communities like Contently, Visually, Ebyline, NewsCred and Skyword aggregate qualified writers and designers that are available to augment marketer’s in-house staff. These communities screen and qualify contributors, and they facilitate discovery, engagement and collaboration, as well as things like payment, tax documentation, dispute resolution and other administrative tasks.

**User Advice:** Measure the gap between strategy and ability to execute, then determine which roles should be filled through direct hiring, ongoing agency relationships and freelancers sourced through marketing talent communities. Favor communities that integrate directly with your publishing and workflow tools. Expect a few iterations to find the right set of freelancers. Prioritize direct hiring for the roles that are both strategic to your business and where relatively steady demand exists. Look to talent communities to fill more tactical needs, particularly when demand for these skills is variable and unpredictable. Use these communities in one of two ways:
As a provisional stopgap for addressing resource constraints in conjunction with an effort to hire and onboard permanent resources or strategic agency relationships.

As an on-demand, relatively elastic resource for staffing during periodic spikes in marketing talent requirements — for example, in conjunction with a resource-intensive campaign push.

**Business Impact:** Marketing talent communities help digital marketing organizations become more agile, adaptive and responsive by mitigating the talent bottleneck that often constrains tactical execution.

**Benefit Rating:** Moderate

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Emerging

**Sample Vendors:** Contently; NewsCred; Skyword; Visually

**Recommended Reading:** "Market Guide for Content Marketing"

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**Multidimensional Campaign Segmentation**

**Analysis By:** Adam Sarner

**Definition:** Multidimensional campaign segmentation functions enable the grouping of audiences/customers/consumers based on different attributes along multiple dimensions. Traditional attributes have focused on products and who owns them; newer groupings focus on customer profitability, customer life cycle and the growing use of third-party anonymous customer/consumer data.

**Position and Adoption Speed Justification:** Many companies perform segmentation at only a basic level, working from attributes such as product owned versus product not owned, and demographics. This approach to segmentation is now understood and is considered mainstream. However, today’s hype is around multidimensional segmentation, with many marketers seeking to use value-based segmentation (profitability analysis) or want/needs-based segmentation (lifestyle or life stage, in-market and affinity indicators such as search), social dimensions of influence or interest such as open-graph data. For this reason, we see these advanced aspects of multidimensional campaign segmentation as having only 5% to 20% market penetration.

Both value- and needs-based segmentation techniques, with data mining and data visualization in the hands of a marketer, are pushing campaign segmentation techniques into the mainstream. Campaign segmentation techniques are employed in many different channels of marketing online and off — such as email, web, call centers, social, mobile marketing and loyalty programs. Marketers’ move toward big data and real-time marketing, particularly by incorporating first-party customer data with third-party behavioral data, means an added level of complexity before campaign segmentation moves to the Plateau of Productivity.

**User Advice:** Move beyond simplistic one- or two-dimensional analyses. Use segmentation techniques based on a combination of needs, wants and actions to build a more complete view of the relationship than schemas (which are based on only one or two dimensions). Create eight to 12
formal customer personas or segments that can be used as a springboard for your overarching customer strategies. These customer segments should be descriptive in nature and easily communicated to the rest of the organization. Then, use more data-driven segmentation techniques based on multiple attributes/modeling that help target each formal segment with actual offers, campaigns and customer-buying journeys. Marketers are familiarizing themselves with the composition of commercial segmentation clusters available from third parties to understand how these classifications are derived and how they might map to their target markets. Use data analysis techniques like regression and predictive modeling as a way to identify and optimize segmentation clusters to estimate, which dimensions might make good segmentation parameters (out of the hundreds or thousands you might assemble with third-party look-alike data).

**Business Impact:** Marketers segment customers for multiple reasons. One is to find those most likely to buy in the shortest amount of time. Marketers also segment for other reasons, including understanding the relative lifetime value and profitability of a customer. Segmentation also helps qualify customers. Multidimensional campaign segmentation helps refine and better align the value propositions of companies and products with customers. Life cycle types of segmentation strategies are particularly relevant in industries such as retail banking, where reconciliation of multiple services occurs around a time dimension.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Emerging

**Sample Vendors:** Adobe; AgilOne; IBM; Oracle; Pitney Bowes; SAP; SAS; Selligent

**Recommended Reading:** "Magic Quadrant for Multichannel Campaign Management"

"Use Gartner's Marketing Maturity Model to Build Digital Marketing Muscle"

"How to Build Segments and Personas for Digital Marketing"

**Mobile Marketing Analytics**

**Analysis By:** Mike McGuire

**Definition:** Mobile marketing analytics measure the behaviors of mobile website and application users, enabling marketers to optimize mobile experiences, messaging and advertising. Among the requirements for these tools are identifying device attributes such as OS type, display size and screen resolution. (Application performance analytics are covered under different technology profiles.)

**Position and Adoption Speed Justification:** Effectively engaging consumers on their mobile devices is firmly ensconced at the top of marketers' strategic requirements. Broad consumer adoption of smartphones and tablets requires that marketers are able to quantify mobile behavior in depth; superficial metrics such as app downloads will not suffice. With companies increasingly
demanding that marketers hold accountability and generate business value, vendors of all sizes and types are racing to meet demand for better mobile marketing analytics, concomitantly elevating the category’s expectations toward the peak. We expect this profile to move very quickly through the rest of its Hype Cycle journey.

In the past 12 to 18 months, venture capitalists have poured tens of millions of dollars into the coffers of web and mobile analytics, and mobile marketing tech providers. Incumbent multichannel marketing and digital marketing hub platforms are increasing investments in mobile marketing analytics with a combination of building their own (such as Salesforce and Marketo); others such as Adobe have chosen to partner with and incorporate top point-solution providers such as Kochava and Fiksu.

Output from mobile marketing analytics for mobile web and mobile apps provides quantitative information for optimizing a mobile site’s performance, improves an app’s functionality, and tunes up mobile advertising. However, the mobile world is still fragmented. There are several reasons why the "app economy" and mobile websites provide unique challenges in contrast to those of traditional web analytics:

- It is difficult to independently measure the use of apps downloaded from multiple app stores.
- Mobile OS designs and the privacy and security requirements of OS vendors vary from platform to platform.
- User behavior and resulting analytic requirements often include complex new categories of data, such as location, context and environmental interaction (such as via beacon technology).

With the popularity of apps, the reach of the mobile web, and the lack of a centralized reporting entity to independently measure site or app functionality, any attempt to refine an app or mobile site previously required multiple vendors or a complex homegrown process.

Insights from app and mobile web analytics can lead to increased sales of apps or mobile web or in-app transactions, as well as help a brand conduct better campaign management via the app. Early-to-market mobile marketing analytic providers have largely abandoned the "freemium" model and instead pursued platform expansion by emphasizing broader capabilities and linkage to other marketing channels such as email.

**User Advice:** Determine the business requirements for mobile marketing analytics. The needs of an enterprise marketer with high-data volume requirements vary greatly from those of a mobile commerce app manager wanting to benchmark their app against competitors. As a result, solutions range from highly targeted (for example, location-based analytics for ad targeting) to features in megavendors’ overall analytic suites. Marketers need to expect rapid change and prioritize the need for flexibility and exploration in strategy and technology.

**Business Impact:** Because of the variability of user IDs and the cookie rules of the competing OS vendors, site and app analytics will be important tools for brand marketers, advertisers and publishers looking to take advantage of the popularity of mobile apps and the mobile web. Marketers will need specific expertise in mobile marketing analytics in order to optimize
development costs, particularly in the area of native-app development and support, as well as in integration with other marketing platforms.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Adobe; Appsee; Google; Localytics; Mixpanel; Yahoo (Flurry)

**Recommended Reading:** "Market Guide for Mobile Marketing Analytics"

"Three Steps Toward a Connected Mobile Marketing Strategy: Step Two, Mobile Marketing Analytics"

**Predictive Analytics**

**Analysis By:** Adam Sarner

**Definition:** Predictive analytics is about extracting an analytical model from data that anticipates future behavior or estimates unknown outcomes. It is most typically performed via a variant of machine learning.

**Position and Adoption Speed Justification:** Predictive analytics is surrounded by a continued sense of excitement, driven by even more data sources and a surge of interest in nonclassical use cases, such as demand prediction. A surge in vendors and success stories specific to marketing has added an intensity to the hype, particularly for B2B marketers. They are now leveraging programmatic advertising as an additional high-volume data source for creating more accurate models for activities like lead scoring and postsale cross-sell/upsell renewal opportunities. Gartner’s 2015 Data-Driven Marketing Survey shows that B2B respondents outspend B2C on marketing analytics — 45% versus 26%.

**User Advice:** Predictive analytics can be quite easy to use if delivered via packaged applications. However, they do not exist for every analytics use case, and they often do not provide enough agility or competitive differentiation. In these situations, organizations are advised to build solutions either through an external service provider (see "Market Guide for Advanced Analytics Service Providers") or with highly skilled in-house staff using an advanced analytics platform (see "Magic Quadrant for Digital Marketing Analytics"). Many organizations increasingly use a combination of these tactics (build, buy, outsource), and vendors develop hybrid offerings. In addition, marketers find themselves behind the curve due to their traditional focus on a relatively narrow set of outcomes, such as sales or capturing leads, and an analytical approach that favors measurement over modeling.

**Business Impact:** By understanding likely future outcomes, organizations are able to make better decisions as well as better anticipate outcomes, by being proactive rather than reactive (for example, predictive maintenance of equipment, demand prediction, fraud detection and dynamic
pricing). Interest is increasing in these new applications of predictive analytics as well as traditional areas in churn management, cross-selling, propensity to purchase, multichannel campaign management and customer lifetime prediction.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** AgilOne; Angoss; FICO; IBM (SPSS); Infer; Pitney Bowes; SAS Institute

**Recommended Reading:**
- "Predictive Lead Scoring Yields Significant ROI for B2B Marketers"
- "Magic Quadrant for Multichannel Campaign Management"
- "Four Ways B2B Marketers Can Generate Demand Within Existing Accounts"

**Shoppable Media**

**Analysis By:** Kirsten Newbold-Knipp

**Definition:** Shoppable media refers to video, images and other rich media formats that trigger commerce transactions when a user selects an object representing showcased merchandise (such as a hot spot or button on an image or video of a dress or gadget). Desktop, mobile and TV-based versions are available. This profile includes owned and earned media (such as an online, shoppable look book) as well as paid media channels.

**Position and Adoption Speed Justification:** Consumers expect to shop and buy when and how they want. Shoppable media is a merchandising technique that empowers brands to present their offerings at the moment of desire, winning new customers in their preferred context. Some brands have used the concept of native advertising to overcome banner blindness and ad blocking. Shoppable media takes this to the next level. Interest in shoppable media has been rising slowly but steadily since late 2014. Early deployments from major retailers such as Target, Macy’s and H&M and consumer brands such as Dyson, Gucci and Puma have been met with fresh adaptations from new entrants such as Asos (#AsSeenOnMe), Gilt on Apple TV and mobile app Project September. Media outlets continue to add capability to make media shoppable, from examples such as Buyable Pins on Pinterest to the newly launched Shopping Ad format on YouTube. Although this concept is more than 10 years old, a variety of obstacles have kept it from maturing quickly or consistently.

- **Shoppable imagery, video and interactive web pages** have emerged at a rapid pace, with social media and content marketing serving as catalysts for expansion. Brands are increasingly enriching social, editorial and user-generated content with shoppable hot spots or buy-now buttons that directly convert to a product page or shopping cart. With the barriers to implementation rapidly declining, commerce-oriented marketing organizations will embrace the potential of still-image or web-page-based shoppable media in the coming one to two years.
The shoppable TV use case has seen continued interest, but suffers from complexity in both consumer usability and value chain. Embedding purchase data into streaming media could mean engaging as early as TV show production. Also, today’s remote control devices provide a poor interface for granular exploration and data entry, though the smartphone and prevalence of second-screen behavior may be a usability savior. Overcoming these two obstacles will take several more experiments and unique partnerships between brands and publishers, thus it may take three to five years before more meaningful adoption is observed.

**User Advice:** Retailers and brand marketers need a shoppable media strategy, especially in fashion, electronics and lifestyle categories. Digital commerce marketers should evaluate shoppable ads, social posts and enriched content marketing efforts to extend storefronts across web and mobile app platforms.

Whether through partnership, agency or internal innovation, testing should be a high priority. Because these mediums blend creative, advertising and operational sensibilities, execution requires an interdisciplinary approach. Cautious experimentation with shoppable TV and video should be on the roadmap, with an eye toward mitigating user and value chain complexity.

**Business Impact:** The increased incidence of ad skipping, blocking and even fraud has made advertising in a paid context more challenging. Marketers can overcome some of these challenges across all outlets (paid, owned and earned) using shoppable media. Engaging, content-driven shopping experiences presented in a convenient digital context can:

- Attract new customers through creative, shareworthy discovery vehicles.
- Encourage upsell and cross-sell of outfits, sets or use cases for increased average order value.
- Enable high-margin, data-rich direct brand-to-consumer sales relationships.
- Overcome ad skipping and blocking behavior in many contexts.
- Counteract the commoditizing effects of online price competition and side-by-side comparisons.
- Provide near-real-time insights on the most compelling creative and messaging to be used in other nonshoppable contexts.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Adobe; Advtas; Amplience; Curalate; Delivery Agent; Fluid; Klixl8; Olapic; Stackla

Digital Marketing Hubs

**Analysis By:** Christi Eubanks; Jake Sorofman
**Definition:** A digital marketing hub provides marketers and applications with standardized access to audience profile data, content, workflow elements, messaging and common analytic functions for orchestrating and optimizing multichannel campaigns, conversations, experiences and data collection across online and offline channels, both manually and programmatically. It typically includes a bundle of native marketing applications and capabilities, but it is extensible through published services with which certified partners can integrate.

**Position and Adoption Speed Justification:** Several large software vendors, such as Adobe, Salesforce, IBM and Oracle, have consolidated their digital marketing offerings under the umbrella term “digital marketing cloud.” The term “cloud” in this context connotes a compilation of application components that have been acquired over time from disparate startups, often lacking integration. Gartner uses the term "hub" to distinguish solutions that have achieved the integration and harmony to share uniform access to common resources and behave consistently as applications within an operating system. Such integration is the active goal of many marketing cloud providers, as well as pure-play challengers pursuing visions of a unified marketing hub from the start. Today, the majority of digital marketers are constructing homegrown hubs composed of one or two components from leading cloud vendors and best-of-breed point solutions, with mixed results.

The products designed around a hub architecture are in high demand by marketing organizations that seek to reduce complexity and accelerate time to value by choosing converged out-of-the-box capabilities over heterogeneous platforms and tools. However, this impulse is often checked by a strong desire for the ability to embrace the latest digital marketing trends in a rapidly evolving landscape of innovation. This combination is driving strong requirements for broad extensibility through open application programming interfaces.

The digital marketing hub has reached the Peak of Inflated Expectations. Although digital marketing hub adoption is accelerating, enterprise software vendors seek high returns on years of investment in acquisition and integration, and are aggressively overpromising as a result. Disillusion is likely to follow as marketers discover hidden costs and limitations of these solutions. Openness is a frequently cited tenet of the digital marketing hub, but multivendor architectures can be costly and challenging to implement, and the requisite skills remain in short supply. Google and Facebook threaten disruption, especially at the lower end of the market.

Ultimately, however, the digital marketing hub will raise the baseline on marketing efficiency to the point where few brands will remain competitive without it. By this point, the market will consolidate around a small number of hub vendors at the core of an ecosystem of supporting specialized operational and analytic add-ons.

**User Advice:** Work with experienced marketing technologists to design and model a data and application architecture that maps to your digital marketing goals and objectives, as well as supports your technical and functional requirements. Even if you choose a multivendor solution, assign a general contractor role to a specific vendor to coordinate hub integrations and support. Investigate how the converged capabilities of a digital marketing hub might reduce the complexity of your environment and accelerate time to value. Pay particular attention to the openness and extensibility of architecture components to ensure that the hub can adapt to your evolving marketing needs. Start with customer data and analytics to prove and guide a graduated adoption of more advanced orchestration capabilities.
**Business Impact:** Digital marketing hubs will categorically improve marketing efficiency by giving marketers the ability to engage individuals, businesses and narrowly defined customer segments with tailored messages, optimized for context. Although initial costs seem high, the ultimate payoff for brands able to effectively leverage the digital marketing hub will be lower acquisition costs, and higher loyalty and satisfaction ratings. Improved marketing efficiency and automation will free up cash for investment in product improvements, market expansion and more competitive pricing, raising customer expectations and the baseline for competition among enterprises.

Digital marketing hubs will have an impact on the business on par with ERP, substantially contributing to a transformation in the practice of marketing and creating an adoption imperative in almost every large enterprise globally.

**Benefit Rating:** Transformational

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Adobe; IBM; Marketo; Oracle; Salesforce

**Recommended Reading:** "Magic Quadrant for Digital Marketing Hubs"

"Critical Capabilities for Digital Marketing Hubs"

"What's a Digital Marketing Platform? What Isn't?"

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**Predictive B2B Marketing Analytics**

**Analysis By:** Todd Berkowitz

**Definition:** SaaS-based applications used by B2B marketers and sales development reps featuring data science/machine-learning models leveraging both internal (from CRM lead management and sales force automation [SFA] systems) and external data (from social media, public and proprietary databases) identify segments, accounts and leads with a higher propensity to buy. The scoring models are based on suitability and intent.

**Position and Adoption Speed Justification:** B2B marketers have become more sophisticated in how to generate demand, convert, nurture and qualify leads. They are looking for a more intelligent and reliable way to identify buyers that are a good fit and in the market (showing intent). Predictive lead scoring was included in last year’s Hype Cycle as it was the most common use case, but predictive segmentation and demand generation have quickly gained traction, fueled by the rise of account-based marketing (ABM).

The market remains immature, adoption has been limited to a few countries, vendors struggle to differentiate and Gartner expects consolidation to occur. High technology companies are the early adopters, but other B2B companies have started to adopt. Awareness, press attention and hype is high (especially around ABM), driving the market position to the Peak of Inflated Expectations.
Despite the obstacles and the hype, the benefit rating is high and the return on investment is often so compelling that many B2B companies are likely to consider adoption over the next two or three years.

**User Advice:**

- Consult with marketing and sales stakeholders to understand the accuracy of current demand generation processes to generate leads and scoring models when predicting likelihood of conversion of leads to opportunities and, ultimately, closing deals.

- Since predictive models work best with larger datasets, ensure that you have enough historic data (at least 500 transactions over two years [wins, losses and converted opportunities]) before evaluating applications.

- Many vendors use similar data science and machine-learning techniques, so don’t simply make purchasing decisions based solely on perceived model accuracy. Consider data sources, domain expertise, security, the ability of the machine learning to intelligently select/reject models, customer references, integrations and model flexibility as well.

- Conduct proof of concept (POC) comparisons before purchasing a solution, both to evaluate performance, but also to accelerate buy-in from marketing and sales stakeholders.

**Business Impact:** Predictive B2B marketing applications help organizations be smarter about where to focus their sales and marketing investments and resources, as well as improve engagement with prospects. Many organizations will not abandon traditional demand generation programs and lead scores, but will use the predictive models to augment current efforts. When sales development and field reps "buy-in" to the recommendations and scores, then adjust behavior accordingly. B2B companies often see very compelling (and rapid) return on investment through increased win rates, larger average deal sizes and higher incremental revenue.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Emerging

**Sample Vendors:** 6sense; Datanyze; EverString; Infer; InsideSales.com; Lattice Engines; Leadspace; Mintigo; Radius; SalesPredict

**Recommended Reading:** "Market Guide for SaaS-Based Predictive Analytics Applications for B2B Sales and Marketing"

"Predictive Analytics Are Transforming B2B Selling"

"Tech Go-to-Market: Predictive Lead Scoring Can Yield Significant ROI for Technology Provider Marketers, Even for Lower Lead Volumes"

"Cool Vendors in Tech Go-to-Market, 2016"

"Cool Vendors in Data-Driven Marketing, 2016"
Voice of the Customer

**Analysis By:** Jim Davies

**Definition:** Voice of the customer (VoC) solutions combine multiple, traditionally siloed technologies associated with the capture, storage and analysis of direct, indirect and inferred customer feedback. Technologies such as social media monitoring, enterprise feedback management, speech analytics, text mining and web analytics are integrated to provide a holistic view of the customer’s voice. The resultant customer insights are acted on by disseminating relevant information to the right employee at the right time on the right channel.

**Position and Adoption Speed Justification:** Most organizations have multiple and often quite mature customer feedback mechanisms, but these are usually departmentally oriented and siloed in nature, and are often not used for strategic purposes. The most common of these is surveying, but departments are also becoming transfixed on capturing and understanding additional customer feedback associated with their specific domains. They are doing so through the use of speech analytics in the contact center, web analytics on the corporate website, and social media monitoring by marketing to capture customer comments. However, these pockets of feedback for the large part remain isolated — few organizations have aligned these various sources to create an integrated VoC hub. Most organizations aspire to tie these diverse feedback channels together to create a single view, but are currently a few years away from achieving this. Instead, for the majority, the current drive is to improve surveying through investment in a new platform, which can then form the basis of a VoC hub in years to come.

Some momentum has been seen within leading customer-centric organizations, particularly those in consumer-centric industries such as financial services, telecommunications and utilities, but VoC is far from mainstream. The vendor landscape is still emerging, and there are over 20 vendors that have expertise spanning the diversity of feedback collection techniques that a holistic VoC solution encompasses. However, multivendor VoC solution ecosystems — where data is imported into a central solution from one or more third-party solutions — will be the unavoidable organizational deployment strategy for the next few years.

**User Advice:** Find an owner with cross-department responsibilities. Conduct an internal audit to assess current capabilities and reduce duplicate departmental customer feedback technologies (such as surveying or social media monitoring). Prioritize future initiatives to collect VoC data based on the richness of the content. Strive to obtain a single, holistic view of the VoC. Determine the most appropriate data architecture and analytical models/techniques to extract key customer insights at both individual and aggregate levels. Distribute relevant insights/actions across the organization (front line and management) in a timely manner using workflow and operational integration. Determine what distilled set of feedback metadata (for example, a customer sentiment score) will be fed into the corporate master data management environment. Leverage VoC in core business processes, ideally in real time — for example, using a low survey score to open a case within the CRM system.

**Business Impact:** The business impacts of VoC are many and varied. Sources of VoC data are plentiful, ranging from survey results to social media dialog. Such sources provide valuable venues for analysis, but analytics in isolation inherently limits the opportunity to fully understand customers.
By integrating data from multiple VoC sources, organizations can uncover subtler insights, drive accuracy and ultimately instill more confidence in the actions taken at individual customer (such as an outbound call) and overarching strategic (such as a process change) levels. This holistic approach also ensures that the right insight gets to the right employee at the right time — for example, a new lead resulting from a tweet being sent to a sales rep; negative campaign feedback from analyzing a recording of a contact center dialog being sent to a marketing manager; or a survey comment to "talk slower" being sent to an agent. VoC can be used to help manage brand perceptions, understand the customer experience and help develop future customer engagement strategies.

**Benefit Rating:** High

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Clarabridge; Conﬁrmit; MaritzCX; Medallia; Nexidia; Nice Systems; Qualtrics; Questback; SandSIV (CustVox); Verint

**Data-Driven Marketing**

**Analysis By:** Martin Kihn

**Definition:** Data-driven marketing is the practice of acquiring, analyzing and applying information about customer and consumer wants, needs, contexts, behaviors and motivations to marketing efforts, and then evaluating those efforts using data in a continuous cycle of optimization. Data-driven marketing tools typically support the commingling and analysis of first-party (internal) data with anonymous third-party data, to enable complex insights and communication strategies and inform strategic business decisions.

**Position and Adoption Speed Justification:** Data-driven marketing requires an artful balance of science and humanity, and it embodies the growing importance of precision and accountability in marketing. Gartner’s 2015 data-driven marketing survey revealed that 69% of respondents intend to base "most" of their marketing decisions on quantitative methods rather than gut feel within the next few years. This aspiration is driven by a real increase in the amount of data available to marketers and an intuition that this data contains insights just waiting for the right tools and talent to unlock them. Consequently, two-thirds of marketers say they are building an analytics center of excellence, and both marketing analysts and data providers find themselves to be hot commodities throughout 2016.

The amount of data available to marketers continues to outstrip efforts to mine it. Rapid consumer migration to mobile platforms complicates customer journey analytics, as the average person lumbers back and forth among more than five different interfaces to the internet — including browsers, smartphones and over-the-top TV boxes — all of which have different contexts and uses. Already the nascent wearable technology sector and the Internet of Things (IoT) generate signals of great interest to some marketers. The continued expansion of programmatic advertising and real-time bidding provide increasingly complex profiles of personas and audiences, and offer
opportunities for sophisticated, creative communication. If anything, data’s future role within the marketing suite is underestimated rather than overhyped.

At any rate, the hype around data-driven marketing is justified. In the long run, it will make marketing better, faster and more cost-effective while aligning marketers with fast-moving markets and objectives. Over time, a successful data-driven marketing strategy will extend its value beyond targeting and promotion to inform pricing and product development, as well as other imperatives. Although data-driven marketing is not a panacea for all challenges facing chief marketing officers (CMOs) and digital marketers, there is little evidence that a methodical approach to activities such as segmentation, forecasting, audience identification, personalization and measurement hinders good marketing.

Yet, in many organizations, the promise of data-driven marketing has bumped up against a real world in which data remains siloed, hard to access, and of questionable quality and currency. The operational challenges of data collection, cleansing and consolidation are new territory to many marketers who are trying to develop internal skills and tools, and manage external partners. Analytical tools and techniques can be complex and expensive, and lead to ambiguous results or analysis paralysis. So there remain many speed bumps — economic, technical and organizational — on the road to data-driven marketing success.

**User Advice:**

- Review marketing investment and development initiatives through the lens of business objectives and their related metrics, including the data needs and opportunities they represent.
- Establish agile, cross-functional teams with capabilities to rapidly analyze business and technical data requirements, and execute tactical integration projects and product evaluations.
- Review marketing and advertising data vendors to ensure they are providing accurate, unduplicated information; explore new data sources, particularly vertical players.
- Pay attention to the full range of channel and service providers who make use of customer data, inventorying their goals, as well as safeguards for security and privacy.
- Support the institutionalization of data-driven methodologies in your marketing organization by keeping score, based on appropriate key performance indicators.

**Business Impact:** As a key driver of growth, marketing has the capacity to be one of the most effective enterprise applications of big data across several industries. Within the marketing discipline, data is combining often disconnected marketing operations in advertising, web development, analytics, design, social and mobile divisions around a shared pool of information about customers and the marketplace. It is streamlining inefficient marketing processes and giving rise to a new wave of technology and service providers, while also forging career paths and business models. It is elevating the role of marketing in the C-suite. Some argue that it is also contributing to the systematic erosion of privacy and creating a new class of data superpowers with unprecedented knowledge of human behavior.

**Benefit Rating:** Transformational
**Market Penetration:** 20% to 50% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Acxiom; Adobe; Experian; IBM; Neustar; Oracle; SAS

**Recommended Reading:** "Market Guide for Marketing Data Providers"
"Data-Driven Marketing Techniques Fuel Investments in Talent and Centers of Excellence"
"How Leaders Manage Data-Driven Marketing"

**Mobile Commerce**

**Analysis By:** Penny Gillespie

**Definition:** Mobile commerce is the interaction among businesses, people and things via a mobile device that results in a transaction of value for the customer. Value may be such things as finding products quickly via search, ordering seamlessly, receiving promotional pricing, redeeming loyalty rewards or coupons, or easily making a payment. The convergence of social, mobile and web channels has led to the use of the term "digital commerce" to describe the larger framework.

**Position and Adoption Speed Justification:** Gartner’s preliminary estimates suggest that worldwide mobile phone sales to end users reached approximately 471 million units in 1Q16, growing from 461 million in 1Q15. Smartphones accounted for 74.3% of the global mobile phone unit sales in 2015, up from 66.3% in 2014 and growing 14.4% year over year. Some of the large markets (such as India, Indonesia, rest of Sub-Saharan Africa, rest of the Middle East and North Africa, rest of emerging Asia/Pacific, and Mexico) sold more than 30 million smartphone units and grew more than 17%, thus driving up the worldwide smartphone sales (see "Market Share Analysis: PCs, Ultramobiles and Mobile Phones, Worldwide, 2015"). Many of these markets are leapfrogging investment in desktops and going straight to mobile.

Also, in 2015, Google announced that more Google searches took place on mobile devices than on computers in 10 countries — including the U.S. and Japan (no other countries were disclosed). Customers want both the convenience and efficiency of mobile. Most customers have their mobile devices with them 24/7, which often makes the device more convenient than having to locate a tablet/notebook or walk to a desktop computer. While customers initially used their smartphones for product discovery and research (for example, identifying, finding and evaluating products), they are expanding their usage. Indeed, mobile commerce now makes up 22% of digital commerce revenue (see "What the Growth in Mobile Commerce Means to Marketers"). More and more customers are starting to use their mobile phones to engage with both products and sellers. Using various types of technologies (such as quick response, bar codes, Near Field Communication and Bluetooth low energy beacons), consumers are using their phones to locate products in stores, get additional product information, receive localized offers and scan a print or video media to order a product.

While mobile usage continues to grow and is recognized by retailers to contribute to an average of 50% of in-store revenue, mobile purchases continue to lag. A massive increase in mobile traffic, with more than 50% year-over-year growth from 1Q14 to 1Q15, has failed to bring a commensurate
increase in sales from mobile channels. Although mobile accounted for 60% of total time spent shopping online in the U.S., 87% of online retail purchases were made on desktops, according to audience measurement firm comScore.

Research conducted by Google and Millward Brown Digital found that business buyers are also starting to embrace mobile commerce. Not only are they searching more (42% are using a mobile device during their B2B purchasing process), they are also viewing videos about product features and increasing their mobile spend. B2B purchase rates rose 22% between 2012 and 2014.

**User Advice:** Reuse mobile web components as much as possible with one exception — critical functionality. Critical functionality, like check out, should use native experiences because native is likely to be faster and more responsive than using a web check-out component — should the network connectivity be bad, a web check-out component results in a frustrating experience for customers.

If there are budget constraints, consider offering coupons and starting loyalty programs, which are also likely to drive consumer loyalty and interest in mobile payments. As consumers become more comfortable with using their mobile device for reward and coupon redemptions, payment will likely be the next step due to the close proximity of redemption and payment in the check-out process.

Add mobile functionality to engage customers — be it to entice them into stores, make their in-store shopping experience easier or make shopping on their mobile device easier. Explore the use of smartphone features, such as camera and GPS, and consider integrating with other key technologies such as QR codes or Bluetooth low energy. Evaluate augmented or virtual reality to demonstrate how problems look in the context of the shopper’s environment.

**Business Impact:** The largest opportunity for mobile today — and perhaps the most welcomed by consumers — lies with sellers using it to improve their customers' experience, whether online or within their brick-and-mortar walls. Strong use cases exist in many areas, including retail, quick-service restaurants (QSRs), traditional restaurants, travel and hospitality and entertainment. Companies would also be well-served to incorporate self-help concepts such as product locators, or easy payment into their mobile commerce applications within brick-and-mortar faculties, or further engage shoppers with promotions and rewards in brick-and-mortar stores.

Mobile has the potential to disrupt traditional industries by streamlining them and removing the "middle man," which, in turn, makes them more transparent and efficient. We are already seeing this with transportation (for example, Uber) and QSRs (for example, Starbucks).

The mobile phone has the capacity to become a vehicle for monetization, becoming the window into the Internet of Things, depending on where the core technology resides — in the mobile or in the "thing" itself. For example, the smartphone could become the medium for pay-as-you-go purchases, such as for insurance or other just-in-time payments, triggered by such things as drivers getting into their cars or taking the last glass of orange juice from the refrigerator.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience
**Maturity:** Early mainstream

**Sample Vendors:** Apple; Google; PayPal; Square

**Recommended Reading:** *"Market Share Analysis: PCs, Ultramobiles and Mobile Phones, Worldwide, 2015"*

"Recalibrate Your Retail Marketing Strategies as Digital Channels Increasingly Drive In-Store Revenue"

"Use Mobile Apps to Stimulate Digital Business"

"What the Growth in Mobile Commerce Means to Marketers"

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**Bluetooth Beacons**

**Analysis By:** Charles S. Golvin

**Definition:** Bluetooth beacons are Bluetooth Smart (aka Bluetooth Low Energy [BLE]) devices that serve as proximity beacons to BLE-capable mobile devices, such as smartphones. With BLE’s Proximity profile, beacons can resolve device location with greater precision than previous technologies, especially in an indoor environment. iBeacon is Apple’s proprietary implementation of the BLE Proximity profile.

**Position and Adoption Speed Justification:** Since Apple introduced iBeacon in 2013, it has generated a lot of buzz among app developers and businesses, especially those in the retail sector. Android 4.4 KitKat’s support for Bluetooth 4.x in the second half of 2013 added a critical mass of devices that can support the Bluetooth beacon technology, and spurred more application and service providers to enter the market, given the potential for solutions to reach a majority of smartphone owners. Three years into commercial availability, deployments range from professional sports venues (Major League Baseball, the National Basketball Association and the National Football League) to retail (American Eagle and Walgreens). We have moved the benefit rating for this technology profile down to "moderate" because we expect to see other technologies, such as Wi-Fi and geofencing, provide a superior alternative in some beacon use cases.

Although there is significant momentum behind the technology, as evinced by retailers, airports and other venues advancing pilots into deployments, beacons also face challenges. Primary among these is the complexity of the deployment, management and evolution of beacon networks. For marketers, the challenges range from the mundane to the existential. Instances of the former tie to the consumer: Is Bluetooth turned on? Is the requisite app installed and configured to receive beacon-triggered messages? For the latter, marketing leaders must understand each customer’s sensitivity regarding direct outreach from a brand on a personal device: What is the boundary between useful and invasive? The concern is less about privacy and security (although important) and more about whether a marketer’s desire to engage is another chance for annoyance on the consumer’s part. Google’s Eddystone-URL standard (aka "the Physical web" to indicate the ability to employ a mobile web browser to interact with physical objects) attempts to address this by using a "pull" versus "push" model, shifting the decision to interact more toward the customer.
Key to any beacon system is the technology to provide initial physical mapping of the locations of the beacon objects. Creating and maintaining the physical map requires careful planning and implementation, as beacons may move, appear and disappear in an unpredictable manner. In addition, Bluetooth beacons also face competition from other location-sensitive approaches, including Wi-Fi, geofencing and Near Field Communication. Moreover, for marketers, just deploying beacons and dreaming up new engagement models is only part of the challenge — somebody will be responsible for maintaining the beacons.

**User Advice:**

- Marketers working in businesses that can benefit from the Bluetooth beacon’s microlocation and context-aware capabilities should engage with technology providers to understand the cost and complexity of deploying and maintaining an array of beacons.
- Beacon infrastructure providers should offer a comprehensive beacon management platform that enables users to quickly deploy and easily manage the beacons; providers should support hybrid solutions to give maximum flexibility in designing the customer experience.
- Marketers considering beacon deployments should ensure their campaigns adhere to their company and regional privacy regulations surrounding proximity applications. Plan for a review from legal and company risk experts for any proposed application.

**Business Impact:** The Bluetooth beacon technology, with its proximity detection, contextual awareness and low-power capabilities, has the potential to impact businesses and enterprises in the areas of information delivery, customer analytics, promotion management, mobile marketing engagements and site monitoring. Given the technology’s broad reach and potential benefits, marketers and their IT peers need to monitor its progress and evaluate its business potential.

**Benefit Rating:** Moderate

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** BKON; Estimote; Gimbal; kontakt.io; Radius Networks; Shelfbucks; Swirl

**Recommended Reading:** "Cool Vendors in Mobile Marketing, 2016"

"Predicts 2015: Digital Marketers Will Monetize Disruptive Forces"

**Multitouch Attribution**

**Analysis By:** Martin Kihn

**Definition:** Multitouch attribution (MTA) refers to software and services that help marketers evaluate how much credit to assign to each element of a multitouch marketing campaign. Models may use business rules, algorithms and experimental controls to isolate events on the conversion path and determine their contribution to a desired outcome, such as a sale.
Position and Adoption Speed Justification: Attribution has been an issue in marketing for decades, but only recently has it become feasible to make scalable inferences based on direct observations at the customer level. The attractiveness of this idea masks several limitations, especially when it comes to resolving the behavior of individuals across different devices and contexts — including nondigital ones. Although this capability is evolving, it’s also colliding with privacy concerns and fragmented consumer behavior patterns.

Providers are taking a variety of routes around these limitations. At the high end, they’re combining experimental design and top-down marketing mix modeling techniques to create complex proprietary approaches. More commonly, they’re incorporating business rules, such as manual weighting of touchpoints by their order in the journey, in lieu of deterministic analysis. Overall, multitouch attribution lacks standards or even consensus on the validity of diverse approaches, which can draw from game theory, linear algebra, probability and other domains. Still, it has come far from its “last-click” origins.

Over the past year, digital marketing analytics providers such as Adobe and Google have taken preliminary steps toward incorporating user-level attribution within a broader suite of analytics and other tools integrated into an enterprise digital marketing hub. Neustar’s acquisition of MarketShare, which combines marketing mix modeling and attribution with professional services, is another signal of the key position such solutions play in marketing decisions. In addition to cross-device identity resolution, the combination of top-down (marketing mix) and bottom-up (attribution) approaches showcases the convergence occurring across marketing and advertising technology domains. The reason for such convergence is clear: Marketers want a more integrated, accurate view of the customer journey, and they’re (almost) in a position to get it.

MTA’s position near the foundation of data-driven marketing is secure, and no marketing analytics solution can get far without addressing it. Given the magnitude of investment in digital marketing solutions and attribution’s role as scorekeeper, expect extraordinary resources to focus on surmounting its challenges. Given the complexities of human behavior, expect its ultimate manifestation to leave room for design and implementation flaws and misinterpretation. We estimate that it will take three to five years for the market to settle on good-enough solutions and incorporate them as standard features in any marketing analytics package or engagement.

User Advice: Adoption or improvement of multitouch attribution techniques should be a top priority for any digital marketing organization. Don’t make determining marketing accountability the sole objective; establish goals for attribution-based gains in efficiency and effectiveness. Consider indirect benefits, such as insights into customer communication preferences, and greater capacity to evaluate new marketing programs. Beware of short time horizons when evaluating marketing, and consider factors beyond conversion rates, such as customer lifetime value.

Digital marketing organizations that take on attribution projects must recognize the technical challenges, limitations and trade-offs involved. Question any provider or consultant who suggests attribution can be inexpensive, simple and accurate. In particular, carefully evaluate the sources and accuracy of data used to build the models, the actual modeling approach itself, and the timeliness and level of detail afforded in the recommendations. If sufficient expertise is not available within your organization, find a trustworthy independent expert to assist in scoping and overseeing the
project (preferably separate from any vendor or service provider that might have a stake in the outcome).

Business Impact: Multitouch attribution will enhance the role that data plays in marketing — and that marketing consequently plays in differentiating organizations. As tools and in-house expertise become more widely available, sophisticated attribution approaches will be adopted by marketers beyond the core group of large advertisers and early adopters. Although it can’t lead marketers to good ideas, it will give those that already have them more power to effectively amplify and deliver them to the right audiences and gain organizational buy-in to run with them. It will guide organizations to be more analytics-driven in general, impacting marketing’s bottom line. As marketing evolves beyond its current channels into broader spheres such as connected television and the Internet of Things, the role of systematic attribution becomes even more urgent.

Benefit Rating: High

Market Penetration: 1% to 5% of target audience

Maturity: Emerging

Sample Vendors: Adobe; AOL (Convertro); C3 Metrics; Google; IBM; Neustar; Visual IQ

Recommended Reading: "Magic Quadrant for Digital Marketing Analytics"
"Advanced Analytics for Marketing: Five Representative Use Cases"

Tag Management

Analysis By: Martin Kihn

Definition: Tag management systems simplify the deployment and maintenance of JavaScript and other tags that are used to exchange data between online and mobile content, and between external applications, such as analytics, advertising and personalization. One tag replaces all others, which then controls publishing of the appropriate tags and related data flows. This decouples tag operations from marketing requirements, usually increasing deployment and website speed. It can also improve data management.

Position and Adoption Speed Justification: Tag management solutions appeared almost a decade ago and saw a rapid rise of market acceptance over the past four years. Increased usage is due to support for more tag-based vendors; marketing’s aversion to IT-driven release cycles; free and bundled solutions from Adobe Systems, Google and IBM; and an increased awareness of the benefits. Gartner estimates that more than two-thirds of larger e-commerce companies — and a growing number of players in other industries — use a tag management system. Tag management systems from Google, Tealium, Ensighten and Signal (formerly BrightTag) ranked in the top tag deployments, as reported by the tracking firm Ghostery.

Due to competition from increasingly capable bundled solutions such as Google’s Tag Manager, the leading enterprise tag management vendors are moving up-market, adding premium features and
carving out slightly different strategic ground. Ensighten acquired an analytics company and launched a site performance monitoring product. Tealium stresses its role as a neutral "operating system," furnishing a continuously updated data layer that can power applications such as analytics and execution systems from a range of providers. Similarly, Signal touts its ability to process event data in real time and pass it along to other systems.

Despite their well-documented benefits, tag management systems continue to face some obstacles to broader adoption. One is the difficult problem of redirection, whereby authorized tags can redirect to unauthorized tags in ways that are hard to detect and harder to police. This leads to the potential for data leakage, increased website latency and other issues. A more potent obstacle is the onslaught of mobile devices, which do not usually employ traditional tags but rather rely on software development kits for data collection in ways that are not easily supported by tag management systems (most now offer some support).

Although tag management has compelling benefits for website and campaign management providers, including some mentioned above, envision expanding their scope to cover virtually all elements of online data collection across the enterprise. Marketers with elevated expectations are at risk of suffering disillusionment as they confront the scale and scope of challenges associated with marketing profile and master data management. For these reasons, the Hype Cycle positioning has been moved past the Peak of Inflated Expectations and closer to the Trough of Disillusionment.

**User Advice:** The value of using a tag management system is in having a central way to create, edit and publish tags, no matter where or how the content that contains the master tag is published. Marketers that use tag management systems often see an improvement in website and mobile app performance, and easier data collection and management. This enables the combination of data from different sources for further analysis using a common data model and metadata. Tag management should be considered when multiple tags are deployed, custom variables are added to tags, frequent changes to tag configurations are being made, or rules about when the tag should fire are required.

One market for tag management systems is the digital marketing practitioner, struggling to manage these tags for multiple web analytic products, surveys, content, and multivariate testing and recommendation engines. A second market is publishers and advertising buyers, who use tags to track users across websites and understand behaviors and responses to digital content and advertising. And a third market includes agencies and other service partners who have a role managing marketing’s owned properties and multichannel campaigns.

**Business Impact:** The impact on businesses is increased due to the more sophisticated use of tags for analysis, advertising and optimization of customer-facing content and applications. This leads to better business results from digital channels. Using the common data model makes it easier for developers to add metadata to content. Quality problems and bottlenecks in making changes to the tags and metadata that feed them can inhibit the use of optimization products. Excessive tag volume can slow page loading times. Where government regulations require better privacy protection for users, some tag management vendors offer a foundation to control what is captured. Tag management providers are expected to continue pushing to become broader data management systems. In time, stand-alone tag management systems will likely cease to exist. They will either be acquired and turned into a feature of marketing hubs, multichannel campaign management and
other platforms, or transformed into (or merged with) broader platforms to provide a data management layer for marketing.

**Benefit Rating:** Moderate

**Market Penetration:** 20% to 50% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Adobe Systems; Ensighten; Google; IBM; npm (Signal.IO); Qubit; Tealium

**Recommended Reading:** "How to Choose a Provider for Tag Management"

"Guide to the Data Ops Neighborhood on Gartner's Digital Marketing Transit Map"

**Wearables**

**Analysis By:** Adam Sarner

**Definition:** Wearables are objects (e.g., clothing, smartwatches, wristbands) designed to be put on the body and used to bridge information and connections between physical and digital environments. Computing and electronic sensors enable these objects to record biometric and ambient information, transmit data to the cloud, and connect to other "things."

**Position and Adoption Speed Justification:** Use cases and functionality vary significantly. In many instances, they are not fully articulated, which has cooled the hype around wearables from its peak. The most invested area of wearables currently belongs to the health and fitness market. Wearables such as Fitbit, Garmin and smartwatches record data about how the wearer is performing and share it in the cloud and/or with a connected mobile app. Gartner estimates the wearables market for fitness and personal health alone will reach $5 billion in devices, apps and services by the end of 2016. In this area, the value proposition and use cases for wearables are more clearly defined. In other areas, such as connections to home automation systems, use cases are less defined, in part due to fragmented home automation standards. Expanded use case is also hindered by current limitations of wearable speed, battery life and its reliance on a smartphone for operation.

However, the rise of the Internet of Things (IoT) and the accompanying flow of real-time data mean the big use case for wearables likely will be digital information for navigating the physical environment. Here, digital marketers will start incorporating wearables into multichannel marketing efforts to orchestrate brand interactions. Over the next two years, wearables will help customers with real-time decision support as they traverse a buying journey. Consider that IoT devices such as beacons — while still emerging in use cases themselves — will help more advanced, fully featured wearables (like the Apple Watch) locate in-store products, enable automated check-in identification for differentiated VIP treatments and promotions, and connect to mobile wallets and contactless payments.

**User Advice:** Marketers should define where their target audience will intersect the wearable buyer market and in what context wearables will be used. Wearables' reliance on smartphones for
connectivity and data transmission give marketers another reason to adapt their existing customer personas to reflect consumers' approaches to mobile interaction.

Marketers will need to assess how context data improves targeting accuracy or introduce it where none existed previously. If your audience is likely to leverage wearable technology, you have the opportunity to connect with them using contextual data that is closer to them than any previous device.

Marketers should explore how areas in augmented and virtual reality can enhance the shopping experience for the product. Some products can improve use cases based on wearable data surrounding what the user is feeling, or action he or she is taking. Other products can enhance the user's experience based on what the user is seeing or even hearing.

**Business Impact:** Marketers in healthcare, consumer packaged goods (CPG), retail, travel and hospitality, and financial banking institutions, are poised to incorporate wearables as the preferred, more convenient connector. They offer a way for brands to seamlessly shape differentiated customer experiences through real-time information exchange.

**Benefit Rating:** High

**Market Penetration:** 1% to 5% of target audience

**Maturity:** Emerging

**Sample Vendors:** Apple; Fitbit; Google; LG Electronics; Microsoft; Nike; The Walt Disney Co.

**Recommended Reading:**
"Five Steps for Event-Triggered Multichannel Marketing"
"Magic Quadrant for Multichannel Campaign Management"
"Top Strategic Predictions for 2016 and Beyond: The Future Is a Digital Thing"

**Mobile Wallet**

**Analysis By:** Sandy Shen

**Definition:** Mobile wallets store payment credentials to enable users to authenticate themselves and/or make transactions from a mobile device. The credentials can be payment-related, such as a bank card, bank account or prepaid card, or non-payment-related, such as a loyalty card or mileage card. There are also closed wallets that allow use at specific merchants and open wallets that allow use at many other merchants.

**Position and Adoption Speed Justification:** Mobile wallet adoption today is mostly driven by in-app purchase related to online shopping, where the user behavior is well-established. Wallet providers are developing new use cases to add value to wallets such as order online and pick up in store, car hailing, food delivery, home services, dining and refueling. These use cases focus on removing pain points or friction in the buying process, thus delivering convenience to consumers while increasing conversion rates and revenue for merchants. Technology is still important since it
helps deliver a good user experience, but is no longer a differentiation. NFC and QR codes are understood by an increasing number of consumers, and are included in more wallets. Consumers and merchants are looking beyond technology or payment functionality to see whether mobile wallets give them real benefits. It will take at least another two years before most mobile wallet providers can articulate the value to consumers and merchants.

User Advice: Mobile wallet product managers:

■ Focus on the customers’ journey as they explore, shop and pay using mobile wallet. Offer functions that assist customers to make a knowledgeable decision relating to the commerce experience and personal preference.

■ Don't be preoccupied with technology choices. Users don’t use the wallet because of new technology, but because of the value you deliver. Focus on value such as convenience, saving cost and time, new capabilities, loyalty and deals.

■ Support multiple payment methods especially those that are popular in the local market and let customers make the choice.

■ Work with vertical solution providers when requiring integration with specific businesses such as gas stations, public transportation, retail and hospitality.

Mobile marketers:

■ Select mobile wallet providers based on breadth of authentication and payment support and extensibility of the wallet to integrate functions that add value to the transaction process such as loyalty rewards and offer redemption.

■ Ensure that wallet providers’ data policies enhance, or at best do not diminish, your visibility into all supported transactions. Verify that these policies comply with your own data protection and retention requirements.

Business Impact: The majority of businesses don't have the ambition to introduce their own branded wallets, but want to tap into new technologies to improve operational efficiency and customer experience thus drive sales. There will be test and fail since not all wallets will be embraced by customers. But staying abreast with the latest developments help businesses find out quickly what works and what does not. A few leading businesses, retailers, banks and telcos, have launched or plan to launch their own wallets, leveraging existing assets such as membership card, prepaid card, gift card or store credit cards. Their best bet is to offer a frictionless customer experience first within the wallet and in their physical outlets, and drive adoption by keeping adding more value and continuously engaging customers.

Benefit Rating: High

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent
**Sample Vendors:** Airtag; Apple; Fiserv; FIS; Gemalto; Google; Mahindra Comviva; PayPal; Samsung; Square

**Recommended Reading:** "Market Trends: Mobile Payment — The Way Forward"
"Market Trends: Mobile Wallet Apps Are Not Yet Mainstream Adoption"

### Sliding Into the Trough

**Multichannel Marketing**

**Analysis By:** Adam Sarner

**Definition:** Multichannel marketing is the optimization of customer engagement according to the way customers wish to connect, shop and buy via digital and traditional channels. It is orchestrated to build continual interactions that create measurable, differentiated and compelling experiences.

**Position and Adoption Speed Justification:** Many companies have been practicing the art of running campaigns in multiple channels for decades. However, the more sophisticated strategies and technologies are still developing. These include gaining greater access to customer data and analytics to support the objectives of attracting, acquiring and retaining customers in both digital and traditional channels. Growth in these areas is continuing with providers offering tools, suites and marketing clouds that orchestrate everything from real-time data and analytics to conversion and attribution reporting for multichannel campaign management. Expect the focus on digital marketing to further-accelerate investments in more advanced multichannel marketing practices as brands attempt to attract, acquire and retain customers based on how those customers want to interact at multiple stages of their buying journey.

**User Advice:** Multichannel marketers need to get three actions right:

- **Understand the audience:** You need data about customers' behavior, interests, goals and needs to segment and target them, and know which combination of channels to use.
- **Time and target moments:** You need rules and intelligence to determine the right moment to connect with audiences and the exchange you will have.
- **Automate multichannel execution:** You need to establish a skilled multichannel marketing team to orchestrate and execute your plans. That includes incorporating marketing technology applications and architecture to automate evolving channels and process functions.

Investments in operational technologies, analytics and customer-facing applications should be viewed with an eye toward creating platforms that can be extended as these strategies become more sophisticated. Multichannel marketing initiatives require clear internal ownership, skills in multiple channel disciplines, such as marketing in social media, and expertise in mobile marketing and website/digital commerce execution. Marketing organizations must build and strengthen teams to support true connected engagements with their audiences.
**Business Impact:** Multichannel campaign management is used to orchestrate and improve the customer experience at moments of truth. This is done in a way that establishes and improves customer connections, increases conversion or loyalty rates, and increases revenue. In many companies, it is the marketing system of record that tracks, coordinates and governs conversations or interactions with customers and audiences. Multichannel campaign management is used to directly target existing customers, acquire new ones and retain them over time. A multichannel strategy is optimized to recognize buyer intent, increase customer intimacy, manage more interactions and accumulate data to convert potential buyers, maximize revenue, lower cost to serve and enhance brand value. Benefits also include help for companies that rely on partners, distributors and indirect sales to reach and influence customers.

**Benefit Rating:** High

**Market Penetration:** 20% to 50% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Adobe; IBM; Marketo; Oracle; RedPoint; Salesforce; SAP (hybris); SAS; Selligent

**Recommended Reading:** "Multichannel Marketing Primer for 2016"
"Magic Quadrant for Multichannel Campaign Management"
"Survey Analysis: How Leaders Manage Their Multichannel Marketing Activities"

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**Event-Triggered Marketing**

**Analysis By:** Adam Sarner

**Definition:** Event-triggered marketing is the process of identifying, prioritizing, categorizing, monitoring, optimizing and executing conversations with audiences and customers. It is the most effective strategy multichannel marketers can use to reach audiences at the right moment.

**Position and Adoption Speed Justification:** Event-triggered marketing gives marketers the opportunity to engage with their audience at the right moment within a specific context, increasing the probability of a positive interaction. In recent years, event-triggered marketing has been equipped with near-real-time data to help these moments become more predictive and actionable. Event-triggered marketing is often used to stave off potential customer defections (for example, when a loyal customer’s purchases start to fall, event-triggered marketing alerts the customer’s account executive or offers a win-back incentive).

Event-triggered marketing and its increasing access to both first-party and third-party data is also a relevant component of real-time marketing. Studies show retailers can recover at least 20% of shopping cart abandonment by responding within seconds (while the customer is still in a purchasing state of mind). Alternatively, if the customer does make a purchase, a trigger email can offer a reward or discount (in real time) for that buyer’s next purchase. Hence, event-triggered marketing programs can respond to changes in real-time behavior, not just to predetermined
events. Although event-triggered marketing has moved beyond the Peak of Inflated Expectations, the recent Gartner Multichannel Marketing Survey revealed that marketers would be doubling their investment in event-triggered techniques with a focus toward real-time personalization over the next two years, signaling an acceleration to the Plateau of Productivity.

**User Advice:** The key to event-triggered marketing’s effectiveness across any medium is aligning the interaction or offer in tune with the customer’s relevant events, such as steps in the buying journey. Consider predictive analytics and real-time recommendation engines as ways to detect and act upon future events using communication and offers. Consider beginning with one channel, monitor a database for the channel (e.g., email) and then add others. Determine which data sources (internal or external) to monitor based on accuracy, and refresh schedules that map to the events being triggered and the window of opportunity for the indicator.

Use these five steps to advance your event-triggered marketing strategy:

- **Step No. 1:** Define events and prioritize. Determine which events are meaningful for both the company and the customer.
- **Step No. 2:** Categorize into fixed and variable events. Some events are fixed, like a renewal, birthday and holiday season. Others are variable and harder to predict. Variable events include a change in address, a transfer of funds or a transaction. Start with fixed events. These are easier to monitor, and you can run tests to see if it’s a truly meaningful event for both parties.
- **Step No. 3:** Monitor events. Marketers need to put in place detection mechanisms to monitor events and see when a defined event is actually taking place — for instance, detection in the call center of an angry client signaling defection; or a beacon firing in-store, guiding a customer to a product.
- **Step No. 4:** Optimize events. The key is to identify the best interaction (like an offer) based on many events: right time, budget allocation, profitability analysis of segments and treatments, availability of channel, and resource allocation.
- **Step No. 5:** Execute events. A complex, multisystem, multichannel environment requires processes and automation. The key is to create and begin to scale multiple processes.

**Business Impact:** Event-triggered marketing enables more relevant offers to customers based on segmented, meaningful events, rather than nonsegmented mass campaigns that can cause customer contact “fatigue.” Event-triggered marketing has garnered five times the response rate of untimed mass-marketing campaigns and can have a significant impact on revenue. When significant events between company and customer are aligned, trigger-based interactions produce far higher response rates compared with generic mass-marketing efforts. Trigger-based marketing also provides tactics for delivering timely and relevant interaction above what customers expect, which also leads to increased customer advocacy and retention.

**Benefit Rating:** High
**Market Penetration:** 5% to 20% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Adobe; IBM; Marketo; Oracle; Pegasystems; Salesforce; SAS

**Recommended Reading:**
- "Five Steps for Event-Triggered Multichannel Marketing"
- "Multichannel Marketing Survey Results 2015: Marketers Double Down on Real-Time Strategies"
- "Magic Quadrant for Multichannel Campaign Management"

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**Responsive Design**

**Analysis By:** Noah Elkin

**Definition:** Responsive design is the application of technology and techniques to adapt user experiences to a variety of form factors required by web and mobile channels for optimal rendering, reading and interaction.

**Position and Adoption Speed Justification:** Using technical standards such as CSS3 and HTML5, responsive design is gaining popularity among developers, designers, toolmakers and web platform vendors. In part, this popularity is driven by multichannel marketing and the need to address mobile web and app requirements, as well as traditional websites, in a unified manner. Responsive design first appeared in 2010, although the broader concept of adaptive design dates back more than a dozen years. Many enterprises view responsive design as the answer to lowering development costs and the time to deploy digital experiences across multiple platforms.

To date, most implementations of responsive design are either hand-coded or use one of dozens of small open-source libraries or frameworks. Open-source content management systems, such as WordPress and Drupal with large ecosystems, have about one-third of their themes sold in responsive design capability. Major vendors such as Adobe, IBM, Microsoft, Oracle and SAP are modifying tools and platforms to more fully support responsive design. Many of the mobile application development platform vendors either conform to responsive design concepts or have released adaptive products to address the dynamic pace of mobile change. Depending on in-house tech capabilities (or budget to engage specialists), some marketers with available resources also may want to consider the following tools: Frameless, Gridless and retina.js.

Responsive design is sometimes criticized for its least common denominator approach to functionality, which can dilute the richness of digital experiences. It is also criticized for its reliance on client-side processing to optimize content, which can impede performance and usability, especially on lower-end devices and slower connections.

**User Advice:**
- Treat responsive design as the default starting point for a decision on how to implement content-centric mobile websites across multiple platforms.
Mitigate the limitations of responsive design, including performance limitations, by combining with server-side adaptive web techniques and device-side integration of features such as geolocation.

Consider native or hybrid apps or mobile-optimized site alternatives such as HTML5 for sites with complex requirements beyond content consumption (for example, transactional sites with many screens and complex forms).

**Business Impact:** Responsive design is driven by the proliferation of platforms and channels for engaging with web and mobile audiences, and the escalating cost and complexity of designing for and supporting all of them. Therefore, the primary advantages of responsive design techniques are cost containment and reduced complexity. But because poorly rendered user experiences can inhibit conversions and transactions, responsive design also has implications for demand generation and revenue, particularly when associated with marketing campaigns and commerce sites.

**Benefit Rating:** Moderate

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Adobe; Automattic; Moovweb; Responsify; Usablenet

**Advocacy Marketing**

**Analysis By:** Jay Wilson

**Definition:** Advocacy marketing activates a brand’s champions at scale, often over the social web. Advocates tend to be a brand’s most loyal customers, but may also include employees or partners. These advocate groups can be highly effective in creating content, carrying a brand’s message on its behalf, and coming to its defense both online and off. As the cost of paid advertising increases, and organic social marketing effectiveness declines, marketers look to advocacy marketing to leverage the power of word-of-mouth marketing in a digital world.

**Position and Adoption Speed Justification:** Word-of-mouth marketing has long been recognized as one of the most effective ways to drive acquisition. Study after study shows that consumers trust their peers, friends and family more than any other source. The digital era, social media in particular, has made driving word-of-mouth at scale attainable and increasingly measurable.

Still, it took a fundamental shift in social marketing — namely the decline of organic reach and engagement coupled with the rising cost of social advertising — for marketers to begin advocacy marketing efforts in earnest. Their PR teams, however, may have been doing some form of it for years. The rise of loyalty marketing and advances in analytics tools to identify advocates and measure the impact of their word-of-mouth efforts helped accelerate this adoption.

There is a subtle distinction between advocacy marketing and influencer marketing. The latter, long a staple of public relations and social marketing strategies, does not require a customer/employee
connection to the brand. Influencers could be industry thought leaders, celebrities or content creators who drive word-of-mouth without practical, hands on experience with a brand. Advocates, on the other hand, are typically satisfied customers or employees.

**User Advice:** If you haven’t implemented an advocacy program, then evaluate its potential for your own situation. Advocates tend to be your most loyal customers, making them a particularly unique marketing asset that is often overlooked. So too are employees — studies show they are eager to talk positively about their employers on social media, but shy away from such discussions without permission and guidance.

With either group, the primary objective should be engagement. Engaged customers are more loyal, engaged employees are more satisfied. Develop engagement with the brand before calling on these groups to advocate on behalf of it.

With any advocacy program, a value exchange is needed. This may be as simple as the satisfaction an individual gets with being part of a larger narrative, or in helping a peer make a buying decision, but may evolve toward exclusive access to information or employee recognition. As the value exchange expands, questions of disclosure requirements must be addressed. Marketers should provide guidance to advocates in the form of campaign themes and content assets, but should allow advocates to create and share in their own voice.

**Business Impact:** Loyal customers who advocate don’t just buy more, they also bring others with them. Engaged employees are more satisfied and productive. The advocacy marketing approach enables companies to increase customer lifetime value, while reducing sales costs.

**Benefit Rating:** Moderate

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Dynamic Signal; Extole; Influitive; Mavrck; ReadyPulse; SocialChorus; Zuberance

**Recommended Reading:**
- "Create an Employee Advocacy Program That Works"
- "Build an Influencer Social Marketing Program That Delivers Results"
- "Use Social Media to Power the Entire Customer Experience"
- "When Loyal Customers Become the Advocacy Marketer’s Best Friend"

**Data Management Platforms (Advertising)**

**Analysis By:** Andrew Frank

**Definition:** Data management platforms (DMPs) are tools that support customer segmentation, audience targeting and optimization of digital advertising by combining internal and external data to drive programmatic media strategy and analysis.
**Position and Adoption Speed Justification:** DMPs have been widely incorporated into marketing technology architectures, although many marketers are now seeking to expand their scope beyond programmatic ad bidding. Although they all perform a core set of functions involving third-party data matching, basic segmentation and demand-side platform (DSP) support with relative ease, support for more advanced analytics and multichannel campaign orchestration remains sketchy.

The escalation of mobile and its suppression of cookie-based web tracking undermine the mechanism that gives rise to much of the data to which DMPs were initially designed to provide access. Providers are responding with a variety of innovative cross-device alternatives, but the challenges of mobile ad targeting have diverted substantial revenue to Facebook, whose persistent login and vast supply of targeting data offer a compelling substitute for cookies. Only Google offers a comparable scale of identity tracking. However, the universe of cloud-based data from mobile apps, established data brokers and, most recently, the Internet of Things (IoT) continues to expand rapidly.

Consequently, the DMP value proposition is under pressure to evolve. Competing visions from diversified providers such as Google, Nielsen, Adobe and Oracle challenge a narrowing field of focused independents. Gartner expects DMPs to move relatively quickly through the Trough of Disillusionment as they become absorbed into more general solutions we refer to as digital marketing hubs.

**User Advice:** Marketers should:

- Consider DMPs as part of a multichannel data collection, activation and analytics solution that includes first-, second- and third-party data sources. Prioritize specific use cases as inputs to your selection process. Note Gartner uses "master audience profile" to refer to marketing's top-level analytic data encompassing all people-based information. A DMP may provide this or be relegated to a narrower operational role alongside other systems.

- To be most effective, DMPs require extensive integration. While integration with data sources and DSPs is most common, also prioritize integration with tag management, website optimization/personalization systems and multitouch attribution (or advanced analytics in general). Customer data platforms are appearing as an alternative category more focused on internal data; these, too, must integrate seamlessly with DMPs where adopted.

- Look beyond third-party data toward better application of first-party data to ad and content targeting, and investigate second-party data relationships through DMP-based, privacy-compliant integrations. Many DMP providers also offer private data coops, and marketplaces should be part of your evaluation.

- Centralize DMP implementations and operations as you diversify data sources and data-driven executional platforms. Lower DMP switching costs by insisting on open API integrations and turnkey onboarding processes.

- Take advantage of buyers’ market conditions to negotiate for initial performance guarantees, and high levels of support and training.

**Business Impact:** DMPs are at the crossroads of convergence between ad tech and martech. They’re often among the first ad-tech platforms a marketer considers adopting internally; hence,
they can put stress on traditional media agency relationships by raising issues of agency access to sensitive data and how to apportion responsibility for data-driven ad-buying operations. DMPs also represent ground zero for the application of machine learning to marketing strategy as natural repositories of training data and algorithmic extensions (although DSPs can make similar claims). Thus, we expect them to be a focus of competitive innovation among marketing cloud providers and artificial intelligence (AI) startups.

DMPs also represent gateways into new markets. Data providers from regions outside North America and Western Europe are beginning to recognize the opportunity DMPs provide to offer access to actionable remote market data to brands aiming to extend their digital commerce footprints with local programmatic advertising. Such DMP applications can supply marketers with valuable foreign market intelligence, vastly reducing the cost and risk of penetrating new markets.

The rise of private data relationships among complementary sectors, such as manufacturing and retail, or airlines and credit card issuers, will create new market structures, raising barriers to entry while improving marketing efficiency among participants. Privacy and antitrust concerns are certain to surround many of these practices. Marketers and their IT counterparts must be aware that DMPs will present unanticipated opportunities and risks as gateways to an uncharted world of data alliances and connections.

**Benefit Rating:** High

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Adobe; AudienceScience; IgnitionOne; Krux; Lotame; Neustar; Oracle (BlueKai); Turn

**Recommended Reading:** "Market Guide for Ad Tech"

"Understanding Ad Tech"

"Magic Quadrant for Digital Marketing Hubs"

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**Native Advertising**

**Analysis By:** Christopher Ross

**Definition:** Native advertising is designed to blend in with its surrounding media context by matching stylistic and/or thematic elements. It encompasses paid content marketing forms, such as advertorials, paid posts, sponsored content, preroll video and ads, as well as social ad formats (e.g., Promoted Tweets on Twitter, boosted posts on Facebook and video ads on YouTube).

**Position and Adoption Speed Justification:** After an initial wave of hype, advertisers were quickly faced with issues of scale and overhead. At the same time, publishers and networks were forced to grapple with concerns about their ability to adequately distinguish ads from content. The Interactive
Advertising Bureau (IAB) has taken on some of the scale issues through the introduction of new specifications. Recently, the IAB announced the OpenRTB Dynamic Native Ads API Specification, offering tangible evidence that the industry sees native advertising continuing to mature.

Still, native advertising continues to provoke controversy regarding its effect on journalistic integrity and its ultimate applicability in advertising. While social implementations — notably Facebook’s — appear both effective and scalable, attempts by news outlets and other mainstream publications have raised eyebrows and production costs for advertisers, without always delivering clear benefits.

Brands’ dissatisfaction with the impact of standard display ads, particularly on mobile screens, has motivated a wave of startups to address the cost and scalability issues of native advertising by automating as much of the design adaptation as possible (usually with manual oversight), while offering publishers the promise of higher yields and better-looking pages. Native advertising has also caught the interest of content marketers who have watched their earned media reach plummet as Facebook and other social networks have begun to charge more for access to their audiences. These will continue to propel development and adoption through an anticipated period of disillusionment with basic template-based approaches.

Ultimately, the economics of advertising demand standardization to achieve efficiency and scale as evidenced by the new IAB standard. Native advertising must compromise on diversity and seek a balance, where ads can be more easily adapted to native contexts while retaining standard core elements, such as graphics, copy, video and response mechanisms. Innovators on this path must achieve solutions that satisfy brands’ high creative standards and performance goals, publishers’ economic and aesthetic needs, and the public’s desire for clear separation of ads from content. This will require more technical wizardry, creativity and commitment from marketers and agencies.

**User Advice:** Native advertising is already a component of many content marketing or ad-buying programs. With an ongoing focus on transparency of messaging and consumers’ overall distrust of advertising, brands must strike the right balance to ensure that consumers find value in the content, without feeling deceived. Always preview the presentation of native ads on publisher sites and apps to ensure the unit is clearly identified as advertising. Test native formats against standard ones to measure lift and evaluate against the added cost of "going native." Look beyond stylistic integration to topical sponsorship and semantic context matching, but anticipate mishaps (such as matching an airline ad with a plane crash article). As native advertising becomes more programmatic, brands will need to exercise more caution than ever to prevent ads from appearing natively in inappropriate content. Use whitelists or private networks to restrict placement to familiar contexts, and exercise a high degree of oversight in native ad operations. Review programmatic native transactions carefully.

**Business Impact:** Native advertising is designed to blend with its context, creating the potential for a unique style of engagement as well as the risk of being perceived as deceptive or insincere. Brands must be vigilant about the use of native advertising if they are to leverage its distinguishing properties, recognizing the nuance between effective and destructive impact. Measurement, targeting and performance expectations of native advertising will continue to mature as technologies and publishing models scale and evolve. Marketers should be watchful as native advertising becomes more common and standards-driven, and potentially risks losing its unique properties and becoming just another advertising medium. Native advertising works well when marketers and publishers possess strong data capabilities coupled with dynamic, creative content.
models. Done properly, native advertising has the potential to raise the effectiveness of digital ads, lowering the resistance to ad-supported media, as evident in the widespread adoption of ad-blocking technologies. Especially effective in the awareness phase, native advertising can be effective across a broad range of categories and interests.

**Benefit Rating:** Moderate

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Facebook; LinkedIn; Magnetic; Nativo; Outbrain; Sharethrough; Taboola; TripleLift; Twitter

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### Content Marketing

**Analysis By:** Christopher Ross

**Definition:** Content marketing involves the process and practice of creating, curating and cultivating text, video, images, graphics, e-books, white papers and other content assets that are distributed through paid, earned and owned media platforms. These assets are used to tell stories that help brands engage with and nurture customers, prospects and other audiences. The goal of content marketing is to drive awareness, demand, preference and loyalty through deeper engagement with customers.

**Position and Adoption Speed Justification:** Great content marketing is a challenge for many brands because it requires patience, discipline and the willingness to withhold the commercial pitch in favor of a focus on delivering content that’s useful and engaging in its own right. Content marketing is fundamental to effective social marketing, search engine optimization and multichannel engagement strategies. Content marketing relies on digitally savvy workflows and creative techniques to reach consumers with engaging content that audiences want to consume and share. Niche vendors and agencies have emerged to support the following:

- Managed sourcing of content through marketplaces and brokerages
- Authoring workflow for planning and executing original content creation
- Curation tools for finding, filtering and contextualizing third-party content
- Personalization capabilities for delivering contextually relevant content across owned and earned channels
- Amplification services to promote branded content through paid and earned networks
- Content strategy, creation and distribution services

Although the majority of these vendors remain small — generally with less than $25 million in annual revenue — they’re attracting considerable institutional investment as the content supply chain becomes a key control point for digital marketing. Vendors and agencies in this category continue to
expand the scope of their technology and service offerings, creating a robust, but increasingly confusing, marketplace for marketers. Enthusiasm for the discipline is still positive, but it’s evolving as marketers experience firsthand the level of resource and commitment required to make content marketing effective. Content marketers are under pressure to prove the business value of their efforts and to produce differentiated content experiences that rise above the considerable noise created by a crowded field of content marketers.

**User Advice:** Look beyond owned and earned channels to distribute content assets. The highest-performing content marketing programs use paid media to prime and amplify reach. Consider partnering with content marketing, social marketing or digital marketing agencies to help bootstrap your efforts. Think about investing in human capital (in the form of professional journalists) and technology to create a sustainable pipeline of high-quality content assets. Define performance metrics and instrument content assets for measurement and optimization. Hold your teams accountable for the business impact, but allow at least six months of operational practice before you expect these results to accrue.

**Business Impact:** When done well, content marketing can help brands generate awareness, demand, preference and loyalty through social and other earned media channels. Also, content marketing can, and should, complement paid media campaigns through content co-creation, sponsorship and native advertising programs available from many publishers and digital media properties.

**Benefit Rating:** High

**Market Penetration:** 20% to 50% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Curata; DivvyHQ; Kapost; NewsCred; Percolate; Skyword

**Recommended Reading:** "Content Marketing Comes of Age"

"Market Guide for Content Marketing"

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Social Marketing

**Analysis By:** Jay Wilson

**Definition:** Social marketing is the use of social media to engage and connect individuals across all stages of the customer journey. Social marketers primarily facilitate communications on external social networks like Facebook and Snapchat, but may also use company-sponsored public communities and invitation-only private communities. Social marketing can drive brand awareness, increase revenue by driving traffic to commerce experiences, accelerate customer advocacy and shorten product development cycles through social product ideation and testing.

**Position and Adoption Speed Justification:** The social web offers marketers the opportunity to host, join, facilitate or monitor conversations among customers and prospects. Marketers can share knowledge, offer thought leadership, facilitate connections, inform decisions, entertain and inspire
others, and enrich customer experiences. Doing so increases their market understanding, helps drive consideration, conversion and commerce activity, and lays the groundwork for powerful advocate and influencer relationships.

Today, marketing leaders are increasing their overall social marketing budget, particularly investment in social marketing technology. Increased investment in paid social advertising is also furthering budget growth as marketers work to gain the attention of targeted users on social networks in the wake of decreased organic reach. Despite research indicating social marketing’s effectiveness across the customer journey, many marketers struggle to establish and effectively communicate the business value being created from their social marketing efforts.

The range of tools and vendors that social marketers leverage continues to evolve. Acquisition activity remains high, as does organic development, as vendors race to keep pace with dynamic social marketing strategies. Social analytics tools promise to help reveal customer insights. Social marketing management tools promise increased efficiency in content creation and engagement with customers. Connecting these to multichannel marketing and CRM tools promises more connected experiences across channels. However, the failure of many social marketers to demonstrate business value and connect social marketing better across the organization is what holds the social marketing discipline back from productivity.

**User Advice:** Social marketing introduces the concept of a dialogue into the marketing mix, and thus it should be part of marketing programs where a dialogue can enrich the customer experience, drive engagement with the brand, and extend consumer insight and connection into the organization. Social marketers should:

- Align social marketing strategy and tactics to well-articulated objectives. Determine how social connections and socially shared content will support brand and business goals. Determine how impact will be measured.
- Consider a range of use cases for social marketing. Think beyond posting and engagement to how social connections naturally facilitate market research, influencer identification and risk management, or support advocacy programs.
- Embrace social marketing’s ability to support both direct response (paid) and dialogue (earned) to create a more relevant experience for audiences and a more lucrative marketing program for companies.
- Select tools that support brand goals, serve organizational constituents (beyond the social marketing team) and support your social marketing roadmap.
- Use social marketing as a source and user of multichannel data. Break social marketing out of its silo, and connect insights generated in social marketing to other channels to improve execution across channels.

**Business Impact:** Social marketing can bring a brand or organization to life in a way never before possible at scale. It can be a meaningful part of a brand’s customer experience by keeping people engaged with a company, aligning products and services with individual needs, and leading prospects through a buying process. It enables customer advocates who can be powerful
influencers for purchasing decisions and can help manage and extend the brand message in the market. Customer suggestions, feedback, desires and more can be collected and analyzed for branding, campaign management, loyalty, segmentation, or group/individual satisfaction measurement and sales conversion.

**Benefit Rating:** High

**Market Penetration:** 20% to 50% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Adobe; Audiense; Hearsay Social; Hootsuite; NewsCred; Oracle; Percolate; Salesforce; Spredfast; Sprinklr

**Recommended Reading:**

"Social Marketing Primer for 2016"

"Cool Vendors in Social Marketing, 2016"

"Structure Your Social Marketing Efforts Based on Five Popular Use Cases"

"Five Big Areas for Breaking Down Silos Between Social and Multichannel Marketing"

"How to Measure Social Marketing ROI"

**Social Analytics**

**Analysis By:** Christi Eubanks

**Definition:** Social analytics involves the monitoring, analysis, measurement and interpretation of digital interactions and engagement with people, topics, ideas and content in social communications. It includes sentiment analysis; natural-language processing and social networking analysis (influencer identification, profiling, scoring and analysis); predictive modeling and recommendations; and automated identification and classification of subject/topic, people or content.

**Position and Adoption Speed Justification:** The social analytics space is marked by considerable interest from marketers and shining case studies from vendors about the value of social insights. However, limitations in access to data from key social networks; lack of integration with other multichannel analytics and customer profile data; and difficulty in attributing business outcomes to social marketing efforts corresponding with a shift toward social advertising (typically measured separately on platforms that specialize in media analytics) have driven social analytics further into the Trough. Marketers believe that social media plays a vital role at every stage of the customer journey, but they struggle to come up with the data to prove it, despite increasing adoption of social analytics tools.

Social analytics offers not only basic keyword search analytics, but also dashboards for brand tracking and algorithms for natural-language processing for text classification. Aside from the introduction of image classification to many platforms and enhanced dashboards, few technology
advancements have been made in the past few years. Vendors tend to specialize in one or a few of these activities, but rarely do all things well. Some social analytics vendors offer support for more advanced social analyses and process-driven integration in digital marketing and multichannel campaign management, as well as integration with customer service and sales applications. Others are beginning to overlay social insights into other channel analytics. Consolidation and acquisition have slowed as most multichannel campaign management and digital marketing hub players now feature social analytics capabilities, as do many advertising platforms as a complement to their paid social offerings. Specialty providers still proliferate in the market, resulting in continued market fragmentation. Marketers commonly invest in multiple solutions for specific use cases. They tend to re-evaluate vendors regularly based on market changes, changing organizational priorities, and, sometimes, dissatisfaction or lack of progress with their current vendor.

**User Advice:** Social analytics can offer considerable benefit to the organization, provided the activity is approached strategically and with an understanding of its limitations. Marketers should carefully assess the data types and sources most relevant for their target consumers and the insights most impactful for their business. They should:

- Understand that social listening and analytics may not be representative of every relevant channel (Facebook, Snapchat and many other social networks have limited or no coverage) or customer segment.
- Select vendors based on their ability to meet their specific needs — based on marketing investment and strategic priorities — be it influencer identification, affinity analysis for targeting, social listening, text analytics, community monitoring and management, brand health tracking, or more advanced analytics activities. Avoid searching for a one-size-fits-all tool; it doesn't exist.
- Survey other departments outside marketing to understand their social analytics needs, and take advantage of data synergies and economies of scale.
- Enlist the help of consultants, agencies and/or in-house data scientists to help make better use of your social data by extracting it from social analytics tools and incorporating it into models and multichannel measurement efforts.
- Ensure that integration and extensibility are key evaluation criteria. Weigh the benefits of working with integrated social solutions that are part of a marketing cloud or suite, or going with a niche provider offering best-of-breed capabilities.
- If you don’t have a dedicated social analytics specialist in-house, look for vendors who offer concierge setup services and have a commitment to customer success, to get the most out of your investment.

**Business Impact:** Social analytics can support a range of use cases. Marketers can listen and respond to individuals and communities, they can analyze consumer attitudes and behaviors, and they can map relationships and interest groups for targeting and segmentation. Social analytics can reveal opportunities for real-time campaign adjustments and amplification, or provide early diagnostics for brand health issues through sentiment analysis.
**Benefit Rating:** Moderate

**Market Penetration:** 20% to 50% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Brandwatch; Clarabridge; Crimson Hexagon; NetBase; Oracle; Salesforce; Simply Measured; Socialbakers; Synthesio; Sysomos

**Recommended Reading:** "Market Guide for Social Analytics"

"Embrace a New Framework for Social Marketing Measurement"

"How to Measure Social Marketing ROI"

"Build an Influencer Social Marketing Program That Delivers Results"

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**In-App Advertising**

**Analysis By:** Andrew Frank

**Definition:**

In-app advertising is paid placement of media within a mobile or social app, either as an interactive unit conspicuously placed on an app screen or as an interstitial interruption somewhere in the flow of the app. Although somewhat similar to web ads, in-app ads operate mostly outside of a browser context, giving them access to certain native platform capabilities at the expense of standardization and interoperability.

**Position and Adoption Speed Justification:** In-app advertising’s descent into the Trough of Disillusionment is exemplified by Apple’s announcement this year to sunset its iAd App Network, launched in 2010 with great fanfare by Steve Jobs. The retreat marks the end of a vision of in-app ads as a transformative high-quality format in the tradition of Apple innovations under Jobs. Although iAd reportedly garnered a 5% share of the U.S. mobile display ad market (vs. Google’s 9.5%), Facebook’s in-app format combining social and mobile grew to a dominant 37.9% in 2015.

Gaming apps, meanwhile, continued to rely largely on in-app ads promoting other game downloads.

Facebook’s ability to target within its audience of over a billion active mobile users highlights two major challenges of in-app ads in general. First, retargeting customers based on recent search or site visit behavior is difficult outside of apps like Facebook because in-app ads lack cookies. Although they have access to device IDs that function like cookies, these are specific to iOS and Android platforms and cannot be easily connected to other behaviors such as a web search or site visit. Second, triggering an app install is a popular call to action for mobile advertisers, reminiscent of a banner click. Facebook offers this capability cross-platform, but Google and Apple only offer it on their respective app store platforms, creating complexity for advertisers. Similarly, in-app ads that invoke web content face a variety of context-specific behaviors that are difficult to assess collectively.
In the larger picture, comScore reported in 2015 that consumers were spending 54% of their digital media time and over 80% of their mobile time in apps, making them imperative for reaching audiences. In-app advertising’s complexity got some relief from the development of programmatic native standards by the Interactive Advertising Bureau; these standards streamline the process for adapting ads to disparate formats. Because many studies and testimonials suggest that in-app ads perform well for many advertisers, we can expect a rapid ascent toward the Plateau of Productivity for in-app advertising.

**User Advice:** Many North American advertisers have come to regard Facebook, Twitter and YouTube as sufficient vehicles to cover the in-app advertising landscape. However, they’re not optimal at reaching all audiences. Roughly 50% of available mobile ad impressions are outside their collective reach. To get the most value from investments in video and rich-media content, use an app-neutral approach to content development. In-app native formats open up a range of creative possibilities, but understanding how these play out in a variety of app-specific contexts can be challenging.

Marketers should:

- Incorporate contextual elements into design. Understand what contextual data (such as location or topic) can be provided by host apps, and design with available data in mind.
- Consider how to optimize for in-feed placement with video elements, with particular regard for the condition that videos play silently until engaged.
- Familiarize your creative team with the opportunities and limitations of various ad SDKs and their interactive capabilities.
- Set up a lab and QA review process to understand how in-app ads will appear and behave in a variety of contexts. Pay special attention to how install requests and deep links to web content are handled on different platforms.
- Understand how device IDs can be used for continuity and personalization. Plan for the condition that cross-app device identification can be limited by user device settings.
- Where possible, use responsive design techniques to create content that can be adapted to different platforms and formats, both in-app and web-based.
- Consider the impact of ads on app performance and design accordingly.

**Business Impact:** Advertising is crucial to the app economy. Although revenue is concentrated among a small number of large players, Facebook will lead a drive to bring more app developers and publishers into its ad ecosystem — with competition from Google. Marketers will use targeted in-app advertising largely to promote their own apps, cementing a new default channel for customer experience. As standards evolve, honed by experimentation and analysis, in-app formats will migrate to Connected TV, wearables and other emerging channels. Over time, we expect open standards such as HTML5 to replace proprietary in-app ad formats that will enhance efficiency and promote competition among publishers. Programmatic native standards will assist in the automatic adaptation of ads to different screen sizes and resolutions, alongside new rich formats such as
interactive 3D and shoppable video. In the near term, publishers and advertisers must continue to work within the limitations of walled garden conditions that characterize the current app environment.

**Benefit Rating:** Moderate

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** Chartboost; Facebook; Google; InMobi; Tapjoy; Unity Ads

**Real-Time Bidding (Advertising)**

**Analysis By:** Andrew Frank

**Definition:** Real-time bidding (RTB) is a format and mechanism for passing information between buyers and sellers of advertising in a real-time online auction environment, allowing online ad impressions (including mobile) to be bid on as they occur. The high volume of impressions requires automation, in the form of a demand-side platform, to calculate and issue bids programmatically.

**Position and Adoption Speed Justification:** Following its 2009 debut by Google, RTB ascended rapidly by replacing a notoriously inefficient market with real-time auctions optimized for efficiency. It peaked in 2012 with an OpenRTB application programming interface (API) specification from the Interactive Advertising Bureau (IAB) that spurred adoption and competition among RTB providers, including Facebook. A complex ecosystem of providers and speculators spread RTB’s applications beyond online display advertising into mobile, social and video formats.

Disillusionment set in as buyers and sellers discovered widespread fraud, lack of transparency, quality and viewability of ads, loss of mobile cookies and rising intermediary fees, among other concerns. RTB likely bottomed out in March 2016 when Facebook walked back RTB platform plans noting that, "we were amazed by the volume of valueless inventory." Meanwhile, enthusiasm shifted toward programmatic direct models between buyers and sellers and native advertising formats.

In 2015 and 2016, IAB laid groundwork for RTB's renewal with new standards for programmatic native, freeing RTB from format constraints and opening it up to popular proprietary feeds. Google contributed to renewal by opening dynamic allocation, allowing its DoubleClick ad server to accept real-time bids that exceed an ad’s default price from outside of Google's own ad exchange marketplace. Also, a resurgence of interest in dynamic creative optimization contributed to improvements in RTB performance and accountability.

As market forces pressure publishers to aggressively pursue all avenues of monetization, many will give RTB a fresh look, attracting new buyers for whom RTB can be the key to incorporating advertising into multichannel customer journeys. RTB’s efficiency and versatility ensures that it will become a staple of trading in media across formats and channels.

**User Advice:** Marketers:
Consider RTB to be an important venue for applying and testing data-driven marketing programs, and incorporate its metrics into customer journey analysis and attribution.

Use actions to measure value and instill vigilance against fraud by demanding detailed accountability from agencies and trading partners.

Evaluate how best to use your own data to optimize RTB targeting and bidding strategies while protecting privacy.

Work with onboarding partners experienced in data rights, data quality and privacy issues to activate your data for RTB look-alike targeting.

Investigate the creative possibilities of programmatic native and dynamic creative optimization in the context of RTB strategies.

**Business Impact:** RTB is a disruptive technology. As it streamlines the market, it will squeeze out nonessential intermediaries and arbitragers. Its self-regulated state opens trade to more participants, but also encourages bad actors who exploit its scale and opacity. Like many platforms, it faces crossroads between a walled-garden future, where large media sellers such as Facebook and Google continue to operate dominant marketplaces, and an independent future where by law or convention, RTB exchanges are run by neutral parties. Marketing cloud providers will join advertisers and publishers to press for the latter.

Beyond the benefits of automation and market efficiency, RTB is a key enabler of algorithmic marketing. As marketers discover how to benefit from the precision RTB offers to the right people, at the right time and with the right offer, RTB will raise the profile of activating data and analytic capabilities in real-time as key to competitive advantage. Many of the disciplines derived from financial trading systems will become increasingly applicable to ad media and demand for high-capacity analytic systems. As a result, services and specialized audience data will grow.

Although RTB will never eliminate direct deals, over time it will handle the bulk of transactions in media markets worldwide across all channels and formats.

**Benefit Rating:** Transformational

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** AOL; AppNexus; Facebook; Google (DoubleClick); OpenX; PubMatic; Rubicon Project

**Recommended Reading:** "Market Guide to Ad Tech"
Online Advertising Data Exchanges

**Analysis By:** Christi Eubanks

**Definition:** Online advertising data exchanges are cloud-based marketplaces that enable members to buy and sell consumer data that can be associated with ad media or customer profiles through an identifier, such as a cookie ID. Such data is intended to enhance analytics and customer intelligence, and boost targeting effectiveness for digital advertising and offers.

**Position and Adoption Speed Justification:** Since its inception in 2007, the advertising data exchange has been greeted with enthusiasm and contempt. The hype peaked around 2009 when the rise of real-time bidding spiked demand for targeting data. It bottomed out in 2014 amid privacy concerns and recognition that mobile consumer migration raised barriers to data collection and targeting using cookies. But 2016 brings promise and renewed enthusiasm as major providers commit to tackling the cross-device identity challenge, and the most mature data-driven marketers consider external data essential.

Continued momentum behind Oracle's Data Cloud, Nielsen's integration of eXelate, and Adobe's launch of its Audience Marketplace data exchange, coop and device graph have fueled interest in this category. Obstacles presented by mobile-to-desktop linkage, data quality, and Facebook and Google's rich but walled data gardens remain, but large software vendors are focused on overcoming these.

Although data marketplaces are active and will grow with the adoption of complementary technology such as data management platforms and onboarding services, it's likely to take two to three years before mobile data and targeting problems are completely resolved, and other data sources, notably TV and point-of-sale, are fully integrated into the data exchange model.

There is, however, a plausible scenario under which privacy protection developments produce a chilling effect on data exchanges, further delaying or diminishing their ultimate productivity. The likelihood of this varies by region. In the U.S., it appears that technical solutions, self-regulation and political gridlock diminish this possibility. The growth of private data exchanges (or coop models) mitigates some of this risk. A focus on privacy will ultimately improve use of metadata and encryption to track and protect data rights and enforce restrictions.

**User Advice:** Leading marketers view data as an asset. Marketers benefit from increased access to external data, provided its use is governed by suitable privacy principles. Digital commerce sites, publishers and other high-traffic destinations can monetize data free from the limitations of their ad inventories, while advertisers can use it to understand audience behavior and target key segments across a variety of contexts without having to spend excessively on media.

Data collectors should secure consent from users, and provide transparent access to and control over data collected about them to comply with emerging regional privacy requirements. They must also assess the indirect effects of releasing any significant quantities of even anonymous, consensual data into the marketplace, such as inadvertently exposing information about audience
trends to competitors or diluting the value of their own customer intelligence. Privacy, data usage and confidentiality issues must be analyzed by experts to protect against data leakage and privacy hazards.

**Business Impact:** Data exchanges will continue to support the growing adoption of programmatic media models and technologies, while also impacting adjacent areas of marketing, such as customer analytics and marketing mix modeling. They’ve already helped build awareness of the value of big data in digital marketing and will challenge businesses to focus more on complex questions of how best to use data as an asset in marketing and business. Privacy-related regulatory and social developments will impact time to maturity and yield new models such as private, invitation-only exchanges. They will also improve use of metadata and encryption to track and protect data rights and enforce restrictions.

**Benefit Rating:** Moderate

**Market Penetration:** 20% to 50% of target audience

**Maturity:** Early mainstream

**Sample Vendors:** Acxiom; Adobe; Epsilon; Lotame; Nielsen; Oracle

**Recommended Reading:**
- "Magic Quadrant for Digital Marketing Hubs"
- "Market Guide for Marketing Data Providers"
- "Market Guide for Ad Tech"

**Personalization**

**Analysis By:** Jennifer Polk

**Definition:** Personalization involves marketers’ application of context, including knowledge about a user (e.g., demographic and psychographic data) and their circumstances (e.g., behavioral, geographic and transactional), to select and tailor content, offers and interactions that will maximize conversion and other marketing and business goals.

**Position and Adoption Speed Justification:** Marketers better understand personalization. They invest in technology to enable personalization — from personalization and recommendation engines to marketing technology with the ability to use data to adapt content and interactions. Yet, marketers struggle to realize the full potential of personalization because of challenges in integrating and analyzing the underlying data layer and turning analysis into insight and action.

According to Gartner's 2015 Multichannel Marketing survey, personalization ranks among the top three challenges facing multichannel marketers. They struggle with an inability to reach audiences at the right moments using advanced technology (29%), difficulty determining which channels best serve their audience (29%), struggles with tailoring creative and content for each channel (24%),
and issues sourcing, normalizing and harvesting audience data for segmentation (21%). All are essential parts of personalization.

**User Advice:** Personalization has the potential to deepen customer engagement and improve business results, from delivering near-term revenue growth to increasing loyalty, retention and lifetime customer value. There are different levels of personalization. Align your efforts to the level of personalization that is attainable given your access, permissions and understanding of customer data and resources to analyze that data. Apply insight and automate execution for efficiency and effectiveness. Some steps you can take:

- Determine how personalization can support your business goals to guide your efforts and justify resources and technology investments
- Determine the level of customization you need to meet customer expectations of personalization and privacy, and invest in data, analytics and supporting technology.
- Personalized ads based on segment-level, third-party data can be managed manually, outsourced or automated through a programmatic media platform.
- Customized commerce with product recommendations and search results require recommendation engines to analyze behavior and change the site overlay.
- Contextualized experiences require a unified view of the customer, historical and real-time data, and predictive analysis and integration with execution platforms.
- Engage a data scientist for data sourcing, analysis and modeling or a marketing analyst with solid skills — depending on the complexity of underlying data integration and analysis.
- Assess technology for its ability to integrate and analyze data, generate and apply insight.
- Conduct A/B or multivariate testing and automate execution across touchpoints.
- Look for personalization functionality in campaign management, marketing execution software and personalization engines that specifically use data to adapt a presentation layer.

**Business Impact:** Customer expectations around personalization are rising, along with demands to know and control how personal data is captured and used. This requires marketers to adapt their strategies and tactics. It also forces them to develop governance structures to manage opt-ins and permissions, communicate privacy policy and the benefits of sharing data, and empower customers through preference centers and the ability to opt out of tracking. Greater access to real-time, behavioral data and predictive modeling tools offers the opportunity for deeper contextualization and more relevant content and interactions, while increasing the complexity of connecting data and recognizing customers across channels, devices and functions.

**Benefit Rating:** Moderate

**Market Penetration:** 20% to 50% of target audience

**Maturity:** Early mainstream
**Sample Vendors:** Adobe; BloomReach; IgnitionOne; Monetate; Optimizely; Oracle; Reflektion; RichRelevance; Salesforce

**Recommended Reading:**
- "Use Data-Driven Personalization to Grow Digital Commerce"
- "Rethinking Personalization: The Principles of Personification"
- "Market Guide for Digital Personalization Engines"
- "Marketing Data and Analytics Primer for 2016"
- "How to Build Segments and Personas for Digital Marketing"

Digital Out-of-Home

**Analysis By:** Martin Kihn

**Definition:** Digital out-of-home (DOOH) refers to hardware, software and services that support the electronic distribution of content to networked screens that are placed in well-trafficked areas for advertising, experiential and informational purposes. Such screens are referred to collectively as digital signage.

**Position and Adoption Speed Justification:** Out-of-home signage has been around for centuries, but its incarnation as digital signage (often made interactive through touchscreen mobile devices) has driven the format into malls, taxis, subways, elevators, buses, gyms, theaters, arenas, terminals, gas stations, telephone booths and jukeboxes. Although used by major brands and retailers in marquee locations such as airports and Times Square, wide adoption of DOOH by marketers still faces significant obstacles. These obstacles include a high cost and continually eroding infrastructure of displays, the inherent difficulty of measuring reach and impact, significant content costs, and a lack of standardization. Its potential as a medium for programmatic advertising remains nascent due to market fragmentation and other technical challenges.

However, indications are positive for continued growth during 2016. Although it represents only about 1% of global media spending, DOOH’s cyclical doldrums have passed, and it is expanding steadily, particularly in Asia. Technology costs for LED screens are dropping, more affordable content management systems and players are appearing, and new hardware such as flexible high-resolution OLED installations enable compelling, immersive environments such as the Burberry’s flagship and Verizon’s Experience mall locations.

Another key driver of growth for DOOH technologies will be their role within digital business and alongside the Internet of Things (IoT). As greater hype and initial success stories inspire businesses and tech companies to invest heavily in IoT, it is reasonable to assume there will be more universal adoption of standards and infrastructure that includes signage among complementary IoT elements such as sensors, cameras and local connectivity with mobile devices. The IoT explosion will likely have the effect of both growing and consolidating the DOOH media market as a way of subsidizing IoT investments and exploiting IoT’s novelty and growing reach.
For these reasons, the sector has moved farther out of the Trough of Disillusionment toward greater productivity.

**User Advice:**

- Retailers and other real-world venue owners should revisit the business case for signage programs in light of the increasing mobile device and app usage in stores and competitive threats from online retailers. In particular, newer features such as in-sign sensors, live data feeds and audio streams are worth a second look.

- Media agencies, advertising networks, exchanges and providers of programmatic media tools should ensure DOOH is on their roadmap and prepare to compete for targetable inventory from the fragmented signage world. Over the past year, several ad trading systems for DOOH from WPP’s Xaxis and others have gained some momentum. Likewise, supply-side ad tech company Rubicon Project partnered with BitPoster to enable placements on 300,000 displays in the U.K.

- Marketers with a real-world presence or an urban consumer footprint should consider DOOH as another reason to invest in real-time, data-driven marketing techniques, designed around the goal of delivering the right message in the right context — which is often out-of-home.

**Business Impact:** DOOH can improve marketing efficiency and effectiveness for many consumer brands, particularly those with both online and offline presence. It is particularly important to retailers, for which it plays a potentially decisive role in creating "business moments" out of the convergence of online and offline experiences driven by mobile adoption. It’s also important for brands seeking to generate awareness and capture attention in a media world that is characterized by increasing fragmentation, ad clutter, ad avoidance and social noise.

In addition to the synergistic role of DOOH alongside the IoT, reasons to believe the category is poised for growth include:

- Creative ideas: The past year has seen an increase in the creative use of signage by a range of players. For example, a startup called Intersection is implementing wraparound signage and Wi-Fi hot spots in New York City’s decommissioned phone booths.

- Mobile interactivity: Smartphone ubiquity, combined with geolocation and other applications, enables more interactive use of displays, with retailers aggressively exploring its use to combat declining foot traffic and showroming. For example, Macy’s and Barneys New York have combined mobile apps, beacons and digital signage to provide personalized in-store experiences.

- New technology: Providers continue to invest in innovations aimed at improving display interactivity, such as motion-detection and eye-tracking sensors and real-time automation of creative elements and data feeds.

- Improved measurability: Progress is being made to address the challenge of measuring exposure and calculating ROI, driven by robust, high-level validation studies from Nielsen and others, along with the more accurate on-site sensors from tech providers like Intel.

**Benefit Rating:** Moderate
**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent

**Sample Vendors:** BrightSign; Clear Channel Outdoor; Four Winds Interactive; Omnivex; Samsung; Scala; Stratacache

**Recommended Reading:** "How Digital Marketers Can Find Hidden Opportunities in Showrooming Risks"

"Key Customer Experience Foundations for Marketing Leaders"

**Dynamic Creative Optimization**

**Analysis By:** Martin Kihn

**Definition:** Dynamic creative optimization (DCO) refers to technologies and processes that allow creative elements of an ad unit — such as images and copy — to be dynamically selected in real time, based on variable parameters, such as viewer attributes (e.g., demographics or behavior), context (e.g., device or location) or conditions (e.g., weather, time of day or inventory levels).

**Position and Adoption Speed Justification:** DCO was pioneered about a decade ago by a wave of new vendors who promised to make digital banner advertising creation easier using templates that allowed advertisers to swap images and text in and out in many different combinations, based on rules or protocols. Many of these vendors were acquired in 2010 and 2011 by digital advertising companies such as Yahoo, Conversant (owned by Alliance Data) and Google. (In 2015, Adobe Systems became the second home for Tumri, after acquiring it from Collective.) Despite these deals, subsequent hype and consistent evidence that dynamically personalized advertisements outperform static ones on a range of metrics, the cost and complexity of implementing campaigns inhibited widespread adoption. However, signs remain guardedly positive for a resurgence of adoption by a range of marketers beyond core e-commerce players, moving DCO farther out of the Trough.

First, adoption of real-time bidding and programmatic media has created conditions where up to half of all display impressions in some categories are being targeted and served on an individual basis in real time. This makes targeting parameters used in bid evaluation available to an ad server, which can select creative elements as part of the same interaction. Thus, advertisers have the potential to perform media targeting and creative selection at the same time, rather than separately, increasing the efficiency and performance of programmatic media systems, such as demand-side platforms.

Second, the widespread success of advertising retargeting has convinced many marketers of the value of more personalized advertising. Often used in programmatic environments, retargeting is a strategy that delivers messages to individuals based on known actions they have taken recently, such as visiting the advertiser’s website or abandoning a shopping cart. Platforms such as AdRoll and Criteo enable marketers to, for example, incorporate images of products the visitor looked at in the ad itself. ChoiceStream and others can incorporate real-time weather or Twitter feed data into...
ads directly or to inform creative decisions. Such techniques usually perform many times better than traditional online advertisements.

Third, some digital marketing vendors, such as AdRoll and Sizmek, are expanding the use of DCO in integrated toolsets to address the creative aspect of the problem. They are providing structured design and integration tools that allow marketers to build and preview variations that can number in the thousands. Newer technologies from providers such as SundaySky are expanding basic DCO into formats like video, although these tools remain somewhat basic. Vendors such as Persado provide a glimpse of a future where robowriters create potentially unlimited message versions.

Despite DCO’s undeniable promise, it is underutilized outside e-commerce. More time and attention are paid to targeting than the message that is delivered. This condition is driven by many factors, including creative teams unused to DCO ideation, disconnected media and creative teams, a lack of compelling brand success stories, and banner fatigue. In addition, digital ad dollars are migrating to mobile and video, which have less developed DCO scenarios. However, DCO’s potential to personalize even mobile and native formats ensures its continued relevance.

**User Advice:** DCO covers a range of products, from simple variations on a simple theme that can be selected by basic parameters (such as geography or retargeted product selection), to custom creative units based on sophisticated audience analysis. Advertisers and marketers must assess which style is most appropriate based on their goals and resources, including advertising operations and creative designers.

Digital marketers and agencies should explore expanding the use of DCO in pilots to assess its lift on conversions and brand metrics to determine appropriate levels of investment.

Vendors and service providers in the programmatic media space should seek alliances with DCO providers in anticipation of a rise in demand.

**Business Impact:** DCO will contribute to the trend toward greater efficiency in digital advertising channels, including mobile, native and video formats. DCO will also support increased spending levels on digital media channels by improving ROI.

Programmatic media has shifted the focus of advertisers away from creative toward media-based targeting techniques and technologies; DCO will balance focus back toward targeted creative, resulting in demand for DCO design talent and more robust tools to help advertising artists approach the daunting demands of DCO for many versions of each message.

Privacy advocates will face mounting resistance from business interests because DCO requires some level of pervasive user identification to be most effective (although identification need not include personally identifiable information). However, marketer results show that many consumers are receptive to personalized advertising, so the long-term impact of the privacy debate is unclear.

**Benefit Rating:** Moderate

**Market Penetration:** 5% to 20% of target audience

**Maturity:** Adolescent
Sample Vendors: Adobe; ChoiceStream; Conversant; Google; Sizmek

Recommended Reading: "Market Guide for Ad Tech"
"Understanding Ad Tech"

Appendixes
Figure 3. Hype Cycle for Digital Marketing, 2015

- **Innovation Trigger**
  - Tag Management
  - Real-Time Marketing
  - Digital Commerce Marketing
  - Voice of the Customer
  - Mobile Marketing Analytics
  - Programmatic TV Advertising
  - Cross-Device Identification

- **Peak of Inflated Expectations**
  - Multitouch Attribution
  - Data-Driven Marketing
  - Shoppable Media
  - Predictive Analytics
  - Mobile Commerce
  - Automatic Content Recognition
  - Digital Marketing Hubs
  - Augmented Reality
  - Neurobusiness
  - Mobile Marketing Analytics
  - Programmatic Direct Advertising
  - Marketing Talent Communities
  - Customer Journey Analytics

- **Trough of Disillusionment**
  - Data Management Platforms (Advertising)
  - iBeacons and Bluetooth Beacons
  - Responsive Design
  - Sharing Economy
  - Content Marketing
  - Native Advertising
  - Privacy Management Tools
  - Advocacy/Loyalty Marketing
  - Multichannel Marketing
  - Event-Triggered Marketing

- **Slope of Enlightenment**
  - Social Marketing
  - Digital Marketing Hubs
  - In-App Advertising
  - Real-Time Bidding (Advertising)
  - Gamification
  - Social TV

- **Plateau of Productivity**
  - Lead Management
  - Mobile Advertising
  - Dynamic Creative Optimization
  - Digital Out-of-Home
  - Personalization
  - Campaign Segmentation
  - Online Advertising Data Exchanges

**Plateau will be reached in:**
- ● less than 2 years
- ○ 2 to 5 years
- ● 5 to 10 years
- ▲ more than 10 years
- ⚫ before plateau

**As of July 2015**

Source: Gartner (July 2015)
Hype Cycle Phases, Benefit Ratings and Maturity Levels

### Table 1. Hype Cycle Phases

<table>
<thead>
<tr>
<th>Phase</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Innovation Trigger</strong></td>
<td>A breakthrough, public demonstration, product launch or other event generates significant press and industry interest.</td>
</tr>
<tr>
<td><strong>Peak of Inflated Expectations</strong></td>
<td>During this phase of overenthusiasm and unrealistic projections, a flurry of well-publicized activity by technology leaders results in some successes, but more failures, as the technology is pushed to its limits. The only enterprises making money are conference organizers and magazine publishers.</td>
</tr>
<tr>
<td><strong>Trough of Disillusionment</strong></td>
<td>Because the technology does not live up to its overinflated expectations, it rapidly becomes unfashionable. Media interest wanes, except for a few cautionary tales.</td>
</tr>
<tr>
<td><strong>Slope of Enlightenment</strong></td>
<td>Focused experimentation and solid hard work by an increasingly diverse range of organizations lead to a true understanding of the technology’s applicability, risks and benefits. Commercial off-the-shelf methodologies and tools ease the development process.</td>
</tr>
<tr>
<td><strong>Plateau of Productivity</strong></td>
<td>The real-world benefits of the technology are demonstrated and accepted. Tools and methodologies are increasingly stable as they enter their second and third generations. Growing numbers of organizations feel comfortable with the reduced level of risk; the rapid growth phase of adoption begins. Approximately 20% of the technology’s target audience has adopted or is adopting the technology as it enters this phase.</td>
</tr>
<tr>
<td><strong>Years to Mainstream Adoption</strong></td>
<td>The time required for the technology to reach the Plateau of Productivity.</td>
</tr>
</tbody>
</table>

Source: Gartner (July 2016)

### Table 2. Benefit Ratings

<table>
<thead>
<tr>
<th>Benefit Rating</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transformational</strong></td>
<td>Enables new ways of doing business across industries that will result in major shifts in industry dynamics</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>Enables new ways of performing horizontal or vertical processes that will result in significantly increased revenue or cost savings for an enterprise</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
<td>Provides incremental improvements to established processes that will result in increased revenue or cost savings for an enterprise</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Slightly improves processes (for example, improved user experience) that will be difficult to translate into increased revenue or cost savings</td>
</tr>
</tbody>
</table>

Source: Gartner (July 2016)
### Table 3. Maturity Levels

<table>
<thead>
<tr>
<th>Maturity Level</th>
<th>Status</th>
<th>Products/Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Embryonic</strong></td>
<td><img src="image" alt="In labs" /></td>
<td><img src="image" alt="None" /></td>
</tr>
<tr>
<td><strong>Emerging</strong></td>
<td><img src="image" alt="Commercialization by vendors" /></td>
<td><img src="image" alt="First generation" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Pilots and deployments by industry leaders" /></td>
<td><img src="image" alt="High price" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Maturing technology capabilities and process understanding" /></td>
<td><img src="image" alt="Much customization" /></td>
</tr>
<tr>
<td><strong>Adolescent</strong></td>
<td><img src="image" alt="Maturing technology capabilities and process understanding" /></td>
<td><img src="image" alt="Second generation" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Uptake beyond early adopters" /></td>
<td><img src="image" alt="Less customization" /></td>
</tr>
<tr>
<td><strong>Early mainstream</strong></td>
<td><img src="image" alt="Proven technology" /></td>
<td><img src="image" alt="Third generation" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Vendors, technology and adoption rapidly evolving" /></td>
<td><img src="image" alt="More out of box" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Less customization" /></td>
<td><img src="image" alt="Methodologies" /></td>
</tr>
<tr>
<td><strong>Mature mainstream</strong></td>
<td><img src="image" alt="Robust technology" /></td>
<td><img src="image" alt="Several dominant vendors" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Not much evolution in vendors or technology" /></td>
<td></td>
</tr>
<tr>
<td><strong>Legacy</strong></td>
<td><img src="image" alt="Not appropriate for new developments" /></td>
<td><img src="image" alt="Maintenance revenue focus" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Cost of migration constrains replacement" /></td>
<td></td>
</tr>
<tr>
<td><strong>Obsole</strong>t**</td>
<td><img src="image" alt="Rarely used" /></td>
<td><img src="image" alt="Used/resale market only" /></td>
</tr>
</tbody>
</table>

Source: Gartner (July 2016)

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**Gartner Recommended Reading**

"Understanding Gartner’s Hype Cycles"

"Realize the Marketing Impact of New Technology"

"Understand Marketing's Role in Digital Business"

"Innovative Tech Providers for Chief Marketing Technologists to Consider"

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**More on This Topic**

This is part of an in-depth collection of research. See the collection:

- Gartner’s 2016 Hype Cycles Highlight Digital Business Ecosystems
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- Choose the right channels
- Quickly shortlist marketing and technology providers
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