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THE PREDICTIVE CPG:
Leveraging AI for brand marketing

INTRODUCTION:

Brand marketers have never faced higher stakes but have many tools at their disposal

Building and sustaining a meaningful brand has never been more important for consumer packaged goods (CPG) companies. If this sounds like hyperbole, consider the textbook purpose of a brand: to create and sustain differentiation in the minds of customers to avoid race-to-the-bottom price competition. Indeed, the dream of most CPG marketers is to build a brand so trusted and loved that loyal customers will continue to buy their products even when the closest substitute is on sale. The challenge is that building such loyalty requires deep understanding of the countless combinations of triggers and interactions that collectively influence customers. It gets even tougher: the combinations of brand experiences that engendered loyalty in the past will not necessarily be available or remain effective in the future, and new media, technology, and shopping experiences will continue to add new variables to the already-complicated model of brand-customer relationships.

Building a meaningful brand was never easy, but today it is harder—and more important—than ever. The advent of the web and the smartphone has made the shopping population more informed, more empowered, and more fickle. Your customers have virtually unlimited access to information and a megaphone to add their own opinions and experiences to the information available to others. Even further, through the explosion of ecommerce and the gig economy, your customers have acquired a taste for convenience that will increasingly shift shopping trips from the grocery aisle to the living room sofa. Restocking a pantry essential will literally be as simple as a single click. When consumers can check prices, reviews, and ingredients with the flick of a finger, and when their shopping behaviors make their attention increasingly difficult to capture, it is more essential than ever for CPGs to win and sustain incumbent status with their customers. If your customer is putting only one brand on repurchase autopilot, it needs to be yours.

Brand marketing is evolving to keep pace with a connected, digital world

Fortunately for CPG marketers, technology and marketing capabilities have evolved to keep pace with the complexity of modern brand-building. In particular, the ecosystem of data management and automated marketing tools that once seemed limited to direct response marketers has matured to meet the needs of brand teams. Programmatic marketing offers a foundation and infrastructure on which brands are finding new engagement models for planning and optimizing their full marketing journey. This integrated, data-driven approach is best described as predictive marketing.

Crucially, this new paradigm is completely customer-centric, in that it is agnostic to the platform, device, or medium through which a customer is engaging the brand. Whether your customer is exploring your own content on a brand website, participating in the conversation around your brand on a social platform, or experiencing your brand through a paid media placement on a connected device, it is possible to use an integrated decision system to manage and optimize her full brand experience. This capability is made possible by the confluence of two trends:

- Connected consumers are generating more data than ever before.

- Advanced marketing and advertising technologies are allowing brands to collect, analyze, and activate that data in a growing range of optimization and personalization applications.

The combination of these factors means that, in many ways, marketers have less control over their brands than ever before. Customers play a growing role in the brands they choose to engage, and their engagement—positive or negative, passionate or ambivalent—can create meaningful imprints that ultimately influence the definition of the brand itself. In this way, a brand is no longer solid and static, pushed outward to be accepted or rejected by a target audience. Instead, a brand can be considered porous and malleable, open to be engaged and modified by a target audience. Through a traditional lens, this may sound problematic. But it is actually a prime opportunity for savvy marketers to understand at a granular level which elements of their brand resonate with their target customers and then harness those insights to create more authentic and meaningful brand experiences. In the most successful examples, these efforts can create new customer benefits that increase the brand's appeal, like Mars allowing M&Ms to be customized for gifts, for corporate swag, or simply because a consumer prefers red ones.

Technology and data have laid the foundation for AI to transform brand marketing

Technology-driven marketing has made huge advances over the past decade, and the pace of innovation and sophistication in brand marketing capabilities shows no signs of slowing down. In fact, there is strong evidence that we are just now entering a new era that will be marked by even faster growth and discontinuous leaps in what is considered possible. Up to this point, predictive marketing has primarily served to automate and improve aspects of the marketing process that were previously performed by humans. These were tasks like audience segment development, media performance optimization, creative testing, and

CPG Maturity Model

Stage	Title	Description	Defining attributes	Data and logic flows	Example: digital presence	Example: online marketing imperative
1	Digital CPG	Table stakes in 2017: a digital CPG is utilizing available digital tools to drive today's business results	Efficiency focused, transitioning from traditional	Communication (disconnected pushes and pulls)	Modern, well-built website or app	Web traffic
2	Responsive CPG	More customer-centric: these brands are using data-driven insights to adapt offerings to meet demand	Effectiveness focused, mining for insights	Conversation (adaptive feedback loop)	Personalized for returning customers	Mobile engagement
3	Programmatic CPG	Today's best practices: enabling a customer experience machine with scale beyond human capabilities	Scale focused, looking for more leverage	Automation (streamlining repeatable tasks)	Optimized for segments of new visitors	Meet customers where they are
4	Predictive CPG	Tomorrow's winners: companies using run-time AI to predict and meet customers needs in the moment	Experience focused, integrating full journey	Anticipation (real-time AI)	Dynamically designed for each new visitor	Meet customers where they prefer to engage

advertising or marketing operations. Humans perform these tasks well, but machines can perform them better, faster, more inexpensively, or all three at the same time. In the coming era of artificial intelligence (AI), we will see whole new activities emerge that humans have never performed, because they literally couldn't—think of generating wholly original creative messages on the fly, rather than choosing an optimal combination of component parts, or shifting product distribution shipments in response to real-time shifts in brand sentiment across key geographies. Innovative teams are already exploring this capability: in spring 2017, Saatchi and Toyota launched a campaign that allowed IBM Watson to train on scripts from copywriters and then generate thousands of new pieces of copy on its own.[1] In terms of technological adoption, we are moving from the better-faster-cheaper phase of incremental workflow and performance improvements to a truly new paradigm of marketing in a dynamic, personal, and digitally connected economy. For example, consider the possibilities of universal frequency management

that enables brand marketers not just to measure total marketing and advertising exposure at the individual consumer level, but to actively manage and optimize it to improve brand perception and avoid costly instances of ad collision or message fatigue.

From the programmatic best practices of today to the AI-powered vision of tomorrow

CPG brand marketers stand at a crucial point in 2017: some will continue to throw themselves headlong into data and technology and move aggressively to apply AI in their marketing activities, while others will struggle to overcome change management challenges and the inertia of the familiar. Predictive marketing is a crucial capability for brand marketers, regardless of where they are on the maturity continuum. There exist today turnkey entry points for implementing the basics and adoption roadmaps for testing into the most innovative solutions.

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1   "Saatchi LA Trained IBM Watson to Write Thousands of Ads for Toyota,"
    AdWeek, May 18, 2017

AUDIENCE

Brands are moving to a more comprehensive approach to defining their audiences and experiences

In this paper, we examine the four core components of brand marketing in the predictive era: audience, content, context, and measurement. In each area, we outline the best practices we have observed for applying today's strategies, data, and technologies to the unique challenges of brand marketing. We also go one step further, moving past the best of what's possible today and providing a glimpse around the corner to the ways AI will transform each component of modern brand marketing. In this way, big data and AI play a crucial integrative role among the components of brand marketing and the various interfaces between brand and consumer. These components and interactions are not linear or sequential; the modern relationship between brand and consumer is better framed as an ecosystem—an interconnected and dynamic set of data flows that, through AI, brands can mine for insight and test various methods of activating those insights. This brand-customer stack then serves as both the scoreboard and the field of play, as marketers measure their brand health and implement optimizations to improve it.

As marketing has become increasingly customer-centric, it is likely no surprise that we begin with the audience. Marketers must focus more than ever on truly understanding their target customer. Further, marketers should think broadly and strategically about the composition of this target audience and how it may evolve in the context of demographic shifts, category maturity, or new product launches. In other words, marketers have an opportunity to shift their focus from describing the current customer audience to building a predictive profile of an ideal target audience to realize maximum lifetime customer value. For CPG marketers, this is often a multilayered activity that includes defining a target *shopper* segment (that is, people who actually purchase the product) and a target *consumer* segment (that is, people who actually use the product). For example, consider the brand-building challenge for sports drinks sold in bulk through club stores and major grocery chains: Is the target audience the parent who does the weekly shopping, or the high school gymnast in the household who requests a specific brand be added to the list? Consider as well the different, and perhaps even conflicting, attributes that these two segments would value: mom and dad might be thinking about healthiness and price— "Jeez, whatever happened to the orange jugs on the sideline?"—while

their daughter is focused on taste, performance, and prestige—"What was Team USA drinking in Rio last summer?" CPG brands need to think carefully about these dynamics in defining the target audiences that then inform all their marketing decisions.

Audience profiles are expanding to match the nuance and granularity of digital consumer data

While the practice of defining a target audience profile is nothing new, the best practices in how to do it have come a long way in the digital era. Specifically, brands are now presented with a huge and diverse set of dimensions when attempting to find the key attributes that define their target audience. Demographics remain a core component of most audience profiles. If the target profile is composed in a series of concentric circles, each adding nuance and resolution to the last, many CPG brands would likely start with a core such as "women aged 25–54, with kids." However, the variations that enable marketers to predict which individuals within that core demographic will form authentic connections with a given brand take shape as additional layers are added. For example, if age, gender, and parental status are three columns in a consumer database, there are hundreds more for marketers to consider. The explosion of data dimensions results from the increase in consumers' activity on connected devices, which produces troves of new data that is being collected, organized, and made available for marketing use cases.

While new sources of digital data are exciting and worth exploring, it is critical that brands look just as carefully at tried-and-true offline data sets. In fact, these offline data sets are often the most direct link to sales behavior, and actual purchase behavior is often the best seed-outcome data set to inform the development of predictive models. Indeed, a powerful predictive marketing approach is to start with the subset of current customers who are most loyal in their shopping behavior and then work backward through their journeys and brand experiences to understand the motivations, preferences, and triggers that ultimately formed their loyalty and caused their behavior. The most successful CPG brands in 2017 are deploying cross-device data management platforms to capture and analyze the broadest possible data sets, sharpening their focus and enabling a more robust version of customer profile development that is far more actionable in downstream marketing activities. These additional layers of nuance within an audience definition serve to spotlight the behaviors, values, and motivations that explain why one mother aged 25–54 will develop an authentic connection with a brand, and why her demographically identical neighbor will not. Most importantly, these attributes can be synced and recognized across digital platforms and touchpoints, which means that even the most granular consumer insights are directly actionable.

Customer insights have transformed from a static deliverable to a dynamic process

Audience profiles in 2017 are also far more dynamic than in the past. No individual consumer is static in her behaviors: Individual tastes evolve with changing circumstances and life stages. Priorities and activities change with the seasons. And trends move in and out of favor with the viral speed of social media. Particularly in the case of new brands and nascent product categories, marketers may struggle with the rapid shift of their customer base from the passionate early adopters who ordered your products directly to

the mainstream shopping population who discovered your product only after its launch with a major retail partner. How much of the retail audience overlaps with your passionate core, and how should you think about marketing to these similar-but-not-the-same newcomers? The answer lies in a dynamic, always-on approach to defining an audience and analyzing its behavior. Tweaking the target audience definition midway through a marketing cycle may sound like blasphemy, but leading technology platforms enable brand marketers to be more responsive and agile as they learn new things about their customers. Most importantly, for those marketers managing an integrated predictive marketing platform, the data management tools that collect and surface these audience shifts are directly integrated with the marketing management tools that can make those insights actionable. The most effective brand marketers will deliver consistently positive experiences that appeal to the values of their core target audience, while also allowing the flexibility to adapt when that audience begins to show new needs or priorities.

The rise of household loyalty

Most CPG companies have a portfolio of brands under management, or a single brand that offers multiple occasion solutions. The opportunity and challenge is to break down the organizational silos and think about the customer, or better yet household, as a consumer of all your brands rather than of each brand individually. How can you build loyalty at breakfast, lunch, dinner, snack time? How can you build a company-loyal household, rather than just a brand-loyal household? Digital technology recognizes the moment a consumer is in, so the onus is on brand marketers to tune in and respond accordingly. Are consumers looking for a dinner recipe for tomorrow, or solving the dinner need right now because play practice ran long? Is it breakfast time or laundry time, or did the muddy dog just walk across the carpet? Digital gives marketers the opportunity to look and listen for these signals and then offer the most appropriate brand across their portfolio to best meet the needs in the moment of that customer. This evolution creates an advantage and opportunity for the P&G, Unilever, or Mars of the world— but also a key opportunity for those marketing complementary products. Milk and cereal, peanut butter and jelly, cheese and everything. Digital can help forward-leaning brands uncover and capitalize on new opportunities to manage customer- or even household-level loyalty across a portfolio of brands and products.

Brands still define their aud ience by answering *who*, but they also need to answer *why*

The transformation of how marketers approach customer segmentation can be thought of, in part, as a shift from a demographic-based identity to a needs-based identity. In an increasingly globalized economy it is likely that a CPG brand will find its strongest engagement with consumers whose needs are most fully met by the brand, cutting across traditional boundaries of gender, age, or geography. This is a positive move toward a more holistic view of a brand's customers and their motivations to try, buy, and hopefully advocate for your brand. There is also a growing opportunity for brands to think critically about purchase and consumption behavior at the household level, messaging to meet the differentiated needs of shoppers and consumers, while also acknowledging the potential synergies created by increasing brand engagement with any individual in the household. This is also the area where we expect AI to make the most profound impact on audience definition: AI will enable a predictive approach to customer needs, not just in finding the ideal target audiences for existing products, but also creating a mechanism for brands to avoid potholes and exploit opportunities to delight customers. For example, marketing AI could mine social data to uncover the most prevalent use cases for a new cleaning product—including both the winning moments in which the product delivers and the misfires where the product seems to fall short—and translate those insights into a refined model of the ideal target audience. In a dynamic, real-time analysis of each consumer engagement with the brand, the AI could identify subtle cues that indicate which consumers are more likely to benefit from the product and which consumers have similar needs that are just different enough to create the chance for a poor experience. Predicting a consumer's full experience with your brand, not just her propensity to engage or to make an initial purchase, will transform your ability to define a truly optimal target audience.

CONTENT

Brands must deliver a more robust value proposition to win more informed, hard-to-please customers

Capturing a consumer's undivided attention has never been as challenging as it is in 2017. For proof, look no further than the proliferation of videos showing waves of pedestrians walking past an actor in a gorilla suit, or some other out-of-place high jinks, without ever looking up from their smartphones to notice. Our digital connectedness has only increased the message clutter that we experience: in the 1970s, consumers saw 500 ads per day, and today they will see more than 5,000.[2] TV advertising viewership is challenged by time-shifting and a movement toward consuming video content in ad-free subscription platforms, but even more difficult to account for is the second screen: it has never been easier for consumers to disengage or opt-out completely from paid marketing messages. As a result, the bar is higher than ever for brands to create truly engaging content that will succeed in catching and keeping consumers' attention and engagement. However, this is not simply a call to refresh your brand's marketing and advertising messages. Instead, marketers should review every touchpoint in a consumer's interaction with the brand and consider each of those interactions as part of an integrated and strategic content plan. The classic four

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2 "Cutting Through Advertising Clutter," CBS News, September 17, 2006

Ps of marketing remain as relevant as ever: product, price, promotion, and placement all play a critical role in modern brand marketing. For CPG, key decisions include the design and delivery of the product itself, along with its packaging, and its presentation in the moment of purchase decisions—whether those moments are taking place in a grocery aisle, in an ecommerce website, or in a promoted social media post.

The most effective brands in 2017 have integrated their content management activities to deliver an optimized and consistent brand experience at every touchpoint. Surprisingly, many brands apply more rigor to content decisions in paid advertising placements on third-party websites (ex., dynamic creative optimization of video or banner ads) than to the experience consumers have engaging directly on the brand's own properties (ex., every consumer encounters the same home page and promotions). The future state of this dynamic approach is even more exciting, as brands can implement open innovation practices to aggregate big data sets that create incremental or wholly new product ideas, and test their market demand in real time.

Brands are extending personalization to new prospects, not just their most loyal customers

Unfortunately, beautiful and distinctive design and creative work is not enough in 2017. Your brand's content also needs to be personalized, and consumers' expectations for what constitutes accurate and valuable personalization continue to rise. There was a time not long ago when simple geography-based winks and nods would jump off the web page, whether they were flight deals from one's local airport or references to a regional sports team or event. Today, consumers expect more value in exchange for their attention, and CPG brands should think creatively and broadly about what it means to deliver value through their content.

Indeed, each paid advertising placement, marketing email, or visit to a social or brand page is an opportunity to connect with a consumer on a personal level—but only if you know who you're talking to.

As satisfying as a successful personalization experience can be, the misfires can be even more jarring. In addition, the expectation of personalization is not reserved to loyal customers who are returning or even engaging your content within a logged-in and deterministically identifiable state. Even when presenting a piece of content to a first-time visitor, brands should look for any available signal that could yield even slight insight to power personalization decisions. In practice, data management and personalization tools allow brands to consider the visitor's physical location as well as his web browsing and shopping behaviors, key demographic characteristics, and device, browser, and operating system, among many more specific data points captured and modeled by third-party providers. The combination of these signals could indicate important propensities and preferences toward different products or value propositions, or help the brand to gauge the likelihood that this prospect will develop into a high-value customer.

Insights into the visitor's long-term potential will help brands decide how best to engage each individual, even if the output is as simple as presenting incrementally more relevant offers or content. For example, most sites encourage visitors to engage the brand's social media channels, displaying links to their presence on every available platform. If the visitor is a loyal Instagram user, could he or she be turned off by strong calls to find the brand on Snapchat? These incremental improvements from one-size-fits-all toward increasingly personalized experiences will pull newcomers into your content and nudge returning customers further toward purchase repetition.

Brands must invest to develop content that is responsive and engaging in any medium

The proliferation of connected devices, consumer applications, and environments in which a consumer could experience your brand adds another bit of complexity: marketers must optimize their content not just for the consumer they are reaching, but also for the environment in which that content is being delivered. This goes beyond mobile-friendly design for your own website, although that is a must. Consider online video advertising, which for many brands has historically served as a new distribution channel for their TV spots. Given consumers' ability to skip ads after a few seconds, mute their ads, or simply switch to another browser tab and wait out the ad duration with other content, marketers need to think more critically about the intersection of form and function in their content. Rather than hoping to amortize one creative production effort across the maximum number of possible distribution points, marketers should think carefully about why they want their content to appear in a given environment, and how the mindset and behaviors of their target audience will differ in that environment. Further, marketers should consider the frequency of consumers' interactions with branded content and the potential for message fatigue. Will an ad be funny the first time, but quickly feel too cute when seen again and again? These factors are important to consider, especially for brands pushing their content into nascent or emerging digital channels and platforms where ad repetition could be far more likely than it typically would be on TV.

Products themselves will increasingly need to adapt dynamically to meet evolving customer needs

Winning brands will increasingly view their distributed and owned content—marketing messages, ad placements, social media presence, websites, ecommerce product pages—as feelers that detect and report back on consumer engagement, sentiment, and demand. These insights can be used to optimize those distributed and owned pieces of content themselves, but even more ambitious is the reality that these inputs can be applied to optimize the brand's core content— the product itself.

This is another area where AI will completely change the game—brands will be able to automate the flow of consumer preferences and response rates from direct digital touchpoints all the way back to the manufacturing or sourcing processes. Consider a consumable brand that could dynamically shift production toward the most popular flavors, as measured not just by sales— which may be too slow an input to capitalize on unmet demand—but instead by consumer engagement with individual pieces of content that promote each flavor variation of the product. Questions such as how much consumers worry about the health qualities of a specific ingredient, or the pet risks from a specific cleaning product, or the sweat resistance of a particular variation of a makeup product, can be derived from real-time consumer activity and pulled from passive consumer insight reports directly into the critical path of production and marketing. The power of this vision is not merely in generating more creative product ideas, but doing so with attributes that are automatically mapped to known audience attributes and affinities, and integrated seamlessly into the optimal marketing channels and tactics. Rather than conducting market research and closely aligning the corresponding product development cycles, big data and AI will allow brands to merge the two into a single iterative process.

CONTEXT

Brands must find creative, authentic ways to deliver messages to customers on their own terms

Even the perfect branded message can miss the mark—or worse, launch a PR firestorm—if it is not delivered in the right context. This goes beyond the famous examples of ad placement snafus, such as airline deals running alongside news stories about plane crashes. Instead, in 2017 brands must think in the broadest possible terms about the content they plan to deliver to their target audiences, and how those audiences are likely to engage (or disengage) in the context of each channel, platform, or circumstance. Rather than a tactical media planning decision, the choice about how best to present your brand in each context is a strategic process for brands. In other words, simply because a brand's audience spends time consuming media or engaging with others in a particular online channel does not mean that they care to hear from that brand in that context. Whether it's a brand awkwardly butting into a Twitter conversation, or a brand's Facebook post spamming their fans' newsfeeds to the point of being muted, most marketers have seen examples of these miscues. The driving factor here is that consumers have more power than ever to dictate when and where they engage with branded content, and their preferences in this area are critical insights for marketers to develop and fold into their brand strategy. Your product may be invaluable in the medicine cabinet, but that doesn't mean your customers are eager to engage on Snapchat.

Brand experiences need to be agnostic and portable across channels, environments, and devices

The range of contexts in which consumers spend their time and engage with content and each other is growing all the time. To meet customers where they are and where they are most likely to engage, brand marketers need to think broadly and throw out any preconceived notions about the right or wrong channels for their brand. This could mean jumping straight onto the hot new social application for some brands, and it could mean holding on to more traditional web sponsorship and takeover buys for other brands. To be truly customer-centric and channel-agnostic does not mean that a brand should be everywhere its customer could be found. No channel or environment should be dismissed out of hand, and none should be viewed as indelibly part of a media plan. In an ideal case, marketers will use automation and AI to cast a wide net before quickly discovering where their message resonates and where it falls flat. The days of rolling media plans from year to year with only slight budget reallocations are certainly over, and the most successful brands refine their media placement strategy through a series of continuous experiments that seek to apply the latest audience insights and probe for new opportunities for meaningful engagement.

Brand marketing recognizes and adapts to where customers are in their nonlinear journeys

Context takes on a figurative definition here, because consumers are not only engaging your brand in a wide range of websites, applications, and environments, they are also experiencing your brand at every possible stage of the customer journey. Consider this: a given digital advertising campaign will reach totally new prospects who have never heard of your brand, and it will reach loyalists who regularly buy and recommend your products, and a whole host of others somewhere in between. This reinforces the need for intelligent personalization tools and dynamic content capabilities. Otherwise a brand risks being perceived as tone-deaf in miscommunicating to one type of customer as if he were another. The nonlinear customer journey is especially complicated, because consumers can and do access peer reviews and online watchdog resources from anywhere via their smartphones. Even standing in the grocery aisle with product in hand, consumers can easily shoot back up the funnel into comparison shopping and exploration mode if they receive a competitor's promotion. On the other end of the spectrum, it's possible that aggressive promotions offered in response to branded search activity could be too early in a customer's evaluation process to resonate and induce purchase. Increasingly intelligent digital tools will prevent brands from diluting base sales through promotion activity, and instead drive promotion activity when and where it will deliver incremental sales.

Brands are adopting an updated definition of quality interactions between consumers and brands

One factor that has not changed is brand marketers' pursuit of quality engagement between their brand and their target audiences. However, the ways of defining and managing quality are constantly evolving, and qualitative inputs such as survey results are increasingly

giving way to more scalable and quantifiable quality factors such as viewability, in-audience verification, and brand safety. The leading brands in 2017 have folded these quality considerations into their marketing, media, and content strategies in an effort to ensure that each touchpoint can create genuine value and build brand equity over time.

AI presents new possibilities in this area, with innovative technologies continuing to redefine and expand the ways that brands can measure the impact of each attribute within a consumer's interaction with a brand, and shifting from responsive marketing to truly predictive marketing. AI enables this shift by ingesting new data inputs, many of which are adjacent and indirect, such as concurrent search activity and Twitter sentiment, and developing models that predict the ways a specific brand message is likely to resonate with a specific audience. This type of capability will move brands from the reactive, binary approach of shutting down marketing activities during times of brand trouble or ongoing PR concerns but otherwise flying on autopilot, toward a much more proactive and intelligent approach, where marketing activity is automatically steered away from contexts and audiences where it is unlikely to resonate (even temporarily) and redirected toward environments where it will be most productive. In the future, our ability to quantify the impact of marketing engagements will evolve even further beyond the tactile measures of activity, engagement, and output that we rely upon today. Advances in facial recognition and wearable technology will introduce whole new fields of consumer engagement measurement, and the resulting big data sets will provide enormous possibilities for deep learning on the relationship between specific marketing stimuli and the resulting neural patterns and attitudinal responses, before or in the absence of output and behavioral responses. In other words, brands will be able to shift from asking consumers to describe how experiences made them feel to measuring it directly.

Spotlight: the (digital) evolution of shopper marketing:

CPG has always been a leader in customer-first research and experience delivery. Shopper marketing was pioneered by CPG companies and retailers—it reshaped the way brands were presented and positioned and put understanding of your customers at the center of decisions and actions. How did you as a brand or retailer meet their needs? What was the optimal presentation or planogram to deliver that brand experience? Is the customer expecting value, size, flavor, and what is the best package to deliver that in? This shopper knowledge—and the approach taken to gather and apply it—is exactly how CPG companies now need to approach their digital consumer opportunities. Most CPG companies struggle to make this direct connection and give customers a reason to visit their owned web pages or download their mobile application. Instead, CPG brands have been separated from their customers first by brick-and-mortar retailers like Kroger or Walmart, and now by e-tailers like Amazon and eBay. Digital is effectively removing the barrier, however, and CPG companies now have opportunities to connect directly with customers and be the guide to that end-purchase decision, rather than depending on the indirect influence of TV and trade funds alone. The proverbial digital "end-cap" is where most CPG companies are playing today. Digital ads are those roadblock interruptions that engage customers to remind them to buy. Expect to see trade funds being reallocated to leverage this new digital reality, and look for retailers to create new opportunities for CPG manufacturers to place those digital dollars on their e-store properties.

MEASUREMENT

AI is helping brands to understand the real impact of each interaction with a customer

Brand marketing has been transformed by data and technology in the sense that communication and engagement between brands and consumers are now truly bidirectional. This is a huge improvement from the days of one-way broadcast pushes that allowed for minimal feedback or direct measurement. Instead of relying on passive, indirect, or delayed measurements to gauge the impact of their marketing content, brands can now take advantage of new digital capabilities to understand how consumers perceive and experience their brand. The definition of measured media as marketers have come to know it is changing, because brands now have tools to measure the impact of interactions between consumers and their brand in a wide range of environments that goes beyond paid advertising placements or the brand's own content destinations. Brand experiences are playing out and being shared across review sites, search activity, social media feeds, and online communities, and marketers can monitor the trends and developments across this landscape to understand what is working, what is not working, and most important of all, why. Shifts in digital behavior are creating new ways to measure and evaluate brand engagement, like the Sharing Score from ShareThis, which indicates the degree to which your content generates an active endorsement via

sharing, compared to the positive but more passive endorsement of a Like or upvote. Connecting these independent data sources and integrating them into a cohesive hub of brand sentiment and marketing impact are critical steps for CPG brands, because these inputs and the resulting insights will serve as the brain that powers the automated audience, content, and context capabilities previously discussed. Measurement closes the loop and creates a virtuous cycle of continuous improvement and optimization, and AI powers the cycle by finding meaningful signal within enormous and unstructured data sets.

Brands are adding new digital metrics to the classic measures of reach, resonance, and reaction

Brand marketers have a range of frameworks for organizing their metrics, but all contain variations of the same component questions. Is my message reaching the intended audience? Is my message engaging and connecting with that audience in a positive and meaningful way? Is that connection driving a positive change in sentiment or behavior? These are the same questions that CPG marketers faced in the 1960s, and the underlying objectives of brand marketing have changed little. However, the toolkit available for answering these questions has experienced a period of rapid innovation and improvement in even just the last three years. Not long ago, CPG marketers depended on click-through rates to measure consumer engagement. Today, the leading brands are using a combination of viewability, in-audience reach, fraud detection, hover time, and other nonclick metrics to quantify each aspect of a consumer's interaction with the brand, whether it comes in the form of a paid ad placement, an email, a sponsorship, or another form of distributed content. The leading brands have woven these new measurement capabilities into the core of their marketing planning and management operations, using these new standards as quality filters and negotiating for improved transparency and quality with all marketing vendors and media partners.

Brands are mining big data to move from proxy metrics to true measurements of brand health

While today's growing suite of quality and brand engagement metrics are an improvement over the broad reach metrics of yesterday, they are still ultimately proxies for a measurement of true brand health. However, the breadth and depth of new brand engagement and quality signals have created a unique opportunity for brands to leverage technology and develop their own customized models of brand health. AI will continue to develop and allow brands to uncover predictive connections between increasingly complex and diverse networks of signals. For example, think of a microwave popcorn brand monitoring search behavior, social media sentiment, weather, seasonality, video on demand activity, and trends in consumer perceptions of salty and buttery snacks to predict which markets could see improved response to an upcoming product launch. The future in this area takes classic marketing mix modeling and consumer survey analysis and melds them into a more dynamic and automated process for exploring and exploiting opportunities for brand growth across markets. **Brand marketers who move quickly to build advanced capabilities will enjoy growing advantages in the coming years as traditional measurement techniques and metrics become increasingly ineffective for capturing the complexity of brand health in a dynamic, digital economy.**
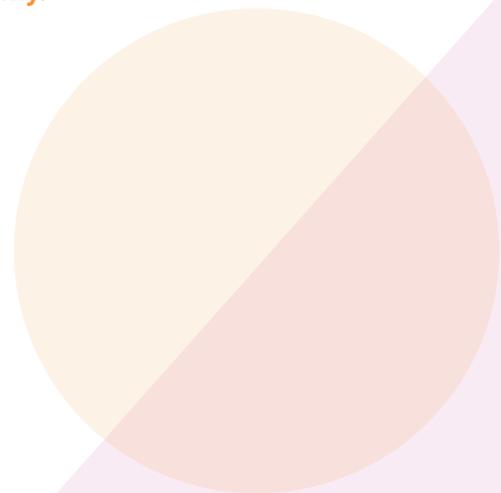
Measurement strategies are evolving to incorporate data from IoT and wearable sensor ecosystems

In addition to improvements in computing power and the ability to draw connections among seemingly independent metrics, brand measurement will also be transformed by the Internet of Things (IoT) and the introduction of entirely new data sets and data collection mechanisms. Sensors and physical beacons are already changing the ways that CPG brands and their retail partners can measure and manage the shopping experience in physical stores. Consider a shopper who receives different offers as she peruses each store aisle, or another who creates a shopping list in her grocer's smartphone app and receives an alert and alternative suggestions if an item on her list is known to be out of stock. These data collection and brand experience opportunities are rapidly moving out of the store. Wearable devices, smart interfaces in cars, virtual home assistants, and smart appliances have already arrived in varying states of maturity, and the pace of improvement and innovation is only quickening. While most marketers will view these new touchpoints as potential content delivery channels, they should also be considered as data collection and measurement vehicles. There will be new and unprecedented opportunities to understand consumers' post-purchase preferences and behaviors, and to more deeply evaluate your brand's relative place within a consumer's hierarchy of brand preferences. **Brand marketers will be most challenged not in finding interesting data about their customers, but in deciding how best to design and mine this rising tide of data for insights that lead to better brand experiences.**

CONCLUSIONS

Brand marketers in 2017 need to invest in data and their ability to harness it for decision-making

The stakes for brand-building are higher than ever, because consumers have never had more choices, more information, and more alternative purchase and delivery models at their fingertips. The result is a hypercompetitive environment in which only the most authentic brands will manage to build and maintain winning connections with their customers; the rest will struggle to differentiate amidst the steady push of commoditization and market share loss to down-market or white label brands. There is good news: while cutting through the clutter to win consumers' attention has become more difficult, there is a clear trend toward rapid mass adoption in cases where brands have been able to create truly remarkable and immersive experiences. The definition of a remarkable experience will vary widely across industries and categories, but brand marketers should be energized by the knowledge that consumers will reward them for cracking the code. As the importance of brand-building has increased, so has the complexity of data and technology capabilities in the brand marketer's toolkit. With a connected, digital consumer at the center of their strategy, brand marketers now have a path toward an increasingly automated and intelligent approach to brand-building. Every detail of the brand experience— including ideal target audiences, branded content, advertisements, packaging, and even the makeup of the products themselves—can now be measured,

optimized, and in some cases automated to deliver a more personalized, resonant experience to customers and prospects. Brands that embrace this challenge and take steps to harness the leading capabilities will consistently win out over their competitors who attempt to carry yesterday's brand marketing playbook forward into tomorrow's environment.

Existing tools and best practices offer a winning toolkit for brands who embrace data and technology

With such lofty possibilities, it can be easy to lose sight of the concrete opportunities for brand marketers here in 2017. Fortunately, there is plenty of steak to go along with the sizzle: leading brands are already implementing much of the vision outlined in this paper, and brands who adopt best practices can quickly catch up to their more advanced and innovative colleagues and competitors.

- In the area of **audience**, brand marketers can take an integrated, cross-device view of defining their target customers. This step will nudge your brand marketing away from broadly defined audience sketches that rely too heavily on demographic factors and shift your audience profiles into a more dynamic, behavioral approach to profile development that is more accurate and also more actionable in digital marketing activities.

- In **content**, brand marketers can think holistically about all the content forms their brand can take across the digital and nondigital environments in which consumers experience and interact with the brand. The content should be consistent across both forms, and on the digital side the leading brands will use integrated personalization technologies to ensure that each consumer,

whether new or known to your brand, is presented with the content that will optimize his or her experience with and perception of your brand.

- In the area of **context**, brand marketers adhering to best practices will take an agnostic view of device types, media categories, and marketing channels to adapt seamlessly to whichever combinations prove most beneficial in reaching the target audience and creating positive experiences in those environments. Further, the content delivered in these varying environments will be tuned and customized to fit the form and function of each context, as well as to reflect the more figurative context of that particular consumer's stage of the purchase journey.

- Finally, brand marketers can take steps to add important new **metrics** to their marketing and brand health scorecards, including digital quality metrics such as fraud rates, viewability rates, and in-audience scores. In addition to direct content engagement metrics, brands can monitor and overlay social and other indirect sentiment or mention data to create a more cohesive view of their brand presence. No one metric will yet serve as the single goal, and marketers will need to work carefully to analyze the potential correlations and tradeoffs among these different quality and brand health metrics. Where possible, these measurement developments should be integrated directly into the content development and marketing planning functional workflows, enabling data and insight to directly influence consumers' brand experience.

AI is a game-changer that will quickly transform brand marketing and reshape markets in the process

AI appears throughout this paper as a common driver of innovation and potential improvements in each facet of CPG brand marketing. We see transformative potential for the brands that embrace AI as a core component of their approach to marketing, building a data architecture to collect and organize all brand and consumer data and applying AI to identify the most valuable and actionable predictive connections among those combined data sets. This architecture forms the foundation for the dynamic, intelligent brand-customer stack that takes the place of the linear, transactional broadcast machine that defined the brand-customer interface in the past. In this new paradigm, the brand is one and the same with its real-time interactions with consumers, and this sense of ownership and influence engenders long-term loyalty among those consumers who identify most deeply with the brand's values. CPG marketers will find a wide range of activation opportunities for those insights, from the straightforward audience targeting and web content optimization use cases of today to more ambitious use cases around truly dynamic and personalized content development and product distribution. As consumers generate richer digital data about their needs and preferences, and as they spend more time interacting with new categories of connected and smart devices, there will be no shortage of potential inputs and outputs for brand marketers to consider, or of computing power to manage and process the information. Instead, the only limitation moving forward in predictive marketing will be the foresight and creativity required to lean in to these emerging capabilities and leverage them to create amazing brand experiences that capture consumers' attention, appeal to their values, and win their loyalty.

ABOUT THE ROCKET FUEL INSTITUTE

The Rocket Fuel Institute is a research initiative dedicated to the transformative field of artificial intelligence (AI) in digital marketing. The RFI aims to transform the digital industry, propelling it to the forefront of the global shift to artificial intelligence by exploring innovation at the intersection of data, technology, and customer experiences. We seek ways to enable and sustain AI-based growth in marketing and across verticals by understanding how digital transformation and adaptive automation, combined with human intuition, accelerate over time. Our long-term research goal is to converge academic research with applied sciences in machine intelligence to understand the nature of brand experiences. For inquiries into our existing or forthcoming work, or to discuss how you might partner with us, please reach out to:

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ABOUT THE PREDICTIVE VERTICAL SERIES

The Predictive Vertical series explores the way marketers in respective industry categories can gain a significant competitive advantage with best-of-breed solutions. The series covers in-depth macro trends that are shaping the global economy, defining the fate of companies and careers, while providing a sweeping perspective on the most advanced tools that are changing the way brands interact with audiences, and the way businesses achieve actionable insights to make more informed decisions in finance, CPG, retail, healthcare, and travel.

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