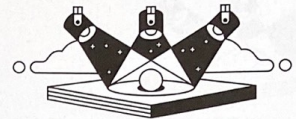


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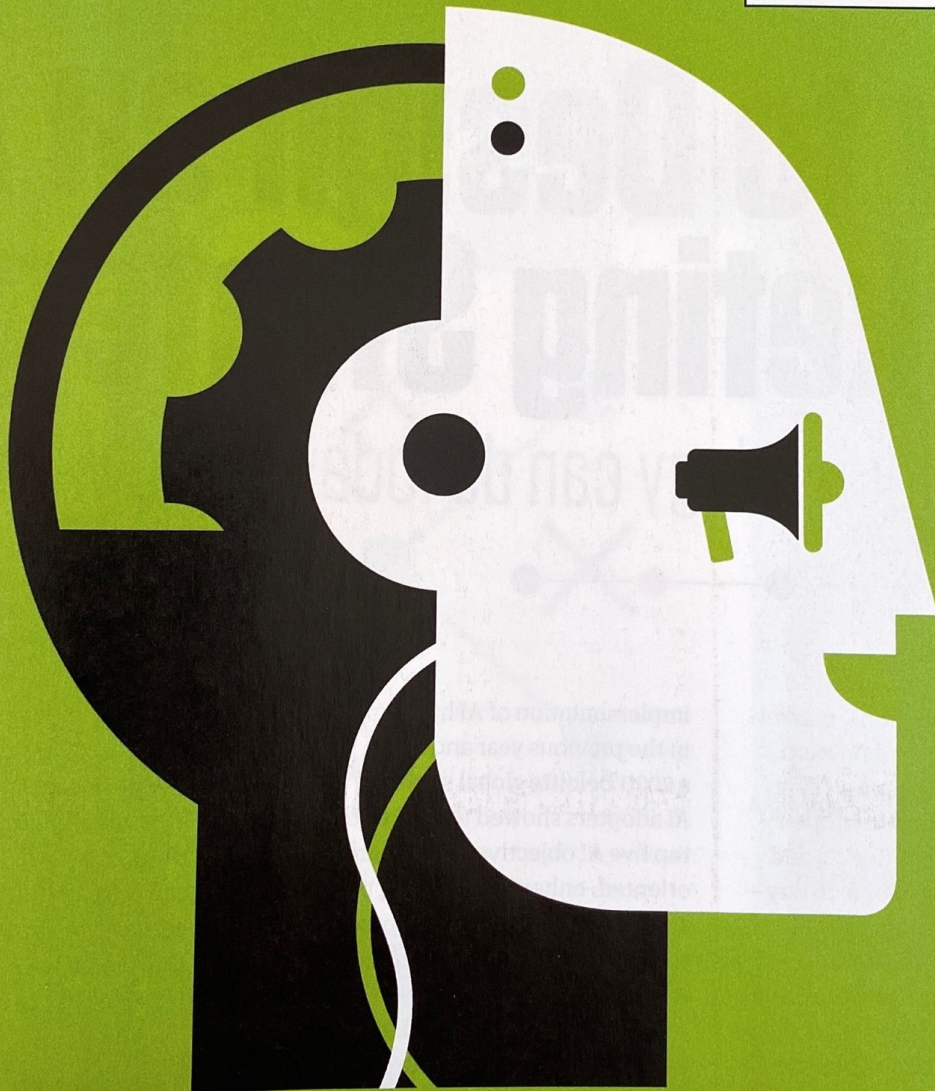
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Spotlight

AI-Powered Marketing



How to Design an AI Marketing Strategy

What the technology can do today—and what's next



OF ALL A company's functions, marketing has perhaps the most to gain from artificial intelligence. Marketing's core activities are understanding customer needs, matching them to products and services, and persuading people to buy—capabilities that AI can dramatically enhance. No wonder a 2018 McKinsey analysis of more than 400 advanced use cases showed that marketing was the domain where AI would contribute the greatest value.

Chief marketing officers are increasingly embracing the technology: An August 2019 survey by the American Marketing Association revealed that

implementation of AI had jumped 27% in the previous year and a half. And a 2020 Deloitte global survey of early AI adopters showed that three of the top five AI objectives were marketing-oriented: enhancing existing products and services, creating new products and services, and enhancing relationships with customers.

While AI has made inroads in marketing, we expect it to take on larger and larger roles across the function in the coming years. Given the technology's enormous potential, it's crucial for CMOs to understand the types of marketing AI applications available today and how

they may evolve. Drawing on more than a decade of experience studying data analytics, AI, and marketing and advising companies across industries about them, we've developed a framework that can help CMOs classify existing AI projects and plan the rollout of future ones. But before we describe the framework, let's look at the current state of play.

Today's AI

Many firms now use AI to handle narrow tasks, such as digital ad placement (also known as "programmatic buying"); assist with broad tasks, li



enhancing the accuracy of predictions (think sales forecasts); and augment human efforts in structured tasks, such as customer service. (See the sidebar “Well-Established AI Applications in Marketing” for a list of some common activities AI can support.)

Firms also employ AI at every stage of the customer journey. When potential customers are in the “consideration” phase and researching a product, AI will target ads at them and can help guide their search. We see this happening at the online furniture retailer Wayfair, which uses AI to determine which customers are most likely to be persuadable and, on the basis of their browsing histories, choose products to show them. And AI-enabled bots from companies such as Vee24 can help marketers understand customers’ needs, increase their engagement in a search, nudge them in a desired direction (say, to a specific web page), and if needed, connect them to a human sales agent by chat, phone, video, or even “cobrowsing”—allowing an agent to help the customer navigate a shared screen.

AI can streamline the sales process by using extremely detailed data on

individuals, including real-time geolocation data, to create highly personalized product or service offers. Later in the journey, AI assists in upselling and cross-selling and can reduce the likelihood that customers will abandon their digital shopping carts. For example, after a customer fills a cart, AI bots can provide a motivating testimonial to help close the sale—such as “Great purchase! James from Vermont bought the same mattress.” Such initiatives can increase conversion rates fivefold or more.

After the sale, AI-enabled service agents from firms like Amelia (formerly IPsoft) and Interactions are available 24/7 to triage customers’ requests—and are able to deal with fluctuating volumes of service requests better than human agents are. They can handle simple queries about, say, delivery time or scheduling an appointment and can escalate more-complex issues to a human agent. In some cases AI assists human reps by analyzing customers’ tone and suggesting differential responses, coaching agents about how best to satisfy customers’ needs, or suggesting intervention by a supervisor.

The Framework

Marketing AI can be categorized according to two dimensions: intelligence level and whether it’s stand-alone or part of a broader platform. Some technologies, such as chatbots or recommendation engines, can fall into any of the categories; it’s how they’re implemented within a specific application that determines their classification.

Let’s look at the two types of intelligence first.

Task automation. These applications perform repetitive, structured tasks that require relatively low levels of intelligence. They’re designed to follow a set of rules or execute a predetermined sequence of operations based on a given input, but they can’t handle complex problems such as nuanced customer requests. An example would be a system that automatically sends a welcome email to each new customer. Simpler chatbots, such as those available through Facebook Messenger and other social media providers, also fall into this category. They can provide some help to customers during basic interactions, taking customers down a defined

IDEA IN BRIEF

THE CHALLENGE

At many firms, the marketing function is rapidly embracing artificial intelligence. But in order to fully realize the technology’s enormous potential, chief marketing officers must understand the various types of applications—and how they might evolve.

THE FRAMEWORK

Classifying AI by its intelligence level (whether it is simple task automation or uses advanced machine learning) and structure (whether it is a stand-alone application or is integrated into larger platforms) can help firms plan which technologies to pursue and when.

IMPLEMENTATION

Companies should take a stepped approach, starting with rule-based, stand-alone applications that help employees make better decisions, and over time deploying more-sophisticated and integrated AI systems in customer-facing situations.



Machine-learning models can recognize images, decipher text, segment customers, and anticipate how customers will respond to various initiatives, such as promotions.

decision tree, but they can't discern customers' intent, offer customized responses, or learn from interactions over time.

Machine learning. These algorithms are trained using large quantities of data to make relatively complex predictions and decisions. Such models can recognize images, decipher text, segment customers, and anticipate how customers will respond to various initiatives, such as promotions. Machine learning already drives programmatic buying in online advertising, e-commerce recommendation engines, and sales propensity models in customer relationship management (CRM) systems. It and its more sophisticated variant, deep learning, are the hottest technologies in AI and are rapidly becoming powerful tools in marketing. That said, it's important to clarify that existing machine-learning applications still just perform narrow tasks and need to be trained using voluminous amounts of data.

Now let's consider stand-alone versus integrated AI.

Stand-alone applications. These are best understood as clearly demarcated, or isolated, AI programs. They're separate from the primary channels through which customers learn about, buy, or get support for using a company's offerings, or the channels employees use to market, sell, or service those offerings. But simply, customers or employees have to make a special trip beyond those channels to use the AI.

Consider the color-discovery app created by Behr, the paint company. Using IBM Watson's natural language processing and Tone Analyzer capabilities (which detect emotions in text), the

application delivers several personalized Behr paint-color recommendations that are based on the mood consumers desire for their space. Customers use the app to short-list two or three colors for the room they intend to paint. The actual sale of paint is then executed outside the app, although it does allow a connection to order from Home Depot.

Integrated applications. Embedded within existing systems, these AI applications are often less visible than stand-alone ones to the customers, marketers, and salespeople who use them. For example, machine learning that makes split-second decisions about which digital ads to offer users is built into platforms that handle the entire process of buying and placing ads. Netflix's integrated machine learning has offered customers video recommendations for more than a decade; its selections simply appear in the menu of offerings viewers see when they go to the site. If the recommendation engine were stand-alone, they would need to go to a dedicated app and request suggestions.

Makers of CRM systems increasingly build machine-learning capabilities into their products. At Salesforce, the Sales Cloud Einstein suite has several capabilities, including an AI-based lead-scoring system that automatically ranks B2B customer leads by the likelihood of purchase. Vendors like Cogito, which sells AI that coaches call center salespeople, also integrate their applications with Salesforce's CRM system.

Combining the two types of intelligence and two types of structure yields the four quadrants of our framework: stand-alone machine-learning apps,

Well-Established AI Applications in Marketing

- Chatbots for lead development, customer support, and cross-selling or upselling
- Inbound call analysis and routing, and customer comment and email analysis, classification, and response
- Marketing campaign automation (including emails, landing page generation, and customer segmentation)
- Marketing mix analysis
- Online product merchandising
- Pricing
- Product or service recommendations and highly personalized offers
- Programmatic digital ad buying
- Sales lead scoring
- Social-media planning, buying, and execution
- Social-media sentiment analysis
- Television ad placement (partial)
- Web analytics narrative generation
- Website operation and optimization (including testing)

integrated machine-learning apps, stand-alone task-automation apps, and integrated task-automation apps. (For more, see the exhibit "The Four Kinds of Marketing AI.")

Understanding which quadrant applications fall into can help marketers plan and sequence the introduction of new uses.

A Stepped Approach

We believe that marketers will ultimately see the greatest value by pursuing integrated machine-learning applications, though simple rule-based and task-automation systems can enhance highly structured processes and offer reasonable potential for commercial returns. Note, however, that nowadays task automation is increasingly combined with machine learning—to extract key data from messages, make more-complex decisions, and personalize communications—a hybrid that straddles quadrants.

Stand-alone applications continue to have their place where integration is difficult or impossible, though there are limits to their benefits. Therefore,

we advise marketers to move over time toward integrating AI within current marketing systems rather than continue with stand-alone applications. And indeed, many companies are heading in that overall direction; in the 2020 Deloitte survey, 74% of global AI executives agreed that “AI will be integrated into all enterprise applications within three years.”

Getting Started

For firms with limited AI experience, a good way to begin is by building or buying simple rule-based applications. Many firms pursue a “crawl-walk-run” approach, starting with a stand-alone non-customer-facing task-automation app, such as one that guides human

service agents who engage with customers.

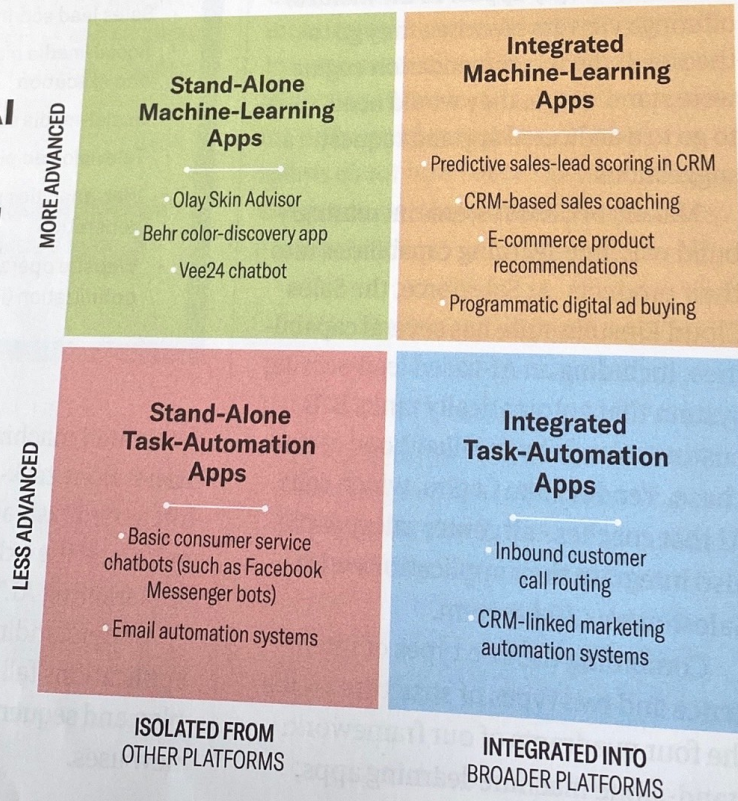
Once companies acquire basic AI skills and an abundance of customer and market data, they can start moving from task automation to machine learning. A good example of the latter is Stitch Fix’s clothing-selection AI, which helps its stylists curate offers for customers and is based on their self-reported style preferences, the items they keep and return, and their feedback. These models became even more effective when the company began to ask customers to choose among Style Shuffle photos, creating a valuable source of new data.

New sources of data—such as internal transactions, outside suppliers, and even potential acquisitions—are something marketers should look for constantly, since most AI applications, particularly machine learning, require vast amounts of high-quality data. Consider the machine-learning-based pricing model that the charter jet firm XO used to increase its EBITDA by 5%: The key was to tap external sources for data on the supply of private jets and on factors that affect demand, such as major events, the macroeconomy, seasonal activity, and the weather. The data XO uses is publicly available, but it’s a good idea to also seek proprietary sources whenever possible, because models using public data can be copied by competitors.

As companies become more sophisticated in their use of marketing AI, many fully automate certain types of decisions, taking humans out of the loop entirely. With repetitive, high-speed decisions, such as those required for programmatic ad buying (where digital ad

The Four Kinds of Marketing AI

Categorizing potential applications according to their intelligence level and structure can help companies plan the rollout of their marketing AI. Simple stand-alone apps are a good place to begin because they’re easier to set up, but their benefits are limited. Once companies acquire AI skills and amass data, they can add apps that are more advanced and are part of other platforms, working their way up to integrated machine learning, which has the potential to create the most value.





Firms should move to more-automated decisions whenever possible. This is where the greatest returns from marketing AI will be found.

are served up almost instantaneously to users), this approach is essential. In other domains AI may only present recommendations to a person faced with a choice—for example, suggesting a movie to a consumer or a strategy to a marketing executive. Human decision-making is typically reserved for the most consequential questions, such as whether to continue a campaign or to approve an expensive TV ad.

Firms should move to more-automated decisions whenever possible. We believe this is where the greatest returns from marketing AI will be found.

Challenges and Risks

Implementing even the simplest AI applications can present difficulties. Stand-alone task-automation AI, despite its lower technical sophistication, can still be hard to configure for specific workflows and requires companies to acquire suitable AI skills. Bringing any kind of AI into a workflow demands careful integration of human and machine tasks so that the AI augments people's skills and isn't deployed in ways that create problems. For instance, while many organizations use rule-based chatbots to automate customer service, less-capable bots can irritate customers. It may be better to have such bots assist human agents or advisers rather than interact with customers.

As companies adopt more-sophisticated and integrated applications, other considerations arise. Incorporating AI into third-party platforms, in particular, can be tricky. A case in point is offered by Procter & Gamble's Olay Skin Advisor, which uses deep learning to analyze

selfies that customers have taken, assess their age and skin type, and recommend appropriate products. It is integrated into an e-commerce and loyalty platform, Olay.com, and has improved conversion rates, bounce rates, and average basket sizes in some geographies. However, it has been harder to integrate it with retail stores and Amazon, third parties that account for a high percentage of Olay's sales. The Skin Advisor is not available on Olay's extensive store site on Amazon, hampering the brand's ability to deliver a seamless, AI-assisted customer experience there.

Finally, companies must keep customers' interests top of mind. The smarter and more integrated AI applications are, the more worries customers may have about privacy, security, and data ownership. Customers may be skittish about apps that capture and share location data without their knowledge or about smart speakers that may be eavesdropping on them. In general, consumers have shown a willingness (even eagerness) to swap some personal data and privacy in exchange for the value that innovative apps can provide. Concerns about AI applications like Alexa seem to be dwarfed by appreciation of their benefits. Thus the key for marketers as they expand the intelligence and reach of their AI is to ensure that its privacy and security controls are transparent, that customers have some say over how their data is collected and used, and that they get fair value from the firm in exchange. To guarantee those protections and maintain customers' trust, CMOs should establish ethics and privacy review boards—with both marketing and legal experts—to vet AI

projects, particularly those that involve customer data or algorithms that may be prone to bias, such as credit scoring.

WHILE MARKETING AI holds enormous promise, we urge CMOs to be realistic about its current capabilities. Despite the hype, AI can still accomplish only narrow tasks, not run an entire marketing function or process. Nevertheless, it's already offering substantial benefits to marketers—and in fact is essential in some marketing activities—and its capabilities are rapidly growing. We believe that AI will ultimately transform marketing, but it's a journey that will take decades. The marketing function and the organizations that support it, IT in particular, will need to pay long-term attention to building AI capabilities and addressing any potential risks. We urge marketers to start developing a strategy today to take advantage of AI's current functionality and its likely future. ©

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