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Tracking Progress of AI Adoption: A Marketing Applications Taxonomy and Scorecard

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Tracking Progress of AI Adoption: A Marketing Applications Taxonomy

Introduction

Poised to transform the practice of marketing, artificial intelligence (AI) represents a tremendous opportunity – and challenge – for marketers. It offers new ways to build brands and achieve marketing objectives (Kumar et al. 2024). In this paper, we view AI as encompassing machine learning and automation technologies, plus newer generative AI technologies based on large language models (LLMs).

While the long-term benefits and downsides of AI are not yet fully known, AI has already been embraced by many consumers and marketers alike (Grewal 2024; Kopalle 2022). Before generative AI started to experience rapid adoption with the launch of ChatGPT in 2022, marketers were already using forms of AI, like machine learning, to automate marketing workflows and optimize marketing programs. Thus, for over a decade, marketers have been harnessing AI to gain efficiency and effectiveness. The relatively recent innovation of generative AI, however, has spurred increased adoption of AI technology by marketers (Grewal et al. 2025; Kshetri et al. 2023).

Marketing organizations are seeking to employ AI in every way possible (Hopf et al. 2023). In such a dynamic marketing environment, however, it can be difficult to keep track of all the AI developments and potential applications (Pettersson 2025). Although trying to benchmark AI's applications in the marketing management process is undoubtedly a moving target, it is nevertheless helpful to establish a foundation of the more common areas of AI applications that can currently be found across leading companies with their marketing.

Towards a goal of laying a foundation of AI applications in marketing, we have developed a comprehensive taxonomy to describe how marketers are applying AI. Based on a thorough examination of current industry practices, the taxonomy, described in more detail below, is comprised of AI marketing applications in five core domains:

- *Interpretation*: Collecting and analyzing data to generate insights
- *Direction*: Crafting marketing strategy and tactics
- *Creation*: Creating new products, services, content and creative assets
- *Connection*: Developing novel ways of engaging consumers with a brand
- *Optimization*: Optimizing marketing performance and resource utilization

Our discussion is organized as follows. In the next section, we elaborate on the taxonomy by delving into two major subdomains for each of the five core domains. Across the ten subdomains, we highlight twenty-four common applications of AI in marketing. We next discuss how the five domains relate to each other and the different phases and pathways that firms can take with respect to the adoption of AI in their marketing. We then use the domains, subdomains and common applications to create an AI marketing adoption scorecard that companies can use to mark their progress. We conclude with some summary comments.

A Taxonomy of AI Applications in Marketing

In this section, we examine the five core domains of AI applications in marketing and ten major subdomains of the taxonomy in detail. To elucidate the ten subdomains, we discuss two or more common applications of AI within each subdomain. In total, we showcase 24 common marketing applications with AI. For each application, we include one or more sample applications, i.e., real-world illustrations of how a specific company has used AI for that application. The 24

applications are not intended to be exhaustive, but instead to illustrate some of the primary ways that companies are using AI to date for each subdomain. Fig. 1 summarizes our full taxonomy.

Fig. 1. AI Marketing Applications Taxonomy: Domains, Sub-Domains, and Common Applications

A. Interpretation

- a. **Research:** Conducting market research and synthesizing findings
 - Designing | Fielding | Synthesizing
- b. **Analytics:** Performing advanced diagnostic & predictive data analytics
 - Diagnosing | Predicting

B. Direction

- a. **Strategy:** Developing marketing strategy
 - Segmentation and Targeting | Positioning
- b. **Tactics:** Developing operational plans to implement the strategy
 - Marketing Communications | Distribution | Pricing

C. Creation

- a. **Products & services:** Developing products and services
 - Ideating | Prototyping | Building | Simulating
- b. **Marketing assets:** Generating and co-creating content & creative
 - Producing Content and Creative | Co-creating Content and Creative

D. Connection

- a. **Personalization:** Hyper-customizing communications and experiences
 - Customizing Communications | Customizing Experiences
- b. **Responsiveness:** Engaging with prospects and customers in real time
 - Conversing with Consumers | Performing Actions

E. Optimization

- a. **Performance:** Optimizing performance of marketing programs and channels
 - Optimizing Content and Creative | Optimizing Delivery
- b. **Resources:** Optimizing resource utilization via operational efficiency
 - Automating Workflows | Allocating Resources

A. INTERPRETATION

The Interpretation domain relates to how AI can impact the collection and analysis of data to generate insights to inform strategy. AI models are adept at quickly analyzing vast quantities of data and synthesizing relevant findings, making AI useful for the interpretation of research and data analysis. The breadth, depth and speed offered by AI can yield insights that companies may not have otherwise uncovered. Many companies have already begun to use AI extensively in the context of the Interpretation domain.

Research

Marketers are using AI across the full lifecycle of market research: designing, fielding, and synthesizing findings (Korst et al. 2025).

Designing

When designing qualitative or quantitative primary research, marketers can use AI to perform tasks such as crafting a research brief, identifying the target sample, collecting respondent contact information, and recruiting respondents (Blanchard et al. 2025). AI can be used to draft research hypotheses to test, write and translate questionnaires, and create images or video of concepts to be tested. Many online research platforms have incorporated AI into their offerings to help marketers create more surveys more quickly (Survey Monkey 2026).

Sample Application: Hornblower, an operator of ferries and sightseeing tours in over 10 countries, used AI to optimize the design of the feedback surveys it sends to the 20 million customers it serves annually. AI makes expert recommendations on the survey design. “[AI] lets me know if a question is too complicated, if the flow of a survey doesn't make sense, if it takes too long to finish,” noted a Hornblower consumer insights leader. “The end result is that my surveys are faster, easier to complete, and they get a much higher response rate from my customers.”

Fielding

Marketers can use AI to identify, recruit and screen potential respondents. AI chatbots can also serve as moderators to conduct qualitative research in one-on-one interviews or focus groups with multiple respondents together (Outset 2026).

Sample Application: HubSpot developed an AI-moderated qualitative research program that operated quarterly. An AI interviewer conducted in-depth interviews with HubSpot customers. It ran the sessions, asked follow-up questions, and synthesized the findings. HubSpot was able to complete more than 100 in-depth interviews in a matter of days, compared with the weeks it would have otherwise taken.

One emerging area is what is known as synthetic research, in which qualitative or quantitative research is conducted using only AI respondents modeled after real human personas (Radius Insights 2026).

Sample Application: The Milk Processor Education Program (MilkPEP), which developed the national “Got Milk?” campaign, ran a series of experiments with synthetic research, testing ad concepts and positioning in both quantitative and qualitative formats. They found that the AI model was more aligned with human respondents on questions about functional benefits, but less consistent on questions about emotional benefits. The mixed results show both the opportunities and challenges, at least currently, of using synthetic research to guide business decisions.

Synthesizing

Once the data has been collected, marketers can use AI to help synthesize the data to derive insights and build reports to share the results. AI can clean and harmonize primary and/or secondary data sets, code open-ended answers, and derive themes and implications. AI is adept at

synthesizing information and generating insights from unstructured data, such as verbal or written customer feedback, online reviews or social media sentiment (Qualtrics 2026).

Sample Application: Using AI for data synthesis, Autodesk significantly shortened the time it took to extract insights from the thousands of open-ended responses it receives in its customer surveys. Analysis to surface the key themes from the research that previously took days, instead took minutes. The company estimated the AI-driven approach saved them four hours of work for each report. In addition to saving time, Autodesk was also able to draw deeper insights from the data.

Finally, AI can also turn insights into research reports in the form of long-form documents or slide presentations, with auto-generated data visualizations (McKinsey 2026).

Sample Application: Teams at McKinsey leveraged a proprietary Gen AI tool called Lilli to clean data from clients and format the data output into client-facing materials, such as slide presentations in the standard McKinsey format. For instance, a client team using Lilli in this manner was able to save 10 to 15 hours a month preparing documents for clients.

Analytics

In addition to using AI for market research, marketers can harness AI to perform advanced diagnostic and predictive data analytics.

Diagnosing

Marketers can employ AI to perform diagnostic analysis of company data. One common use of AI for diagnostic analysis is assessing marketing performance. AI can be leveraged to assess marketing performance overall, across campaigns or for a specific campaign, across channels or for a specific channel, and more. Another diagnostic application is to analyze a company's first-

party customer data to understand user behavior and identify patterns that could negatively or positively affect the business (Tellus 2024).

Sample Application: PepsiCo employed AI to centralize and analyze millions of data points about consumer behavior that previously sat in different siloes. This AI-powered solution gave PepsiCo team members immediate access to real-time dashboards and reports based on that integrated data. As an example, team members could get immediate insights on how consumer behavior changed in response to product launches, promotions or marketing messages, and then adjust accordingly.

Predicting

Marketers can use AI for predictive analytics like propensity modeling, which predicts the likelihood that a particular consumer segment or individual consumer takes a certain action. Propensity models can be used to predict the probability of conversion, churn or winback for different consumers. Predictive analytics can also recommend the next best action that marketers should take with an individual consumer, i.e., determining which marketing touchpoint would be optimal given the data on that consumer. Another predictive application of AI is demand forecasting, which can help marketers better balance supply and demand (Unilever 2025).

Sample Application: Unilever's ice cream division used AI to more accurately forecast monthly purchase volume in its markets around the world. The company also began adding imaging plus AI technology to more than 100,000 freezers at retail locations, giving it real-time insight into stock quantities in-store. These insights boosted sales by 12 percent in the U.S. and 30 percent in Denmark.

Additionally, AI can be used for trend forecasting, in which first-party and/or third-party data is analyzed to anticipate relevant trends as they emerge (Vogue Business 2024).

Sample Application: The online fashion subscription service Stitch Fix developed an AI tool that predicts fashion trends and curates which pieces from among its hundreds of thousands of products are served to each of its personal stylists.

B. DIRECTION

The Direction domain relates to how AI can impact the development of marketing strategies and operational plans. AI is influencing strategy development broadly. One expert analysis concluded that while “Human judgment remains essential to crafting the strategic vision . . . AI can accelerate and bring greater rigor to the work of strategy teams.” (D’Amico et al. 2025).

Organizations can use AI as they develop marketing strategy, building off insights derived from research and analytics in the Interpretation domain. After the strategy is defined, marketers can continue to use AI to develop tactical plans to implement the strategy.

Strategy

AI can be applied in many different facets of marketing strategy, with two fundamental facets being: 1) segmentation and targeting and 2) positioning (Huang and Rust 2021).

Segmentation and Targeting

AI can help marketers refine their audience segmentation and targeting. AI can analyze audience data to create sophisticated target segmentation. In addition, “look-alike” modeling, the practice of finding new individual consumers that look like a company’s existing target, is powered by AI (Adams 2023; P&G 2026).

Sample Application: P&G used AI to create “smart audiences” for its Pampers brand.

These smart audiences were built using an algorithm that combines first-party data from the Pampers Rewards app with third-party data. The data maps target consumers to different stages of the early child-rearing journey, such as infancy, crawling, and potty

training. The data enables P&G to target each audience with advertising tailored to both their child-rearing stage and to the media platforms where they congregate. With its smart audiences, P&G was able to increase the reach and effectiveness of Pampers' advertising, yielding more efficient ad spending.

Positioning

A marketer can use AI to develop key components of marketing strategy, such as positioning statements and value propositions. For example, the deep research feature of an AI chatbot can conduct a "5C" analysis, reflecting customers, collaborators, competitors, company and context considerations, to inform positioning. Using AI to conduct competitive intelligence, which involves tracking competitors' marketing moves, can also inform how a brand should position itself relative to competitors. AI can continually scour secondary data sources, enabling brands to monitor customer reviews, social sentiment, and competitive activity in real time (Klue 2026).

Sample Application: Blackbaud, a software provider for nonprofits and education organizations, used AI to automate its competitive intelligence program to continually refine its positioning in rapidly changing markets. With AI, Blackbaud was able to automatically track dozens of competitors, generate insights about the competitive implications of any new development, and proactively notify individual sales team members with information relevant to a specific deal. The automated competitive intelligence program yielded a nearly 30 percent increase in win rate versus top competitors.

Tactics

Tactical planning with AI can include applications for marketing communications, distribution, and pricing.

Marketing Communications

AI can help marketers draft plans for achieving the communications objectives of the marketing strategy, across the full range of objectives from awareness all the way through to loyalty and retention. As part of the tactical plan, AI can identify key messages, creative formats, media channels and metrics, all tailored to each audience segment. AI can also be used to develop creative briefs. A company can use AI to identify topics that will resonate with their audiences, audit the company's existing content and identify gaps, create a content calendar that maps specific content pieces to specific audiences across the year, and craft metrics to measure the performance of the content (Ad Age 2024).

Sample Application: The moving and storage company PODS partnered with its agency to create an AI-augmented campaign plan and creative brief, which it used to develop a hyper-local digital out-of-home campaign. PODS portable storage containers were equipped with digital signage and mounted on flatbed trucks. The trucks drove around New York City and featured – one at a time – a collection of 6,000 unique messages based on variables like location, time, weather and traffic, all generated with the help of AI.

Distribution

AI can also be used to craft the ideal distribution strategy, identifying the optimal mix of distribution channels to achieve company goals. AI can then help companies make instantaneous adjustments to their distribution based on variables like real-time supply and demand trends, competitive moves, or macroeconomic shifts (Collins 2026; Wendt 2026).

Sample Application: PepsiCo has used AI to optimize the quality, efficiency and cost of its entire supply chain, including the distribution of its products to store shelves all over

the world. With AI, the company could test changes to its distribution strategy before implementing them. PepsiCo also has used AI models to analyze sales data, consumer sentiment, even weather conditions, and then adjusted production and distribution accordingly.

Pricing

Companies can also use AI to optimize pricing strategy. By analyzing data such as a category's historical prices, customer demand, and macroeconomic data, AI can run simulations to identify the optimal price for each product a company sells, in each market. AI can also be instrumental in implementing the related strategy of “dynamic pricing,” where prices are designed to fluctuate with demand (Udinmwun 2024).

Sample Application: To help it stay competitive in the consumer electronics retail market, Best Buy has used AI to automate dynamic price adjustments based on factors like product availability by store and competitors' prices and promotions. According to one analysis, Best Buy changed prices for products on its e-commerce site nearly 3 times per day.

C. CREATION

The Creation domain relates to how AI can be used to bring strategy and tactics to life, augmenting human creativity in the development of new products and services, as well as content and creative assets. As they use AI in developing their products and services, companies seek to realize benefits including better decisions about what products and services to develop, shorter time to market, and higher quality offerings (Flinders and Smalley 2025). For developing content and creative assets, marketers seek to harness the generative capabilities of AI to make it easier and faster to create, and to augment the creative itself.

Products & services

AI can be deployed across many aspects of product and service development, including ideating, prototyping, building, and simulating.

Ideating

Marketers can use AI beginning far upstream to generate new product and service ideas. AI can quickly develop a vast number of new ideas and identify new variations or extensions of existing products and services.

Sample Application: Nestlé created a proprietary AI tool to generate new product innovation ideas, drawing on its consumer insights, existing brand profiles, and market trends. The tool reduced the time to develop new product ideas from six months to six weeks (Shah 2024).

Once marketers have new product and service ideas, AI can then be used to help test the ideas to identify the ones that are most promising (IFT 2024).

Sample Application: Unilever has developed a process it calls “in silico testing” that uses computer simulations to test different ingredient combinations and food recipes instantly. This approach has enabled the company to “optimize products before the lab and scale-up stage, bringing efficiency and cutting time to market,” as one Unilever executive described.

Prototyping

Once a company has identified promising product and service ideas, it can use AI to design prototypes, to enable further testing and refinement (Autodesk 2026).

Sample Application: GM used AI-powered “generative design” to digitally prototype parts and components for its vehicles. One of the parts the company’s engineers

developed via generative design was a new seat bracket, a standard part for attaching seats to the floor of a vehicle. The new bracket was 40 percent lighter and 20 percent stronger than its predecessor.

A common application of AI in the prototyping context is to create what is known as a “digital twin,” a detailed AI-powered digital replica of a physical product or system (McKinsey 2024).

Sample Application: SpaceX created a digital twin of its Dragon spacecraft that enabled engineers to optimize variables such as trajectory, load, and propulsion in order to maximize safety and reliability. The Dragon digital twin was fed data from the hundreds of sensors on the real-world Dragon spacecraft, enabling SpaceX engineers to monitor and optimize the spacecraft’s operations in real time.

Building

Additionally, companies can use AI to help them build products and services. In the digital realm, AI can be a software coding partner for building digital products and services, to perform specialized coding tasks or for low-code and no-code software development. The generative capabilities of AI can also be used to help develop new product and service names and packaging designs, testing them in simulations or via AI-powered research to identify the best-performing variations (*The Independent* 2024; Nike 2024).

Sample Application: Nike used AI to design and produce 13 innovative shoe “concepts” that it unveiled at a special event ahead of the 2024 Paris Olympics. The futuristic shoes were developed by interviewing top Nike athletes like soccer player Kylian Mbappé, sprinter Sha’Carri Richardson, and basketball player Victor Wembanyama about their needs and feeding the inputs into an AI model that developed the designs. The shoe

collaboration was named “A.I.R.,” which stood for Athlete Imagined Revolution, with a nod to Nike’s famed “air” shoe technology.

Simulating

Once companies have developed a product or service, they can use AI to efficiently create product demos, product guides and virtual simulations. These digital experiences can give prospective buyers a sense for what real-life experiences with a product or service will be like (Malik 2025).

Sample Application: Google Shopping created a virtual try-on feature that enabled users to see how different clothing items or outfits would look on them. A user just needed to upload a selfie, and Google’s Nano Banana AI image model would generate a full-body digital image to enable the user to “try on” clothing from compatible Google Shopping listings.

Marketing assets

Companies can use AI to produce content and creative, as well as to co-create content and creative with consumers.

Producing content and creative

Perhaps the most visible example of AI adoption in marketing to date is the use of Gen AI to produce marketing communications in text, image and/or video form. Marketers can use AI for copywriting; image generation and visual design; and audio/video creation and editing.

Marketers harness these AI capabilities to efficiently produce a large quantity and variety of content and assets, such as social posts, blog posts, websites, ads, videos, presentations, reports and white papers.

The AI-enabled content and assets can be net-new creations or modifications of something already existing. For example, AI can be used to convert an existing blog post into one or more of the following: a social media post, a video script, a promotional email or a whitepaper. AI can also be used to help marketers translate and localize assets for use in different markets. The volume and variety of AI output enable companies to tailor marketing communications to different audiences, marketing channels, and languages (Jasper 2026).

Sample Application: Real estate services firm Cushman & Wakefield used AI to develop copy for its website, blog posts, emails, research reports and more. The leverage Cushman & Wakefield garnered from AI yielded thousands of hours in productivity gains in a year.

Companies can ensure quality and brand safety by having humans review AI-generated marketing communications before going live with them, a practice often referred to as “human-in-the-loop” (Arora et al. 2025; Coca-Cola 2025; Kolbjørnsrud 2024; Rogers 2024).

Sample Application: Coca-Cola took the human-in-the-loop approach a step further by partnering with Adobe to develop “Project Fizzion,” an AI-powered “design intelligence system.” Project Fizzion involved automatically applying Coca-Cola’s brand guidelines into AI-generated assets. The system enabled teams to produce assets up to 10 times faster, while maintaining a high bar for quality and originality. Coca-Cola’s AI-human collaboration was highlighted by a senior executive at the company, who said “One of the things we keep repeating in Coca-Cola is it’s about AI and HI. It’s artificial intelligence and human intelligence and ingenuity.”

Co-creating content and creative

Marketers can also use AI to develop rich interactive experiences with which to engage

consumers, such as interactive apps, tools, games, and calculators. Some of these interactive experiences are designed to enable consumers to co-create with their favorite brands (Erdem and Věra Šídlová 2025).

Sample Application: For its “Lidlize” campaign, which won a Cannes Gold Lion, Lidl created an interactive AI tool that enabled consumers to digitally reimagine any object as a Lidl product that featured elements of Lidl’s highly recognizable visual identity. Within the first 3 days of the campaign, over two million “Lidlized” product images had been created.

The co-creation capabilities of AI also can be extended into the realm of user-generated video content (Qatar Airways 2024).

Sample Application: Qatar Airways used AI to enable consumers to “star” in a video ad. Qatar Airways produced a base version of a video that told the story of two people who kept spotting each other in different places throughout the world before finally meeting. Consumers could create a version where they took the place of one of the two main actors, simply by uploading a photo of their face. AI would then reformulate the entire video, with the consumer’s face seamlessly edited into the footage.

D. CONNECTION

The Connection domain pertains to how AI gives marketers novel ways to connect with consumers. With AI, brands can build highly personalized experiences and engage directly with consumers in real-time. Hyper-customization can help consumers feel better understood by brands, leading to a more personal connection between consumers and brands.

Companies have been leveraging automated chat functions in marketing, sales and customer service for years. After 2022, the advent of GenAI chatbots like ChatGPT made it

possible for brands to have an unscripted dialogue with consumers, which enabled greater personalization, increased efficiency, and an increase in the types of conversations that brands and consumers could have (Woojung 2022).

Personalization

Marketers can use AI to develop hyper-customized communications and experiences tailored to individual consumers.

Customizing communications

AI gives marketers an unprecedented ability to hyper-customize communications. Marketers are using AI to automatically create numerous versions of communications and experiences tailored to individual companies, customers or consumers. Because AI can efficiently create any number of variations of a specific communication, marketers are able to build thousands (or more) individually personalized communications, such as emails, digital ads, promotions, in-app experiences and notifications.

Marketers can also use AI to personalize web pages, microsites, product recommendation engines, offers, and loyalty programs (Finio and Downie 2026). These communications can be personalized based on a number of variables, such as a consumer's demographics, geography, interests, prior purchase history, previous engagement with the company's marketing, a target account's firmographics or target buyer's job title in B2B, and more. A common approach to hyper-customization is using AI to build trigger-based campaigns that instantly send communications whenever a user takes one of a number of possible predefined actions (Snowflake 2025).

Sample Application: Cloud data company Snowflake used its proprietary AI platform to develop a predictive account-based marketing (ABM) propensity model that predicted

which accounts were most likely to respond to marketing outreach. It then used its AI platform to auto-generate personalized ad copy for thousands of high-priority accounts. The AI-generated ads delivered a 54 percent increase in click-through rate (CTR) compared with the initial human-written ad copy.

Customizing experiences

AI can also be used to create hyper-personalized digital experiences on the web or in apps. Because websites and apps can be dynamically rendered in real time, AI personalization can be done readily at the individual level. Many brands have integrated third-party chatbots such as Chat GPT into their websites and apps, often as a white label integration. Companies have also developed their own proprietary AI-fueled personalized experiences. These personalized experiences offer companies new and interesting ways to connect with consumers (Sephora 2026).

Sample Application: The cosmetic retailer Sephora developed an AI-powered Smart Skin Scan inside the Sephora app that provides personalized skin care routine and product recommendations when a user uploads a selfie. A medical study commissioned to validate the tool showed a 95 percent reliability rate at identifying skin concerns. Customized experiences can also be built with data about how a consumer uses a particular product or service (Horowitz 2026; Murray 2023).

Sample Application: Spotify’s annual “Wrapped” campaign illustrates the consumer connections that can result from highly personalized communications and experiences. Each holiday season since 2015, Spotify has created an AI-fueled personalized end-of-year summary of each user’s listening habits. Wrapped shares individualized stats for each user such as their top artists and songs, hours listened, the day of the year they spent

the most time on Spotify, and in 2025, a new stat called “listening age,” which assigned a hypothetical age to users based on the music they listened to. Wrapped has become a cultural touchstone that hundreds of millions of Spotify users eagerly await each year. In 2025, Wrapped broke its previous record for engagement, with 250 million engaged users and 575 million shares in the first 65 hours of the campaign.

Responsiveness

AI enables brands to be exceptionally responsive to consumers in the moment, either in dialogue through a chat interface, or by taking actions as an agent on behalf of consumers.

Conversing with consumers

AI enables marketers to engage in real-time dialogue with prospects and customers (Hoyer et al. 2020). This can be achieved via chatbots integrated into a brand’s website or app, via text messages on mobile, on messaging platforms like WhatsApp, or through voice assistants like Amazon Alexa. Consumers can initiate the dialogue throughout their customer journey, for instance when comparing products, completing a purchase, seeking to resolve an issue, or renewing a subscription. Brands can also proactively reach out to consumers through these conversational channels to start a dialogue (Bousquette 2025).

Sample Application: In 2025, Ralph Lauren launched the “Ask Ralph” AI assistant, which combined conversational marketing with conversational commerce. Ask Ralph served as a personal stylist and personal shopper, available in the Ralph Lauren app. The AI model was trained on the Ralph Lauren archives, which go back decades. It could give styling advice customized to the individual user and would answer their specific questions, such as “What should I wear to a wedding reception?” and “What else goes

with my navy-blue blazer?” The user could then purchase items recommended by Ask Ralph directly in the app.

Performing actions

A company’s AI-powered interfaces can also be programmed to perform tasks on behalf of consumers, in which AI is acting as an “agent.” Agents go beyond chatting to take actions based on direction they’re given by consumers, such as booking travel arrangements on a travel website, making restaurant reservations, or making financial trades under certain market conditions. In the B2B context, agents can handle repeatable tasks and act in many ways like another team member. Agents can even be programmed to build and manage other agents (Salesforce 2026).

Sample Application: The World Economic Forum developed an AI agent called EVA (which stood for “Event Virtual Agent”) for attendees at the 2026 edition of its annual event in Davos, Switzerland. EVA could recommend sessions on the event agenda based on the attendees interests and calendar availability, write summaries of the anticipated content and detailed speaker bios for those sessions, and prepare attendees with talking points for discussions at those sessions. EVA could also recommend other attendees to network with, reach out and schedule meetings with select attendees (with permission), and book meeting space.

E. OPTIMIZATION

The Optimization domain captures how AI offers a range of ways for marketers to efficiently optimize performance and resource utilization. AI can optimize the entire marketing program or a sub-component, for example by conducting attribution analysis or marketing mix modeling. It can then identify changes to content and creative, and/or marketing mix, to maximize the

objective(s) specified by the marketer, Common variables marketers seek to optimize for in this manner include website traffic, conversions and return on ad spend (ROAS).

Performance

Marketers can use AI to optimize the content, creative, and delivery of marketing programs.

Optimizing content and creative

The computational power of AI enables it to quickly and constantly analyze reams of performance-related data, determine how to improve performance, and in many cases, take actions to optimize. One Nielsen study found that different AI-powered optimizations available on Google's advertising platform drove between 8 and 23 percent higher ROAS for advertisers (Storyboard 2025). These performance optimization capabilities can be applied to advertising creative. AI can test and even predict which creative performs better for a given marketing objective. This optimization is achieved through A/B and multivariate tests, which evaluate performance of one creative asset compared with one or more other ones (Think With Google 2025).

Sample Application: Cosmetics company L'Oréal used AI to optimize its search advertising campaigns for its hair care and skin care products. Specifically, it applied AI to improve the relevance of its ad text with customized copy that matches the language of the search term, as well as better match emerging search terms that it previously had not appeared alongside. The company experienced a 100 percent increase in click-through rates and a 31 percent reduction in cost per conversion compared with its search advertising prior to the AI optimization.

Optimizing delivery

AI can optimize how a company delivers its content and creative. AI can evaluate and predict which target audiences, both in aggregate and individually, yield maximum results. AI helps marketers shift investment to better-performing audiences. AI can also evaluate and predict which media channels deliver superior performance and optimize how much to spend on each channel. It can also manage real-time bidding on auction-based media like search and social media advertising, optimizing for a specific objective. AI can also evaluate a company's owned properties where visitors convert to customers, such as its website, landing pages, ecommerce store, or app install process. It can then identify optimizations that increase the conversion rate for a specified stage in the customer journey, such as becoming a lead or purchasing a product (Think With Google 2025).

Sample Application: Athleisure brand Lululemon used AI to optimize multiple elements of its marketing programs. It optimized the performance of its shopping campaigns, using bidding optimization and optimizing creative for different audience segments: new, undecided and returning customers. Lululemon also optimized ROI by using a blend of attribution, marketing mix modeling, and experiments. The optimizations it applied led to a reduction in acquisition costs, an increase in new customer revenue, which translated into an 8 percent increase in ROAS.

Resources

Companies can optimize the utilization of their marketing resources with AI, by automating workflows and optimizing the allocation of budgets.

Automating workflows

One important way companies can use AI to optimize marketing resource utilization is by gaining operational efficiency. AI helps marketers gain efficiency by automating workflows,

which enables them to offload repetitive or routine tasks, such as creating meeting summaries, drafting internal communications, setting up campaigns or monitoring campaign dashboards. Marketers can automate workflows by delegating tasks to AI in the form of co-pilots, virtual assistants and/or agents. These co-pilots, assistants or agents can help marketers by drafting emails and documents, pulling performance reports, crafting presentations, updating project plans and trackers, coaching new skills, onboarding new employees, and more (Nyhan 2025).

Sample Application: Estée Lauder created a proprietary AI agent called ConsumerIQ that enabled its employees to use natural language to query decades of consumer data and get instant reports. The fact that employees could use natural language made the agent far more accessible than if it required significant data analytics knowledge. A marketer at Estée Lauder could ask a question like “What are the most popular skin care routines among Gen Z in Italy?” and rapidly get a response that distilled mountains of data, insight and reports into a clear answer. A marketer could then use that answer to build a targeted social media campaign in Italy that incorporated the most popular skin care routines.

Allocating resources

AI also helps marketers make smarter resource allocation decisions. As noted earlier, AI can be used to analyze marketing performance and shift budget allocations by product, channel, or campaign to optimize ROI. The expectation is that AI should enable marketing teams to deliver greater performance at lower cost (Smartly 2026).

Sample Application: KLM Royal Dutch Airlines employed AI to perform “predictive budget allocation.” Rather than spending hours each week analyzing campaign performance across myriad channels and making budget allocation refinements, with

predictive budget allocation KLM automated the process of shifting budget to the highest-performing channels. Compared with manual optimizations, the predictive budget allocation approach yielded 10 percent lower cost per acquisition and a 26 percent increase in conversion rate.

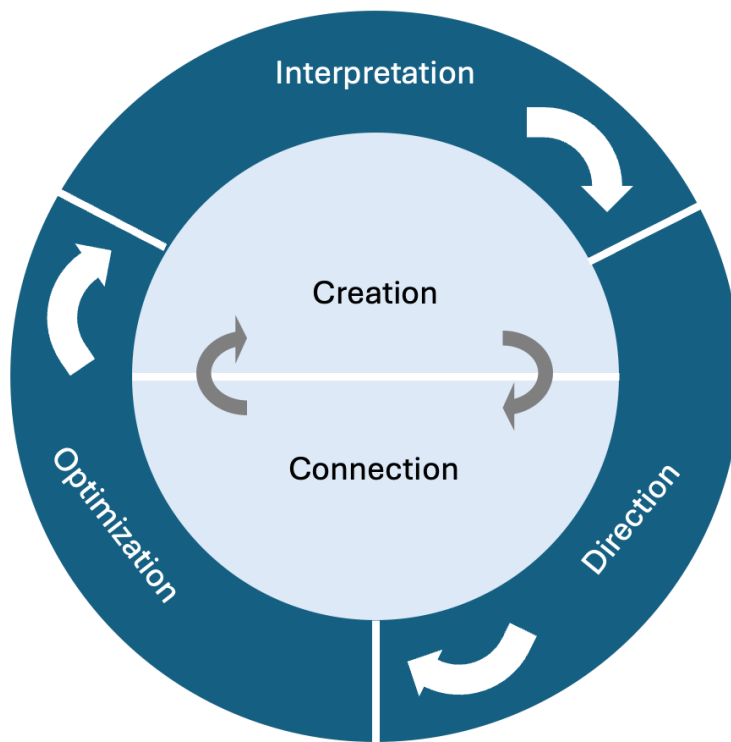
Making Progress with AI Adoption in Marketing

As the Marketing Applications Taxonomy suggests, AI represents a tremendous opportunity for marketers. It offers new ways to build and manage brands and achieve marketing objectives. As the sample applications above illuminate, marketers are applying AI in many ways. Ultimately, however, to enhance marketing effectiveness and stay competitive, companies need to incorporate AI in some way across all five domains and ten subdomains throughout the marketing organization. After describing how the different domains relate to each other, we detail some pathways or sequences that organizations can take to try to make progress with adoption of AI in their marketing function.

The AI Marketing Applications Wheel

The five core domains of AI marketing applications can be related to each other, as many of the domains inform one or more other domains. Fig. 2 displays one such configuration, which we call the AI Marketing Applications Wheel.

Fig. 2: The AI Marketing Applications Wheel



With this depiction, there is an outer circle of Interpretation, Direction, and Optimization domains – which we call the Enablement circle – and an inner circle of Creation and Connection domains – which we call the Engagement circle. These outer and inner circles highlight important relationships.

We start with the relationships within the outer Enablement circle. Interpretation informs Direction. A cogent strategy and related tactics must be informed by research and analytics. Using AI to develop a deep understanding of consumers and competitors, for example, can yield a more effective strategy. Once implemented, the strategy can then be optimized when data from the market comes back. Interpretation also informs Optimization. To know what marketing elements to optimize and how to optimize them, marketers must first have performance data to analyze. Once the optimizations have been applied, new data is generated that can subsequently inform Interpretation, which, in turn, can yield updates and changes to Direction. In these and

other ways, the three domains on the outer circle can be seen as operating as a continuous cycle that, as described below, enables engagement with customers via Creation and Connection.

Within the inner Engagement circle, the Creation and Connection domains are closely related to each other. First, as discussed above, a common application of AI with Connection is to hyper-personalize marketing assets that are developed as part of Creation. Furthermore, when the products, services and marketing assets that a company develops with AI as part of Creation are relevant and impactful, that company can more readily build Connection with its audience. Greater activation with Connection can help companies create more relevant and impactful products, services and marketing assets, particularly when a company integrates AI-powered personalization and responsiveness into the elements it creates.

Finally, and importantly, the outer Enablement and inner Engagement circles also are related. The three outer Enablement domains inform both inner Engagement domains. Direction, which itself is informed by Interpretation, guides Creation and Connection. In addition, Optimization enhances the performance of the assets and experiences developed with Creation and Connection. The two inner domains in the Engagement circle also inform the three outer domains in the Enablement circle. Consumer interactions with the outputs of Creation and Connection generate data that can guide Optimization, inform a new cycle in Interpretation, and alter Direction.

In terms of the five specific domains of AI marketing application, the Interpretation domain is the domain that perhaps offers the highest-leverage use of AI for marketers. Building a strong foundation in the Interpretation domain helps improve performance in each of the other domains. For example, when a company uses AI to deeply understand its customers, it can make

its strategy sharper; develop more compelling products, services and marketing assets; build stronger connections with customers; and better know what and how to optimize.

On the other hand, companies that do not invest in AI in the Interpretation domain risk inefficiencies from efforts that are not informed by the deeper insights made possible by AI-fueled research and analytics. Using AI simply to generate more marketing assets or chat experiences by themselves does not necessarily guarantee improved performance.

AI Marketing Adoption Pathways

Although all five domains of AI marketing application are important, the pace and nature of AI adoption for marketing may vary across organizations depending on different factors or circumstances. After providing motivation for a phased approach, we describe issues with alternative pathways of AI adoption.

A phased approach. Some companies may desire to incorporate AI as quickly and as fully as possible across domains. Many companies, however, adopt AI using a phased approach, in which a company starts by experimenting with AI in one or more domains before implementing it more fully across the marketing organization (Parker 2026).

The phased nature of marketing-specific AI adoption models is consistent with the phased aspect of general business AI adoption models proposed by industry experts. One such model articulates the adoption phases as “Exploration, Experimentation, Accountable Acceleration (Korst et al. 2025).” Another model identifies the phases as “Experimenting, Piloting, Scaling, Fully Scaled.” (McKinsey 2025). Research based on this latter model found a distribution of companies across the phases. Of all organizations using AI in 2025, 31 percent were Experimenting, 30 percent Piloting, 31 percent Scaling, and 7 percent Fully Scaled. It should be

noted, however, even with a phased approach, a company may have applications within a sub-domain reflecting one or more phases.

Two possible pathways. We can use the AI Marketing Applications Wheel to characterize two distinct phased pathways to AI adoption in marketing.

- Companies that start the sequence of their AI adoption in the outer Enablement circle before moving to the inner Engagement circle can be seen as taking an *Outside-In pathway* (see Fig. 3).
- Companies that start the sequence by adopting AI solutions in the inner Engagement circle before moving to the outer Enablement circle can be seen as taking an *Inside-Out pathway* (see Fig. 4).

Fig. 3: The Outside-In Pathway

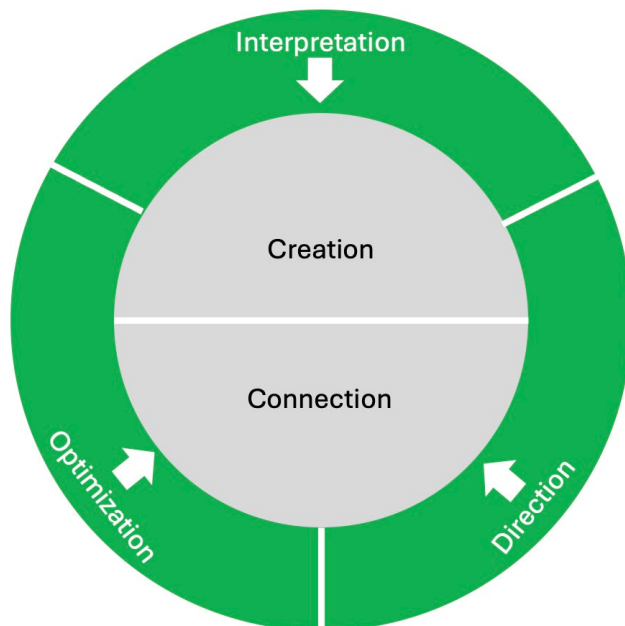
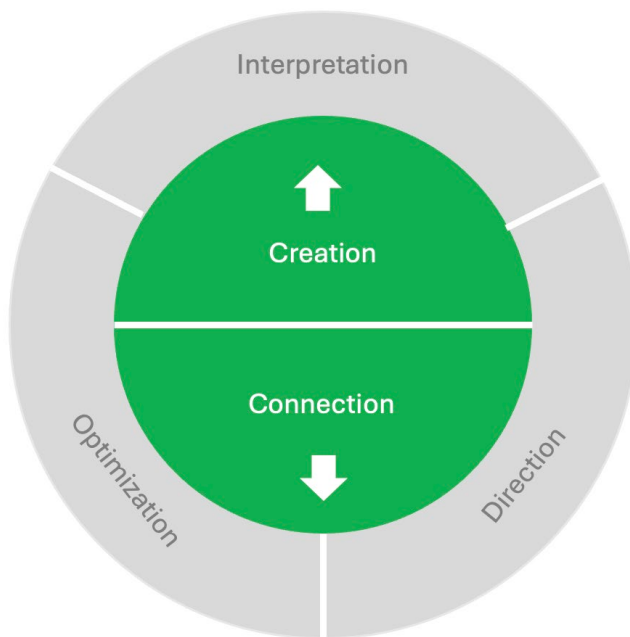


Fig. 4: The Inside-Out Pathway



Prior to the mass availability of Gen AI in 2022, a common Outside-In sequence was to start with the Interpretation and Optimization domains of non-AI generated campaigns, and then to expand to the Creation domain. Similarly, prior to the mass availability of Gen AI in 2022, a company taking an Inside-Out approach would have likely started with the Connection domain, because basic AI chatbots were available for applications in customer service and sales, but AI tools for creation were not widely available yet.

The introduction of Gen AI unlocked all the other subdomains. Today, a company starting to adopt AI for their marketing organization could start with any domain. A contemporary Outside-In pathway might start with the Interpretation domain, to take advantage of the leverage that domain offers with all the other domains, as discussed above. The Optimization domain represents an accessible starting point as well, because of the various auto-optimization capabilities of advertising platforms like Google, Meta and LinkedIn.

Research suggests the Outside-In pathway may be the most common among marketing organizations. One longitudinal study conducted four times between 2023 and 2025 found that the top two uses for Gen AI among marketers in each survey were in the Interpretation domain: data analysis (47 percent of respondents) and market research (46 percent). In that study, creation and connection applications had not yet been adopted, comparatively, by as many marketers: copywriting (34 percent), creative versioning (27 percent), image generation (25 percent) and customer service (14 percent).

Similarly, a different study from October 2025 that looked at AI adoption across companies, and not just within marketing, reached the same conclusions. Data analyses and analytics were the most common use of AI (73 percent of respondents). The study found comparatively lower levels of use of AI for marketing content creation (66 percent) and customer service and support (66 percent) (Korst et al. 2025).

A contemporary Inside-Out approach could start with one or both of the two domains in the inner Engagement circle, using AI's capabilities to produce content and creative and for chat. For companies new to AI, it is perhaps easiest to start with the Creation domain, due to all the AI creation tools available. Small businesses also may be more likely to begin their AI adoption with the Creation domain. "For many SMB marketing teams, the first opportunities are in content creation and repurposing," one industry observer noted. "AI can help draft blog articles, write email campaigns, or create social media captions in a fraction of the time it would take a human."

Unilever Illustration

Global consumer packaged goods company Unilever illustrates how fully an organization can adopt AI, in some form, across all five domains and ten subdomains (see Fig. 5). Unilever's commitment to infusing AI into its marketing organization is reflected in a statement by one of

its executives explaining, “AI and technology are reshaping the way we build our sales and marketing machine by fueling business growth across all business groups” (Unilever 2025).

Fig. 5: Unilever’s AI Adoption Across Domains and Subdomains of Marketing Applications

Interpretation	
Research	Conducted synthetic research by creating predictive models that project how consumers may respond to hypothetical products.
Analytics	Created an AI "customer connectivity" model for demand forecasting that runs 13 billion computations per day.
Direction	
Strategy	Built a Brand DNAi platform to ensure marketing produced with AI tools reflect brand voice, values, and strategic direction.
Tactics	Created a "Smart Briefing" AI-powered process for creating higher-quality creative briefs faster.
Creation	
Products & Services	Used AI to model the taste, texture, shelf life and manufacturing attributes of new product ideas, to better assess their potential.
Marketing Assets	Created an AI-powered in-house graphic design studio called "Sketch Pro" used by teams in London, São Paulo, Mumbai, Jakarta, Durban, Shanghai and Istanbul that can transform creative concepts into consumer-facing materials in 2 hours.
Connection	
Personalization	Launched BeautyHub PRO in the Philippines and Thailand. The app uses AI computer vision to analyze a selfie the user uploads and make personalized beauty product recommendations.
Responsiveness	Developed an AI chatbot to enable blind or low-vision shoppers to scan a QR code on Unilever products to hear ingredients and cooking instructions read verbally, and to ask follow-up questions.
Optimization	
Performance	Optimized content and media spend across channels in India to increase ROI, saving costs and increasing margins.
Resources	Automated workflows with Beauty AI Studio, a system that automates asset creation for paid social, programmatic display, and e-commerce sites in 18 markets.

Marking Progress with AI Marketing Adoption

Regardless of the approach or pathway chosen, the five domains, ten subdomains and twenty-four common applications can be formulated as a scorecard to track progress in a marketing organization's adoption of AI (see Fig. 6). This scorecard can be used as a concrete self-diagnosis tool to evaluate an organization's progress with AI marketing applications over time.

The scorecard can be completed by using the following question and response categories:

Based on the 3-point scoring system outlined below, allocate points according to how extensively your marketing organization has adopted AI in each of the 10 subdomains. To help you evaluate the extent of your AI adoption, you can consider whether your organization is using AI for one or more of the common applications listed under each subdomain.

- 1 point:** We have not experimented or otherwise used AI in this subdomain.
- 2 points:** We have experimented or are experimenting with AI in this subdomain, e.g., with a pilot program, a proof of concept, or a beta test.
- 3 points:** We have moved to full implementation of AI in this subdomain, across a large team or the entire organization, and are integrating AI into the workflows people use to accomplish their jobs in the subdomain.

Fig. 6: AI Marketing Adoption Scorecard

1. Interpretation: Collect and analyze data to generate insights to inform strategy

_____ *Research:* Conduct market research and synthesize findings
➤ Designing | Fielding | Synthesizing

_____ *Analytics:* Perform advanced diagnostic & predictive data analytics
➤ Diagnosing | Predicting

2. Direction: Craft marketing strategy and operational plans

_____ *Strategy:* Develop marketing strategy
➤ Segmentation and Targeting | Positioning

_____ *Tactics:* Develop operational plans to implement the strategy
➤ Marketing communications | Distribution | Pricing

3. Creation: Create new products and services, content and creative assets

_____ *Products & services:* Develop products and services
➤ Ideating | Prototyping | Building | Simulating

_____ *Marketing assets:* Generate content & creative
➤ Producing content and creative | Co-creating content and creative

4. Connection: Develop novel ways of engaging consumers with a brand

_____ *Personalization:* Hyper-customize communications
➤ Customizing communications | Customizing experiences

_____ *Responsiveness:* Engage with prospects and customers in real time
➤ Conversing with consumers | Performing actions

5. Optimization: Optimize marketing performance and resource utilization

_____ *Performance:* Optimize performance of marketing programs and channels
➤ Optimizing content and creative | Optimizing delivery

_____ *Resources:* Optimize internal resource utilization via operational efficiency
➤ Automating workflows | Allocating resources

Each individual sub-domain can be scored on a scale of 1 to 3. Individual subdomain scores can be tallied to give an indication of how the organization as a whole is adopting AI. In that sense, the combined sub-domain scores yield an organizational adoption score. The point totals for the scorecard range thus from a low of 10 to a high of 30.

Below are some possible interpretations of different score ranges along that continuum. Note that a company with 10 points, i.e., with no AI usage in any domain, may be hesitant to use

AI in marketing, perhaps due to reasons such as risk avoidance, lack of internal familiarity or skillsets with AI, or perceptions that the return on AI investment is low.

- **11 to 15 points: AI Experimenting.** A company scoring in this range is testing AI applications to discover what works. While a company could technically experiment in each of the five domains, a more likely scenario is a company concentrating its initial AI experiments in one or two domains.
- **16 to 24 points: AI Expanding.** A company scoring in this range is typically expanding their experimentation across domains, while also possibly moving to full implementation of one or more subdomains.
- **25 to 30 points: AI Embedded.** A company scoring in this range has embedded AI in its marketing through extensive experimentation and implementation across the five domains. Companies can activate AI more or less simultaneously across the domains. Most companies, however, have tested their way into the different domains of AI, so it is more likely that a company evolves to full-scale implementation over time.

Note that the scorecard accounts for a sequential approach for AI adoption by assigning different point values for different phases of adoption, from experimenting to full implementation. The individual subdomain scores reflect the extent of adoption of that particular subdomain, while the aggregate adoption scores across all subdomains reflect the extent of AI marketing adoption by an organization as a whole. Note too that companies may have different priorities and face different industry dynamics, so some domains or subdomains may be more important to a company, while others may not be as meaningful.

Conclusion

AI is transforming how companies perform marketing, giving organizations new ways to build brands and connect with consumers (Chan and Choi 2025). In this paper, we developed a taxonomy that categorizes twenty-four common applications of AI in marketing into five domains, each with two subdomains. We then considered how the five domains relate to each other and explored the pathways or sequences by which organizations can adopt AI across domains. Finally, we converted the taxonomy into a scorecard that organizations can use to assess their progress with AI in their marketing organization.

Companies can maximize the benefits of AI for their marketing by adopting AI as fully as possible (Ångström et al. 2023). Towards that goal, three tools were introduced in this paper to help companies accomplish different goals in their adoption of AI into their marketing organization: 1) The “Taxonomy of AI Applications in Marketing” can help companies understand the different possible domains of AI applications of AI in marketing; 2) The “AI Marketing Applications Wheel” helps companies plan possible potential adoption sequences for incorporating AI in the marketing function; and 3) The “AI Marketing Adoption Scorecard” helps companies assess their progress and current AI adoption levels across marketing domains.

Our conceptual frameworks and discussion suggest future directions for building on our work. The scorecard can be potentially expanded in various ways. For example, a fourth level of the scoring system could be added to reflect an even deeper level of adoption, where a company re-architects its workflows to be centered on AI. Additional nuances could be added to the scorecard, to distinguish between Gen AI applications and non-Gen-AI applications. Furthermore, the scorecard could be augmented to evaluate the quality and impact of a company’s AI applications. Such evaluations would add a normative dimension to our conceptualization, e.g., scoring a company relative to an industry standard level of adoption for

that subdomain. The scorecard could also assess or estimate how much value the company is extracting through its AI marketing applications.

Finally, AI is obviously evolving rapidly (Mustak et al. 2021). Major advances within a domain may arise as AI sophistication increases. These advances could change the content of the taxonomy, the relationship between the domains, and the pathways by which marketers commonly adopt AI. Just as marketers will need to stay current on AI developments and evaluate their potential applications in marketing, the frameworks advanced in this paper will likely need to evolve.

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