

M ARKETING

I NTELLIGENCE

R EVIEW

Generative AI Reshaping the Marketing Landscape

CONTENT CREATION > AI SUPPORT > PROMPT ENGINEERING > LARGE LANGUAGE MODELS >
MARKETING PRODUCTIVITY > MARKETING ECOSYSTEM > DATA QUALITY > HUMAN OVERSIGHT



Nürnberg Institut für Marktentscheidungen e. V.
Founder of GfK
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FROM ACADEMIC RESEARCH TO PRACTICAL USE

CLEVER CONTENT
FRESH KNOWLEDGE

FROM ACADEMIC RESEARCH TO PRACTICAL USE

NIM Marketing Intelligence Review

The Journal of the Nuremberg Institute for Market Decisions

The NIM Marketing Intelligence Review is directed at managers and all decision-makers who are interested in new research findings,
> [current marketing topics](#) and emerging marketing trends.

The journal is published twice a year and is designed as a themed issue. Each issue features a current topic in marketing and market decision-making. The articles present > [academic research and findings that are translated for practical use](#). They provide marketing knowledge and impulses from top international experts for the marketing business – also with the aim of improving market decisions.

The publisher of the NIM Marketing Intelligence Review is the > [Nuremberg Institute for Market Decisions \(Nürnberg Institut für Marktentscheidungen e. V. – in short: NIM\)](#). The NIM is an interdisciplinary, non-commercial research institute focused on the research question of how decisions are changing due to new trends and technologies and how people can make better decisions in markets.

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Editorial



Generative AI is revolutionizing marketing in ways we've never seen, marking a seismic shift in how brands interact with their audiences. Cutting-edge technology such as GPT-4, Midjourney or Claude AI chatbots have taken the world by storm. The technology is not only highly impactful – it is often easy to apply and quick to adopt.

At its core, generative AI excels at highly efficient and highly customized content creation. It can generate compelling copy, blog posts, marketing images or designs that engage customers in novel and captivating ways. These developments have the potential to disrupt entire value chains of creative marketing.

But it's not just about content creation. Generative AI is also enhancing customer experience. In retailing, chatbots allow shoppers to search use cases as opposed to products. Generative AI assists sales representatives in making mundane tasks more efficient and providing better information for high-value activities. It can analyze customer data, facilitate deep dives where needed and simulate market response for more effective marketing campaigns.

However, with great power comes great responsibility. Ethical considerations such as data privacy and the potential for misuse are paramount. Generative AI can hallucinate and produce unwanted bias. While it cannot fully replace the human touch in marketing, concerns about job replacement are rising.

In this issue, leading researchers discuss these opportunities and challenges. They cover applications in advertising, search engine marketing and sales. They delve into how technologies can be prompted, combined and effectively trained for individual marketing objectives. This is complemented by industry insights, including the view of Taboola's CEO Adam Singolda on Generative AI in online advertising and publishing.

As we move forward, the fusion of AI and human creativity will undoubtedly lead to more innovative, effective and engaging marketing strategies. I hope you enjoy reading this issue and gain useful insights for this path.

Mark Heitmann

Mark Heitmann

Hamburg, February 2024

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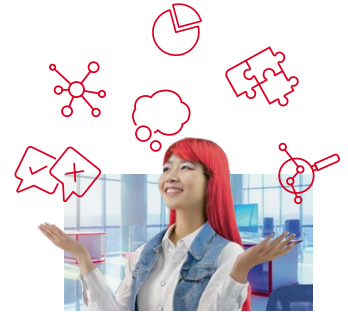


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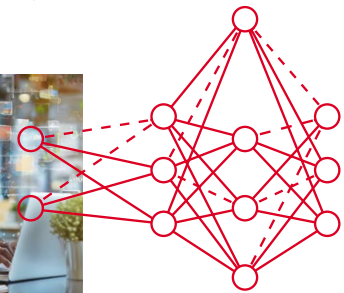


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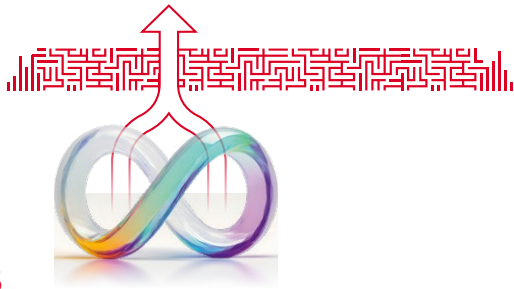
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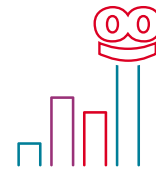


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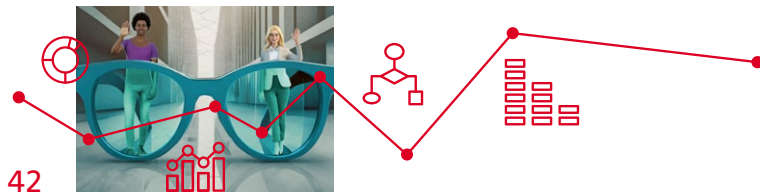
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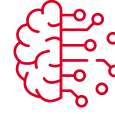
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Executive Summaries



Generative AI for Marketing Content Creation: New Rules for an Old Game

Mark Heitmann

Finding the right content determines success in diverse marketing activities and functions. The trade-off between quantity and quality of content defines the productivity frontier of marketing. Every organization has limits to how much content it can produce. Expanding quantity comes at the expense of quality and vice versa. With GenAI, this trade-off suddenly breaks down and the frontier of content quantity and quality continues to expand. Three main avenues emerge: driving quantity without compromising quality, driving quality without reducing quantity and driving both quantity and quality simultaneously. Navigating in this new field is tricky and comes with diverse challenges. Marketers need to experiment with AI tools and regularly adapt organizational structure and roles. Harvesting the true power of GenAI often entails exposing models to company-specific data and then fine-tuning these for the desired objectives. With open mindsets, strong learning interest and the ability to see beyond the horizon, marketers have much to gain in both efficiency and effectiveness.

Beyond Prompt Engineering: Skills Marketers Need to Successfully Deploy Generative AI

Oguz Acar

The emergence of generative AI tools like ChatGPT, MidJourney and Google Gemini has sparked off the rise of “prompt engineering” as a touted job of the future. However, the focus should extend beyond crafting queries to problem formulation, a strategic process for defining the problem’s focus, scope and parameters. Problem formulation involves diagnosis, decomposition, reframing and constraint design. For marketers, framing tasks as problems aids in purposeful AI integration, allowing the reconsideration of strategies. Sustainable skills essential for leveraging generative AI include exploration (identifying appropriate AI solutions), experimentation (dynamic engagement with AI tools) and critical evaluation (discerning AI-generated content accuracy and relevance). As AI systems improve in their ability to understand user intent, managers must move beyond prompt engineering, adapt continuously, explore emerging AI tools and develop skills to articulate complex problems, fostering a critical acumen for assessing AI outputs. These skills are crucial for navigating the evolving generative AI landscape and distinguishing AI leaders from followers.

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Moving Beyond ChatGPT: Applying Large Language Models in Marketing Contexts

David Schweidel, Martin Reisenbichler
and Thomas Reutterer

Large language models (LLMs) like ChatGPT have seemingly sentient capabilities but are better understood as “stochastic parrots.” They excel at “inside the box” tasks, where they are able to leverage existing data patterns. Creating SEO content falls into this category. This article introduces a hybrid approach involving dynamic fine-tuning of existing LLMs for SEO content creation, combining general language patterns with application-specific information and human oversight. The performance evaluation reveals that this hybrid solution outperformed SEO experts, achieving superior online visibility at a fraction of the cost. However, it emphasizes the indispensability of human oversight for brand consistency and accuracy. Early adopters attest to the practical benefits. Additional successful hybrid applications include search engine advertising, display advertising and social media posts. Marketers should, however, not be lulled into a “set it and forget it” mindset. AI is a tool that can boost productivity and performance, but it is not (yet) a replacement for a marketer’s knowledge and skill set.

From Mundane to Creative: How AI Unburdens Sales Agents

Xueming Luo, Nan Jia, Zheng Fang
and Chengcheng Liao

The concept of “augmented intelligence” envisions AI supporting human employees. A promising field for such cooperation is sales, where AI can handle repetitive tasks, allowing humans to focus on creative and high-value activities. A study with a telemarketing company explores the impact of AI on sales agents’ creativity and performance. Results show that AI-assisted sales agents outperform those without AI, particularly in addressing untrained customer questions, leading to higher purchase rates. The study also highlights differences in performance and the perception of AI among highly skilled and lower-skilled agents. Highly skilled agents benefited from AI support, experiencing positive emotions and improved performance, and thus advocated for expanded AI use. In contrast, lower-skilled agents faced challenges and preferred maintaining the current level of AI assistance. AI assistance can enhance creativity and productivity, but its impact is skill-biased, emphasizing the need for complementary measures such as upskilling, motivating agents, and clearly communicating about the intended use of AI to fully leverage its potential in enhancing creativity and productivity at work.

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Double Impact: Harnessing Generative and Evaluative AIs for Effective Marketing Decisions

Christian Scheier and Dirk Held

While generative AI is already on everyone's lips, evaluative AI and its potential are currently less widely discussed. The evaluative AI market is characterized by a growing number of vendors, many specializing in distinct aspects like predictive eye tracking, image persuasion analysis, image memorability prediction, text content analysis or social media click-through rate predictions. However, the landscape is not limited to these niche offerings. Holistic solutions are also emerging, addressing all relevant marketing touchpoints. They offer capabilities ranging from execution aspects, such as visual attention and simplicity assessments, to strategic evaluations that ensure alignment with the intended brand message. Looking ahead, the trend is moving towards fully integrated platforms that encompass the entire AI-based marketing workflow. These platforms promise to cover everything from audience insights and strategy development to creative execution and performance monitoring. The future of marketing lies in the seamless integration of generative and evaluative AI, guided by human expertise.

Bye-bye Bias: What to Consider When Training Generative AI Models on Subjective Marketing Metrics

Christina Schamp, Jochen Hartmann and Dennis Herhausen

Biased training data can distort the outputs of GenAI models and should therefore be a core concern when the models are being developed. Ideally, potential biases should be assessed and addressed before the model training and complement the current practice of error analysis in post-training. This will make the AI model training not only more effective but also more cost-efficient. Being aware of the most relevant biases – sampling bias, measurement bias, social desirability bias and response bias – is therefore essential. Setting up diverse research teams with both technical and market research skills helps to combine these perspectives and allows for the development of successful use cases, especially for subjective training tasks that aim to capture relevant marketing metrics in a specific marketing context.

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Beyond the Buzz: Creating Marketing Value with Generative AI

Fabian Buder, Nina Hesel and Holger Dietrich

A study by the Nuremberg Institute for Market Decisions (NIM) examines the actual usage and perception of generative AI tools among B2C marketing professionals. In the rapidly evolving world of marketing, generative AI tools have already become a staple. Every marketing professional interviewed was already using generative AI, at least to some degree. The responses revealed a strong consensus that generative AI will significantly improve marketing activities, with almost two-thirds of those interviewed predicting a substantial improvement. Heavy users found that generative AI excels at saving time and significantly accelerating market research and content creation tasks. Moreover, AI is being recognized for not only its speed but also its potential to improve the quality of marketing output. Marketers should embrace the practical uses of AI in their strategies while being mindful of its limitations and the challenges of integrating it both at the user and organizational levels.

One-Stop Campaigns: How Generative AI Is Transforming Digital Advertising

Interview with Adam Singolda, Founder and CEO of Taboola

GenAI has a deep impact on marketing and on the advertising industry in particular. While predictive AI has revolutionized targeting, GenAI is also reaching into the creative realm. Taboola masters both AI applications, offering easy-to-handle self-service one-stop-native-advertising campaigns to a constantly growing number of clients all over the world. Are these developments the end of human-made ads? Will advertising agencies soon be obsolete because AI-created ads achieve better performance? In this interview, Adam Singolda, CEO and founder of Taboola, shares his thoughts with us on the future of advertising. Read about the latest developments and the role of the human touch and culture for relationships between tech, creative, clients and consumers.

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Generative AI for Marketing Content Creation: New Rules for an Old Game

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Marketing Productivity, Content Quality





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*Marketers will need to identify
 meaningful areas or applications and
 develop new KPIs to efficiently monitor
 automated marketing.*
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Content creation is essential to marketing ✕ A striking image, a catchy claim, a funny video: High-quality content builds brands, excites audiences and persuades them to purchase. Finding the right content determines success in diverse activities and in various marketing functions such as advertising, public relations, social media marketing, customer relationship management, inbound marketing or personal sales. What makes generative AI (GenAI) truly revolutionary is that the same technologies promise to impact the entire value system of the content of marketing management. We have learned that GenAI can help produce high-quality content of literally any modality in terms of text, images or certain types of video. In a recent survey of 600 B2C marketers, about 50% report regular usage with plentiful applications as Fabian Buder and colleagues report

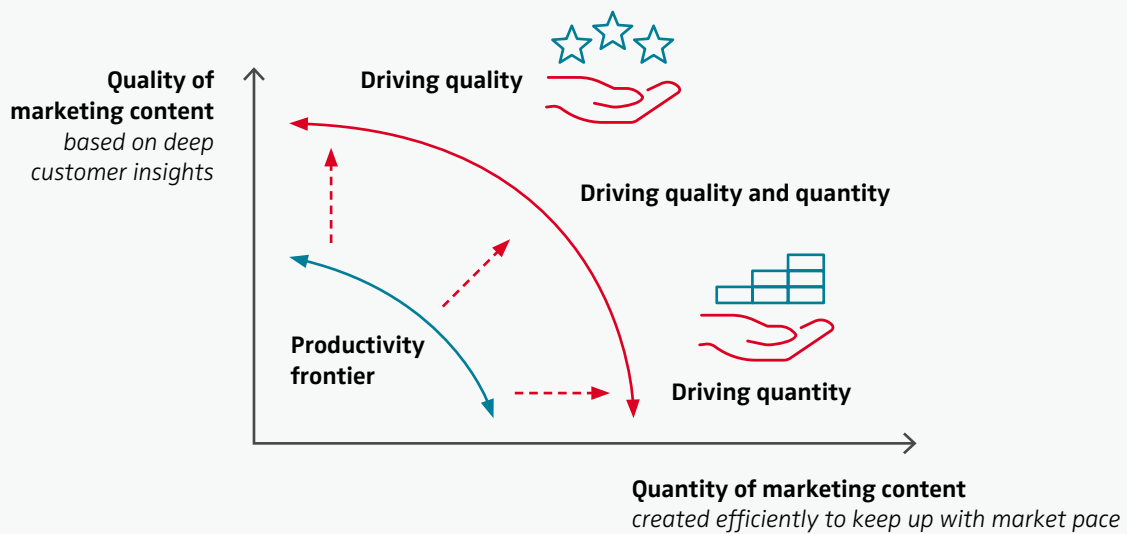
in this issue (p.50). Given the versatility of GenAI and the plethora of its potential applications, how should marketers make sense of the scope of change driven by GenAI?

Marketing trade-offs between content quality and content quantity ✕

It is useful to take a step back and consider the fundamental marketing trade-offs that GenAI is breaking up. Any piece of content created in marketing always involves the fundamental decision on how much time and effort to invest in content creation. Very simply: The longer one takes, the less one creates.

With faster pace and proliferating channels, more content is being required from marketing. Capitalizing on market opportunities as well as responding to competitive moves or societal developments requires efficient means of content

FIGURE 1 > Shifting the productivity frontier of marketing content creation with GenAI



creation. On the other hand, careful reflection is sometimes warranted. Any successful sales representative carefully analyzes prospective high-value clients before choosing what to show and in which way. High-quality content is needed when communicating brand purpose, responding to a social media firestorm or investing in high-reach channels such as traditional TV advertising. Marketers sometimes simply need to get quality right. This relates to ultimately winning the hearts and minds of customers. Building deep connections in this way necessitates deep customer insights. These take time to obtain and digest and limit the amount of content marketers can produce.

These limitations mean that marketers can communicate with many customers superficially and with some in depth. They can consider many alternative communication strategies and perfect one in full detail. At every step of the way, trade-offs between quantity and quality are being made. It always comes down to decisions of when to perfect and when to cut corners.

Leveraging the new economics of content creation in times of GenAI ✕ The trade-off between quantity and quality defines the productivity frontier of marketing. Every organization has limits of how much content it can produce. Expanding quantity comes at the expense of quality, and vice versa. With GenAI, this trade-off suddenly breaks down.

Three main avenues emerge: driving quantity without compromising quality, driving quality without reducing quantity and driving both quantity and quality simultaneously (see Figure 1).

> **Driving the quantity of marketing content with GenAI** ✕

More efficient content creation is the most obvious purpose for GenAI in the realm of marketing. Most prominently, ChatGPT and associated Microsoft services, Google's Gemini or Meta's open-source Llama help with ideation and the blank page problem, assist in finding alternative forms of expressions or adapt messages to specific audiences or channels. Top-of-funnel marketing activities such as blog or social media posts, search engine marketing, press releases, e-mail marketing, cold outreach in sales or the creation of landing pages for inbound marketing all benefit from more efficient creation of more content. Specialized solutions such as Jasper.ai or Copy.ai have been optimized for marketing purposes and can efficiently build on brand voice, product knowledge or website information to take context into account.

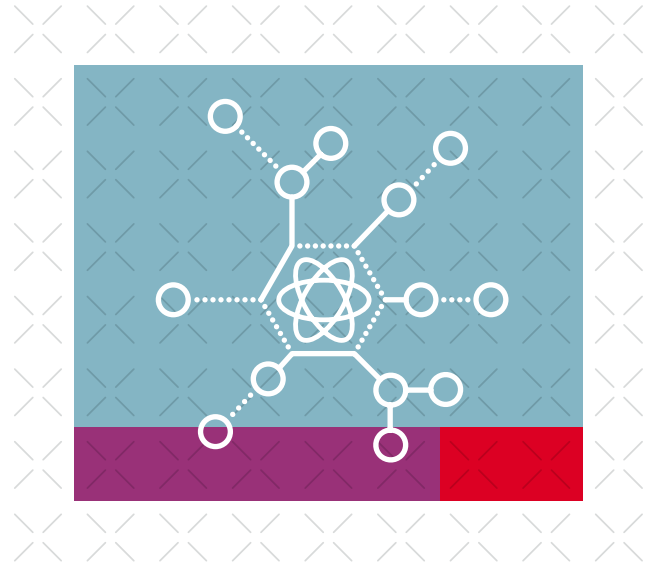
When it comes to images, even more profound efficiency gains are attainable. Useful content can be created without photographers travelling the globe, searching for suitable locations or waiting for the right weather. Dall E, Midjourney or Stable Diffusion can create a sunset at the beach as

quickly as it can a snow-covered alpine village. Developments such as in Firefly from Adobe allow the adding of one's own images to guide creation, and image-to-text conversion can assist in finding suitable prompts to expand on.

In terms of content distribution, advertising platforms such as Meta provide tools to adapt creative assets, generate new backgrounds or expand images to adjust to different aspect ratios, making distribution more efficient. Through Taboola, marketers can create entire online advertisements including headlines, descriptions and image content based on their landing pages and directly execute distribution.

The efficiency and content quantity rendered by these applications are particularly useful when marketers want to continuously engage audiences with new content, quickly capitalize on recent trends or promptly flush out new products or when many channels and languages need to be managed. Heinz ketchup, for example, has leveraged the hype around GenAI with various ketchup-related prompts, demonstrating that most images resemble the iconic Heinz bottle. Mattel reports generating four times as many Hot Wheels toy car concepts with GenAI. Other marketers attempt to engage communities to further increase the variety of content. Coca Cola has invited artists to join its Create Real Magic digital platform to produce images for display on billboards in New York and London. All these developments are possible due to the dramatic reductions in content production costs. According to estimates from communication giant WPP, savings can be as much as 10 to 20 times. But these gains in efficiency do not free marketers from making informed decisions about what to communicate. While off-the-shelf models provide impressive content and are quick to implement, they are not optimized for specific marketing objectives. Establishing a clear strategy and operational measures remains essential, in addition to developing the right prompts, as Oguz Azar argues in his article (p. 18).

- > **Driving the quality of marketing content with GenAI** ✕ The efficiency gains of GenAI are an intuitive starting point for improving the decision-making of marketers. With GenAI, marketers can explore a broader



solution space than previously conceivable. Proponents of agile marketing have long urged marketers to quickly test realistic concepts, collect feedback and iteratively improve. Such measures have been limited by the number of concepts marketers could communicate and the level of quality with which those concepts could be represented. With the ability to produce better visuals, marketers can leap more directly to concept illustrations that feel more real to customers, enabling better informed feedback. Taking a broader scope of alternatives into account and communicating these further increases the chances of finding the best possible solutions for the task at hand. These developments require marketers to rethink the way they assess the alternatives. Think of creating advertising copy. Traditional market research and consumer surveys center on collecting many responses to just a few alternatives from a large number of consumers. This allows for the collection of detailed and nuanced feedback on each individual alternative. Testing more alternatives necessarily limits the sample sizes per alternative and the number of diagnostic questions. Online survey solutions such as Qualtrics, quantilope or QuestionPro are integrating GenAI



*The productivity frontier of content quantity
and quality continues to expand.*



into their systems to assist rapid survey development. However, one needs to be aware that the fewer performance indicators collected, the more essential it becomes to find the right ones.

To scale further, one can combine predictive AI with generative AI to assess even more options without the need to collect feedback. In their article (p. 36), Christian Scheier and Dirk Held discuss how integrating different AI applications can help in finding a more manageable solution space. Another approach is to utilize GenAI directly for assessment. With its ability to reflect on different types of input, GenAI can simulate individual customers. In pricing, even off-the-shelf ChatGPT can provide reasonable inferences on price response for mainstream products. Providing better training data on the actual market will likely further improve such predictions. While the actual potential has yet to be explored, it can offer exciting options to flexibly simulate various possible market conditions. The ability to dig deeper wherever marketers see potential is essential to obtaining insights that have impact. GenAI is capable of not only simulating “what if” scenarios but also providing rationale and relevant visuals with the click of a button.

Sales is another area abound with highly variable and unstructured information, such as email chains and audio and video of personal interactions. Services like Microsoft Copilot for Sales or Salesforce Einstein GPT digest this information and can combine it with other sources, including publicly available data. GenAI excels at summarizing such content. It allows sales agents to drill down to any needed level of detail. It can consider the subtle signals and language nuances both within a prospective customer and across customers. This ensures that no important details are missed. It allows for quick snapshots of opportunities and more effective time allocation. In their article (p. 30), Xueming Luo and his colleagues show these effects empirically while also pointing out that freeing sales agents from mundane tasks makes their jobs more challenging.

- > **Driving the quality and quantity of marketing content** ✕ In advertising, the Internet has dramatically reduced content distribution costs and provided access to advertisers with smaller budgets. The volume and diversity of content and channels are already astonishing. GenAI has the potential to skyrocket this development into other dimensions. This makes it more important than ever to stand out and cater to individual target groups with the best possible content fit.

Accordingly, much of the excitement around GenAI’s marketing potential centers on hyper-personalization. It seems intuitive to extend personalized content distribution to personalized content creation. An airline

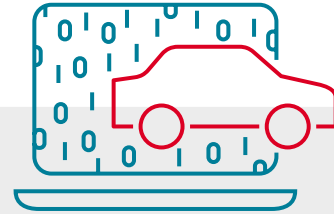
might display different ads and adapt landing pages depending on whether customers have previously visited a destination. While human content creators might have many intuitive ideas on how to do that, automatically adapting with GenAI is less trivial. Further complicating matters, one would ideally optimize content creation and content distribution simultaneously. However, these are two highly distinct tasks (see Interview with Taboola CEO Adam Singolda on p. 56). Full hyper-personalization therefore requires solving multiple technical challenges. To get there, one would first need to be able to create content that is optimized for market objectives without requiring human intervention.

Can GenAI accomplish the tasks previously performed by teams of market researchers, marketers and creative agencies? It is important to note that such tasks differ widely from what common GenAI applications do. They do create content, and they can even be promoted to create advertising content, so the problem might appear to be solved. But solutions such as ChatGPT or Midjourney are trained on objective data. Midjourney can produce images of a car, chair or cat, and ChatGPT mostly gets linguistic facts right. This is not the same as choosing which content to display to engage a target group. No single objective truth exists for these marketing objectives. What works for marketing changes over time and differs across individuals. It requires customized models based on unbiased, subjective training data, as Christina Schamp and colleagues explain in their article (p. 42). Box 1 and 2 illustrates how this can be done.

GenAI can be trained on other objective marketing functions beyond advertising. Similar to the results in Box 2, better performance has been reported in research on product design as well as research on search engine marketing – see the article by David Schweidel and colleagues (p. 24). These developments will allow marketers to drive both quality and quantity. In advertising, for example, automated quality optimization is the basis for actual hyper-personalization. While we have trained images on the average population, the same can be done with any market or target group. Recent advances with multimodal models (Google Gemini, OpenAI GPT4, Apple Ferret) will allow much deeper image diagnostics to understand what drives marketing performance for individual target groups. This could feed into large action models or other GenAI-based agent systems that iteratively improve marketing communication through continuous feedback collection and optimization.

GenAI developments in marketing are promising, but challenges remain ✕ As these various examples illustrate, the productivity frontier of content quantity and quality

BOX 1



Study: An example of automotive advertising

For online advertising, Tijmen Jansen, Martin Reisenbichler, David Schweidel and I have investigated whether GenAI can go the full distance and create effective ad images. We retrained open source Stable Diffusion. To do so, we collected 543 online advertisements from the automotive industry. We then ran traditional market research and collected classic mindset metrics like attention, interest or liking on conventional 7-point scales as well as click rates. Average ad performance in the eyes of consumers varied fundamentally, with the best ad achieving an average above 5.50 and the worst a little better than 2.0 on the 7-point scale.

To automatically produce well-performing ads, we picked a recently introduced Polestar 3 vehicle and collected associated marketing images. In addition, we chose two possible brand positioning objectives: ruggedness and luxury. To train Stable Diffusion on these brand associations, we collected image collages from other sources as would be done in traditional advertising.

The text prompts Stable Diffusion uses are similar in spirit to discussions in traditional ad creation where market research and marketing effectively translate visuals into language to guide content creation of agencies. Good agencies have a great deal of implicit knowledge about effective marketing communication. Stable Diffusion does not. While it knows what ads look like, it does not know their impact on consumers' minds. We therefore needed to train GenAI new mindset vocabulary and relate it to image content, using well-performing ads, images of the target product (Polestar 3) and relevant brand associations (ruggedness and luxury). Based on this training, we were able to ask Stable Diffusion to produce images for any combination of advertising objectives.

FIGURE 2 > Generating effective ads: Actual ads and AI-generated ads for Polestar 3 used in the study

Online ads scraped from the Internet



GenAI ads optimized on mindset metrics and brand ruggedness

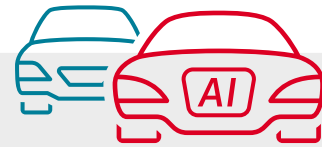


GenAI ads optimized on mindset metrics and brand luxury



Figure 2 displays four automatically generated ads and compares them to two conventional ones. As illustrated, Stable Diffusion found meaningful expressions of abstract concepts such as ruggedness (rock, trees, off road) or luxury (buildings, street movement) also utilizing different car viewing angles.

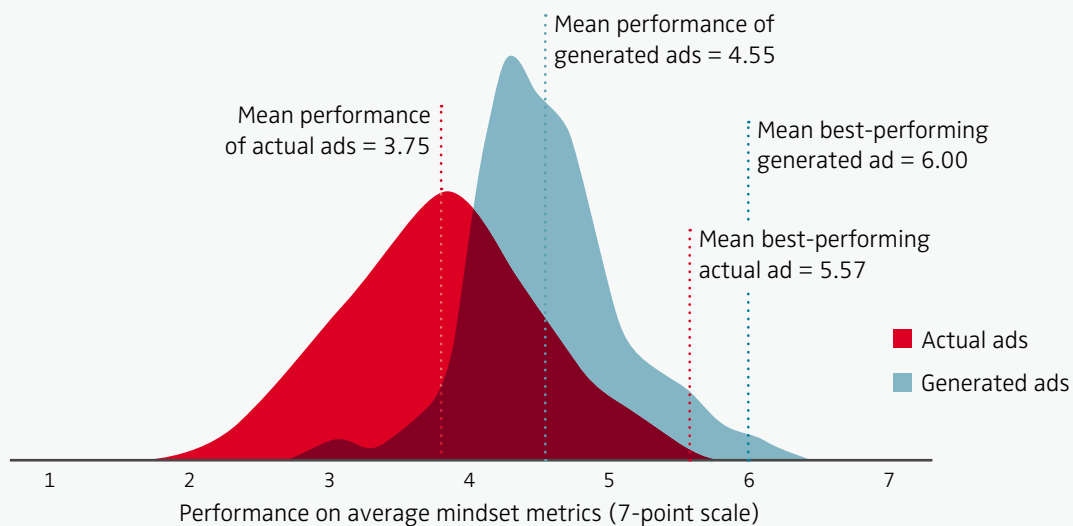
BOX 2



Can GenAI create effective ads? Results from the study

Unedited AI-generated ads outperformed actual ads ✕ Figure 3 shows the results on the average mindset metrics. On average, the generated ads received a rating of 4.55, while the actual ads received a rating of 3.79 by consumers. It is safe to assume that the actual ads involved creative briefings, photo shootings, image editing, perhaps even market research and some form of informed ad selection. We did nothing of the kind for the AI-generated ads. Despite this, they performed more than 20% better.

FIGURE 3 > Performance of actual ads compared to AI-generated ads



Could advertising pick AI-generated ads at random and attain reasonable results or outperform even the best-performing actual ad? ✕ Based on our data, the probability was 85% that a randomly selected generated ad performed better than the average of traditional ads. The best traditional ad had a score of 5.57. Two generated ads (4%) outperformed these, with the best generated (and unedited) ad achieving a score of 6.0 on a 7-point scale. In terms of actual behavior, we found click-through rates (CTRs) of the best generated ad to be about 17.5% higher for the best generated ad compared to actual Polestar marketing material (CTR=1.42 vs. 1.21%).

continues to expand. In navigating these turbulent waters, it is useful to reconsider whether driving content quantity, quality or any combination is the primary objective. These objectives come with various challenges.

> **Experiment with tools and adapt organizational structure and roles** ✕ Off-the-shelf solutions provide various means of improving efficiency and can create

vastly more content. Fully leveraging the efficiency gains of GenAI includes experimenting with the various tools available. Not every tool works for everyone. Prompting can be a tedious exercise. It is therefore essential to find the best partners for individual content creators. On the one hand, marketers will want a culture of openness and experimentation. On the other hand, potential biases such as racial or gender prototypes need to be managed, and



Harvesting the true power of AI often entails exposing GenAI models to company-specific data and fine-tuning these for the desired objectives.



digital rights as well as enough human review need to be ensured. This can require new roles. Coca Cola, for example, has appointed a head of Generative AI. Such functions will have to manage a delicate balance of the necessary bottom-up experimentation and top-down control.

- > **Train AI models with brand- and consumer-specific data** ✕ Driving quality involves helping people make better decisions. This includes adapting systems to the needs of individuals and helping decision-makers to more quickly learn how to better perform their traditional roles. Harvesting the true power of AI often entails exposing GenAI models to company-specific data and fine-tuning these for the desired objectives. Furthermore, asking the right questions to GenAI and drawing the right conclusions is non-trivial. Whether it's innovation, advertising, product design or sales, the new lever of GenAI will make domain knowledge even more powerful. While it is intuitive to build knowledge on proper prompting and GenAI usage, improving domain knowledge and utilizing GenAI for learning hold similar promise when it comes to driving quality.

- > **Define application areas and develop new KPIs** ✕ Driving both content and quality is perhaps most exciting, but it also comes with the highest challenges. It is not yet clear in which domains both higher quality and quantity can be achieved. For example, the car advertisements above are much easier to create with GenAI compared to fashion advertisements, which have a stronger human presence. Marketers will need to identify meaningful areas or applications and develop new KPIs to efficiently monitor automated marketing. Once GenAI creates even more content and marketers can optimize its effectiveness, finding useful summaries of content production will also become critical. Managing such systems requires creating new diagnostic data and will fundamentally change the roles of all involved, including internal and external content creation team members.

One of the most successful applications of GenAI is the development of the GenAI itself. In this way, GenAI is fueling its own rate of innovation. This includes tailor-made solutions for specific tasks, improved multimodality, better understanding of image and video content and better responses to user input, and perhaps including agent systems that understand marketers and act on their behalf. With open mindsets, a strong interest in learning and the ability to see beyond the horizon, marketers can benefit tremendously from the added efficiency and effectiveness GenAI can bring to the table. ✕



FURTHER READING

Brand, J., Israeli, A., & Ngwe, D. (2023). Using GPT for Market Research. Harvard Business School Marketing Unit Working Paper No. 23-062.
SSRN: <https://ssrn.com/abstract=4395751>

Burnap, A., Hauser, J. R., & Timoshenko, A. (2023). Product Aesthetic Design: A Machine Learning Augmentation. *Marketing Science*, 42(6), 1029-1056.

Jansen, T., Heitmann, M., Reisenbichler, M., & Schweidel, D. A. (2023). Automated Alignment: Guiding Visual Generative AI for Brand Building and Customer Engagement.
SSRN: <https://ssrn.com/abstract=4656622>

Beyond Prompt Engineering: Skills Marketers Need to Deploy Generative AI Successfully

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KEYWORDS

Generative AI, Prompt Engineering, Problem Formulation, AI Skills

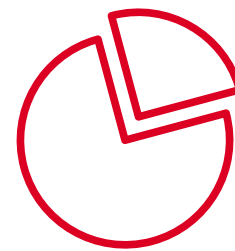
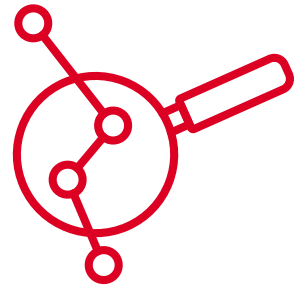
Prompt engineering: THE skill in the age of Generative AI?

× Throughout history, waves of technological innovation have continually redefined the professional landscape. Not long ago, roles such as switchboard operators, typists and stenographers were indispensable to large organizations. Fast forward to today, and once-unthinkable professions like social media managers or app developers have become the norm. Now, as generative AI tools like ChatGPT, MidJourney, and Google Gemini emerge, we stand on the cusp of another monumental shift.

Among the new job titles surfacing, “prompt engineering” is often heralded as the “job of the future.” However, it’s imperative to look past the hype and concentrate on transferable and sustainable skills that are crucial for harnessing the potential of generative AI.

Start with the problem × A key skill for effectively integrating generative AI systems within organizational workflows is problem formulation. Unlike prompt engineering, which focuses on crafting and fine-tuning the perfect query, problem formulation is the strategic process of defining what you’re asking in the first place – establishing the problem’s focus, scope and parameters. This distinction is crucial: Without a clear problem, even the most elegantly engineered prompts will miss the mark. Yet in practice,

problem formulation often doesn’t receive the attention it deserves, as the traditional preference for problem solving overshadows the foundational step of problem formulation. Framing marketing jobs and activities in terms of problems – or tasks that marketing professionals aim to accomplish – is a starting point for intentionally engaging with new AI tools. That is, problem formulation allows marketers to use generative AI in a more purposeful way and, in turn, obtain AI solutions that are more precisely tailored to specific marketing challenges. In addition to better alignment, this approach prompts a reconsideration of marketing operations in a more problem-centric way. Such reevaluation can serve as the basis for strategic prioritization and smart experiments





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To fully reap the rewards of GenAI, managers must cultivate a suite of complementary skills.

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FIGURE 1 > Key components of effective problem formulation



> **Problem diagnosis**

identifying the core problem for AI to solve and the main objective you want generative AI to accomplish



> **Problem decomposition**

breaking down complex problems into smaller, manageable sub-problems



> **Problem reframing**

changing the perspective, enabling alternative interpretations



> **Constraint design**

delineating the boundaries of a problem

to guide marketers in determining when a task should be automated via AI, when it can augment human efforts and when its application might be counterproductive.

Problem formulation has four main components: problem diagnosis, decomposition, reframing and constraint design (Figure 1).

> **Problem diagnosis** ✕ Problem diagnosis is primarily about getting to the heart of the issue and defining the specific objective for the AI to tackle. Take, for instance, a company facing an unexpected dip in sales. A conventional approach might be to jump straight to solutions, like ramping up advertising or rolling out promotions. Yet a strategic problem diagnosis requires a step back to probe underlying causes: Is a new competitor on the rise, have customer tastes shifted or is there an unnoticed flaw in the product? By pinpointing the exact problem for the AI, the resulting AI-generated insights or output will be more focused on specific solutions rather than broad-stroke attempts to raise sales. In other words, a well-diagnosed problem enables AI to generate more targeted, actionable solutions that address the real issues rather than just the surface-level symptoms.

> **Problem decomposition** ✕ Problem decomposition concerns breaking down complex problems into smaller, more digestible sub-problems. This becomes particularly important when dealing with multifaceted issues that, if tackled as a whole, might overwhelm the problem-solving capabilities of both humans and AI. Consider an e-commerce platform aiming to increase customer engagement. This overarching goal can be dissected into distinct components like refining the user interface, tailoring the shopping journey, streamlining the checkout pathway or augmenting post-purchase support. Each sub-problem presents a clear objective for AI intervention. For example, when the AI is used for “optimizing the checkout process to curtail cart abandonment,” it is poised to devise specific solutions or algorithmic enhancements that simplify the purchasing trajectory. By compartmentalizing the overarching problem, marketers can leverage AI to tackle each component systematically, yielding more effective, practical solutions that cumulatively address the larger problem.

> **Problem reframing** ✕ Problem reframing is about altering how the problem is approached, offering a new



lens through which alternative solutions can emerge and allowing marketers to uncover a broader array of potential solutions. Take, for example, a retailer grappling with diminishing foot traffic at in-store events. The initial challenge may be straightforward: “How do we boost attendance at in-store events?” However, a reframed query could transform the problem space entirely: “How might we replicate the in-store experience for customers virtually?” This shift in perspective can lead AI to pivot from conventional ideas focused on driving physical attendance to generating innovative alternatives like virtual reality shopping or interactive online workshops.

- > **Problem constraint design** ✕ This component is about delineating the boundaries of a problem by defining the input, process and output restrictions of the solution

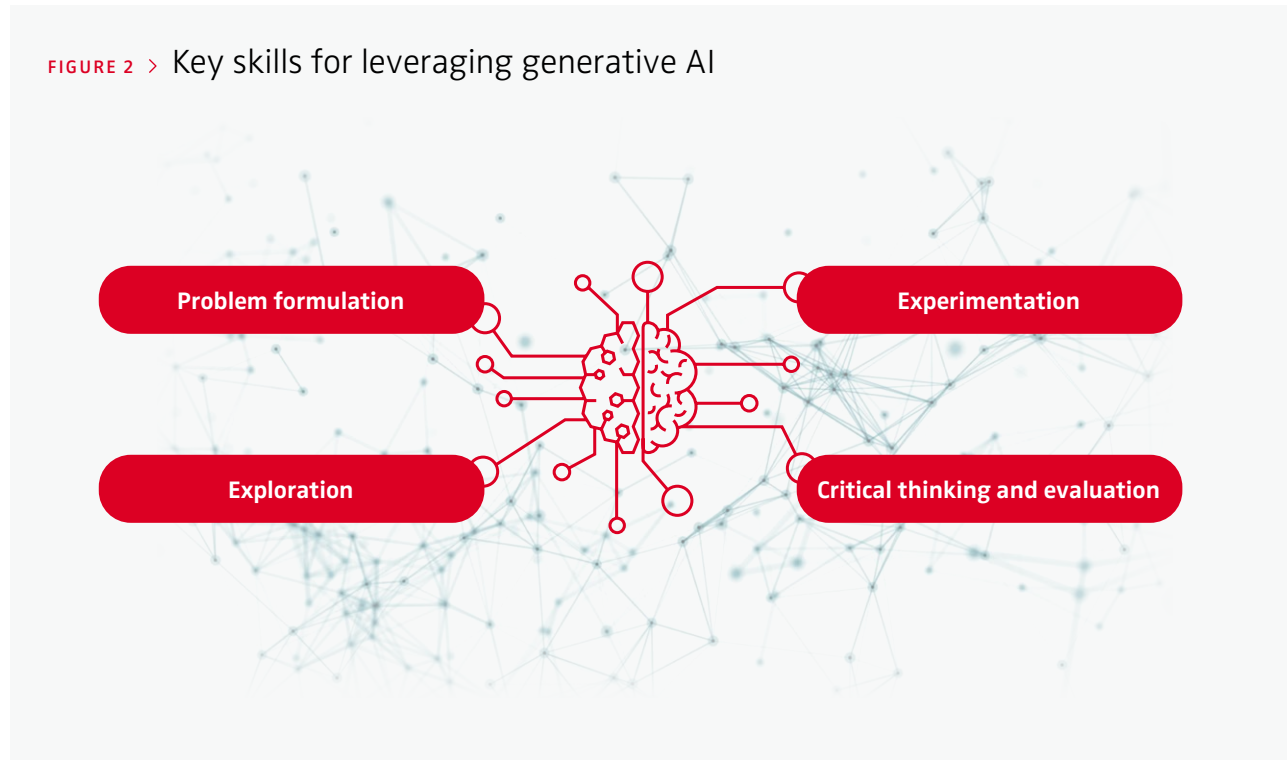
space. Setting these parameters within which a problem must be solved enables the strategic channeling of AI’s capabilities. For tasks where productivity is key, precise and stringent constraints are often necessary. For instance, when AI is being employed to craft a social media campaign, constraints might include target demographics, budget limits, selected platforms for engagement, and alignment with brand identity. Such parameters guide AI to generate tailored output that meets specific marketing objectives. When the aim is to spark creativity, however, the approach to constraints should differ. Relaxing, adjusting or even temporarily removing constraints can lead to fresh and novel ideas. Overall, when the right constraints are in place, AI can excel at producing solutions that are both innovative and in harmony with the campaign’s goals and the brand ethos.



A key skill for effectively integrating generative AI systems within organizational workflows is problem formulation.



FIGURE 2 > Key skills for leveraging generative AI



Focus on sustainable skills ✕ Developing problem formulation skills is just the initial step in a much more comprehensive course toward effectively harnessing generative AI tools. To fully reap the rewards of this transformative technology, managers must cultivate a suite of complementary skills. This skill set encompasses exploration, experimentation and critical evaluation (Figure 2).

> **Exploration** ✕ In an era where new AI tools and functions are announced almost weekly, the ability to navigate and identify the most appropriate AI solution for a given marketing challenge has become increasingly important as well as challenging. Marketers are not only expected to be familiar with main generative AI tools – such as ChatGPT or Google Gemini – but they must also explore

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A well-diagnosed problem enables AI to generate more targeted, actionable solutions that address the real issues rather than just the surface-level symptoms.

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tools that are specifically designed or particularly useful for marketing. Consider, for instance, Jasper and Lately.ai, which are tailor-made for crafting social media content, or text-to-video generators like Runway and Synthesia, which can transform the creation of marketing videos.

> **Experimentation** ✕ Given the fast-paced evolution of AI, one of the most practical approaches for staying ahead is continual experimentation. This process goes beyond passive observation – it's about dynamic engagement with AI, characterized by hands-on interaction, trial and error and careful evaluation of results. In branding, for instance, text-to-image AI, like OpenAI's DALL-E generator, opens up a new frontier for creative exploration and co-creation. Coca-Cola's "Create Real Magic" campaign serves as a case in point. The company invited consumers to an image-generation contest where they could use a design tool that leverages ChatGPT and DALL-E to generate images. Active experimentation with such tools allows brands to discover innovative opportunities to improve marketing processes and outcomes.

> **Critical evaluation** ✕ Generative AI tools sometimes confabulate – i.e., produce inaccurate, biased or contextually inappropriate content. Not only is this a major limitation in general, but it is also particularly concerning when such AI-generated content informs strategic marketing decisions or is presented directly to consumers. Integrating a human with strong critical evaluation skills in the loop helps identify and mitigate this limitation. By applying a disciplined and attentive lens through which to evaluate the generative AI output, humans with better creative skills can distinguish between what is suitable and what is not. As such, this skill is key to ensuring that AI-generated content makes sense for a brand in a given situation.

From prompting to proficiency ✕ To truly leverage the growing capabilities of generative AI, managers must look beyond the confines of prompt engineering. AI systems are already getting much better at understanding user intent and generating prompts themselves. For example, Chat GPT 4 can generate sophisticated prompts from very basic inputs to create images in DALL-E. Likewise, a recent study introduced a new framework called GATE (Generative Active Task Elicitation), which enables AI systems to not only surpass user prompting techniques in eliciting superior responses but also to produce novel outcomes that were not initially foreseen by users.

For marketers, staying ahead of this transformative wave demands a resolute commitment to continuous adaptation, learning and development. This involves a thorough exploration of emerging AI tools, a proactive approach to testing the frontiers of these new technologies and the development of skills to articulate complex problems clearly. Additionally, it requires a critical acumen for assessing AI-generated outputs.

As the generative AI landscape evolves, it is these skills – unearthing and articulating complex problems, dissecting AI-generated solutions and remaining agile in the learning curve – that could separate AI leaders from followers. ✕



FURTHER READING

Acar, O. A. (2023, November 8). Has Generative AI Peaked? Harvard Business Review. <https://hbr.org/2023/11/has-generative-ai-peaked>

Acar, O. A. (2023, June 6). AI Prompt Engineering Isn't the Future. Harvard Business Review. <https://hbr.org/2023/06/ai-prompt-engineering-isnt-the-future>

Acar, O. A. (2023, June 15). Are Your Students Ready for AI? A Four-Step Framework to Prepare Learners for a ChatGPT World. Harvard Business School Publishing. <https://hbsp.harvard.edu/inspiring-minds/are-your-students-ready-for-ai?>

Gvirtz, A., & Acar, O. A. (2023, October 26). Why Text-to-Image AI Requires a New Branding Mindset. Sloan Management Review. <https://sloanreview.mit.edu/article/why-text-to-image-ai-requires-a-new-branding-mindset/>

Li, B. Z., Tamkin, A., Goodman, N., & Andreas, J. (2023, October 17). Eliciting Human Preferences with Language Models. Working paper. <https://arxiv.org/pdf/2310.11589.pdf>

Moving Beyond ChatGPT: Applying Large Language Models in Marketing Contexts

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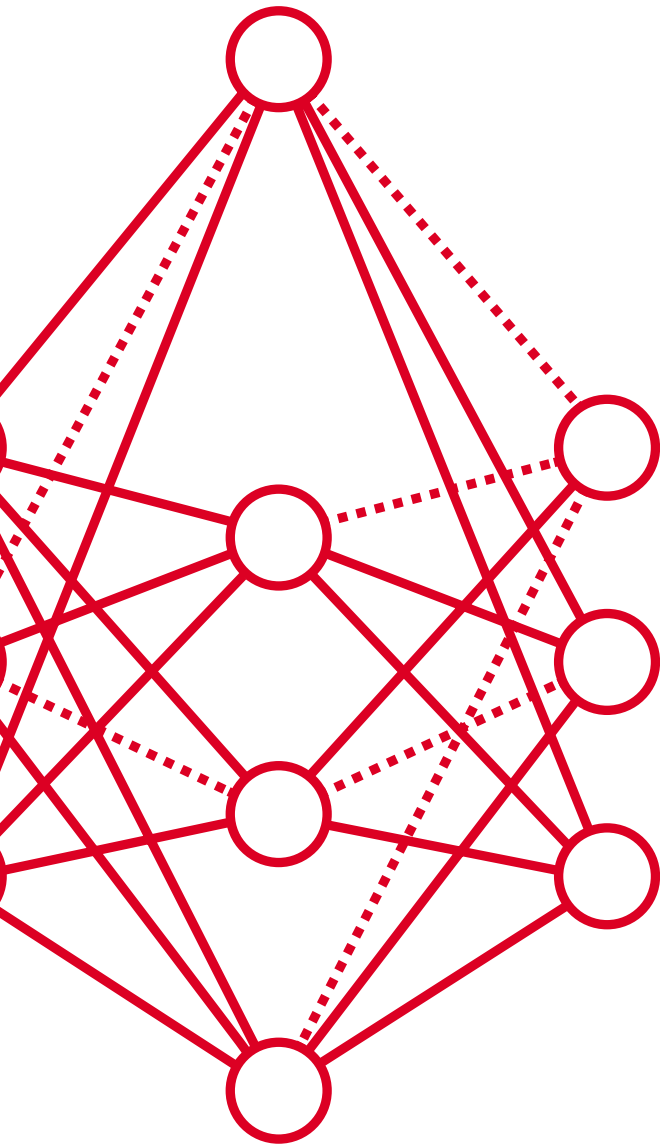
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KEYWORDS

Large Language Models, Content Marketing, Search Engine Optimization, Human-Machine Collaboration





*AI is a tool that can
boost productivity and
performance, but it requires
human oversight.*



A new era of AI assistance ✕ When Open AI demonstrated ChatGPT to the public, people were amazed by what large language models (LLMs) – the type of generative AI behind the chat-like surface – were able to produce. Even if LLMs might seem like sentient machines, they should more appropriately be viewed as “stochastic parrots” or eager-to-please interns. But despite their apparent prowess, LLMs are not trained for a particular context. Should the text attract new customers? Engage current customers? Will it be used for direct mail or a blog post? The intended use of the text will ultimately dictate what makes for successful content. If we could filter previously developed content and use only that which has been deployed successfully for a particular task, we could try to recreate the formula for success. This is not wishful thinking, but rather offers an accessible approach to tailoring LLMs for marketing applications that we have successfully demonstrated in the search engine marketing process.

LLMs perform well “inside the box” ✕ Figure 1 offers a schematic of the types of projects that stand to benefit most and least from LLMs. To harness LLMs like OpenAI’s GPT Series or Google’s Gemini, we must reframe “out of the box” problems as “inside the box” concepts where LLMs shine. “Inside the box” thinking makes use of the patterns present in existing data. Ask an LLM for the recipe for a traditional dessert, and it has many examples on which to draw. If you wanted to blend recipes for different confections, LLMs will draw upon relations observed in the training data to craft a unique combination. The same would be true for drafting descriptions of new products that evolved from prior products.

FIGURE 1 > The Opportunities for LLMs in Marketing



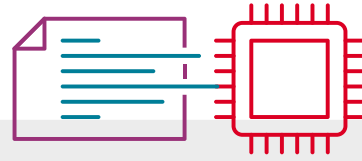
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Creating new content by leveraging past content quickly escalates beyond humans' pattern recognition capabilities.

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The situation is different for fundamentally new tasks. Imagine trying to describe today's smartphones before they came on the market. The device could have easily been described as a miniature computer with a powerful camera that just happens to have the capability of making phone calls. We still talk today of "dialing" a number, even though many have never seen a rotary phone. While it is easy to deconstruct today's products into underlying components à la conjoint analysis,

put yourself in the early days of telephones. Anyone writing about a phone at the time would have had no concept of the capabilities of today's smartphones. Envisioning new products requires "outside the box" thinking that goes beyond what has been previously observed. Such paradigm shifts reveal the shortcomings of being anchored to historical data. If it has never been seen before, there is no data on which to train an AI. Such creativity hasn't been replaced (yet).



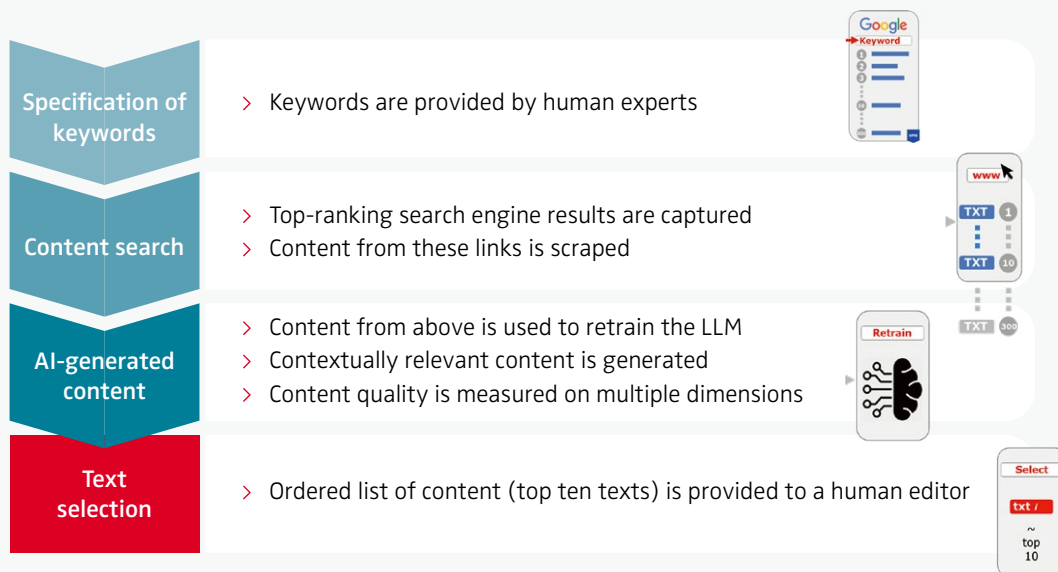
BOX 1

Customizing LLMs by adding context-specific information and human editing

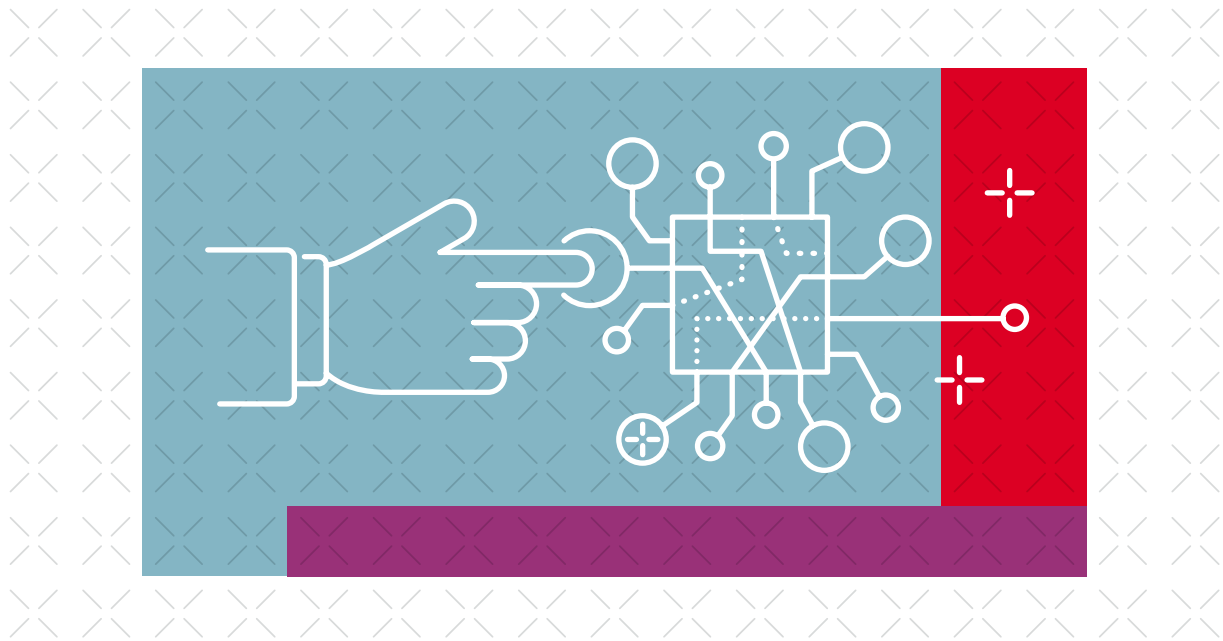
Our approach to producing AI-assisted SEO content blends the general language patterns known to a base LLM with application-specific language. The result is a customized language model that can generate thousands of pieces of hypothetical content for a particular search query.

But not all content from our informed “stochastic parrot” will be suitable for publishing. Some might be gibberish, or it might replicate toxic or otherwise inappropriate language, while other pieces of content will be more appealing. To find the text that is expected to perform best, we score the content using an empirically validated quality metric that was developed by scraping nearly 1.5 million websites using 8,500 search terms that spanned 36 different industries. While the content created up until this point is fully automated, it is risky to let machine-generated content represent your brand. Content that is factually accurate – which is not guaranteed – may not be consistent with the tone or positioning of the brand. An experienced editor’s discerning eye is essential to choosing the appropriate content and casting it into a form that is publishable. Figure 2 summarizes the steps in this process.

FIGURE 2 > Overview steps of a (semi)automated SEO content writing machine



Performance of the hybrid solution ✕ To evaluate this approach, we pitted our human-in-the-loop AI against SEO experts. In two different industry contexts, our approach outperformed SEO experts. The machine-generated-human-edited content was indistinguishable from human-written content in terms of readability, ease of understanding, naturalness and credibility. More importantly, our content ranked higher in the search engine than human-written content, outperforming it in terms of online visibility by more than a factor of 2. Beyond the improved performance, the machine-generated, human-edited content was created at a fraction of the cost compared to hiring a professional copywriter. Even if we account for the effort to build and maintain the AI solution and the labor costs associated with editing the AI-generated content, the cost savings per piece of content exceeded 80%.



LLMs excel when human and machine collaborate

✕ While AI can produce candidate answers to a question at scale, human experience allows us to ask the right questions and to inform how we measure success. Take a non-profit trying to increase donations to its fundraising campaign. While some past appeals worked to open constituents' wallets, others fell on deaf ears. We would want to draw inspiration from the marketing content that was successful. By first defining and identifying past successes, we can use that to provide a schematic for AI-assisted content creation. But textual content is multi-faceted as it involves tone, sentiment, word frequency and syntactic patterns. Creating new content by leveraging past content quickly escalates beyond humans' pattern recognition capabilities. This is where LLMs excel, leveraging previously observed patterns to deliver fresh content bearing these same language patterns. The

approach we developed and implemented, as summarized in Box 1, relies on the pattern recognition capabilities of AI and a human's discerning eye.

Creating content optimized for online search ✕ In our research, we develop an AI-supported algorithm to produce search engine optimized (SEO) content, a typical highly scalable "inside the box" application in the upper-right quadrant of Figure 1. The objective was simple: Create content that would rank well in search engines. Being highly ranked is paramount for marketers because search engines are one of the ways to attract new prospects. But it is not enough to be in the search results. The vast majority of clicks occur on the first page of search results, making the subsequent pages of considerably less value. Our goal in creating new content was to show up on the first page.



Beyond the improved performance, the machine-generated, human-edited content was created at a fraction of the cost compared to hiring a professional copywriter.





While LLMs enable us to offload a good portion of the work, marketing still requires a human touch.



One would expect content similar to the current top-performing search results to perform well. But replicating the current search engine results does not provide value to consumers searching for a particular query. In fact, search engines actively discourage this black hat SEO practice, referred to as content spinning. Instead, it is necessary to create unique content that retains the syntactic patterns of top-performing search results.

One option would be to build an LLM entirely from scratch for each application. This approach, however, is cost-prohibitive. Moreover, the content that is most relevant to a particular application – the currently top-performing websites based on their search results – is fairly limited. Another option would be to use an existing, off-the-shelf LLM, but such models don't include options to tailor the language to our specific task or brand. While the content might look natural to a reader, it hasn't been engineered to perform well with search engines. Therefore, we developed a middle-ground approach by dynamically fine-tuning an existing LLM based on a given search query. It is described in Box 1.

Explaining the performance disparity between SEO experts and our approach ✕ While humans might look for easy and straightforward rules of thumb like integrating some keywords, machine-generated content recreates high-dimensional textual properties like topical fit and optimal keyword frequency as well as industry-specific lexical and reading patterns. This is the point where a human's analytical gaze reaches its limits and LLMs excel. But it is important to remember that the machine cannot go at it alone. Though we have reduced the effort needed from human content creators, the role remains critical to ensure accuracy and consistency with brand guidelines. As we demonstrate, while LLMs enable us to offload a good portion of the work, marketing still requires a human touch.

Early adopters are thrilled ✕ Among our early adopters, the practical benefit is undisputed. For example, Storyblok, a globally operating headless CMS provider, was thrilled by the "overdue arrival of tools for automated marketing content generation." Their evaluation ranged from deeming it "an

interesting source of inspiration" to "extremely useful in conjunction with interactive editing." Christoph Wendl, CEO of Iphos IT solutions and inventor of the enterprise search software searchIT, credited gaining a substantial contract for his company to the superior search engine performance of the content generated as part of our pilot studies. The substantial reduction in costs from automating more routine tasks allows human contributors to focus their efforts on higher-value tasks like tailoring content to a specific brand's narrative or unique proposition.

Many more applications on the horizon ✕ Beyond SEO, we have applied similar principles to applications including search engine advertising, display advertising and social media posts. Without a doubt, we will see automated content generation used to optimize entire pieces of creative marketing – text, images, audio and video. But marketers should not be lulled into a "set it and forget it" mindset. Ultimately, they are responsible for the content – whether it is created by human, machine or both. Generative AI is ultimately a tool that can boost productivity and performance, but it has yet to become a wholesale replacement for a marketer's knowledge and skill set. ✕



FURTHER READING

Reisenbichler, M., Reutterer, T., Schweidel, D. A., & Dan, D. (2022). Frontiers: Supporting Content Marketing with Natural Language Generation. *Marketing Science*, 41(3), 441–452.

From Mundane to Creative: How AI Unburdens Sales Agents

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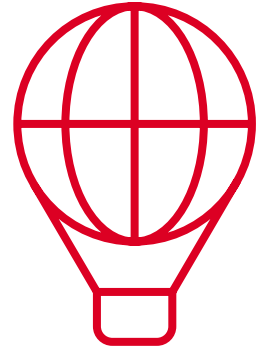
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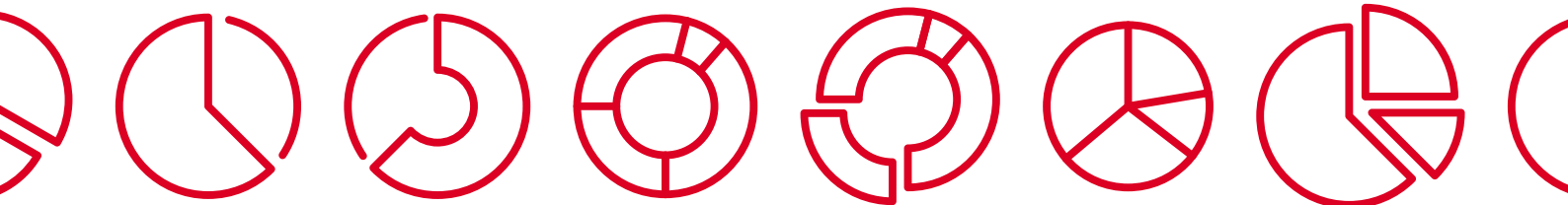
KEYWORDS

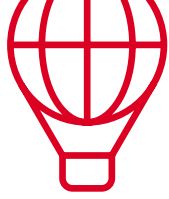
AI Support, Sales Assistance,
Sales Calls, Creativity,
Organizational Behavior



Teaming up with AI ✕ Many organizations envision AI as a partner that enables human employees to focus on higher-level problem solving. AI and employees have the potential to compensate for each other's weaknesses and generate complementarity, or "augmented intelligence." One speculation is that AI could increase employee creativity, with bots taking care of the heavy lifting so that humans can focus on the creative aspects. However, AI assistance can also have negative effects. Human employees might grow concerned about being replaced or having to face an increased workload when tasks become more challenging.

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*AI assistance can enhance
creativity and productivity,
but its impact is skill-biased.*
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Promising AI potential in sales ✕ A promising field for the joint work of humans and AI is sales. AI could handle repetitive and time-consuming tasks like data entry, lead qualification and appointment scheduling. This would allow human sales professionals to concentrate on high-value, creative activities like building relationships with clients and closing deals, ultimately improving efficiency and productivity. To gain more insights into the effects of AI support on the creative potential and performance of sales agents, we cooperated with a major telemarketing company in a field experiment (Box 1). The task involved making outbound calls to sell credit cards to customers and a sequential division of labor. The first part of the experiment comprised generating sales leads, a well codified activity that an established AI conversational bot technology could perform. The second part involved persuading these sales leads to make purchases, which the human sales agents performed.

How sales agents evaluate AI assistance ✕ Despite all groups of agents performing better in their sales calls when AI was involved, the interviews revealed remarkable differences in how AI was perceived by top performers in contrast to less skilled sales agents.

> **AI assistance altered job roles** ✕ Without AI assistance, sales agents considered lead generation to be hard labor as they rarely had real communications with customers. Agents spent most of their time trying to get connected, dealing with hang-ups and having very short conversations if customers even took their calls. With AI assistance in probing initial interest of customers, actual conversations with customers reached almost 100%. These changes increased efficiency but also the intensity

and challenges of agents' work. Interestingly, highly skilled and lower-skilled agents reported a drastically different impact of this change on their work performance and psychological well-being. Although highly skilled agents also recognized that with AI assistance, the difficulty of their work increased, they considered it beneficial to their efficiency and performance, and they reported feeling elated because this new work mode significantly improved their work. Conversely, lower-skilled agents considered the change to have lowered their speed and efficiency at work because with increased AI assistance they encountered more serious customers who were more challenging to serve. Owing to their limited abilities, the lower-skilled agents experienced many difficulties in persuading customers to move forward with a purchase.

> **Only highly skilled employees were able to use the freed-up time to develop more creative solutions**

✕ Agents at all skill levels agreed that increased interaction with customers provided valuable feedback, leading to the potential for better, context-appropriate solutions and that it enhanced their creative potential for new scripts in unique situations. However, there was a sharp divergence between highly skilled and lower-skilled agents. The highly skilled employees benefited directly from AI assistance because it allowed them to focus more on problem solving and developing innovative scripts, leading to improved outcomes in handling challenging customer questions. Conversely, the lower-skilled agents felt overchallenged and were unable to find new or better answers or more innovative solutions during the additional time. However, they felt that they might benefit from the scripts that higher-performing colleagues developed.



The findings of the study indicate that agents with AI assistance were significantly more successful in answering untrained customer questions than those without AI assistance.



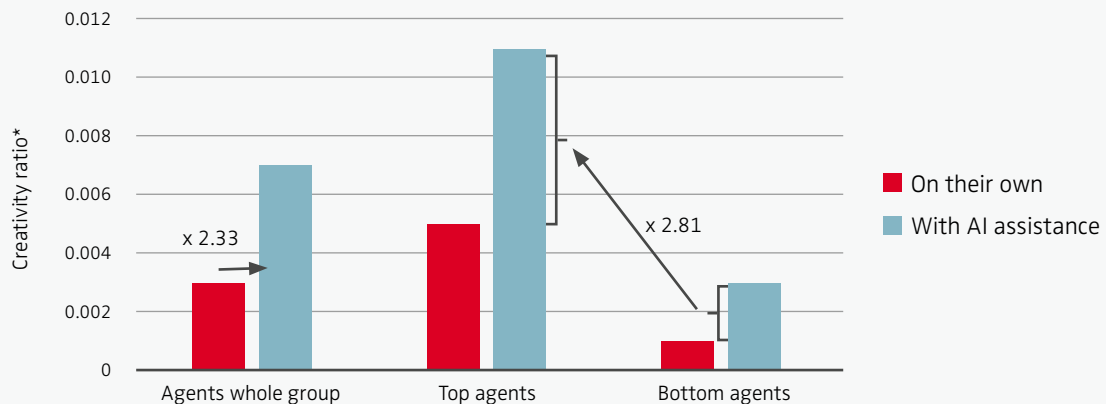


BOX 1

Mixed-methods study of AI assistance and creativity in sales

The study employed a mixed-methods approach to investigate the impact of AI assistance on creativity in a sales context. The first part of the study involved more than 3000 outbound calls to sell credit cards. The experiment used double randomization to assign customers to be served by AI-human teams or human agents alone, and human agents were also randomly assigned to work with or without AI assistance. The study measured employee creativity by analyzing audio recordings of agents' conversations to determine whether they successfully answered untrained customer questions and observed whether customers applied for credit cards after the sales calls. Figure 1 summarizes the results of the 4-group experiment.

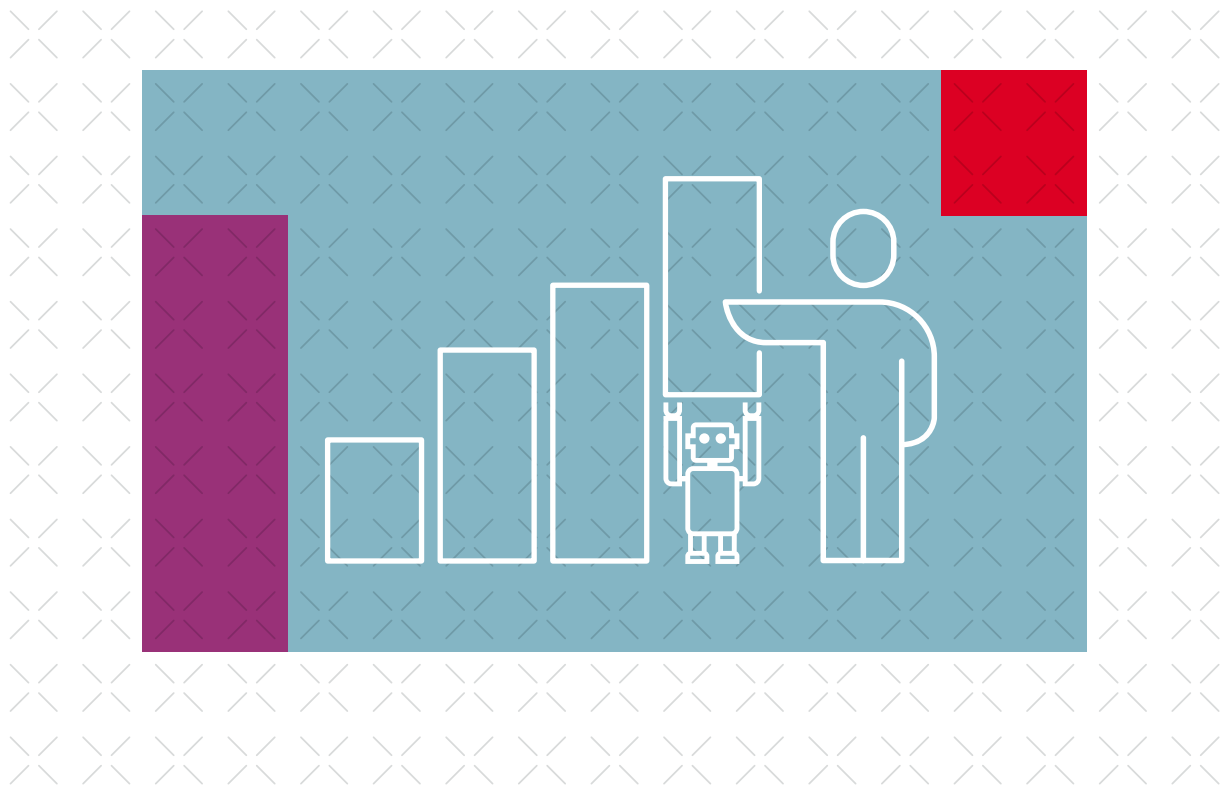
FIGURE 1 > Success of different groups of sales agents in solving outside-knowledge-bank sales challenges



* creativity ratio = creative answers/total questions asked

Figure 1 shows the creativity ratio of answering outside-knowledge-bank questions for the two aggregate experimental groups that differed in terms of whether AI assistance was used for lead generation. The findings of the study indicate that agents with AI assistance were significantly more successful in answering untrained customer questions than those without AI assistance by a factor of 2.33. The magnitude of this increase is much more pronounced among top agents than among bottom agents. Specifically, for top agents, the increased success in answering untrained questions due to receiving AI assistance, compared with no AI assistance, was 2.81 times that of bottom agents. All differences were statistically significant. This increase in successfully addressing untrained questions was a critical factor in sales performance. AI-assisted agents achieved higher customer purchase rates compared to those working independently.

In the second part of the study, semi-structured interviews with the 40 involved human sales agents were conducted to gain further insights into their experiences with AI support. The main findings from the interviews are summarized below.



- > **Highly skilled employees experienced more positive emotions** ✕ Both groups expressed positive sentiments regarding the company's adoption of AI, viewing it as a sign of technological advancement and strategic vision. This sentiment was driven by a sense of pride, recognition of their job skills and the perception of enhanced organizational support. The perceived emotions and morale, however, diverged between highly skilled and lower-skilled agents. Highly skilled agents experienced positive emotions, including improved mood, higher morale and increased passion and engagement with customers willing to make purchases. Positive emotions also contributed to improved creativity. In contrast, lower-skilled agents reported negative emotions such as nervousness, demoralization and feelings of rejection, largely due to the increased complexity of tasks and the pressure to persuade challenging customers. Despite recognizing the potential threat of AI replacing their roles in the future, most employees remained supportive of the company's adoption of AI, highlighting a willingness to adapt and grow in response to technological advancements.
 - > **Highly skilled employees achieved better results and favored additional AI support** ✕ Highly skilled agents attributed improved performance, characterized by higher efficiency and quality, to AI assistance and experienced a positive impact on meeting key performance indicators (KPIs). Lower-skilled agents expressed frustration with reduced success in persuading sales leads. These performance perceptions indeed aligned with analytical results of sales performance. Most highly skilled agents advocated for expanding the use of AI to handle less effective calls and actively contributing to updating the AI's knowledge bank with their script innovations. In contrast, many lower-skilled agents preferred maintaining the current level of AI assistance, expressing concerns about increased difficulty in handling tasks if AI expansion continued.
- Complementary action to support the success of AI assistance** ✕ Our study demonstrates that it is possible to use AI-human collaboration to increase employee creativity and productivity. The sequential division of labor between AI and human employees as used in our setting was wel-

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AI assistance increased efficiency but also the intensity and challenges of sales agents' work.

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came by most sales agents but did not translate into increased performance only for some: AI-augmented creativity and productivity is skill-biased. Employees' job skills critically shape their cognitive abilities and psychological outcomes, which are conducive to creativity and higher-level problem-solving. Therefore, companies introducing AI should plan complementary measures to leverage AI's full potential.

> **Upskill and motivate sales agents** ✕ In our interviews, lower-skilled agents called for more training and sharing experiences with highly skilled colleagues to help them adapt. They experienced "double loss" – from the lack of job skills per se and negative experience working in a team with AI. It is important not to ignore these experiences and requests, as many low-skilled employees can grow to develop greater job skills in the future. Therefore, the introduction of any AI should include additional training in domain knowledge sales skills, particularly for agents who lack skills or are less experienced. Since low job skills lead to "double loss," elevating job skills generates double returns for employees and their company. Another type of complementary policy might be to create incentives for successful AI integration in the sales process and to develop routines where higher-skilled employees regularly share the creative outcomes generated under AI assistance.

> **Clearly communicate the purpose and scope of the intended use of AI** ✕ All agents recognized the threat of eventually being replaced by AI and described mixed feelings concerning the help they received from AI. To reduce agents' concerns, managers should clearly communicate the intended scope of AI implementation: In our case, the purpose was to follow clear scripts and accomplish easy, repetitive tasks and not to interact with customers in real, unscripted sales conversations. If this is made clear, agents might be less worried about having to compete in a "horse race" with AI. Being alleviated from

concerns about being replaced might further motivate agents to use the full potential of AI for their own and their company's benefit.

Summing up, AI assistance can be added to the toolbox that enables employees to solve problems in a novel and useful manner, thereby improving creativity and productivity at work. ✕



FURTHER READING

Jia, N., Luo, X., Fang, Z., & Liao, C. (2023). When and How Artificial Intelligence Augments Employee Creativity. *Academy of Management Journal*, 66(4). doi:10.5465/amj.2022.0426

Double Impact: Harnessing Generative and Evaluative AIs for Effective Marketing Decisions

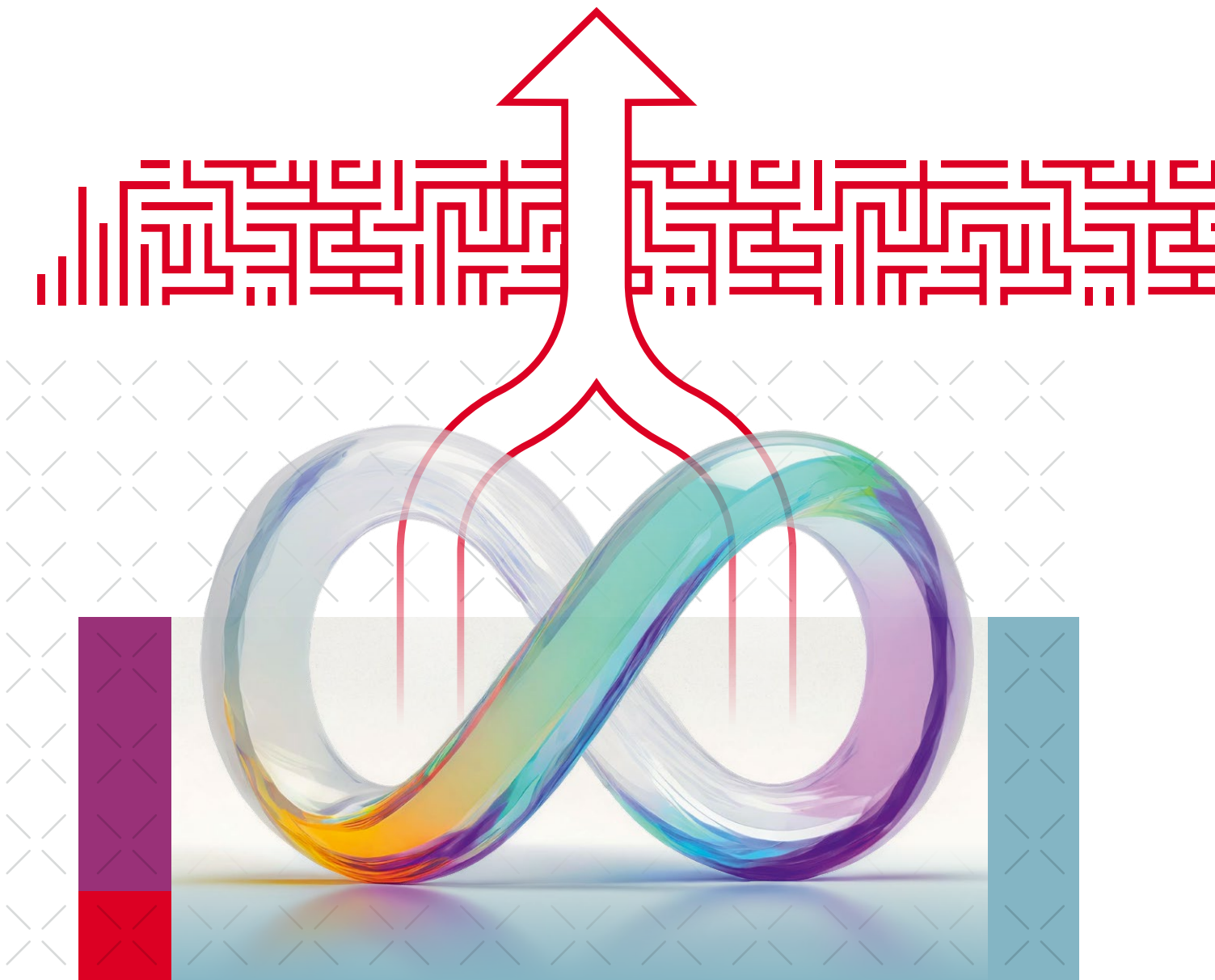
THE AUTHORS

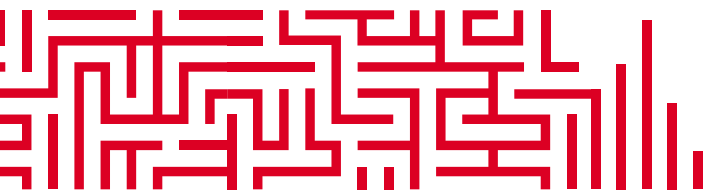
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KEYWORDS

**Generative AI, Evaluative AI,
Marketing Decision-Making,
Effective Content**



**The AI landscape: More than just generative models**

✘ In the realm of artificial intelligence (AI), the term has always encompassed a diverse range of technologies. Recently, the spotlight has been on generative AI models, known as “GenAI.” Their capabilities have captivated the marketing world, with their potential appearing boundless. This fascination with GenAI risks overshadowing another critical aspect of AI: its analytical capabilities. Previously, AI was synonymous with predictive analytics, classification and pattern recognition. The current hype around GenAI shouldn’t detract from these foundational abilities. For a holistic and sustainable AI implementation in businesses, it’s imperative to integrate both generative and predictive AI. While GenAI offers tremendous assistance in these areas, it’s not a standalone solution. Predictive AI can be highly useful for evaluating resulting marketing strategies.

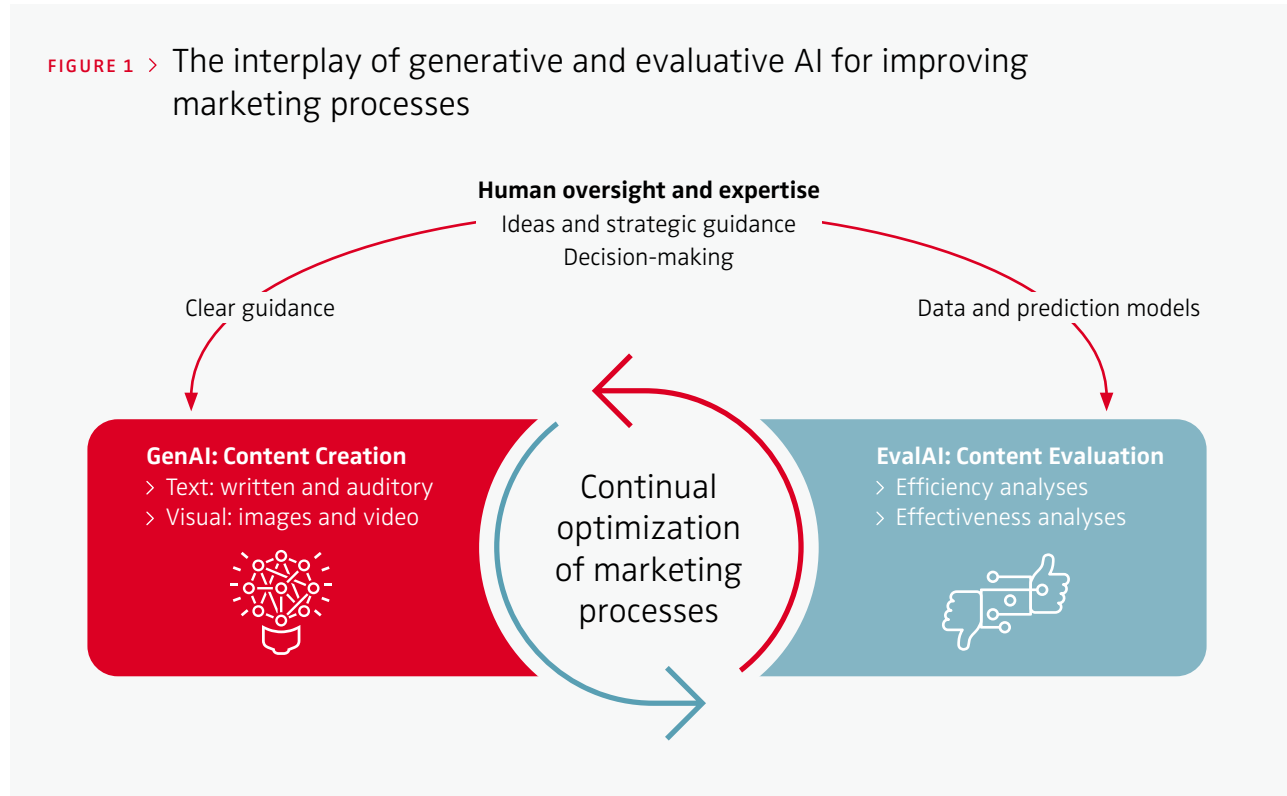
Evolving processes, enduring marketing pillars ✘ Technological advancements have revolutionized marketing processes, yet the core success pillars remain unchanged. Successful marketing requires, first, target audience insights – understanding the nuances of the target audience is foundational to any marketing strategy. Second, it is crucial to have a relevant and differentiating strategy that sets the brand apart from competitors and resonates with the audience. Third, the strategy must be executed in a creative and brand-cohesive way. Creativity isn’t just about originality; it’s about aligning with a brand’s identity and message. Finally, marketing activities need to be evaluated. Assessing the impact of marketing efforts ensures that strategies are effective and provides insights for future campaigns.



The effective utilization of both generative and evaluative AI in marketing represents a significant advancement in how businesses can approach their marketing strategies.



FIGURE 1 > The interplay of generative and evaluative AI for improving marketing processes



Previously, these pillars rested solely on human interaction and intuition. Now, AI serves as a complement and, in some cases, a substitute for human roles. This not only applies to generative AI but also to the evaluation process for which a growing number of solutions are available. However, the essence of these success factors remains unchanged. More than ever, formulating strategies and understanding consumer insights on the part of human experts are

indispensable. On this basis, human experts need to guide generative AI but should not neglect the opportunities to also evaluate results by using evaluative AI. Operating without thorough evaluation is akin to navigating without a compass. The combination of generative and evaluative AI allows managers to make sound decisions and continually improve marketing processes (see Figure 1).

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*For a holistic and sustainable AI implementation
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it cannot replace the need for thorough analysis and evaluation.*



The irreplaceable human element: Idea and strategy formulation

✗ At the heart of every effective GenAI application is a human-driven starting point and set of guidelines. GenAI, no matter how advanced, relies on human input to initiate and direct its processes. Without this human element, GenAI would produce generic, undirected output. The role of humans in idea generation and strategic guidance cannot be overstated. It's the creative spark and strategic foresight of humans that set the direction for GenAI to follow.

Furthermore, the formulation of brand and communication strategies, while informed by evaluative AI insights, remains a distinctly human decision. It is at this juncture where the true innovativeness and distinctiveness of a strategy are determined. GenAI can provide options and scenarios, but the strategic decision – what makes a brand unique and compelling – is a uniquely human endeavor.

Content creation: The thin line between plausible and true

✗ One of the most apparent benefits of GenAI in marketing is its ability to rapidly generate a multitude of content, texts and visuals. This capability is a game changer in terms of efficiency and creative exploration. GenAI models are trained on vast datasets, learning the statistical likelihood of words or pixels appearing following a given prompt. This training makes their responses consistently plausible. However, plausibility does not guarantee accuracy or factual correctness. It's important to recognize the current limitations and challenges in this domain: Currently, public models struggle with pixel-perfect generation of products, logos, iconic brand assets or fonts and accurately generating human features – even as basic as producing the right number of fingers or teeth. Training data biases are a known issue and individual models predominantly focus on separate domains, such as image, audio or text generation. Further, generative AI models often “hallucinate,” producing plausible but potentially misleading or incorrect outputs. This is particularly concerning when seeking consumer insights or evaluating campaigns. For instance, while GenAI can generate plausible reasons why a product might appeal to a particular demographic, these reasons might not align

with reality. The challenge lies in distinguishing plausible from accurate insights. This is where the analytical prowess of AI becomes invaluable. By efficiently analyzing large datasets – whether from surveys or social media channels – AI can extract insights more quickly and accurately than ever before. While GenAI can inspire and guide the insight process, it cannot replace the need for thorough analysis and evaluation. Without this, insights might seem reasonable at first glance but ultimately lead to misguided decisions.

Content value: The thin line between nice-to-have and effective

✗ Most importantly, the question of selection arises: How do we choose the most effective assets from a plethora of generated content? Without proper analysis and evaluation of their impact, the process devolves into an inefficient trial-and-error method. This not only negates the efficiency gains but it can also lead to significant financial waste or even possible backfiring of communication.

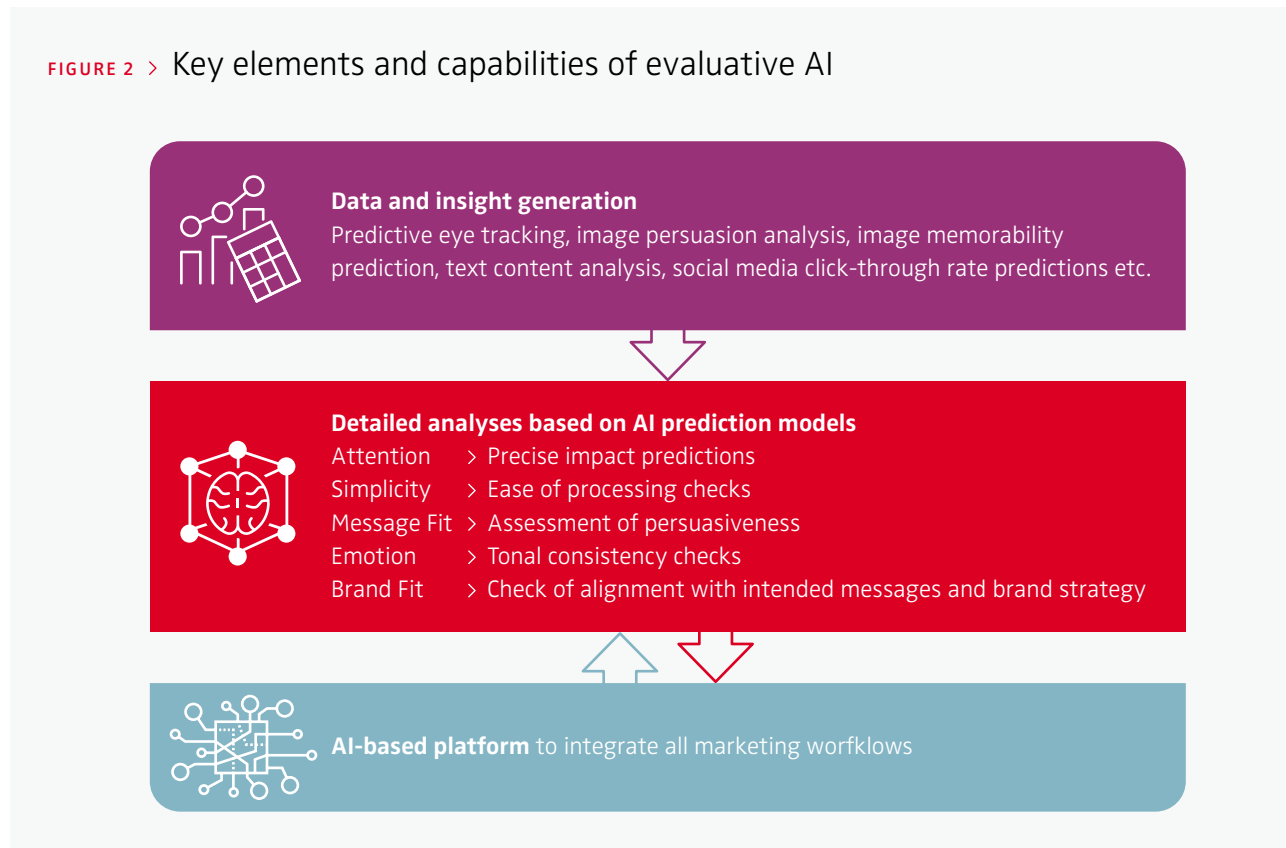
Beyond short-term effectiveness, the long-term impact on brand equity is crucial. To maintain a distinctive brand identity, the executions must align with the brand's core values and aesthetics. Here, evaluative AI can play a pivotal role by ensuring that only content that resonates with the brand's identity and target audience is selected and utilized.

In the absence of systematic control via evaluative AI, the use of GenAI by different individuals within a company can lead to inconsistent and disjointed branding efforts. Managing the sheer volume of content alone requires automation. If GenAI is added to the mix without intelligent analysis and oversight, the challenge of maintaining brand consistency and effectiveness becomes even more daunting.

Increasing availability of evaluative AI in the marketplace

✗ While generative AI is already on everyone's lips, evaluative AI and its potential are currently being less widely discussed. Nevertheless, the evaluative AI market is characterized by a growing number of vendors, many specializing in distinct aspects like predictive eye tracking, image persuasion analysis, image memorability prediction, text content analysis or social media click-through rate pre-

FIGURE 2 > Key elements and capabilities of evaluative AI



dictions. However, the landscape is not limited to these niche offerings. Holistic solutions are also emerging to address all relevant marketing touchpoints. These offer capabilities ranging from execution aspects, such as visual attention and simplicity assessments, to strategic evaluations that ensure alignment with the intended brand message. Looking ahead, the trend is moving towards fully integrated platforms that encompass the entire AI-based marketing workflow.

These platforms promise to cover everything from audience insights and strategy development to creative execution and performance monitoring. With some solutions, such as brainsuite.ai, which are already available in this space, the market for evaluative AI in marketing is poised for rapid growth, underscoring its increasing importance in shaping effective, data-driven marketing decisions.

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In the absence of systematic control via evaluative AI, the use of GenAI by different individuals within a company can lead to inconsistent and disjointed branding efforts.

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The strengths of evaluative AI in marketing assessment

✗ When it comes to evaluating marketing efforts, evaluative AI is superior to generative AI. Its strengths lie in its ability to make predictions specific to channels, brands and target audiences. Recent multimodal models like GPT Vision combine text and image understanding and can interpret and comment on image content. However, without further training these generic foundational models lack insights into target groups, brands and their competitors. They fall short of providing reliable and precise quantifications and analyses, let alone benchmark analyses. Given the level of nuance and detail required for accurate and detailed analysis, evaluative AI is more suitable – especially considering that most marketing campaigns are multimodal, encompassing text, audio, visuals and video.

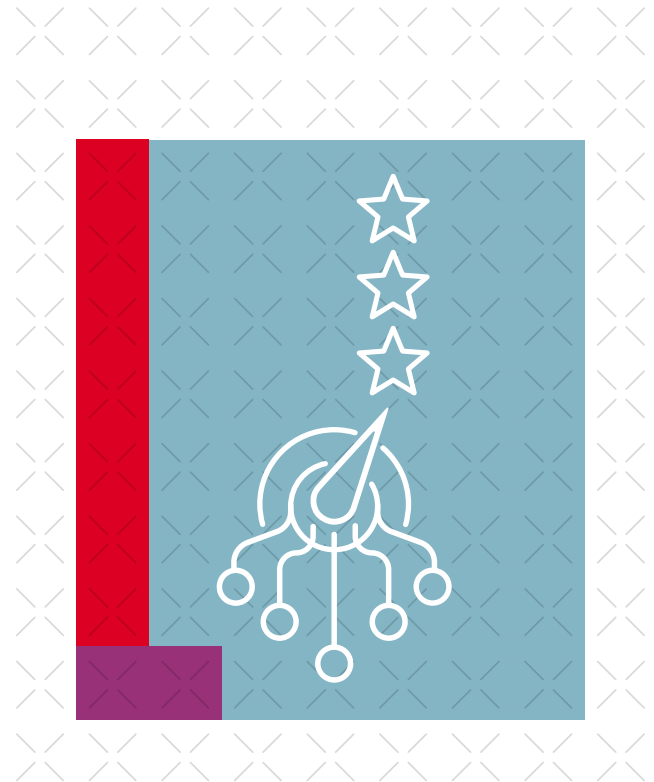
Evaluative AI is able to make pixel-accurate predictions about the effectiveness of all multimodal elements, such as brand presence or product placement within a medium. It allows for ease of processing checks which evaluate the simplicity of textual, auditory and visual content, including video, to ensure its accessibility to the intended audience. Evaluative AI is further able to ensure the correct tonality in created content, including checks for appropriateness and sentiment alignment. It tests whether the content effectively conveys the intended message and aligns with the overarching brand strategy while also being persuasive (see Figure 2).

Integrating generative and evaluative AI for the continuous optimization of marketing processes

✗ The future of marketing lies in the seamless integration of generative and evaluative AI, guided by human expertise, as depicted in Figure 1. This integration involves a dynamic interplay where generated texts, audio, images or videos are evaluated and refined by evaluative AI, creating a continuous cycle of generation and evaluation. This process ensures that the final output is not only creative and diverse but also effective and aligned with marketing goals.

The key to success in this integrated approach is intelligent collaboration between these AI aspects and human guidance. Effective and sustainable business implementation requires these systems to work in harmony, complementing each other's strengths. Intelligent workflows can transform marketing from insight gathering to content creation, making the process both more efficient and effective.

Such workflows necessitate an integrated, AI-based platform that encapsulates the entire brand management process. This platform should facilitate the seamless flow of information and insights between generative and evaluative



AI systems. Additionally, integrating consumer research into this platform is essential to ensuring that the insights and content generated are grounded in real-world consumer behaviors and preferences.

The effective utilization of both generative and evaluative AI in marketing represents a significant advancement in how businesses can approach their marketing strategies. By combining the creative and generative capabilities of GenAI with the analytical and evaluative prowess of evaluative AI, marketers can not only streamline their processes but also enhance the effectiveness and impact of their campaigns. The key lies in maintaining a balance between technological innovation and human insight, ensuring that marketing efforts are not only efficient but that they also resonate deeply with the target audience. ✗



FURTHER READING

Jo, T. (2023). *Deep Learning Foundations*. Springer.

West, P., et al. (2023). *The Generative AI Paradox: "What It Can Create, It May Not Understand."* arXiv.org.



Bye-bye Bias: What to Consider When Training Generative AI Models on Subjective Marketing Metrics

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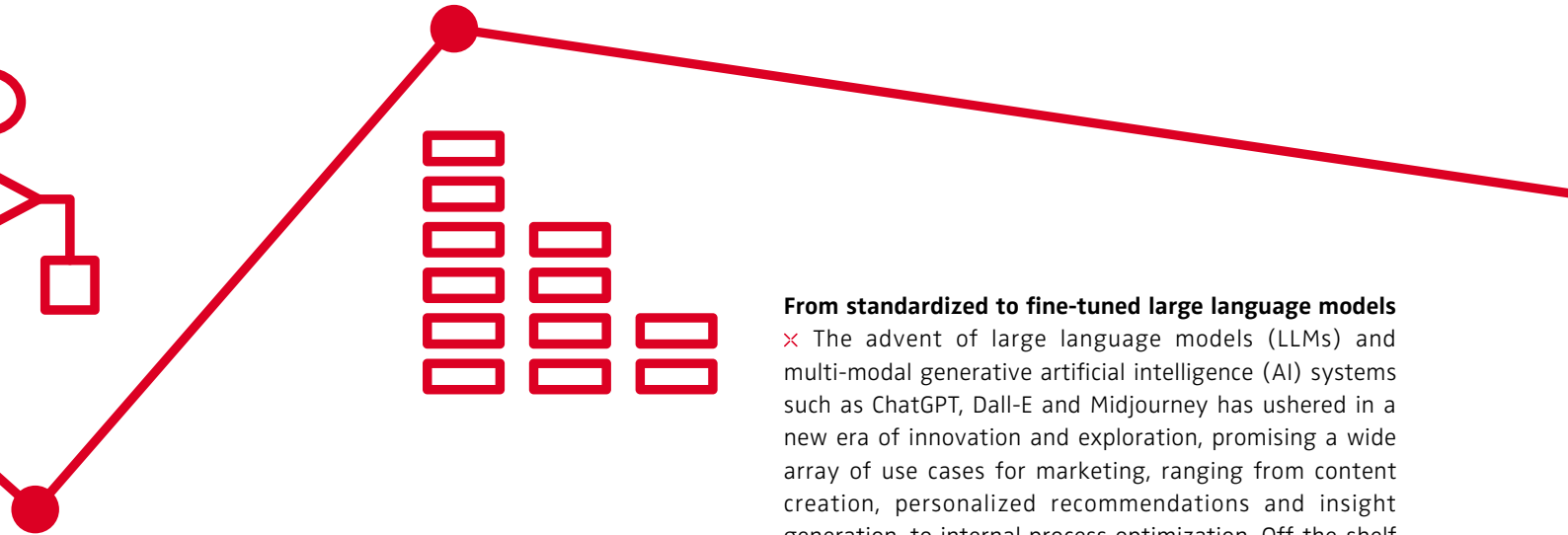
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KEYWORDS

Large Language Models (LLMs), Generative AI, Data Quality, Bias, Marketing Metrics



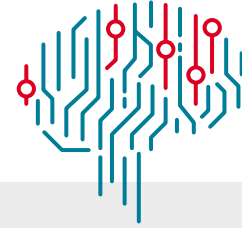
From standardized to fine-tuned large language models

× The advent of large language models (LLMs) and multi-modal generative artificial intelligence (AI) systems such as ChatGPT, Dall-E and Midjourney has ushered in a new era of innovation and exploration, promising a wide array of use cases for marketing, ranging from content creation, personalized recommendations and insight generation, to internal process optimization. Off-the-shelf LLMs often exhibit remarkable “zero-shot” capabilities for these use cases, allowing them to generate content or make predictions without explicit training on specific tasks or the specific brand context. However, these models are trained on vast data sets scraped from the Internet, such as Common Crawl or LAION, that contain little information on the types of perceptual measures marketing is often interested in, such as perceived brand image and consumer engagement, or that lack the specific brand context. For example, some services offer direct ad creation hand in hand with search optimization. These ads are designed and optimized for high average click-through rates but do not provide brand differentiation and, at worst, can undermine brand image. Unlocking the true power of GenAI requires fine-tuning models to the specific brand context, which is often reflected



Potential biases in training data should be assessed and addressed before GenAI models are trained.



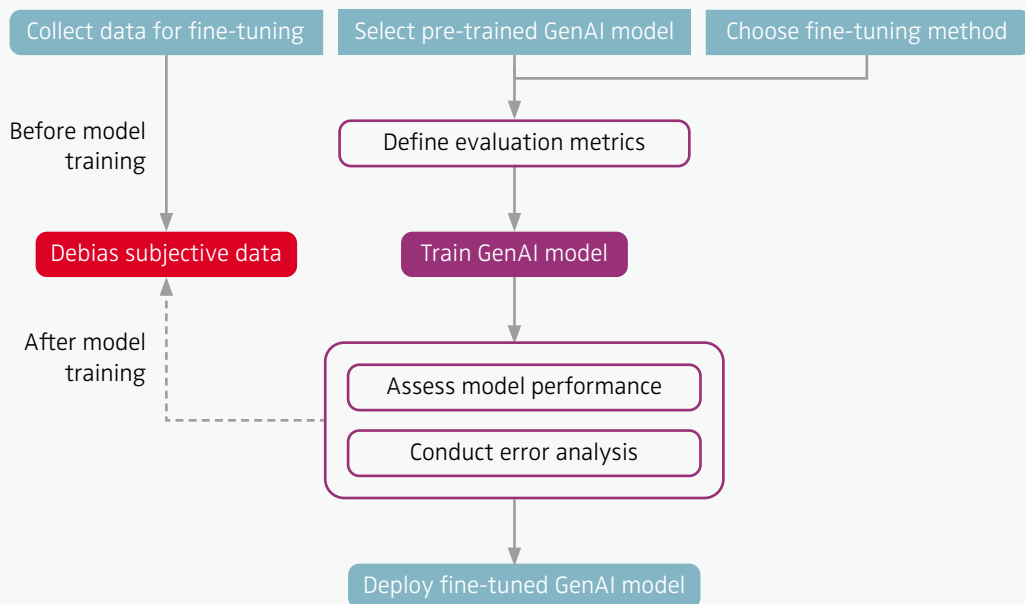


BOX 1

How companies can fine-tune GenAI models for specific marketing applications

The overall process of fine-tuning a GenAI model is comparable to any other supervised machine learning pipeline and is illustrated in Figure 1. The refined model emerging from such a high-level, multi-step pipeline is a function of three main inputs: the training data, a pre-trained GenAI model such as Llama 2 and the fine-tuning method. It goes without saying that the quality of the used data is key. Data quality can be assessed both before and after model training. Assessments of the model and its training data ex post are commonly conducted in computer and social sciences to understand the levers for improving model performance. Companies should, however, leverage insights from behavioral sciences and address potential biases already in the pre-model training stage. For example, training data can be debiased by selecting representative human coders and reasonable coding scales and by designing a frictionless “data annotation journey.” All these factors will substantially contribute to a higher performance of the refined GenAI model, once deployed in a real-world setting.

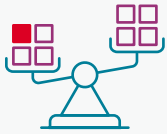
FIGURE 1 > Process for fine-tuning GenAI models



The performance of a fine-tuned pre-trained, open-source model such as Llama 2 is often competitive if not better than that of a general-purpose, closed-source model such as GPT-3.5. However, the performance benefits depend on the application context. Hence, quantifying the performance difference between a customized model and a baseline model is an important step before deploying a GenAI model. Clearly, additional considerations, such as data privacy, might inhibit companies from sharing their training data with commercial providers, making an offline fine-tuning process on local servers even more attractive.

FIGURE 2 > Checklist for ensuring data quality and preventing biases in training data

How to prevent



Sampling Bias

- > Use random or representative sampling to ensure the representativeness of ratings.
- > Collect control questions on relevant (demographic or customer segment) characteristics to check for equal distribution of variables in training and real life.
- > Check for non-response bias and probable oversampling of certain subgroups with lower participation likelihood.
- > Balance out dataset by up-weighting underrepresented relevant subgroups.



Measurement Bias

- > Formulate short, clear and precise questions.
- > Use clear instructions and introductory comments to define variables of interest/psychological concepts.
- > Rely on established scales that might break down difficult concepts into several items/sub-questions and check the internal reliability of the questions.
- > Check binary versus ordinary rating scales for more precise answers.



Social Desirability Bias

- > Ensure and emphasize confidentiality in introductory remarks, incentivizing honest responses.
- > Formulate neutral questions that do not imply any social norm.
- > Reduce sensitivity of questions, e.g., by including trade-offs.
- > Check responses with previous answers or existing data.



Response Bias

- > Provide a frictionless survey environment to minimize survey fatigue.
- > Limit overall survey time and set number of questions per repeated stimuli accordingly.
- > Randomize the order of presented stimuli/data to be labeled to avoid order effects.
- > Inspect and likely delete responses of bad quality using speed-clicking, straightlining or monotonous response patterns and inconsistencies as likely candidates.

in rather subjective marketing metrics. Unlike objective metrics that can be classified as “right or wrong” by a viewer (e.g., is there a person in the ad?), subjective metrics capture the perceptions, opinions, feelings or beliefs related to the ad, which might differ across viewers. Box 1 and Figure 1 describe the technical process of fine-tuning GenAI models. The performance of these models critically depends on the quality of the underlying training data. Therefore, we focus on how to achieve top-quality training data to fine-tune

GenAI models. This will be the differentiating factor in the race for the best AI applications in marketing.

Objective versus subjective training tasks ✗ For objective training data, the underlying task is to detect elements or classify objects as either right or wrong. Typically, there is a clear ground truth: Is there a cat on an image? Is there a logo on a social media post? Is an email spam? In contrast, subjective training data capture perceptions, opinions,



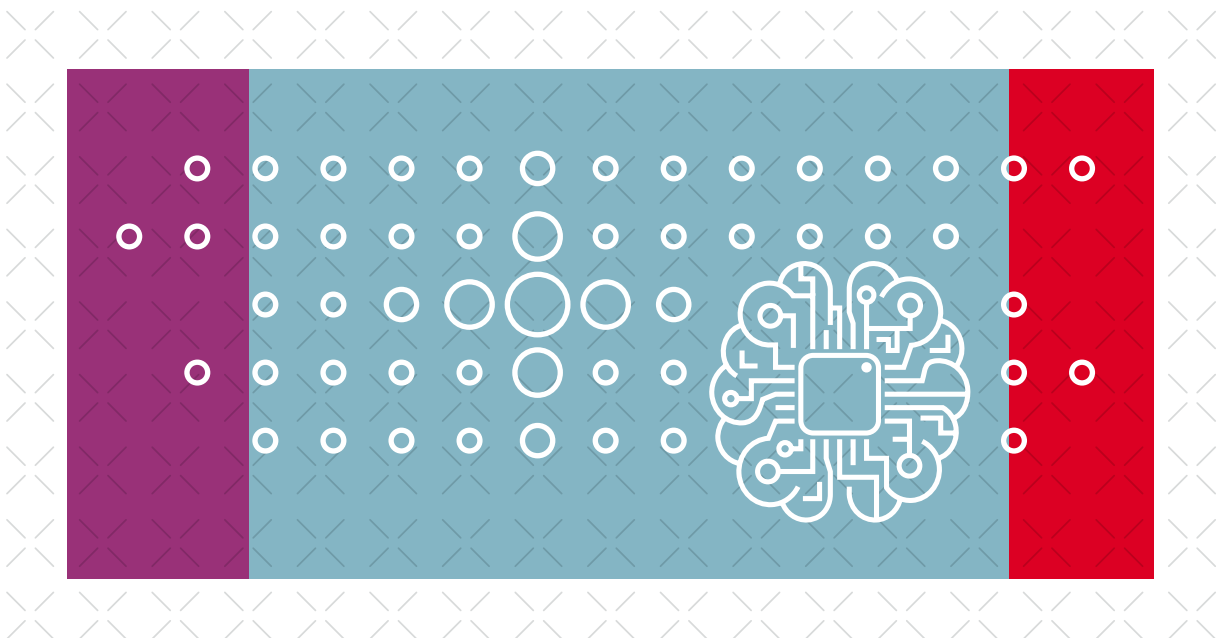
*Objective training data are already prone to error,
but ensuring high-quality subjective training data on
marketing metrics is even more challenging.*



feelings and beliefs that might differ across different customer or population segments. These data might include the emotions elicited by a generated ad, whether an ad is funny or which arguments are most convincing during a customer interaction. Objective training data are already prone to error, but ensuring high-quality subjective training data on marketing metrics is even more challenging. For objective training data, a relatively low number of human coders is sufficient to achieve a low variability of answers and high intercoder reliability for labels. Conversely, subjective training tasks will, by definition, result in labels with higher variance. These labels are often measured on ordinal or even metric scales rather than categorical classes, at best from a larger representative sample of respondents. In addition,

consumer perceptions might depend on the geographical or cultural context, and change over time, making it necessary to rerun the training procedures and update the algorithms on a regular basis.

Subjective training data allow for a more “customized” trained algorithm that is fine-tuned to the specific brand, product or customer context. To ensure their quality, marketers need to combine competences from different fields: behavioral insights based on survey research and machine learning (ML) based on objective data. Infusing traditional insights into AI models teaches GenAI valuable lessons from traditional marketing in how to attain differentiation, win the hearts and minds of consumers and improve bottom-line effectiveness.



Biases in training data and how to overcome them

✗ Ensuring reliable, high-quality training data, especially for subjective marketing metrics, has received surprisingly little attention. Currently, the quality of the underlying data is primarily evaluated ex post – after model training – by identifying systematic errors of the ML model. While quantifying errors is straightforward, understanding their reasons based on ML classifications is not. Further complicating matters, training data biases can be systematic and not detectable ex post.

We therefore recommend not only evaluating the quality of underlying AI training data after a ML model has been applied, but also accounting for the most prevalent pitfalls and biases in classic market research such as surveys or experiments in a pre-training stage (see Figure 1). This includes measuring and improving data quality ex ante – before feeding them into the training model – and providing recommendations that make the training more efficient. Figure 2 summarizes the most relevant biases that might occur in training data and provides recommendations on how to check for and avoid them for subjective marketing metrics tasks.

- > **Sampling Bias** ✗ This bias occurs when the humans used for training the algorithm or data labeling differ from the context in which the algorithm will be applied. This leads to systematic errors in model predictions. For subjective training tasks, sampling bias arises when the input data are not representative of the relevant population so that the distribution of the sampled population differs from the “true” underlying distribution in the relevant population. For instance, an algorithm that intends to measure to what extent an image reflects a brand’s personality should reflect the perceptions of all customer segments for the relevant market. Different customer segments might have different consumer perceptions, markets might differ due to cultural differences and consumer perceptions might change over time. If training data fail to be sampled correctly, the algorithm will consequently fail to make good predictions and generalize to different contexts.
- > **Measurement Bias** ✗ Measurement bias relates to how the labeling occurs. If the chosen questions or labels are imperfect proxies for the real variables of interest, the outcomes of the model will result in misleading predictions. Even for objective tasks, measurement bias might occur in terms of label bias where labeled data systemat-

ically deviate from the underlying truth in the population. In reality, suggested labels might fail to precisely capture meaningful differences between classes, or cultural and individual differences might cause systematic deviations. For instance, generated texts for an authentic advertising claim might fail to meet the complex human perceptions of authenticity because the training data are based on only one single question and hence render an imprecise measurement. One way to address measurement bias is to collect multiple conceptually related measures to triangulate the underlying labeling intentions of respondents. Another way is to assess the variance between respondents from coherent target groups.

- > **Social Desirability Bias** ✗ Any training data capturing human perceptions, opinions or historical data are prone to social biases. These biases occur when available data reflect existing biases, norms or prejudices in the sampled population, resulting in unwanted outcomes of the AI model. For example, numerous biases have emerged where algorithms trained on past data discriminate against females or Black people in the context of banking, hiring or jurisdiction because the training data already reflected biases. One established mitigation method is to exclude protected attributes such as race, gender or ethnicity as input from the model to ensure fairness and equality. However, effects of discrimination might still prevail, as protected attributes might correlate with non-protected attributes of the model. To help understand and avoid such biases requires an in-depth investigation of the correlation matrix of the underlying training data as well as an expert discussion of potential consequences of the use of the algorithm in the real-world context. Relatedly, training data can include social (un)desirability bias. In contrast to responses that might inherently reflect prejudices and inequality, respondents often label and answer in a way that conforms to cultural norms. Thus, if respondents are aware of certain social expectations, they may label the data to accommodate these expectations. This is most likely to occur in AI models that attempt to predict consumer orientations towards sustainable, moral or healthy behavior. As a consequence, a marketing campaign and related generated content might assume exaggerated consumer preferences for influencers representing minorities or organic and sustainable products.
- > **Response Bias** ✗ While measurement bias relates to the questions and response options for the labeling, response



Biased training data, which in turn can bias the outputs of a GenAI model, should be a core concern in the development of GenAI models.



bias relates to the labeling process itself. Compared to traditional surveys, labeling training data is often more repetitive and monotonous, focusing on a small set of questions for repeated varying stimuli. Whereas objective tasks can already be tiring and burdensome for the human coders, the more complex measurement for subjective tasks multiplies the likelihood of this bias. Thus, coders will be prone to response style biases that occur in overly lengthy or complex questionnaires. These include acquiescence – the tendency to agree with questions regardless of their content – and disacquiescence, where coders tend to disagree with questions or careless and arbitrary responses.

The generation of AI outcomes therefore depends on the quantity and sequence of coder tasks. Response biases can severely harm the efficiency and performance of the model and are of particular concern when the model is trained on only a few responses for each video, image or text, as GenAI requires sufficient variance at the content level.

More effectiveness and cost-efficiency of models with debiased data ✕ Generative AI has the potential to transform marketing. True competitive advantage can be achieved when fine-tuning standard GenAI models to brand-specific tasks that can capture subjective marketing metrics. A crucial requirement, however, is to ensure top-quality training data. Biased training data, which in turn can bias the outputs of a GenAI model, should be a core concern in the development of GenAI models. A best-in-class model can be accomplished by assessing and addressing potential biases even before the model training, thereby complementing the current practice of error analysis in the post-training stage. This will make the AI model training not only more effective but also more cost-efficient.

We recommend setting up interdisciplinary research teams that have both technical and market research skills and using software platforms to ensure a cutting-edge, frictionless data annotation journey. These measures help to combine all relevant perspectives and enable the development of successful GenAI use cases that have competitive advantages over standard applications. ✕



FURTHER READING

Feuerriegel, S., Hartmann, J., Janiesch, C. et al. (2023). Generative AI. *Business & Information Systems Engineering*, 66, 111–126. <https://doi.org/10.1007/s12599-023-00834-7>

Hartmann, J., Heitmann, M., Schamp, C., & Netzer, O. (2021). The power of brand selfies. *Journal of Marketing Research*, 58(6), 1159–1177.

Van Giffen, B., Herhausen, D., & Fahse, T. (2022). Overcoming the pitfalls and perils of algorithms: A classification of machine learning biases and mitigation methods. *Journal of Business Research*, 144, 93–106.



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Beyond the Buzz: Creating Marketing Value with Generative AI

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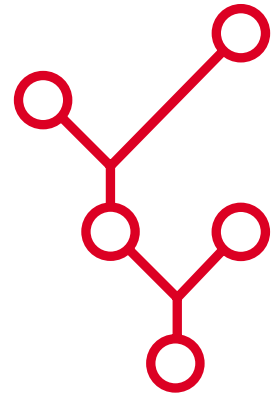
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KEYWORDS

Generative AI, Marketing Automation,
AI Adoption, AI Knowledge Gap



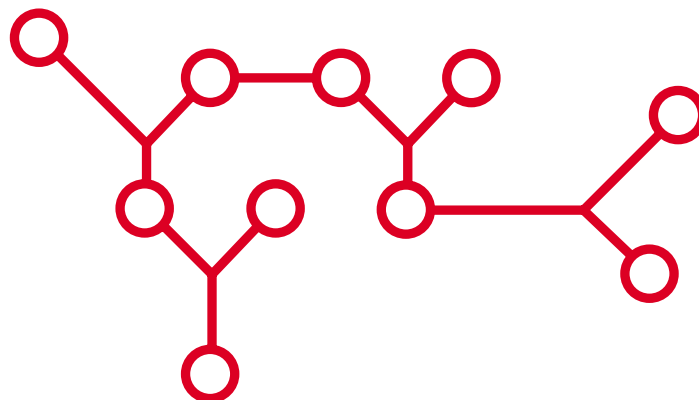
Demystifying the prevailing hype around generative AI

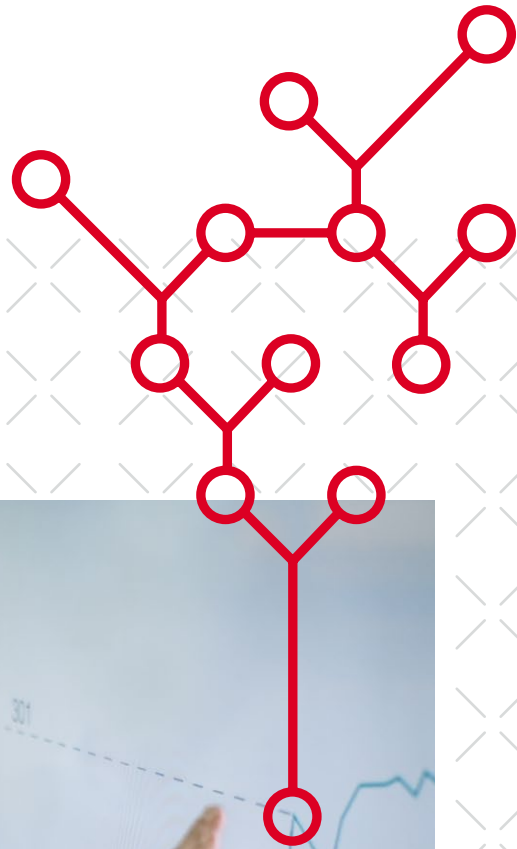
✗ The technological leap in generative AI has aroused much excitement and speculation in the marketing industry, fueling a narrative that presents generative AI as a cure-all for various marketing challenges. This hype is driven by the promise of the effectiveness and almost limitless efficiency of AI tools that seem to be able to automate tasks, including complex data analysis, content creation and the personalization of customer experiences. Amid this enthusiasm, however, critical questions arise: What is the reality beyond the hype? How is generative AI actually being used in marketing, and what are the implications and challenges for marketers and organizations? A study by the Nuremberg Institute for Market Decisions (NIM) examines the usage and perception of generative AI tools among B2C marketing professionals (see Box 1).

Generative AI tools: The new reality in marketing ✗ In the rapidly evolving world of marketing, generative AI tools have already become a staple. Every marketing

professional interviewed reported that they were already using generative AI to some extent. Nearly half of the respondents reported significant or even predominant use of AI tools for their marketing activities. Moreover, there was a strong consensus among respondents that generative AI will significantly improve their marketing activities, with almost two-thirds expecting a substantial improvement (see Figure 1).

Key applications for generative AI in marketing ✗ Figure 2 lists the marketing activities for which marketers are using generative AI. Notably, the top five activities include tasks that require extensive data handling and analytical processing. It appears that generative AI has been quickly adopted as a standard means of facilitating not only data analysis but also market research and insight generation. The preference for AI in these areas suggests that marketers recognize its efficiency as well as its ability to generate plausible interpretations of data and information that are either too large or too complex for manual processing.

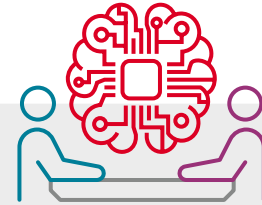




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A study among marketing professionals revealed a strong consensus that generative AI will significantly improve marketing activities.
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BOX 1

Study design – How marketing professionals evaluate generative AI in marketing



The study focused on assessing the use, benefits and challenges of generative AI in marketing. From the end of October to the middle of December 2023, insights were gathered from 600 B2C marketing professionals through computer-assisted telephone interviews with web screen sharing in three major markets: Germany, the United Kingdom and the United States. Small (100–249 employees), medium (250–499 employees) and large (500+ employees) companies were represented in roughly equal shares.

It is hardly surprising that generative AI is being used extensively by many marketers to create, summarize and translate text. One notable finding, however, is the extent to which respondents are using generative AI in the ideation process, such as brainstorming and idea generation. This application may represent a shift in creative processes, as AI is now being used as a tool to inspire and generate new marketing ideas. This underscores the growing recognition of AI's value in not only performing analytical tasks but also contributing to the creative aspects of marketing, an area long considered one of the last bastions of exclusively human skill. Other marketing tasks involve a more moderate to low level use of generative AI. These include specialized tasks such as video and audio content generation and programming as well as more general activities such as campaign planning and decision-making.

The value of using generative AI in marketing ✕ Despite the widespread adoption of generative AI for a multitude of marketing activities, the essential question remains: Where does AI truly excel? Beyond the initial excitement about this new technology, where does AI significantly increase efficiency, improve the quality of results or reduce costs? In our quest to understand the tangible value that generative AI tools bring to marketing, we zeroed in on the “heavy users”

– those professionals who reported significant or predominant use of generative AI for a specific task (Figure 2). These were the main findings:

- > **Generative AI speeds up market research, insight generation and content creation** ✕ Heavy users have found that generative AI excels at saving time and significantly accelerating market research and content creation tasks. AI's ability to swiftly process large data sets and collect and summarize information allows marketers to gain timely insights and quickly adjust strategies. In content creation, AI helps overcome the challenges of producing customized text and images in a timely manner, thereby increasing productivity.
- > **Quality enhancement in market research and text creation** ✕ AI is being recognized not only for its speed but also its potential to improve the quality of marketing output. In conducting market research and data analysis, as well as in creating text content, experienced users report much higher quality when using generative AI tools. In addition, AI helps to generate higher-quality ideas, a critical component for differentiating marketing strategies in a competitive landscape.



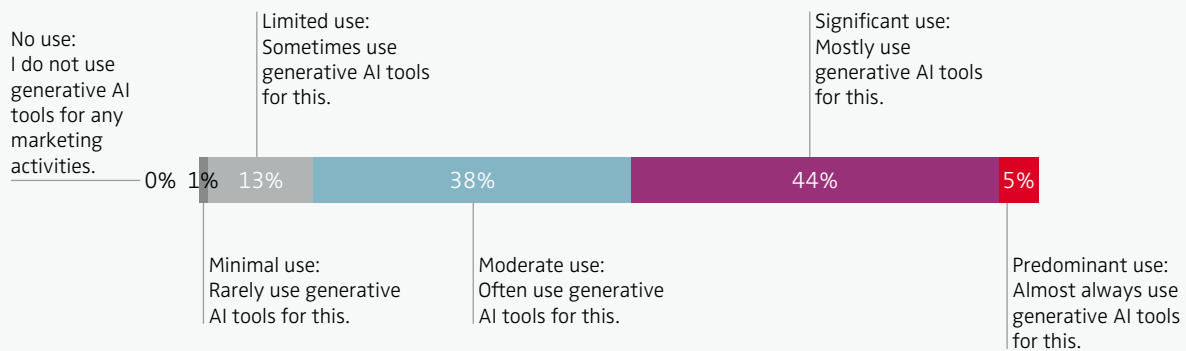
AI is being recognized not only for its speed but also its potential to improve the quality of marketing output.



FIGURE 1 > Usage of generative AI tools in marketing and the expected improvement resulting from their use

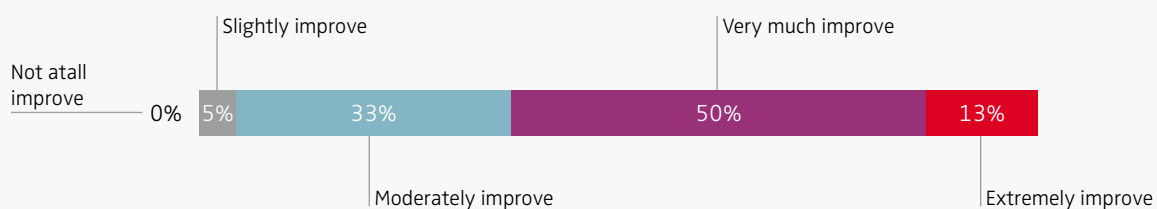
Usage of generative AI tools in marketing

In general, to what extent do you use generative AI Tools like ChatGPT, Gemini or Midjourney for your marketing activities?



Expected improvement through AI

Based on your knowledge or experience, how much do you believe the use of generative AI tools could improve marketing activities?



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- > **Realizing cost savings in content creation and personalization** ✗ In terms of cost-effectiveness, the perception of the value of generative AI is more nuanced. Savings are most evident in tasks involving traditionally high external costs, such as content creation and market research. AI's ability to streamline these processes can reduce reliance on external resources, lowering overall costs. AI-driven personalization and technical tasks such as programming also benefit from cost reductions.

These findings underscore the potential of the technology to enhance the speed and quality of marketing tasks and to bring about cost savings, especially in content-related and analytical functions. Still, while generative AI may offer clear benefits, its effective use in practice hinges on understanding its capabilities and limitations.

- Knowledge gaps in key areas of AI applications** ✗ The understanding and use of generative AI in marketing appear

FIGURE 2 > Usage and benefits of generative AI for marketing activities

Share of respondents who use GenAI tools “mostly” or “almost always” for the following marketing activities (= “heavy users”)

Data Analysis: Analyzing or summarizing data	44%
Market Research: Gathering, analyzing, and interpreting market information and trends	40%
Text Creation: Creating, summarizing or translating text	36%
Idea Generation: Brainstorming and ideation	34%
Gaining Insights: Searching for information and insights	32%
Personalized Messaging: Crafting personalized messages for customers	27%
Campaign Planning: Planning marketing campaigns	25%
Image Generation: Generating or editing images	25%
Decision-Making: Making marketing decisions	24%
Audio Content: Generating or editing audio	20%
Video Content: Generating or editing video	19%
Programming and Bug Fixing: Building and optimizing websites, apps or chatbots.	18%

Benefits perceived by those “heavy users”. Generative AI makes this marketing activity ...

	... much faster (Speed)	... much higher quality (Quality)	... much less expensive (Cost)
Data Analysis: Analyzing or summarizing data	41%	47%	21%
Market Research: Gathering, analyzing, and interpreting market information and trends	48%	50%	26%
Text Creation: Creating, summarizing or translating text	49%	46%	30%
Idea Generation: Brainstorming and ideation	37%	41%	25%
Gaining Insights: Searching for information and insights	44%	47%	24%
Personalized Messaging: Crafting personalized messages for customers	36%	37%	30%
Campaign Planning: Planning marketing campaigns	33%	39%	20%
Image Generation: Generating or editing images	42%	32%	19%
Decision-Making: Making marketing decisions	28%	33%	17%
Audio Content: Generating or editing audio	26%	36%	28%
Video Content: Generating or editing video	28%	30%	15%
Programming and Bug Fixing: Building and optimizing websites, apps or chatbots.	23%	27%	25%

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to be interrelated: More knowledge about AI often goes hand in hand with more extensive use, which in turn can foster a deeper understanding. In addition, more frequent usage of generative AI typically comes with an increased recognition of its benefits. While these correlations don't necessarily imply causation, they do indicate that enhancing

knowledge might be a crucial factor in boosting AI usage, especially since it represents an area that companies can actively influence.

Our research reveals a critical knowledge gap among marketers in key areas related to the legally and ethically sound use of generative AI. While most respondents feel they have a



More frequent usage of generative AI typically comes with an increased recognition of its benefits.



basic understanding of generative AI and how it works, 43% of professionals state that they have only limited knowledge at best of the legal implications of using generative AI content, while 38% admit to having a knowledge gap regarding the ethical use of AI content in marketing. These findings highlight an urgent need for companies to invest in skill development to ensure legal compliance and ethical integrity. In addition, a significant share of marketers admit that they have not fully understood important practical aspects of AI application, such as content curation, prompt writing and the integration of AI output into campaigns. This points to another area where skills need to be developed to realize the full potential of generative AI in marketing. Importantly, our findings suggest that companies should think about providing development opportunities beyond formal in-house trainings or degrees. The marketing professionals in our study found hands-on experimentation with AI tools in projects and participation in industry conferences and webinars particularly beneficial for skill enhancement in generative AI.

Leveraging organizational drivers ✕ Knowledge seems to be a crucial point in the context of generative AI in marketing, yet the organizational environment is also likely to play a pivotal role in enabling professionals to successfully apply AI. Aside from legal and ethical challenges regarding customer data privacy and biased algorithms, respondents identified problems with the integration of AI in existing infrastructure and processes, high costs and a lack of organizational expertise and clear policies as being among the top barriers to effective AI use.

So what can organizations do to better facilitate the use of generative AI in marketing? We found that marketers who use generative AI more extensively often work in environments that have certain organizational characteristics. These include having dedicated resources and budgets for AI initiatives, which ensures that the essential components for AI adoption are in place. Beyond monetary investment in AI, these companies incorporate generative AI as a core component of their marketing strategy. This means not only having the right tools in place, but also aligning their use with the company's overall marketing goals. Finally, these companies successfully foster a culture where sharing insights and best practices around generative AI is commonplace. While these

findings do not establish causation, they do suggest avenues for companies looking to leverage generative AI for more sophisticated, efficient and effective marketing outcomes.

Move beyond the hype and explore the practical applications of AI in your marketing efforts ✕

Generative AI is not just a passing trend in marketing; it is a transformative force that is already reshaping how marketing professionals actually work and make decisions. By speeding up market research and content creation, improving the quality of analytical and market research tasks, text generation and ideation, and offering the potential for cost efficiencies, AI is proving to be a valuable asset in the marketing toolkit of experienced, knowledgeable users. Applications may even go beyond operational improvements and entail a more strategic shift, with AI evolving as a partner in creativity and marketing planning.

For marketers, the key takeaway is this: Embrace the practical uses of AI in your strategies while being mindful of its limitations and the challenges of integrating it at both the user and organizational levels. ✕



FURTHER READING

Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., . . . Wright, R. (2023). Opinion paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>

Korst, J., & Puntoni, S. (2023). The rise of generative AI across enterprises – Usage, investments and perceptions among enterprise decision makers. GBK Collective. <https://www.gbkcollective.com/thoughtleadership/the-rise-of-generative-ai>

Kshetri, N., Dwivedi, Y. K., Davenport, T. H., & Panteli, N. (2023). Generative artificial intelligence in marketing: Applications, opportunities, challenges, and research agenda. *International Journal of Information Management*, 102716. <https://doi.org/10.1016/j.ijinfomgt.2023.102716>

One-Stop Campaigns: How Generative AI Is Transforming Digital Advertising

Interview with Adam Singolda, Founder and CEO of Taboola

GenAI has a deep impact on marketing and on the advertising industry in particular. While predictive AI has revolutionized targeting, GenAI is also reaching into the creative realm. Taboola masters both AI applications, offering easy-to-handle self-service one-stop-native-advertising campaigns to a constantly growing number of clients all over the world. Are these developments the end of human-made ads? Will advertising agencies soon be obsolete because AI-created ads achieve better performance? In this interview, Adam Singolda, CEO and founder of Taboola, shares with us his thoughts on the future of advertising. Read about the latest developments and the role of human touch and culture for relationships between tech, creative, clients and consumers.



Mark Heitmann ✕ *Taboola has been a leading content recommendation company for several years. Could you briefly summarize the main areas of your business?*

Adam Singolda ✕ We see ourselves as the world's largest discovery platform. We have exclusive partnerships with many of the world's top publishers and serve 360 billion content recommendations to over one billion people across the web each month. Taboola helps publishers monetize their sites on all channels and increase traffic. You have probably seen our feed serving recommendations on sites like Süddeutsche Zeitung, CNBC, NBC News, Le Figaro, El País, The Independent and The Weather Channel. With massive scale, unique content consumption data and world-class AI technology, we help thousands of advertisers reach their

audiences with compelling native ads in a brand-safe environment when consumers are most open for discovery.

It is fair to say that you have been one of the earliest adopters of GenAI. Taboola has truly embraced the technology. I read that 25% of the ads you now distribute are being created by your AdMaker tools.

Yes, and mostly as self-service. We offer one-stop service campaigns. Most of our revenue comes from advertisers who buy from Taboola directly – not through agencies or programmatic advertising, which is an automatic way of buying. They open a campaign on our dashboard and then on their website and directly start their campaign.



← ADAM SINGOLDA

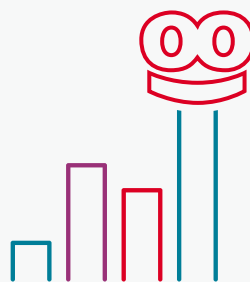
ABOUT ADAM SINGOLDA

Adam Singolda is the founder and CEO of Taboola. He was born in Israel and graduated from the IDF Officers Academy and the Mamram IDF Computer Science Program. Adam has been a keynote speaker at various events, such as the Digital Innovators' Summit. He has also received several awards, such as "Entrepreneur of the Year" by Geektime and "30 under 30" by TheMarker.

ABOUT TABOOLA

Taboola is the leading content discovery and native advertising platform. Established in 2007, Taboola serves as a bridge between publishers and advertisers, recommending relevant content to users and facilitating engagement. It was founded in 2007 in Israel by Adam Singolda and later moved its headquarters to New York City. Taboola uses deep learning, AI and large datasets to help more than a billion people discover what is interesting and new online. Taboola also offers solutions for brand promotion, content distribution and customer engagement and is one of the pioneers of applied Generative AI in online advertising and publishing. Taboola is publicly listed and valued at over a billion dollars with over 1,800 employees and 24 offices worldwide.

www.taboola.com



THE INTERVIEWER

The interview was conducted by Mark Heitmann in January 2024.

For these self-service campaigns to work, you need to identify the right consumers and create copy that works. Do you see GenAI as an extension of existing activities or as an entirely new operation for Taboola?

There are two fundamental schools of thought about the uses of AI. The core AI is powered by deep learning, which is mainly geared towards matchmaking. That's what Facebook, Instagram or TikTok are really good at. There aren't many good deep-learning engineers in the world who can match what TikTok and Facebook are doing. Their matchmaking is really powerful. This is old-school AI, the hardest deep learning of all time, and it can be magic. Then you have GenAI, which centers on the generation of content. GenAI is a whole new universe using deep learning and LLMs. Different purposes, engineers, skill sets, and data. They are very different.

To offer one-stop services, Taboola needs to master both. How do you target the right people and create content that works for them?

We try to be data- and execution-driven. We have 600 million people a day and generate about \$1.5 billion a year in revenue. We show them articles, videos and products and have less than a second to know who they are and to predict what they like. That's the matchmaking, and it is very hard. And based on customer interactions, we tested whether we could use that unique data to prompt little models and started to create titles and text. We took advantage of our historical information with real clients and used the data to generate relevant creatives with GenAI technologies. We offered it to clients and over time, one in four random advertisers that came in through the self-service used GenAI to create their campaigns.

What was the feedback? What has created the most value so far?

Our customers liked it and kept using it. It was a productivity tool for them; it was easy to use and it saved them time. And at Taboola we have a second benefit, which is important in the world of advertising and journalism: moderation and editorial quality. If you are putting an ad on The Independent, ESPN, BBC or CNBC, you want to make sure that it adheres to a certain policy. With GenAI, it is not only fast and productive, but it also complies automatically and is therefore accepted. It is always journalistically high-quality and advertisers need not fully understand the policy. They just know it is going to work.

Do you see potential for creating ads that exceed traditional ads in terms of effectiveness, clicks, purchases and so on?

I do. I think the models will become a commodity which anyone can use. The main differentiation will come from what I know and you don't. The more you use conversion data and information about campaigns that worked for certain businesses or advertisers with real users, the bigger your advantage. It will take years for others to catch up. In a world of GenAI, scale is a real differentiation because you need data that no one else has. If we both prompt the same thing, having better information gives me a performance advantage over you.

How do you think Taboola can compete with Google and other tech giants? Various players in the market have the skill set, the deep pockets and different types of data to leverage GenAI. What will be the competitive edge of Taboola?

Apart from machines, the human advantage we have lies in our deep relationships with our B2B partners in the publishing industry. Unlike Facebook or Amazon, we work in the open web and allow advertisers to diversify their channels.



One in four random advertisers that came in through the self-service used GenAI to create their campaigns.



You give Facebook your name, your age, your gender and your hobbies, but you will never show on Facebook or Twitter something that you're concerned about or something related to your kids or a medical case. However, you will read about this all the time and you are curious. It could be news, travel, a passion, or your hobbies. You watch videos about it because it's fun or of concern. It is this curiosity graph that Taboola has access to. Without knowing their names, we understand the interests of people very well. This is the data we prompt back into our engines to say, well people who do this, what else do they like? And what creatives entice them to give it a chance and maybe even convert? Google has search data, and social networks have social data. Taboola knows a version of you that is perhaps closer to who you really are in the real world.

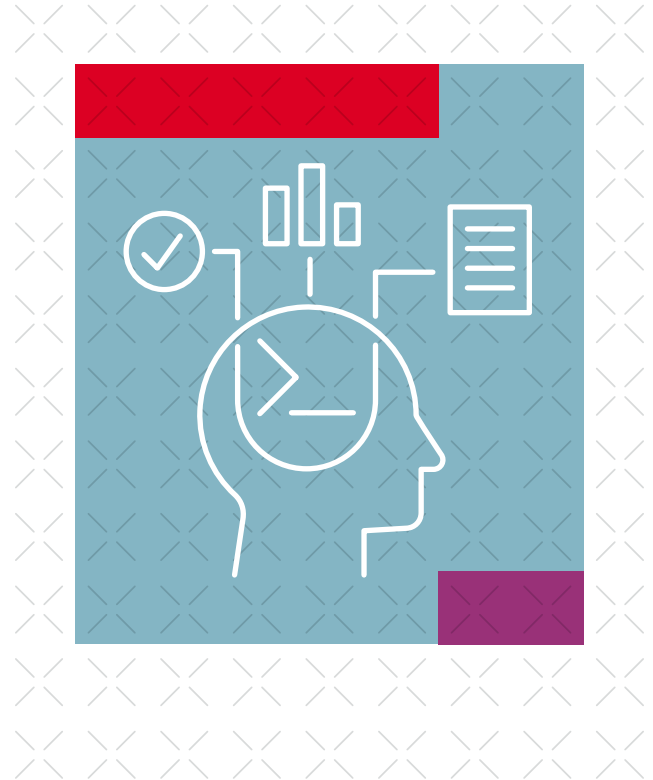
Right now, you are helping people create advertisements with GenAI. What else can be done with similar technologies?

A few pieces are still missing. There is potential in AI-powered landing pages. Right now, the modeling is deterministic in the sense that all users land on the same page. But people react differently to different forms of landing pages. One person might be very visual and love big images but hate videos. Somebody else prefers text and just wants to read and move on. The same content can be created very differently on a landing page, and time of the day, device, screen size etc. could also be considered. Creating individualized landing pages could be an opportunity to increase conversions, which today, at least, we don't offer.

As technologies evolve, very different services will be possible. Where do you expect to see the most traction beyond content creation?

We do not yet have what I call a buddy or a strategic advisor powered by GenAI. Imagine having an account manager who is awake 24 hours a day to help you with your own strategy and with creating the right targeting, objectives etc. That's an opportunity because there is also an emotional element in doing business. When you have the perfect account manager, you can feel relaxed and build trust. Even if you fail, you trust someone you know. This emotional element is currently missing, but I think it can be created.

Do you think machines can go the full distance in terms of consulting and customer success? As technology becomes more complex, might we need more human explanations and more assisted services?



We live in a very complicated world. One of the most exciting things about GenAI is the opportunity to simplify complicated tasks into something people can master without fully understanding how they are being done in the backend. If you have a flower shop and you want to get people to your store, implementing a campaign on the open web would be truly complicated. If you contact an agency, they will ask you weird question about things you might not even know existed. There would be so many steps and you just want to sell flowers. Most clients do not fail because their flowers are not beautiful but because it is too complicated to reach customers. Too many services, too many account managers, too many dashboards, and too many terminologies to get familiar with. I think GenAI will simplify that. You will need fewer services. My idea is that you just define your business objective and maybe provide some unique data. Then with GenAI, a variety of touchpoints can be created automatically.

If everybody ends up using the same tools optimized for the same objectives, don't we risk that marketing communication may become highly homogenous and interchangeable? Do you see a risk that GenAI might erode differentiation in marketing communication?



One of the most exciting things about GenAI is the opportunity to simplify complicated tasks into something people can master without fully understanding how they are being done in the backend.



It is a risk if you do not provide something unique about you. There are a variety of companies offering different models for consumer and business use, including OpenAI. Using them will be as easy, almost like making coffee. It will be affordable and available to anyone. The main differentiation will be what you put into the system, something that makes you unique. GenAI will mainly be different based on the data you prompt. If you don't have unique data, you will become obsolete and irrelevant.

What you know about customers is one side of the training data. The other side is the creative content needed to train GenAI models. How can we make sure that people keep writing and producing images and videos when everything is available through GenAI?

I think the AI environment is going to create many new jobs and that GenAI won't replace editorial content. In the world we live in, it is required more than ever. We appreciate an



editorial team that cares about what they write, a publication that has writers who spend their time learning and educating themselves on a topic. You want to believe their good intentions and follow their thoughts and ideas. Compare that to the world of TikTok. It's entertaining and can spark curiosity. But God forbid that our children end up making important life decisions about science, politics or health care based exclusively on such social networks. I still believe that humans should select and create editorial content.

What about advertising? If you can create effective well-performing ads with the click of a button, why should humans bother producing novel ad content themselves?

The way I imagine it, creative content will be created by humans and then supplemented by GenAI to make them better or faster. It will increase productivity and maybe even effectiveness. It might also help humans develop really new ideas. I think on the front end, in terms of titles and images, humans do not necessarily have an advantage, but when it comes to full communication strategies or more complex content such as videos, humans are not as easily replaced.

Do you think consumers will continue to value a human touch in advertising?

Human relationships and authenticity matter. Consumers, and especially younger generations, want to have an emotional connection with the brand or product they buy. We see it all the time with direct-to-consumer brands. For instance, people want to see the founder's story. Mid-funnel direct consumer advertising is a huge portion of the advertising market and includes subscription services that create relationships. If you want to buy a bed, you want a furniture brand you can relate to, not just a good bed.

Advertising involves a whole ecosystem of creative agencies, market researchers and marketing professionals. How might GenAI alter these collaborations? Will we see more in-house content creation or perhaps a greater need for partners that monitor and leverage technology in the best possible way?

Smaller businesses won't necessarily hire an agency because they can't afford it. Google, Facebook and companies of that scale have about 10 million advertisers, and probably 70 percent or more use self-service. Clients will use GenAI almost automatically without even realizing that they do. It will be rare to find someone who does not use it. Then we

have the segment of bigger brands and bigger enterprise accounts, and they will still use agencies and marketers for multiple reasons. They need a creative strategy, trials to lead the strategy and gut feelings, and they will use more touchpoints.

There has been much debate about GenAI and the business model of creative agencies. Is GenAI more of an evolution or a revolution for agencies?

My guess is that there will be both an evolution and a revolution on the agency side. There will be those who embrace technology to get better and those who reject it and may become obsolete. We will see more innovation, more jobs and more funding. It's all about embracing change. And the change will not be driven by technology alone, but by culture. The biggest innovation to enable GenAI and AI is culture. You need to embrace it and feel comfortable being uncomfortable.

A very nice closing statement. Those with the right culture stand much to gain, be it an agency, a marketer or a publisher. Thanks, Adam, for taking the time. It has been fabulous talking to you. ✕

Editors

Mark Heitmann is a chaired professor of marketing and customer insight at the University of Hamburg (Germany) and adjunct professor of marketing, NOVA School of Business and Economics, Lisbon (Portugal). He studies applications of AI in social media marketing, advertising and brand management. His publications have appeared in the *Journal of Marketing Research*, the *Journal of Marketing*, the *Journal of Political Economy* and the *Journal of the Academy of Marketing Science*. He has been awarded the MSI/H. Paul Root Award of the Marketing Science Institute and the American Marketing Association and the Robert D. Buzzel Award of the Marketing Science Institute and was a finalist for the Harold H. Maynard Award of the American Marketing Academy. In addition to his academic work, he has actively co-founded several software-as-a-service marketing technologies.



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