

# Transforming the Operational Components of Marketing Processes with GenAI: A Paradigm Shift

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## Abstract

Generative Artificial Intelligence (GenAI) is transforming marketing through advanced content creation, personalized customer interactions, and strategic optimization. This study explores GenAI's impact on marketing processes, current applications, and related ethical and strategic challenges. A meta-analysis of the existing literature was conducted, focusing on GenAI integration in marketing. Relevant research was collected from various databases and rigorously evaluated, with case studies illustrating practical applications and benefits. The findings show that GenAI enhances marketing efficiency by automating content creation, improving customer service, and optimizing strategies using specialized AI tools. However, GenAI's use is currently fragmented, focusing more on operational than strategic tasks. This study underscores the necessity for a comprehensive and integrated approach to fully leverage the potential of GenAI in marketing processes, with the intention of effecting a paradigm shift, particularly in operational marketing tasks. Future research should focus on developing integrated GenAI solutions that comprehensively address all facets of the marketing process, including strategic decision-making, ethical and regulatory considerations, and long-term impact assessment, while exploring innovative applications and optimizing existing technologies to fully harness GenAI's potential in driving a holistic digital transformation of marketing.

**Keywords:** Artificial intelligence, ChatGPT, Digital transformation, Generative artificial intelligence, Large language models, AI-Marketing, Marketing process.

**JEL-Codes:** M31, O33, L86, D83, C45, M37, O32

**ACM-Codes:** I.2.7, H.3.5, I.5.1, K.4.0, J.1

## 1. INTRODUCTION

Artificial Intelligence (AI) has emerged as a crucial force in marketing, driving a paradigm shift in operational marketing [1]. It is revolutionizing business operations in marketing by enhancing customer engagement, optimizing e-commerce platforms, and refining customer services [2]. The use of AI-powered tools, such as chatbots and virtual assistants, has led to significant improvements in operational efficiency while also increasing the personalization of advertising campaigns [3]. The growing prevalence of GenAI in marketing is evident in its use in content personalization, market insight generation, and innovative content marketing strategies [4, 5]. Incorporating AI technologies, especially GenAI, not only improves operational efficiency, cost savings, and brand image, but also drives long-term success and competitiveness [6, 7].

The objective of the study is to analyze the impact of AI on business processes, particularly regarding the profound changes it can bring to parts of the business model [8]. The focus is on GenAI, which is considered a disruptive technology that is driving digital transformation in enterprises. Models such as GPT-4, LLaMA or Claude embody this new era of AI, revolutionizing traditional marketing approaches and enabling new, innovative business models.

This study focuses on how marketing can accelerate digital transformation with GenAI. In doing so, the study aims to provide practical insights into the central research question: How can marketing use GenAI to achieve and sustain digital transformation? To comprehensively answer this main question, the study focuses on three complementary research questions: (1) How is GenAI currently being used in marketing? (2) How can GenAI contribute to the digital transformation of marketing? (3) What are the implementation paths for GenAI in marketing?

To address these questions and attain the objectives, a methodical meta-analysis of the predominant research on the influence of AI in marketing will be undertaken, with a particular focus on GenAI. Our analysis includes specific case studies that examine how this technology is applied to marketing processes. This enables us to identify current practices and anticipate potential drivers for digital transformation.

## 2. METHODOLOGY

A non-statistical meta-analysis is considered the most appropriate approach, given the diverse and rapidly changing nature of studies in this area. The utilization of this methodology guarantees a comprehensive synthesis of the literature [9, 10]. The initial phase involves conducting a literature search that targets criteria relevant to the application of AI, with an emphasis on the role of GenAI in the marketing process. This approach involves a thorough examination of multiple databases, including Web of Science, Emerald Insight, Google Scholar, Scopus, Semantic Scholar, and Typeset. The outcome is a comprehensive corpus of literature pertinent to the convergence of AI technology.

Each retrieved reference undergoes rigorous evaluation to ensure alignment with the research topic and methodological soundness. The evaluation criteria include relevance, methodological rigor, credibility of data sources, and contribution of the study to the field [11]. High-quality references are then annotated concisely to summarize their main findings, methods, and conclusions, as well as any limitations or gaps. The synthesis phase involves careful analysis and integration of the relevant literature. This process not only evaluates and compares different approaches and findings, but also identifies common themes, divergences, and innovative applications of GenAI in the marketing process.

This study seeks to offer a dependable and consistent synthesis of prior research by employing a methodological approach that is both verifiable and trustworthy. The synthesis addresses the essential question of how GenAI can enhance the digital transformation of marketing processes.

### 3. THEORY AND STATE OF RESEARCH

#### 3.1 Definition of Digital Transformation and its Relationship to Marketing

The concept of digital transformation, which has been frequently discussed in the academic literature, refers to the extensive incorporation of digital technologies into various aspects of an organization, which leads to considerable alterations in business operations and value delivery [12, 13]. However, there is no generally accepted definition of this term [14]. In academic discourse, the term “digital transformation” encompasses both technological advancements and strategic and organizational changes that affect business processes, customer experiences, and organizational culture [13]. These changes are often presented as a continuous process that includes three distinct stages: digitization, digitalization, and digital transformation, with the latter being the most extensive. Digital transformation strategies are multifaceted and have far-reaching implications. Consequently, dedicated leadership roles are essential to overseeing and implementing the transformation process. To leverage the opportunities presented by digital technologies, strategic and prioritized modifications to business activities, processes, competencies, and models are required [15].

As indicated by Hauer [16], the academic community is yet to extensively explore the relationship between marketing and AI in the digital age. Despite this, the ever-changing technological landscape necessitates that all business units undergo a digital transformation [16]. This involves the use of digital technologies to redesign traditional and non-digital business processes and services in response to changing market and consumer demands [17]. In the context of digital transformation in marketing, a considerable amount of research has been conducted with a particular focus on digital tools for specific areas. Among these tools, Social Media Marketing is the most studied field, followed closely by Online Marketing, Data-Driven-Marketing, Influencer Marketing and Marketing Automation [18]. Nevertheless, there are other technologies that have received as much attention in the literature, such as machine learning, Virtual/Augmented Reality, and Neural Networks [15]. To gain an understanding of the impact of GenAI in the marketing process, a comprehensive analysis is necessary [16]. It must be emphasized that the domain of marketing is vast and diverse, encompassing a wide range of digital tools, concepts, and understandings. While certain fields have received more attention than others, it is crucial to examine both specific understandings and the broader concept of the typical marketing process to achieve a comprehensive understanding.

#### 3.2 AN EXPLANATION OF THE TYPICAL MARKETING PROCESS

According to prominent marketing experts such as Runia, Meffert, Homburg, and Bruhn [19–22], the ideal typical marketing process can be understood as a cyclical process. In this study, the model proposed by Runia serves as the primary reference. It identifies five key phases of the marketing process. Marketing analysis is the initial stage and is divided into two distinct components: external analysis and internal analysis. External analysis examines the coherent determinants of the environment that impact a specific market over a defined period, geographical area, and subject. In contrast, internal analysis assesses a company’s strengths and weaknesses, resources, core competencies, and other relevant criteria [19].

Following the marketing analysis, the next step is to establish marketing objectives based on the results of the analysis and the company’s existing objectives. These objectives are often categorized as economic or psychological. Economic objectives can be quantified and typically relate to metrics such as sales, revenue, or market share. Conversely, psychological objectives are not as easily quantifiable and pertain to conditionally defined target plans [19].

To establish marketing objectives, it is essential to devise marketing strategies that provide a blueprint for marketing operations [22]. To achieve this, market segmentation is conducted based on the intended

target markets. The aim is to segment the overall market effectively to address the target audience as efficiently as possible [19, 20].

Considering the devised marketing strategy, the subsequent step involves determining the marketing instruments to be utilized. It is crucial to ensure that the selected instruments align with the strategic approach, and that they are employed in conjunction. Typically, they encompass product, pricing, distribution, and communication policies [19, 21].

Marketing controlling is implemented to review the marketing objectives established in the final stage of the process. Various indicators are employed to gauge success based on a target performance comparison [19]. If the extent of goal attainment is low, modifications must be made within the marketing process steps [20]. Consequently, this is a cyclical process. The assessment and reflection of planned and executed measures should be reviewed at periodic intervals.

### **3.3 Generative Artificial Intelligence: Definition and Delimitation from Artificial Intelligence**

GenAI has emerged as a transformative technology that utilizes data to produce creative content. The history of AI can be traced back to the 1950s, marked by the emergence of two primary technologies: expert systems and machine learning [23, 24]. Expert systems rely on codified knowledge from experts, whereas machine learning forgoes manual rule creation in favor of discovering patterns within data [25, 26]. Machine learning is generally classified into three categories: supervised, unsupervised, and reinforcement learning. Supervised learning uses labeled data to predict outcomes for new inputs, unsupervised learning identifies structures in unlabeled data, and reinforcement learning enables agents to learn optimal actions through environmental interactions to maximize rewards [25–27].

GenAI, a subfield of AI, encompasses algorithms designed to produce new data that resemble a given dataset. One prominent technique is Generative Adversarial Networks, which employ a generator and a discriminator working together to create realistic outputs [28]. They have been utilized in various domains, including image generation, data augmentation, and video synthesis [29]. The foundational elements of GenAI are language models, such as GPT-4, Llama, Claude, and Gemini, which have undergone pre-training and have been fine-tuned for specific tasks, thus enabling them to comprehend and generate intricate, coherent, and contextually relevant texts [28].

The growing interest in GenAI, particularly in the field of marketing, has been largely attributed to the emergence of advanced large-language models. These models have demonstrated potential in generating novel, contextually relevant content, which has significant implications for a range of applications, including natural language and image processing. However, the rise of this technology also raises ethical concerns, particularly regarding the potential misuse of AI-generated content, such as deepfakes and misinformation. Therefore, it is imperative to establish ethical standards and guidelines to govern the responsible deployment of this technology [30].

## **4. GENERATIVE ARTIFICIAL INTELLIGENCE IN MARKETING PROCESSES**

GenAI is rapidly reshaping the marketing landscape and offering transformative solutions across various domains. This meta-analysis synthesizes findings from multiple studies to provide a comprehensive overview of how GenAI is currently being used in marketing and how it contributes to the digital transformation of marketing processes. A summary table has been added to the appendix (TABLE 1).

## **Current Uses of GenAI in Marketing**

GenAI applications in marketing are diverse and multifaceted, and address numerous aspects of marketing strategies, customer engagement, and operational efficiency [31]. One of its primary uses is content creation. Tools such as ChatGPT and DALL-E are employed to generate high-quality marketing content, including blog posts, social media updates, and video scripts, thereby ensuring a consistent content pipeline [2, 32]. This automation saves time and maintains a consistent brand voice across platforms. Another significant application of GenAI is in customer interaction. ChatGPT-powered chatbots and virtual assistants are widely implemented to enhance customer service by providing instant responses and personalized recommendations. These AI-driven tools improve customer satisfaction by delivering quick and accurate support, which is crucial for maintaining a competitive edge in the current market [33]. In e-commerce, GenAI tools are used to enhance the shopping experience through virtual try-ons and personalized product recommendations. For example, Google's virtual try-on feature allows customers to realistically visualize products, thereby reducing uncertainty and return rates. Similarly, personalized recommendations help improve customer satisfaction and drive sales [34].

GenAI also plays a crucial role in marketing strategies and analytics. Large Language Models (LLMs) are also used to validate marketing strategies by comparing them to best practices and performing gap analyses. This capability allows businesses to optimize their marketing efforts effectively. In addition, LLMs are employed to summarize vast amounts of marketing data, providing high-level insights that aid in decision-making processes [35]. Furthermore, GenAI significantly enhances marketing automation and personalization. It automates various marketing tasks, including email marketing, social media management, and advertisement targeting, thereby increasing operational efficiency. The ability to create personalized marketing messages and campaigns based on customer data leads to more effective and engaging marketing efforts [36].

## **Contribution to Digital Transformation**

The contributions of GenAI to the digital transformation of marketing processes are profound. One of the key aspects of this transformation is the enhancement of customer interaction and support. By deploying chatbots and virtual assistants, businesses can offer 24/7 customer services, improving responsiveness and customer satisfaction. This shift enhances customer experience and allows companies to gather valuable data on customer preferences and behavior, which can be used to refine marketing strategies [35, 37]. Furthermore, the automation of content creation and marketing tasks is another contribution of GenAI to digital transformation. By automating routine tasks, GenAI frees up valuable time for marketing teams to focus on strategic initiatives and creative innovation. This automation also leads to cost savings, as businesses can reduce their reliance on human resources [31, 38].

Additionally, this technology facilitates personalized and data-driven marketing efforts. Through advanced data analysis and customer insights, businesses can create highly targeted marketing campaigns that resonate with specific audience segments. This level of personalization enhances the effectiveness of marketing processes and leads to higher engagement and conversion rates [34]. Moreover, GenAI's ability to validate and optimize marketing strategies through advanced analytics significantly contributes to digital transformation. By leveraging LLMs to analyze and compare marketing strategies, businesses can identify gaps and opportunities, leading to more effective and efficient marketing concepts [39].

## **Contribution to the Marketing Process**

The comprehensive examination of GenAI applications within marketing processes demonstrates a transformative influence, mainly concentrated on the execution of marketing instruments. Its aptitude in content generation, customer engagement, and marketing automation emphasizes its essential role in

the “Selection of Marketing Instruments” phase, showcasing its efficacy in crafting personalized and captivating content across various platforms. This substantial reliance on operational tasks underscores its capacity to improve efficiency and consistency, significantly minimizing manual labor. However, the disparity observed across the traditional marketing process steps indicates that GenAI’s potential has not been fully harnessed. Notably, no applications have been identified for deriving marketing objectives and implementing marketing controlling, indicating an opportunity for further integration of this technology in the strategic planning and evaluation phases. The restricted use in “Development of a Marketing Strategy” and the absence of applications in “Implementation of Marketing Controlling” disclose gaps that, if addressed, could result in a more comprehensive utilization of GenAI’s capabilities.

## 5. DISCUSSION

This article provides a comprehensive analysis of the transformative potential of GenAI within marketing processes, highlighting its current applications, potential for digital transformation, and future prospects. The findings indicate that while GenAI markedly enhances numerous marketing operations, its implementation remains predominantly fragmented, concentrating on discrete tools rather than an integrated, process-oriented methodology. This limitation restricts the full potential of GenAI, as the interdependent nature of marketing process stages necessitates cohesive integration to achieve strategic alignment and holistic outcomes. GenAI has significant potential to revolutionize traditional marketing processes, with applications spanning nearly every step of the process. Despite this potential, there is currently no comprehensive solution that integrates GenAI with all marketing functions. Existing implementations are fragmented, addressing only isolated tasks to aid marketing professionals. Marketing managers do not have access to AI-powered platforms that holistically combine current GenAI tools. In addition, there is a lack of synergy with existing content, which negatively impacts the efficiency of the marketing process.

GenAI-powered standalone solutions initially represent a fundamental approach to gradually digitizing the marketing process. By streamlining mundane tasks, tailoring customer interactions, and delivering nuanced data-driven insights, GenAI promotes digital transformation in marketing. However, a discernible gap exists in the seamless incorporation of GenAI across all marketing functions, particularly during strategic planning and evaluation stages. This disparity offers fertile ground for future research and development to devise all-encompassing solutions that harness GenAI’s capabilities throughout the entire marketing process. The practical implementation of GenAI necessitates a phased approach, with a focus on integrated content creation, personalized customer interactions, and campaign automation. It is recommended that companies incorporate GenAI into content management systems, enhance CRM with AI-driven tools, and utilize predictive analytics for data-driven decision-making. To ensure alignment between marketing and IT teams for seamless and effective GenAI adoption, it is essential to guarantee cooperation and communication between the two departments. Adherence to legal and ethical standards remains paramount and can only be assured through human intervention. The synergy between AI and human expertise is crucial for holism and effective digital transformation of the marketing process.

Future research should focus on developing integrated GenAI solutions that span all aspects of the marketing process, addressing current gaps and improving the overall effectiveness and comprehensiveness of marketing practices. In addition, it should explore the integration of GenAI into strategic decision-making, address ethical and regulatory concerns, and assess the long-term impact and ROI of AI-driven marketing strategies over extended periods of time. In this context, research should also emphasize both exploring innovative applications of GenAI in uncharted marketing areas and leveraging existing technologies to optimize and scale their use in established processes. This dual approach will ensure that the full potential of GenAI is realized in driving the digital transformation of marketing.

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## Appendix

Table 1: Summary of Key Studies on AI in Marketing

Study	Key Findings (short)	Practical Contribution (short)
Bartelt, C. (2024). Potenzial zur Demokratisierung von Künstlicher Intelligenz im B2B-Marketing.	GenAI democratizes AI in SMEs, enhancing efficiency.	Shows potential for increasing competitiveness in B2B marketing.
Enshassi, M., et al. (2024). Potentials of artificial intelligence in digital marketing and financial technology.	AI improves SME functions, barriers exist.	Framework for overcoming barriers in AI adoption.
Kshetri, N., et al. (2023). Generative artificial intelligence in marketing.	GenAI underutilized in marketing.	Identifies gaps and offers new areas for application.
Mikalef, P., et al. (2023). AI competencies for organizational performance.	AI enhances B2B marketing capabilities.	Demonstrates AI's impact on marketing performance.
Dwivedi, Y. K., & Wang, Y. (2022). AI for B2B marketing.	AI offers innovation in B2B supply chains.	Synthesis of AI's role in supply chain management.
Gołąb-Andrzejak, E. (2023). AI-powered Digital Transformation.	AI improves e-commerce efficiency.	Highlights AI benefits in retail during digital transformation.
Gupta, R., et al. (2024). Adoption and impacts of generative artificial intelligence.	GenAI has potential but needs ethical considerations.	Provides guidelines for ethical AI adoption in marketing.
He, Y., & Zhang, W. (2023). AI-powered touch points in the customer journey.	AI enhances customer experiences contextually.	Offers a framework for integrating AI in customer journeys.
Kumar, V., et al. (2024). AI-powered marketing: What, where, and how?	AI enhances marketing but presents ethical challenges.	Guidelines for ethical AI practices in marketing.
Kshetri, N. (2024). Navigating the Landscape of Generative AI Investment.	GenAI investment concentrated in the US and China.	Insights for policymakers on global GenAI investment trends.
Kakkar, T., & Singh, M. (2021). Generative Adversarial Networks: A Survey.	GANs are powerful but underused in marketing.	Overview of GAN potential in marketing applications.
Dwivedi, Y. K., et al. (2023). Implications of ChatGPT.	ChatGPT offers opportunities but with ethical concerns.	Multidisciplinary insights on ChatGPT's impact.
Hicham, N., et al. (2023). Strategic Framework for Leveraging AI in Marketing.	AI adoption enhances marketing strategy execution.	Practical framework for successful AI adoption in marketing.
Chen, Y., & Prentice, C. (2024). Integrating AI and Customer Experience.	AI enhances customer experience but challenges human interaction.	Model for balancing AI and human touch in customer experience.
Chen, J., et al. (2023). Firm AI Adoption Intensity and Marketing Performance.	Higher AI adoption improves SME marketing performance.	Emphasizes AI's importance in SME marketing success.
Coyle, J., & Jeske, S. (2023). The Rise of AI Copilots.	AI copilots enhance business intelligence.	Future perspective on AI copilots in marketing analytics.