

Artificial Intelligence As A Driver Of Marketing Strategy Transformation

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Abstract: The article examines the evolution of artificial intelligence (AI) and its impact on marketing in global and Uzbek contexts, highlighting the shift from theoretical foundations in the 1950s to the integration of generative models in business processes. The relevance of the topic is driven by the exponential growth of AI investments, reaching \$252.3 billion in 2024 according to the Stanford AI Index (2025), with a focus on generative AI (\$33.9 billion). The methodology combines historical-chronological, quantitative, and qualitative analysis, including case studies of companies such as Amazon, Alibaba, and Uzbek startups Uzum and MyTaxi. The results identify six stages of AI development, demonstrating its role in automation, forecasting, and personalization, where 78% of organizations use AI in business, according to McKinsey (2025). In Uzbekistan, under the 2030 AI Development Strategy, \$50 million has been allocated for 86 projects, with a projected GDP contribution of \$1.1 billion by 2030 (UNDP, 2025). Discussion of advantages and challenges, including ethical risks and talent shortages, leads to recommendations for public-private partnerships. In conclusion, the potential of AI for sustainable growth in developing economies is emphasized, with the AI market in marketing valued at \$47.32 billion in 2025 (SEO.com, 2025).

Keywords: Artificial intelligence, marketing, digitalization, investments, Uzbekistan.

Introduction: The current stage of global economic development is characterized by the rapid implementation of information technologies, among which artificial intelligence (AI) technologies occupy a central place. The term "artificial intelligence" was first proposed by John McCarthy in 1956 at the Darmut Conference as a scientific category denoting systems capable of imitating human cognitive functions such as learning, reasoning, and decision-making (McCarthy et al., 1955). Currently, AI has evolved into a set of technological solutions, including software, machine learning methods, deep learning, and big data processing infrastructure. This allows solving complex problems without predetermined algorithms, achieving results comparable to or even exceeding human intellectual activity.

The relevance of AI application in marketing is due to its unique ability to analyze vast amounts of data, identify hidden patterns, predict consumer behavior, and optimize business processes. According to McKinsey Global Institute (2022), AI can add up to \$13

trillion to global GDP by 2030, with a significant share in marketing and sales through automation and personalization. The scientific interest in the topic is confirmed by the exponential increase in publications: according to Stanford AI Index (2024), the number of AI research has doubled from 2010 to 2023, and reached its peak in 2024 with over 200,000 publications, of which about 15% are dedicated to business applications, including marketing.

In corporate practice, AI provides competitive advantages through automating routine tasks, hyperpersonalising offers, and forecasting market trends. For example, research by Harvard Business Review (2024) shows that companies integrating AI into marketing demonstrate 45% higher sales growth due to predictive analytics. However, implementing such technologies requires a thorough analysis of their alignment with the strategic goals of organizations, selecting reliable solution providers (e.g., from Google Cloud or AWS), and training personnel. Risks include ethical issues such as algorithm bias (bias) and data

privacy issues, as highlighted in the EU's AI Act report (2024).

In the context of developing economies like Uzbekistan, AI opens up opportunities for accelerated growth. According to the National Strategy for the Development of Artificial Intelligence until 2030 (Decree of the President of the Republic of Uzbekistan, 2024), AI should contribute \$1.1 billion to GDP by 2030, with a focus on the digitalization of industries, including marketing. Global trends, such as the growth in the use of AI in marketing to 88% among professionals (SurveyMonkey, 2025), emphasize the need to adapt to local markets where traditional methods still dominate.

The purpose of the report is to analyze the evolution of AI, assess its impact on marketing through global and Uzbek examples, and offer recommendations for business and policy.

METHODS

The research is based on a systematic analysis of scientific literature, reports of international organizations, and national strategies. The main sources include Stanford AI Index (2024), McKinsey Global Institute (2022, updated report 2025), World Bank reports on digitalization (2024), and national documents such as the "Digital Uzbekistan-2030" Strategy and the Strategy for AI Development in Uzbekistan until 2030. To compare the application of AI in marketing in developed countries (USA, China, EU) and Uzbekistan, a comparative approach was used, taking into account economic, cultural, and technological differences.

The methodology combines the historical-chronological method for analyzing the stages of AI development, quantitative analysis for assessing investments and company growth, and qualitative analysis through case studies. Specifically:

1. Literature review: Study of fundamental works on the history of AI (Turing, 1950; McCarthy et al., 1955) and modern trends (Hinton et al., 2012; Goodfellow et al., 2016 on deep learning). Recent studies have been added, such as McKinsey's "The State of AI" (2025) report, where 78% of respondents note the use of AI in business, and Harvard Professional Development (2025) on AI in marketing.

2. Quantitative Analysis: Assessment of global AI investments (2010-2024) based on Stanford AI Index data (investments increased from \$10 billion in 2010 to \$330 billion in 2024) and local data for Uzbekistan (AI startup investments reached \$950 million in 2025, according to StartupBlink). Statistical methods were used to calculate growth rates (CAGR) and the correlation between investment and marketing performance.

3. Quality analysis: Case studies from the USA (Amazon with recommendation systems, Google with AI-driven ads), China (Alibaba with e-commerce personalization), EU (SAP with AI in CRM) and Uzbekistan (startups like Datatruck for logistics optimization with AI marketing, Unitlab for AI Analytics in sales). Case studies are based on company reports and publications in journals such as Journal of Marketing (2024-2025).

Data is collected from open sources, including Scopus and Web of Science databases, with a focus on 2020-2025 publications for relevance.

RESULTS

AI Technology Evolution. Analysis of AI evolution revealed six key stages reflecting the transition from theoretical foundations to practical applications in business and marketing. The stages are based on historical review (Russell & Norvig, 2021) and adapted considering marketing aspects.

Table 1. Stages of development of AI technologies

Stage	Period	Key events and developments	Influence on marketing
1. Pioneer research	1950s-1960s	The works of Alan Turing (Turing's test, 1950) and John McCarthy (Darmuth Conference, 1956). The first programs imitating logic (e.g., Logic Theorist).	The emergence of ideas for automating data analysis; minimal practical application in marketing.
2. Early enthusiasm and first applications	1960-1970s.	Development of expert systems (e.g., Dendral, 1965) and perceptrons (Rosenblatt, 1958). DARPA funding.	First attempts to automate market segmentation; limited by computational capabilities.
3. "AI Winters"	1970-	Two "Winters" (1974-1980,	Slowing down innovation;

Stage	Period	Key events and developments	Influence on marketing
(stagnation periods)	1990s.	1987-1993) due to overestimation of expectations and lack of data/capacity.	focusing on traditional marketing, but laying the foundation for future ML models.
4. Revival and Machine Learning	1990-2010s.	Growth of the Internet, Big Data; development in neural networks (Hinton, 2006). IBM Watson win at Jeopardy (2011).	Implementation of predictive analytics (e.g., in e-mail marketing); growth of A/B testing with ML.
5. Boom of deep learning	2010-2020	Breakthroughs in deep learning (ImageNet, 2012); availability of GPU and cloud services.	Real-time personalization (e.g., Netflix recommendations); AI in content marketing.
6. Integration and Generative AI	2020s and beyond	Generative models (GPT-3, 2020; DALL-E, 2021); business integration (ChatGPT, 2022).	Hyper-personalization, AI content (e.g., automated campaigns); ethical challenges in marketing.

This evolution illustrates the transition from rule-based systems to self-learning models, which fundamentally changed marketing from mass to individualized.

Quantitative analysis of investment and growth.

Global AI investment grew from \$10 billion in 2010 to \$330 billion in 2024 (Stanford AI Index, 2024), with a CAGR of 30%. In marketing, the AI market is estimated at \$217 billion by 2034 (Digital Marketing Institute, 2025). The number of companies using AI increased by 60% between 2020 and 2025 (McKinsey, 2025), with 88% of marketers using AI daily (SurveyMonkey, 2025).

In Uzbekistan, investments in AI startups reached \$950 million in 2025 (StartupBlink), with a focus on AI for business. According to the national strategy, AI's contribution to GDP is expected to increase by \$1.1 billion by 2030, with an emphasis on education and healthcare, but with potential in marketing.

Qualitative analysis: case studies

- USA. Amazon and Google. Amazon uses AI for recommendations, generating 35% of sales (Forbes, 2024). Google Ads is using ML to optimize bids, increasing ROI by 20% (Google Reports, 2025).
- China. Alibaba. The Taobao platform uses AI for personalization, processing 1 billion interactions daily, resulting in 45% conversion growth (Alibaba Annual Report, 2024).
- EC. SAP. AI in SAP CRM systems automates lead scoring, reducing marketing costs by 30% (SAP Case Studies, 2025).

- Uzbekistan. Local Startups. Datatruck is using AI to optimize logistics and targeted marketing, attracting \$500,000 in investments (2025). Unitlab uses AI analytics to predict demand in e-commerce, integrating it with local platforms like Uzum. In the Angel Connect hackathon (2025), startups focused on AI for business optimization, including marketing. The National AI Center is developing local language models to improve targeted ads.

Modern trends in AI application in marketing. The current stage of global economic development is characterized by the active use of AI in marketing, especially in process automation, market trends forecasting, and customer interaction. According to McKinsey's "The State of AI" (2025) report, 78% of organizations use AI in at least one business function, with a focus on marketing and sales, where AI increases efficiency by 15-20%. This is confirmed by Harvard Business Review (2025), which notes that AI is changing the structure of consulting firms and marketing departments, allowing them to focus on strategic tasks instead of routine tasks.

The analysis shows that AI is integrated into marketing for big data processing, personalization, and optimization of campaigns. Globally, according to Stanford AI Index (2025), AI increases labor productivity and narrows skills gaps, which is especially relevant for marketing, where predictive analytics can increase ROI by 20-30%.

Investments in AI in global and regional aspects. AI

investment analysis shows exponential growth. According to the Stanford AI Index (2025), global corporate investments in AI reached \$252.3 billion in 2024, a 44.5% increase compared to the previous year, including \$33.9 billion in generative AI (18.7% increase). The US leads with \$109.1 billion, followed by China. Mergers and acquisitions in the sector increased by 12.1%, and the use of AI in companies reached 78%, although the financial benefits remain low for most.

In developed countries, investment growth correlates with innovation: in the USA, Amazon and Google use AI for personalization, increasing income by 20-30% (McKinsey, 2025). In China, Alibaba uses AI to analyze the behavior of 800 million users, increasing conversion by 25%. In the EU, SAP integrates AI into analytics, reducing costs by 15-30% through CRM automation.

In Uzbekistan, the development of AI is supported by the state program "Digital Uzbekistan - 2030." The volume of investments has increased: the government allocated \$100 million to accelerate the AI sector, including \$50 million for 86 projects in the economy and social sphere. According to UNDP (2025), AI can contribute \$1.1 billion to GDP by 2030, with a focus on establishing Central Asia as an AI hub. Local startups like Uzcard (fintech with AI segmentation) and MyTaxi (service optimization) are implementing AI, reducing the burden on operators by 30%. Other examples include Uzum (e-commerce with AI recommendations), TBC Bank Uzbekistan (AI in banking marketing), and

TASS Vision (AI analytics for retail, which attracted \$1.5 million in 2025). ICT Week 2025 highlighted Uzbekistan's ambitions in AI for dignity and global recognition.

Key areas of AI application in marketing. The analysis revealed three main directions of AI application in marketing:

1. Process Automation. RPA (Robotic Process Automation) technologies are used to process data from CRM systems and call centers. Example: Google applies RPA to analyze ad campaigns, reducing processing time by 40%. Globally, according to Harvard (2025), AI increases consultant productivity by 25.1%. In Uzbekistan, Uzcard automates targeting, increasing response by 15%.
2. Predicting. Deep learning algorithms predict demand. Alibaba analyzes user behavior by increasing conversion by 25%. McKinsey (2025) notes that agentic AI restructures workflows for greater impact. In Uzbekistan, MyTaxi uses AI to forecast taxi demand, optimizing marketing.
3. Customer interaction. Chatbots and virtual assistants provide personalization. Amazon generates 35% of its revenue through recommendations. In the EU, SAP reduces marketing costs by 30%. In Uzbekistan, VEON's Hambi super app uses AI for personalized interaction, including payments and entertainment.

Table 2. Key areas of AI application in marketing

Task	AI Technology	Result (example)	Global/Uzbek context
Automation RPA		Cost reduction by 15-30% (SAP, EU)	Uzcard: +15% response in targeting
Forecasting	Deep learning	25% conversion growth (Alibaba, China)	MyTaxi: Demand optimization, -30% load
Interaction	Chatbots, gen. AI	Increase loyalty by 20-35% (Amazon, USA)	Hambi: Personalization for 800,000 users

Debate

Research shows that the benefits of AI in marketing transform strategies:

- Effectiveness. Automation releases resources for strategies. McKinsey (2025) confirms that 92% of businesses plan to invest in genetics. AI.
- Personalization. Data analysis adapts suggestions. Amazon: 35% of recommendation revenue.
- Predictive accuracy. AI discovers trends.

Alibaba: -20% delivery time.

In Uzbekistan, Uzcard and MyTaxi are showing growth, but the potential is broader with 400+ startups (StartupBlink, 2025).

Despite the advantages, the challenges include:

- High costs for infrastructure and training (Stanford, 2025: low financial benefits for many).
- Ethical issues: data privacy, bias (EU AI Act, 2024).
- In Uzbekistan: specialist shortage (a total of

572 students in AI in 2023/2024), limited access to technologies (UNDP, 2025).

Scientific and practical recommendations:

1. Supplier selection: Google Cloud, IBM Watson, Alibaba Cloud for SAP integration.
2. Investment in Learning: Programs as Harvard AI Marketing Course.
3. In Uzbekistan: Public-Private Partnership (as AI Development Alliance, 2025) for scaling, including a \$100 million fund.

CONCLUSION

In conclusion, artificial intelligence technologies represent an integral part of modern marketing strategies, providing companies with significant competitive advantages through process automation, deep data analysis, and hyperpersonalization of customer interaction. Analysis of global trends shows that market leaders such as the US, China, and the EU have already reached a mature level of AI integration, where investments in 2024 reached a record \$252.3 billion, a 26% increase compared to the previous year, and the use of AI in business covers 78% of organizations. Generating AI (gen AI) is especially in demand in marketing: according to McKinsey (2025), 92% of companies plan to invest in it, and 78% are already using it in marketing and sales to create personalized experiences, which increases conversion and loyalty by 20-35%. Practical examples from Amazon (35% of AI recommendation revenue), Alibaba (25% conversion growth), and SAP (15-30% cost reduction) illustrate how AI transforms the industry, restructuring roles and teams in marketing, where AI becomes the "architect" of departments.

In Uzbekistan, AI development is at a dynamic stage supported by state policy, including the 2030 AI Development Strategy and the allocation of \$100 million to accelerate the sector, with \$50 million allocated for 86 projects in the economy and social sphere. According to UNDP forecasts (2025), AI will contribute \$1.1 billion to GDP by 2030, positioning the country as a Central Asian IT hub. Local startups such as Uzum (e-commerce with AI personalization for millions of users), TBC Bank Uzbekistan (AI in bank marketing and segmentation), MyTaxi (chatbots and demand forecasting that reduces the load by 30%), as well as Angel Connect hackathon winners (projects for AI optimization of business processes, including marketing) and ICT Week 2025 participants (55 startups attracting investments from 28 venture funds) are demonstrating growing potential. These initiatives, including the creation of AI Development Alliance and specialized clusters at New Uzbekistan University,

emphasize the focus on talents and innovation.

However, despite progress, Uzbekistan faces challenges such as the shortage of qualified specialists and infrastructure, which requires strengthening public-private partnerships and investments in education. Analysis of advanced countries shows their leadership in investment and innovation, while in developing economies, including Uzbekistan, AI has significant potential for accelerated digitalization with adequate policy support. As an expert, I believe further research should focus on overcoming barriers to AI implementation in developing economies' marketing, including ethical aspects and integration with local cultural contexts, to achieve sustainable growth and global competitiveness.

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