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EVOLUTION OF MARKETING TOOLS IN THE CONTEXT OF BUSINESS DIGITAL TRANSFORMATION

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ЕВОЛЮЦІЯ ІНСТРУМЕНТІВ МАРКЕТИНГУ В КОНТЕКСТІ ЦИФРОВОЇ ТРАНСФОРМАЦІЇ БІЗНЕСУ

In the context of digital business transformation, marketing approaches are undergoing significant changes. Traditional methods of customer interaction, which have focused mainly on mass communications and classical promotional channels, are giving way to innovative tools and methods built on the use of big data, artificial intelligence, and business process automation. Therefore, this study aims to theoretically substantiate and analyze the evolution of marketing tools in the context of business digital transformation, with an emphasis on the processes of their intellectualization. Within the scope of the research, it has been established that the evolution of marketing tools in the context of business digital transformation demonstrates a clear trend toward their intellectualization, driven by the need for more effective, flexible, and personalized interaction with consumers. It has been demonstrated that, instead of traditional approaches based on mass communications and standardized strategies, modern marketing practices focus on the use of big data, artificial intelligence, machine learning, and business process automation. Thus, it has been established that the key outcomes of the evolution of marketing tools in the context of business digital transformation are: the shift from mass communications to personalized marketing strategies (through the replacement of generic advertising messages with messages tailored to the unique needs of each

consumer); the shift from reactive to proactive approaches (in particular, the expanded use of machine learning algorithms and predictive analytics, which enable forecasting customer behavior and offering solutions even before an explicit request arises); the shift from manual management to automated systems (notably, CRM systems, marketing platforms, and chatbots take over a significant portion of operational activities while simultaneously improving the quality of communications); the shift from static tools to adaptive and self-learning systems (specifically, marketing tools are capable of independently refining their algorithms based on new data and changes in consumer behavior). The combination of these changes forms a qualitatively new paradigm of marketing activity, in which the primary source of competitive advantage is a company's ability to integrate intelligent technologies and rapidly adapt to the changing conditions of the digital environment.

В умовах цифрової трансформації бізнесу відбувається суттєва зміна маркетингових підходів. Традиційні методи взаємодії з клієнтами, що ґрунтувалися переважно на масових комунікаціях і класичних каналах просування, поступово відходять на другий план, поступаючись місцем інноваційним засобам і методам, побудованим на використанні великих даних, штучного інтелекту та автоматизації бізнес-процесів. Відтак, мета дослідження полягає у теоретичному обґрунтуванні та аналізі еволюції маркетингових інструментів у контексті цифрової трансформації бізнесу з акцентом на процесах їх інтелектуалізації. У межах дослідження встановлено, що еволюція маркетингових інструментів у контексті цифрової трансформації бізнесу демонструє чітку тенденцію до їх інтелектуалізації, зумовлену потребою в більш ефективній, гнучкій та персоналізованій взаємодії зі споживачами. Доведено, що замість традиційних підходів, заснованих на масових комунікаціях і стандартизованих стратегіях, сучасні маркетингові практики дедалі більше орієнтуються на використання великих даних, штучного інтелекту, машинного навчання та автоматизації бізнес-процесів. Отже, встановлено, що ключовими результатами еволюції маркетингових інструментів у контексті цифрової трансформації бізнесу є: перехід від масових комунікацій до персоналізованих маркетингових стратегій; перехід від реактивних до проактивних підходів (зокрема, розширення використання алгоритмів, що дозволяють прогнозувати поведінку клієнтів і пропонувати рішення ще до появи явного запиту); перехід від ручного управління до автоматизованих систем (серед яких, CRM-системи, маркетингові платформи та чат-боти, що беруть на себе значну частину операційної діяльності, одночасно підвищуючи якість комунікацій); перехід від статичного інструментарію до адаптивних і самонавчальних систем. Сукупність цих змін формує якісно нову парадигму маркетингової діяльності, де головним джерелом конкурентних переваг виступає здатність компаній до інтеграції інтелектуальних технологій і швидкої адаптації до мінливих умов цифрового середовища.

Key words: mass communications; personalized strategies; advertising messages; consumer; personalized marketing strategies; marketing tools.

Ключові слова: масові комунікації; персоналізовані стратегії; рекламні повідомлення; споживач; персоналізовані маркетингові стратегії; маркетингові інструменти.

PROBLEM STATEMENT

In the context of digital business transformation, marketing approaches are undergoing significant changes. Traditional methods of customer interaction, which have focused mainly on mass communications and classical promotional channels, are giving way to innovative tools and methods built on the use of big data, artificial intelligence, and business process automation.

This transformation entails not only the technical enhancement of tools but also their intellectualization, which expands the ability of systems to independently analyze information, predict consumer behavior, and develop personalized marketing strategies. An example of the intellectualization of marketing tools is the use of Salesforce Einstein recommendation systems in

e-commerce, where, based on analysis of purchase history, user behavior on the website, and data from other channels, artificial intelligence algorithms generate individualized product or service offers.

The evolution of marketing tools through their intellectualization has become a key factor in the competitive activity of creating, producing, and selling goods or providing services in the digital economy. Machine learning algorithms, predictive analytics, intelligent CRM systems, and chatbots enable businesses to adapt more quickly to market changes and manage customer interactions more effectively. At the same time, there arises a need to rethink traditional approaches to marketing communications, where the focus shifts from scale to relevance and the intellectualization of impact.

Process 1 – Shift from mass communications to personalized strategies.
Instead of generic advertising messages, marketing focuses on the unique needs of each consumer.

Process 2 – Shift from reactive to proactive approaches.
There is an expanded use of machine learning algorithms and predictive analytics, which enable forecasting customer behavior and offering solutions even before an explicit request arises.

Processes shaping the gradual transformation of business methods and tools for interacting with consumers

Process 3 – Shift from manual management to automated systems.
CRM systems, marketing platforms, and chatbots take over a significant portion of operational activities while simultaneously improving the quality of communications.

Process 4 – Shift from static tools to adaptive and self-learning systems.
Marketing tools are capable of independently refining their algorithms based on new data and changes in consumer behavior.

Figure 1. Evolution of marketing tools in the context of business digital transformation focuses on their intellectualization

Note:

These changes occur under the influence of shifts in the socio-economic environment, the development of digital technologies, and the increasing role of data in managerial decision-making.

Source: compiled based on [2–3; 5–7].

ANALYSIS OF RESEARCH AND PUBLICATIONS

The variability of marketing tools in digital business transformation is explored by Belova T. H., Voitovych N. Yu., Vasylytsiv N. M., and Rozhko N. Ya. In particular, the scholars draw attention to the rapid obsolescence of these tools and note that digital transformation changes not only the set of marketing instruments but also the approaches to customer interaction, data management, and campaign planning.

At the same time, the issue of the evolution of marketing tools in the context of digital business transformation has not received sufficient coverage in the scientific literature, which creates the need for a systematic analysis of the changes occurring in marketing practices and the identification of tools and approaches capable of functioning effectively in a rapidly changing digital environment.

FORMATION OF THE OBJECTIVES OF THE ARTICLE (TASK STATEMENT)

The study aims to provide a theoretical justification and analysis of the evolution of marketing tools in the context of digital business transformation, with a focus on the processes of their intellectualization.

Feature 1 – Individualized offer

A list of products or services offered that correspond to the interests of a specific customer.

Feature 2 – Dynamic

personalization of communications

Selection of content and timing of messages based on the user's previous interaction experience.

The basis for the formation of features in the shift from mass communications with customers to personalized interaction strategies

Features of personalized interaction strategies

The basis for the formation of features in the shift from mass communications with customers to personalized interaction strategies

Feature 3 – Customer behavior forecasting

A conceptual profile of customers for whom personalized offers are created.

Feature 4 – System adaptability and self-learning

A list of new data on user behavior intended to improve recommendation and segmentation algorithms.

Figure 2. Features of personalized customer interaction strategies shaped by intellectualized marketing tools in business

Source: compiled based on [2–3; 6–7].

MAIN BODY OF THE PAPER

The evolution of marketing tools in digital business transformation, with an emphasis on their intellectualization processes, involves a gradual shift from traditional, mostly mass-oriented and standardized methods of consumer interaction to innovative technological solutions based on the use of big data, artificial intelligence, and business process automation.

Evolutionary transformations in the field of marketing are realized through a series of key processes (see Figure 1): the shift from mass communications to personalized strategies; from reactive to proactive approaches; from manual management to automated systems; and from static tools to adaptive and self-learning technologies.

As a result, there is a growing trend toward the intellectualization of marketing tools, that is, the implementation of intelligent technologies such as artificial intelligence, machine learning, and data analytics. This not only reflects technological progress but also serves as a strategic factor in securing competitive advantages for businesses in the digital economy, enhancing relevance, responsiveness, and the depth of consumer engagement.

The evolution of marketing tools in the current context of digital transformation involves a shift from mass communications with customers to personalized interaction strategies.

In particular, instead of generic advertising messages, marketing is reoriented toward the unique needs of each consumer.

At the same time, specific features of personalized customer interaction strategies emerge, shaped by intellectualized marketing tools, such as individualized offers, dynamic personalization of communications, customer behavior forecasting, adaptability, and self-learning systems (see Figure 2).

In some cases, such features also include comprehensive data integration; however, their implementation depends on the level of business

Table 1. List of marketing tools that facilitated the shift from mass communications with customers to personalized interaction strategies

Tools for developing personalized interaction strategies	Example of tools	Features of the shift from mass Communications with customers to personalized interaction strategies
Recommendation systems of marketplaces, streaming platforms, CRM, and SaaS platforms	Amazon, Netflix, Spotify, Salesforce Einstein, Shopify, eBay	They analyze a user's purchase and browsing history and recommend products or content that best match their interests. This allows generic advertising messages to be replaced with personalized offers.
Email marketing tools for online stores, SaaS services, media platforms, and brands	Mailchimp, Sendinblue, Klaviyo, GetResponse	They personalize content and the timing of message delivery based on the user's interaction history with communications, enhancing message relevance.
Intelligent systems of online platforms and marketplaces	HubSpot, Salesforce, Zoho CRM, Microsoft Dynamics 365	They forecast customer behavior, identify potentially valuable buyers, and create personalized offers, replacing mass segmentation approaches based on broad categories.
<u>Intelligent chatbots on websites and messaging apps</u>	Drift, Intercom, ManyChat, Tidio	They automatically select responses to user inquiries and suggest relevant products or services.
Analytical platforms and machine learning tools	Google Analytics, Power BI, Tableau, Python-бібліотеки (pandas, scikit-learn, Tensor Flow)	They enable the identification of patterns in user behavior and the optimization of marketing campaigns.

Source: compiled based on [1–3].

development and the availability of data from various interaction channels. Not all companies can immediately integrate information from all customer touchpoints (website, mobile app, social media, email), so in practice, personalization is often implemented gradually-initially based on individual data sources, and over time it expands to comprehensive analytical models that provide more accurate and relevant offers for each user. Thus, the list of marketing tools that enable businesses to effectively implement personalized interaction strategies and enhance customer loyalty is presented in Table 1.

The outlined process of marketing tool evolution ensures more relevant, targeted, and effective communication interactions, enhancing customer loyalty and business competitiveness.

Moreover, the evolution of marketing is reflected in the shift from reactive to proactive approaches. This means that marketing ceases to be merely a system that reacts to consumer actions and begins to anticipate their needs, offering solutions before the customer even expresses them. In other words, while a reactive approach involves the company waiting for the customer to take action (for example,

a consumer buys a phone, and only afterward are accessories or insurance offered), a proactive approach allows the company to predict customer behavior based on data and offer relevant products or services in advance (for example, an algorithm analyzes that the customer frequently purchases sports nutrition and, before the next

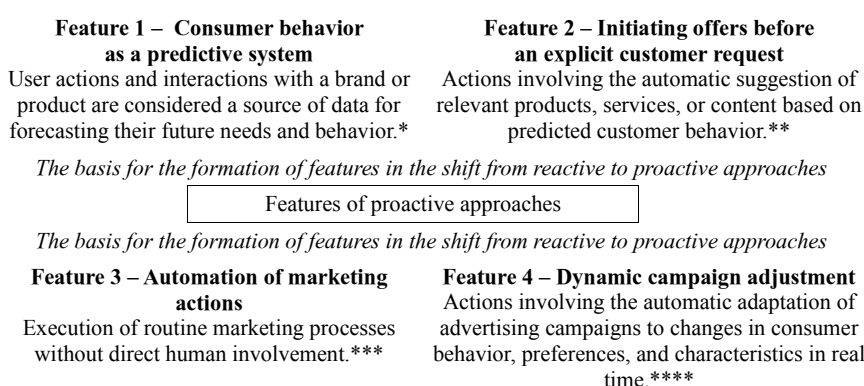


Figure 3. Features of proactive marketing approaches in business

Note
* In the system, every click, view, purchase, or interaction with content is analyzed to predict what the consumer might want or do next.
** The system independently sends offers, displays ads, or suggests content before the user makes a request.
*** The system automatically sends personalized emails, launches social media advertising campaigns, segments audiences, and generates product recommendations.
**** The system automatically adjusts impressions, bids, audiences, and creatives based on user behavior, interests, demographics, and other data.

Source: compiled based on [1; 4–5; 7].

Table 2. List of marketing tools that facilitated the shift from reactive to proactive approaches

Tools for proactive marketing approaches	Example of tools	Features of the transition from reactive to proactive marketing approaches
Predictive analytics platforms	Adobe Marketo, Oracle Eloqua	Analyze user behavior and help plan campaigns so that offers appear even before the customer makes a request.
AI tools	Google Analytics, Power BI, Python libraries (scikit-learn, TensorFlow)	Identify patterns in user behavior and make predictions for automated marketing actions.
Machine learning tools	Salesforce Einstein, HubSpot AI, Amazon SageMaker, IBM Watson	Analyze large volumes of data on user behavior (views, purchases, clicks, ad interactions) and uncover patterns that are not obvious to humans.

Source: compiled based on [2—3; 6].

purchase, suggests a new product or personalized promotion).

Features of such approaches include (see Figure 3): consumer behavior as a predictive system; initiation of offers before an explicit request arises; automation of marketing actions; and dynamic campaign adjustments.

Instead of waiting for a customer request, machine learning tools, artificial intelligence, and platform-based predictive analytics forecast consumer behavior and generate offers even before an explicit request arises, in accordance with the specifics presented in Table 2.

The outlined process of marketing tools evolution effectively creates a more relevant, targeted, and efficient communication environment between the customer and the business.

Marketing evolution is manifested in the shift from manual management to automated marketing systems, where tools such as CRM systems, marketing platforms, and intelligent chatbots take over a significant portion of operational activities. Indicators of intelligent automated marketing systems include (see Figure 4): automation of repetitive tasks; proactivity; optimization of marketing decisions; integration of interaction channels.

Such an evolutionary approach reduces the workload on marketing departments, increases the accuracy and quality of customer communications, ensures a personalized approach, and enables timely interaction.

The evolution of marketing is manifested in the transition from static tools to adaptive and self-learning systems, which, by their features, are capable of independently improving their algorithms based on new data and changes in consumer behavior. This is facilitated by data-driven machine learning systems, self-learning chatbots and virtual assistants, and self-programming predictive analytics platforms, as presented in Table 3.

This evolutionary approach ensures continuous self-improvement, consistently increasing the accuracy of predictions and the effectiveness of marketing decisions through the analysis of large volumes of data, identification of patterns, and automatic adjustment of algorithms.

CONCLUSIONS

Within the scope of the study, it has been established that the evolution of marketing tools in the context of business digital transformation demonstrates a clear trend toward their intellectualization, driven by the need for more efficient, flexible, and personalized interaction with consumers. It has been shown that, instead of traditional approaches based on mass communications and standardized strategies, modern marketing practices focus on leveraging big data, artificial intelligence, machine learning, and business process automation.

Thus, it has been established that the key outcomes of the evolution of marketing tools in the context of business digital transformation are:

Feature 1 – Automation of repetitive tasks.

Repetitive tasks performed without human intervention, such as sending newsletters, updating databases, and segmenting customers.

Feature 2 – Proactiveness.

System actions that initiate offers in real time.

Basis for the formation of features in the transition from manual management to automated marketing systems

Features of intelligent automated marketing systems

Basis for the formation of features in the transition from manual management to automated marketing systems.

Feature 3 – Automatic optimization of marketing decisions.

System actions that automatically adjust marketing parameters to improve effectiveness.

Feature 4 – Integration of interaction channels

System actions that unify different channels (email, messengers, social media, websites) to ensure a consistent and coordinated communication with the customer.

Figure 4. Features of intelligent automated marketing systems in business

Source: compiled based on [3; 6—7].

Table 3. List of marketing tools that enabled the transition from static tools to adaptive and self-learning systems

Tools for building adaptive and self-learning systems	Example of tools	Features of the transition from static tools to adaptive and self-learning systems
<u>Data-driven automatic learning systems</u>	Python-Libraries (scikit-learn, TensorFlow, PyTorch), H2O.ai	Allow analysis of large volumes of data, detect patterns, and independently update predictive models without manual intervention.
<u>Self-learning chatbot and virtual assistant systems</u>	Drift, Intercom, IBM Watson Assistant	Automatically adapt responses and interaction scenarios with users, improving personalization and communication effectiveness.
<u>Self-programming predictive analytics platforms</u>	Adobe Marketo, Salesforce Einstein, Oracle Eloqua	Automatically adjust marketing campaigns based on consumer behavior forecasts, optimizing offers and timing of communications.

Source: compiled based on [1; 5].

— Transition from mass communications to personalized strategies. Instead of using universal advertising messages, marketing is tailored to the unique needs of each consumer.

— Transition from reactive to proactive approaches. The use of machine learning algorithms and predictive analytics is expanding, enabling the forecasting of customer behavior and the provision of solutions even before an explicit request is made.

— Transition from manual management to automated systems. CRM systems, marketing platforms, and chatbots take over a significant portion of operational activities while simultaneously improving the quality of communications.

— Transition from static tools to adaptive and self-learning systems. Marketing tools are capable of independently refining their algorithms based on new data and changes in consumer behavior.

The combination of these changes forms a fundamentally new paradigm of marketing activity, in which the primary source of competitive advantage is a company's ability to integrate intelligent technologies and rapidly adapt to the ever-changing conditions of the digital environment.

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