TRANSFORMATIONS OF THE ADVERTISING AND PR-SYSTEM AS A WHOLE DUE TO THE SIGNIFICANT INCREASE IN THE USE OF DIGITAL TECHNOLOGIES BASED ON ARTIFICIAL INTELLIGENCE IN MODERN INTERNET MARKETING MODELS

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Abstract. The article reveals the historical evolution of advertising and PR as communication systems and shows how the emergence of the Internet and Internet marketing radically changed their role, structure and logic of interaction with the consumer. The essence of advertising as paid targeted communication focused on stimulating a behavioral response is determined, and PR as a long-term activity to form and maintain trust, reputation and mutual understanding between the organization and various groups of the public. It is substantiated that in the conditions of Internet marketing these two subsystems can no longer be considered in isolation, since they are combined into a single field of brand perception, where the user simultaneously interacts with commercial messages, content and reputation signals. The work proves that the Internet has become a critical point of change, as it deprived the monopoly of traditional media, made the audience an active participant in communication and introduced a new economy of attention. It is shown that this shift created the prerequisites for the further transformation of advertising and PR based on digital technologies based on artificial intelligence. It was determined that until 2022, the use of such technologies was mainly experimental and fragmented in nature, was available to a limited number of large companies and did not massively change management practices. After 2022, thanks to the spread of cloud services and ready-made platforms, technologies based on artificial intelligence became an everyday tool for a wide range of Internet marketing entities. It is substantiated that the mass

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implementation of these technologies transforms advertising and PR at three levels of communication practices. At the operational level, routine tasks are automated, the possibility of deep personalization and constant optimization of campaigns in real time appears. At the strategic level, data from different channels is combined, the integration of advertising and PR within a single analytical system is strengthened, which makes it possible to link economic results with the dynamics of public opinion and reputational risks. At the value level, the importance of ethical decisions, transparency of algorithms and a responsible attitude towards the use of consumer data is increasing. It has been proven that the human factor does not disappear, but changes its function. The author's vision, ethical sensitivity, the ability to empathy and construct meanings remain key, while technologies based on artificial intelligence act as a tool for enhancing analytics and efficiency. The article substantiates that such technologies, like search engines and social networks, form a new communication infrastructure that will remain with us in the long term, and therefore requires further scientific research and rethinking of educational approaches in the field of marketing and PR.

1. Introduction

The transformation of advertising and public relations towards the active use of digital technologies based on artificial intelligence is important, as the very logic of communication between the brand and the consumer is changing. The audience lives in an environment of constant online presence, information overload and multi-platform, so traditional approaches to advertising and public relations no longer provide the necessary speed of response, level of personalization, or depth of interaction. Digital technologies based on artificial intelligence allow you to analyze large arrays of behavioral and contextual data, identify subtle patterns in consumer preferences, predict reactions to messages and adjust content, format, and communication channel in real time. Therefore, this increases the effectiveness of advertising budgets, helps to better align customer expectations and strategic goals of companies, and also minimizes the risks of unethical or inadequate communication. The urgency of such a transformation is also enhanced by the fact that competition for consumer attention is growing, and loyalty is becoming more fragile, so those organizations that are able to quickly learn, adapt and build a more

honest and transparent dialogue, relying on data, rather than intuition, gain an advantage. At the same time, it is also interesting and necessary from the point of view of the development of creativity, professional roles and the marketing and public relations industry itself. Digital technologies based on artificial intelligence take on routine operational tasks, such as technical testing of ad variants, automated monitoring of the media space, basic segmentation or building reports, which frees up specialists for strategic thinking, deep analytics, building meanings and value stories of the brand. New content formats, interactive campaigns, adaptive communication scenarios are emerging that change depending on the user's reaction, and this makes advertising and public relations more lively and flexible. At the same time, new questions of ethics, transparency of algorithms, responsibility for manipulative practices arise, which stimulates scientific research and professional discussions. The transformation of advertising and public relations systems under the influence of technologies based on artificial intelligence is therefore not just a technical trend, but a profound shift in the understanding of how trust, reputation, and emotional connection with the consumer are built in the digital age, which makes this topic both relevant, necessary, and truly fascinating.

After AI-based technologies began to be widely used in business, the transformation of advertising and public relations is gaining even greater importance, because not only the tools but also the very structure of the communications market are changing. What was a competitive advantage yesterday is becoming a standard and everyday practice today. Recommendation algorithms, automatic advertising purchasing systems, chatbots, content generation, voice assistants, and consumer behavior analytics are becoming widely available. In this situation, companies can no longer limit themselves to simply implementing AI-based digital technologies, since everyone is doing the same thing. It is important to reconsider the concept of working with audiences, combining technological capabilities with a deep understanding of emotions, values, social expectations, ethics, and transparency. The mass adoption of AI-based technologies increases the risks of distrust in advertising and PR practices if the audience feels manipulated, hidden algorithmic biases, or the use of personal data without informed consent. Therefore, it is important to form new standards of responsible communication, to learn to explain to

the audience how exactly artificial intelligence technologies are used, why data is collected and what benefits not only business but also consumers receive. This creates space for new research, educational programs, changes in marketing and public relations training courses, and also opens up interesting areas for interdisciplinary cooperation between economists, communication specialists, lawyers, and digital ethics specialists. Thus, after the stage of simply mass use of artificial intelligence technologies, the key issue becomes the issue of meaningful, responsible and creative transformation of the advertising and PR system as a whole.

Thus, the transformation of advertising and PR in response to the mass introduction of digital technologies based on artificial intelligence appears as a complex and at the same time inevitable stage of development of modern Internet marketing, combining technical innovations, new models of consumer behavior and changing professional standards in the field of communications. This topic is relevant because it touches on the basic principles of building trust in brands, forming a reputation and managing audience attention in conditions of information overload, the rapidity of trends and the growing sensitivity of society to issues of data ethics. It is necessary for business, as it allows to rethink communication strategies, increase the effectiveness of advertising investments, form more stable relationships with customers and reduce the risks of reputational crises in an environment where every mistake instantly becomes public. At the same time, the topic is interesting from a scientific and educational point of view, as it opens up space for analyzing new formats of interaction, the role of algorithms in creating meanings, the redistribution of creative and analytical functions between humans and technologies, as well as for finding balanced models of responsible use of technologies based on artificial intelligence in the Internet marketing system. That is why further research into the transformation of advertising and the PR system as a whole can be considered an important step towards understanding the future of communications in the digital age.

2. Transformation of the advertising and PR system
after the emergence of internet marketing

The history of advertising and PR begins long before the emergence of modern media and even before the formation of markets in the form we are

familiar with. Already in the ancient civilizations of Egypt, Mesopotamia, Greece and Rome, merchants used wall inscriptions, signs, symbols on ceramics and stone to announce goods, craft services, and spectacles, such as gladiatorial games or fairs. Where literacy levels were low, heralds played a significant role, who loudly reported news and commercial announcements, combining information with elements of spectacle. At the same time, rulers and temples used monumental architecture, inscriptions, and religious rituals to assert their own authority and form the desired image of power in the minds of their subjects. Modern researchers interpret such practices as early forms of both advertising communication aimed at attracting attention to a particular object and prototypes of PR associated with the legitimization of government and influencing public opinion. With the spread of printing in Europe from the 15th century, advertising reached a new level. Printing workshops and publishers began to place signs and short announcements about their services, and with the appearance of the first periodicals in the 17th century, advertising messages gradually occupied a separate space in them. Newspapers and later magazines created a stable channel for commercial communication, which allowed them to address wider audiences than city squares or bazaars. During the same period, various political and religious movements actively used leaflets, pamphlets, public speeches, petitions and boycott campaigns to change public sentiment, for example, in the fight against the slave trade in Britain and the USA. Such actions are often considered historical predecessors of PR, as they combined systematic work with public opinion, thoughtful argumentation and the use of multiple channels of influence. In the 19th century, along with industrialization, the development of the capitalist economy and mass production, advertising turns into a powerful economic force. The increase in newspaper circulation, the emergence of illustrated magazines and the reduction in the cost of printing created conditions under which manufacturers of industrial goods, banking institutions, transport companies and other businesses began to systematically use advertising to stimulate demand [1-3]. Gradually, specialized advertising agencies emerge, which take on the role of mediator between the advertiser and the media, develop creative concepts, slogans, visual images and media plans. During this period, the first elements of professional standards are formed, for example, awareness of the difference between awareness and

conviction, the emergence of legal restrictions on misleading advertising, attempts at audience segmentation. Advertising becomes an integral part of the consumer goods market, supporting the formation of brands and new consumption models, and gradually moving from text ads to more emotional and imaginative forms. The modern history of PR as a professional activity is usually associated with the beginning of the 20th century. In 1900, the Publicity Bureau was created in the USA, which is considered one of the first specialized structures providing services in the field of public relations. Already at the beginning of the century, key figures such as Ivy Lee and Edward Bernays, who are often called the fathers of modern PR, appeared. Ivy Lee formulated the principles of open public information, developed the press release format and the idea of two-way communication, where the organization not only speaks, but also listens to society. Edward Bernays combines PR practice with the ideas of mass psychology, considering the influence on public opinion as a scientifically controlled process based on the study of motives and unconscious attitudes. Both approaches develop in parallel and lay the foundation for the professionalization of PR, the creation of the first agencies, training courses, and codes of ethics that distinguish legitimate work with stakeholders from crude propaganda.

Throughout the 20th century, advertising and PR have developed together with new media, first radio, then television, and later cable channels, satellite broadcasting, and finally the Internet and social networks. Advertising has moved from the dominance of print ads to audiovisual formats, where sound, rhythm, editing, and recognizable images accompanying mass brands play an important role. PR integrates the experience of military propaganda, corporate anti-crisis campaigns, and state information programs, gradually building models of long-term reputation management. In the second half of the century, professional associations, magazines, and research centers were created, where theories of communication management were formed, methods for assessing effectiveness, and standards of ethical behavior were developed. With the advent of Internet marketing and user-generated content platforms, advertising and PR became even closer, since the same audience reacts in real time to both commercial messages and reputational actions of companies. At the current stage, this is being supplemented by digital analytical tools and technologies based on artificial intelligence, which do not cancel the historical evolution of advertising and PR, but continue it,

making these areas even more complex, interconnected, and dependent on public trust [4-6].

The Internet changed everything because it broke the old rules of access to information, time and space. Previously, to learn something, you had to go to the library, buy a newspaper, wait for the TV news, ask your friends. The Internet made information constantly available, almost free and instant. A person can compare prices at any time, check the reputation of a company, read reviews, find an alternative. This destroyed the monopoly of those who owned communication channels, large media and advertising in the traditional sense. A brand can no longer simply declare that it is the best, because the user checks in a few seconds whether it is really so and sees the experience of other people. As a result, the balance of power between companies and consumers is changing, as is the very logic of trust in information. At the same time, another reason is that the Internet has turned every person from a passive listener into an active participant in communication. Previously, those who had access to the airwaves or printed publications spoke, while everyone else only listened and occasionally wrote letters to the editor. Yes, with the advent of the Internet and especially social networks, everyone can create content, comment, criticize, and unite with other people around certain topics or brands. For advertising and PR, this means that there is no longer complete control over the information flow. Any video, publication, mistake, or unsuccessful phrase is instantly discussed, copied, and reinterpreted. Therefore, communication turns into a constant dialogue. You need not only to speak, but also to listen, respond, explain, and build relationships, not just launch campaigns. In essence, the Internet has created a new economy of attention. A person constantly sees hundreds of messages, notifications, advertisements, posts from friends, news, and videos. The most scarce resource has become not information, but the ability to concentrate. In such a situation, advertising and PR can no longer work only on volume and repetition. You need to be useful, interesting, and relevant, get into the right context, and take into account the person's state at a particular moment. That is why online marketing, digital analytics, personalized messaging, and later artificial intelligence-based technologies began to develop rapidly, helping to better understand the behavior and expectations of the audience. The Internet created conditions in which, without fine-tuning of communication, a brand simply gets lost in the noise (Table 1).

Table 1

Essential foundations of internet marketing today

Key dimension	Substantive description of internet marketing today
1	2
Customer centric journey focus	Internet marketing today is built around the complete customer journey rather than isolated campaigns or single clicks. The brand plans how a person discovers information, compares options, makes a decision, uses the product and shares feedback, and then it designs communication for every step. Websites, social media, email, messengers and support channels are coordinated so that the experience feels coherent and continuous, not fragmented. The core idea is that long term value comes from understanding real needs and frustrations of people and adapting digital touchpoints to reduce friction and increase satisfaction.
Interactivity and continuous dialogue	Digital channels turn marketing into an ongoing dialogue instead of a one way broadcast. People comment, react, remix content and involve their own communities in the conversation about a brand, which means that listening becomes as important as speaking. Modern internet marketing therefore includes community management, real time responses and participation in public discussions, not only scheduled posts and pre planned messages. The success of a brand depends on its ability to answer questions, accept criticism, explain decisions and build trust in an open and sometimes unpredictable environment.
Data driven decision making	Internet marketing is strongly shaped by the use of behavioural and contextual data that come from clicks, searches, views, sign ups, purchases and feedback. Teams rely on web analytics, attribution models and experimentation to understand which elements of communication actually work and which only look attractive in theory. Decisions about budgets, channels, audiences and creative formats are increasingly based on evidence rather than intuition or hierarchy. This data orientation does not remove creativity, but it disciplines it because ideas must prove their value in measurable outcomes that can be tracked over time.
Integrated multichannel presence	The contemporary internet environment is fragmented across many platforms and devices, which forces brands to think in terms of integrated presence. A person may see a video on a social network, later search for reviews, then read a blog article and finally receive an email reminder, and all these elements need to tell one consistent story. Internet marketing coordinates search, display, social, content and email activities so that they support each other instead of competing for attention in a chaotic way. Integration also means that technical infrastructure, design language and tone of voice are aligned, which helps users recognise the brand quickly and feel safe when interacting with it.

1	2
Value oriented content and long term relationships	At the centre of internet marketing stands the idea that brands must create real value for people through their content and services, not only push promotional messages. Educational materials, how to guides, stories from customers and helpful tools make the brand useful in everyday life, which builds trust that cannot be bought only with paid advertising. The goal is to transform occasional visitors into engaged subscribers, community members and loyal advocates who recommend the brand to others. This long term relationship orientation shifts attention from short term clicks to lifetime value and encourages more responsible communication practices.

Source: formred by the author

Advertising, in its simplest sense, is a form of targeted communication in which one party tries to draw the attention of another party to a specific product, service, idea or brand with a clearly defined goal. Usually, advertising is paid, the customer is a specific entity that is interested in changing the behavior or attitude of the consumer. In the classic model, the sender of the message is distinguished, i.e. the advertiser, intermediaries, such as agencies and media, the communication channel, i.e. a television commercial, a banner, a publication on the Internet, the advertising message itself, and the recipient, i.e. the target audience. It is important that advertising does not simply inform, it seeks to persuade, encourage a purchase, to try a new product, to switch to another brand or to support a certain behavior, for example, to participate in a social initiative. In the modern approach, advertising is considered as part of a broader system of marketing communications, therefore it should be based on market research, analysis of consumer motivations, careful budget planning and further evaluation of results [7-9].

PR or public relations is a different, albeit closely related, area of professional communication. While advertising focuses primarily on promoting goods and services, public relations focuses on forming, maintaining and protecting the reputation of an organization, person, brand in the eyes of various public groups. Public relations is understood as systematic and long-term activities aimed at building mutual understanding and trust between an organization and its audiences, which include customers, partners, employees, government agencies, local communities, the media

and the wider society [10-12]. The focus of public relations is not so much on a direct appeal to buy as on the formation of a positive image, explaining decisions, responding to criticism, managing crises, communicating values and missions. Historically, public relations has developed from simple information to complex strategies that combine analytical tools, creativity, psychology and understanding of social processes. When we talk about an advertising system, we mean not only a separate commercial or advertisement, but a whole ordered set of elements that interact with each other. Such a system includes subjects, i.e. advertisers, advertising agencies, media companies, creative studios, research organizations, as well as consumers, public associations, and state institutions that regulate advertising activities. An important role is played by processes such as market analysis, formation of campaign goals, selection of target audience, development of creative concept, production of materials, media planning, placement of advertising and subsequent evaluation of effectiveness. The system also includes resources, financial, human, technological, dominant rules of the game, in particular legislative restrictions on the content of advertising, consumer protection, fair competition. It is the totality of these elements and the connections between them that transform advertising from a separate message into a complex organized system in which each decision affects the overall result. It includes subsystems of internal communications with employees, external communications with clients, partners, authorities, media relations, within which contacts with journalists and editorial offices are formed and maintained, crisis communications, responsible for responding in situations of conflicts, scandals, negative information waves. Important components are also corporate social responsibility programs, measures to create a positive image, organization of events, public speeches, participation in public discussions. For effective work, the public relations system uses a cycle that includes situation analysis, goal setting, event planning, implementation, constant monitoring of audience reactions and final evaluation of results. Therefore, public relations is not a one-time action, but continuous communication management, where consistency, honesty, transparency and the ability to listen, not just speak, are important [13-15].

It should be noted that in more modern organizations, advertising and public relations are increasingly considered as elements of a single

communication system that supports the development strategy of a business or other structure. Thus, advertising provides visibility and stimulates short-term consumer reactions, such as purchases, registrations, and website visits, while public relations builds long-term trust, strengthens reputation, and creates a context in which advertising messages are perceived more positively. Together, they help organizations explain their goals and values, manage stakeholder expectations, and strengthen relationships with partners and society. Such an integrated communication system already at a basic level requires a clear understanding of what advertising is, what public relations is, what tasks each of them solves, and what their similarities and differences are. Only then can we move on to the next steps, such as analyzing the impact of digital technologies based on artificial intelligence and new models of Internet marketing, but the foundation always remains the basic definitions and structure of advertising systems and PR systems as a whole.

The essence of Internet marketing is that it is not just a transfer of traditional advertising to the digital environment, but the construction of a holistic system of communication and exchange of value between the company and the consumer on the network. Internet marketing covers the entire user journey from the first contact with the brand in the online space to repeated purchases and recommendations to other people. The focus is not on a separate ad, but on the person's experience during interaction with the website, social media page, email, mobile application, service support. Therefore, Internet marketing combines elements of classic marketing, psychology, design, programming, analytics and work with content, creating new logic of the brand's presence in the external environment. If traditional media worked mainly in one direction, when the company speaks and the audience listens, then on the Internet users can immediately react, comment, ask questions, share or boycott content. Internet marketing is based on a continuous dialogue, in which the company not only broadcasts messages, but also listens, observes reactions, takes into account the mood of communities, tests different formats and adapts its actions. This turns marketing into a flexible process of setting up interaction in real time, where the result depends on the brand's ability to adequately respond to signals from the audience (Table 2).

Table 2

Directions of transformation of online advertising campaigns

Direction of transformation	Situation before internet marketing	New characteristics in the internet environment	Main implications for advertising campaigns
From isolated media placements to integrated customer journey	Advertising was organised mainly around separate media placements in television, radio, print and outdoor formats. The focus was on buying reach in each channel and creating memorable messages, while the path of an individual customer from first contact to purchase was only roughly imagined and rarely measured in detail. Different media often worked independently, with weak coordination between creative ideas, timing and follow up communication.	Internet marketing encourages brands to see the campaign as a continuous journey with many digital touchpoints, such as search, social platforms, websites, video channels and email. Each contact is designed to answer specific questions, reduce doubts, provide proof and lead the person toward a decision and later support. Digital tools allow tracking behaviour across these touchpoints, which makes the journey visible and manageable rather than hypothetical.	Campaigns become longer in time and more complex in structure, since success depends on coherence of many small interactions rather than a single striking message. Planning and evaluation move from counting impressions to analysing how people progress through the journey and where they drop off. This increases the need for cross channel coordination, detailed analytics and ongoing optimisation, but also opens space for deeper relationships and higher lifetime value.
From one way broadcasting to interactive dialogue	Traditional advertising treated the audience mostly as passive receivers. Brands spoke through mass media and expected people simply to watch, listen or read, with very limited opportunities for direct response beyond phone calls or visits to a shop. Feedback was slow, fragmented and often came only in the form of sales statistics or occasional surveys, which made it hard to understand real reactions in time.	Online environments turn campaigns into conversations where users can instantly comment, share, criticise, support or ignore content. Social networks, review platforms and messaging tools allow people to talk not only with brands but also with each other, shaping public perception in real time. Advertising messages are placed into this living stream of interactions, where context, tone and responsiveness matter as much as the creative idea itself.	Campaigns must include active community management, real time monitoring and the ability to answer questions, correct mistakes and thank supporters quickly. Success depends on the perceived authenticity and listening attitude of the brand, not only on the size of the media budget. Poorly handled dialogue can quickly turn paid visibility into reputational damage, while respectful interaction can multiply the effect of limited spending through voluntary sharing and advocacy.

Source: formred by the author

Thus, every click, page view, like, search, filled out form creates information that can be collected and used to more accurately understand people's needs and behavior. Internet marketing relies on web analytics systems, segmentation tools, campaign management platforms, as well as digital technologies based on artificial intelligence, which help predict likely user actions, automatically select relevant content, and optimize budgets. Thanks to this, marketing decisions are less and less based only on the manager's intuition and are increasingly based on facts, patterns and proven hypotheses, which increases the effectiveness of actions in the digital environment.

I believe that a brand should be present where its audience lives and speak a language that is understandable to this audience. Websites, blogs, social media pages, video platforms, podcasts, review pages, marketplaces become not just a showcase, but a space for dialogue and community creation. Internet marketing requires a well-thought-out content strategy, where each material, text, video, image, interactive element performs a specific function, for example, to attract attention, explain the benefits of the product, dispel doubts, encourage action, support the client after the purchase. Thus, content becomes the main tool for building trust and an emotional connection with the consumer. Thus, Internet marketing is associated with product development, pricing, logistics, service, reputation management and PR. In essence, it helps to form long-term relationships with customers, collect feedback to improve the offer, create competitive advantages in a global competition where the consumer can choose any company in the world. Ultimately, the essence of internet marketing lies in the combination of technological tools, creative thinking, and strategic vision that allows organizations to remain visible, useful, and persuasive in the digital age.

The emergence of Internet marketing has forced advertising and PR systems to change the very principles of their work, and not only the channels for distributing messages. If earlier communication was built around mass media such as television, radio, and the press, then on the Internet the audience is scattered between a large number of platforms, communities, and services. Therefore, this means that advertising has ceased to be a purely one-way flow from the brand to the consumer. It has

turned into a sequence of touches at various digital touch points. Banners on websites, search advertising, presence on social networks, content on video platforms, emails, and push notifications together form a single user experience. In such conditions, the classic model of a one-time campaign almost loses its meaning. Instead, advertising becomes a continuous process that constantly maintains the brand's presence online, adapts to people's behavior, and responds to changes in the external environment. For the PR system, Internet marketing has become a catalyst for the transition from controlled messages to an open dialogue with numerous audiences. So, if earlier the main emphasis was on working with the media and official press releases, today a significant part of reputation is formed in social networks, on thematic forums, in comments under posts of opinion leaders, in reviews on e-commerce platforms. PR specialists are forced to work with an environment where any person can become a source of information, and an informal post can influence the perception of a brand no less than an official statement. This has led to the emergence of new practices, such as online reputation management, monitoring the tone of discussions, working with bloggers and influencers, and active participation in public discussions in real time. The PR system has become more sensitive, mobile, and dependent on constant monitoring of the digital space.

Advertising under the influence of Internet marketing has become much more precise, targeted, which was previously almost unattainable in traditional media. Instead of general messages aimed at broad audiences, companies began to create segmented campaigns for different groups of users depending on their interests, behavior, purchase history, and location. The ability to track a user's journey from ad exposure to a specific action made it possible to link advertising costs to real results. This changed the role of advertising in the management decision-making system. In essence, it became not only a tool for creative brand expression, but also an accurate mechanism for achieving measurable goals in sales, customer acquisition, and retention of existing customers. At the same time, such accuracy increased the responsibility of advertisers, because any unsuccessful communication is instantly reflected in performance indicators. For the PR system, Internet marketing opened up the opportunity to constantly maintain contact with audiences, rather than being limited to episodic informational occasions.

The official website, social media pages, newsletters, online events, streams, webinars have become tools through which an organization can explain its decisions, talk about internal processes, demonstrate responsibility and openness. This has changed the tone of communication. It has become less formal, more dialogic, focused on explanations and discussions, and not just on one-sided information. At the same time, the risks of crisis situations have increased, because any conflict or mistake instantly becomes visible to a wide range of people. Therefore, the PR system was forced to implement rapid response procedures, anti-crisis action scenarios, and algorithms for coordinating positions in real time, which was previously less critical. At the same time, another important transformation has been the convergence of advertising and PR systems within a single Internet marketing strategy. Organizations are increasingly considering advertising campaigns, content on social networks, work with opinion leaders, participation in public discussions as parts of one holistic process, and not as separate activities of different departments. Advertising strengthens the messages that are formed by the PR system, and PR maintains trust, without which even the brightest advertising is perceived skeptically. In the digital external environment, this interaction becomes especially noticeable, because the user easily moves from an advertisement to a brand page, news messages about the company, reviews, discussions. All this creates a single field of perception in which it is no longer possible to clearly separate where advertising ends and PR begins. It was the emergence of Internet marketing that made such integration not just desirable, but actually a necessary condition for effective communication.

3. Transformation of the advertising and PR system after the mass introduction of technologies based on artificial intelligence

The mass introduction of digital technologies based on artificial intelligence after 2022 was a turning point for the advertising and PR system, because these technologies moved from the category of experiments to the level of everyday tools. Until 2022, many companies perceived algorithms based on artificial intelligence as something complex, expensive, available mainly to global corporations with very large budgets

and their own teams of analysts and programmers. Therefore, the use of such approaches was often limited to point pilot projects without a systemic impact on the entire communication strategy. After 2022, a large number of cloud services, platforms with ready-made modules, interfaces without the need for programming appeared, which allowed even small companies to integrate technologies based on artificial intelligence into daily work. The advertising and PR system began to rely not just on general digitalization, but on constant automated analytics, content generation, personalization and modeling of audience behavior. Thus, in advertising, the transformation has manifested itself in the fact that the planning, creation and placement of communications have become much more automated and data-driven. Systems based on artificial intelligence analyze millions of contacts with users, find out which combinations of visual elements, texts, headlines, display time and types of audiences give the best result, and adjust campaigns almost in real time. It has become possible to massively create different variants of advertisements, dynamically adjust content to a specific person, to their viewing history, purchases, geolocation. Until 2022, most of these actions were performed manually or using simpler algorithms that did not provide such a level of flexibility and speed. Advertising departments spent a lot of resources on routine tasks and rather rough segmentation, so deep personalization remained a rarity, not the standard. For the PR system, the mass use of digital technologies based on artificial intelligence after 2022 meant a qualitatively new level of work with the information space. Modern tools can track brand mentions in news, social networks, blogs, video platforms in near real-time, analyze the tone of statements, identify potential conflict topics, risk groups, and opinion leaders who shape the agenda. In essence, AI-based algorithms help quickly create drafts of statements, responses, and communication scenarios for different scenarios of the situation. Until 2022, most companies relied on manual monitoring, a limited number of sources, and retrospective analysis, so the response to crises was often late and the picture of public opinion was fragmented. Today, the PR system is increasingly turning into an early warning center for reputational risks with support for AI-based technologies (Table 3).

Table 3

Place of AI based technologies in marketing

Role of AI based technologies	Detailed explanation in contemporary marketing
1	2
Automation of routine operations	AI based technologies increasingly handle repetitive and time consuming tasks that previously required large operational teams. Examples include automatic bidding in advertising platforms, smart scheduling of posts, first level responses in chat based customer service and initial classification of feedback or support tickets. By taking over these activities, AI based tools free human specialists to focus on strategic questions, qualitative insights and creative problem solving. Automation also reduces the risk of human error in large scale campaigns and allows constant optimisation that would be impossible to maintain manually
Personalisation and segmentation at scale	One of the most visible contributions of AI based systems to marketing is the ability to personalise communication for millions of users in a dynamic way. Algorithms analyse browsing history, purchase patterns, device information and interaction data to predict what kind of message, offer or content will be most relevant for a particular person at a specific moment. This makes it possible to display different products, headlines or visuals to different users visiting the same page or application. As a result marketing moves from broad general segments to fluid micro segments, which can significantly increase engagement and conversion if handled ethically and transparently
Insight generation and prediction	AI based technologies help marketers move from descriptive metrics, such as simple counts of clicks, to deeper analytical insights and predictions. Systems can discover hidden patterns in large datasets, highlight emerging behaviours, forecast future demand or identify users that are likely to churn. These capabilities support better budgeting, more realistic sales planning and early identification of risks or opportunities in the market. Instead of reacting only after problems appear, companies can use predictive signals to adjust campaigns, modify offers or prepare communication strategies in advance, which strengthens their competitive position
Support for creativity and content production	Generative tools based on artificial intelligence have started to influence how marketing content is created, tested and improved. They can propose alternative headlines, visual concepts, article drafts or video scripts that human teams then refine according to brand values and cultural context. This speeds up experimentation because many creative options can be produced quickly and evaluated with real audiences. At the same time the final responsibility for tone, ethical boundaries and emotional resonance remains with human professionals, who decide which ideas are acceptable and which might harm reputation or sensitive groups

End to Table 3

1	2
Transformation of skills, ethics and governance	The growing presence of AI based technologies in marketing changes not only tools but also required competencies and rules of governance. Marketers need to understand how algorithms work at a conceptual level in order to interpret their outputs, recognise biases and avoid overreliance on automated recommendations. Organisations are pushed to develop internal guidelines on data usage, transparency towards customers and acceptable levels of personalisation, especially when dealing with vulnerable audiences. In this sense AI based technologies become a catalyst for new discussions about responsibility, fairness and long term societal impact of marketing practices, linking everyday campaign decisions with broader questions of trust and digital citizenship.

Source: formred by the author

It is important that after 2022, advertising and PR systems began to interact differently with each other precisely due to the massive use of shared digital platforms. Data from advertising campaigns, user behavior on the site, reactions on social networks, news publications are now combined into single analytical panels, where systems based on artificial intelligence reveal connections between sales, changes in audience sentiment and information events. This allows you to plan communications comprehensively, taking into account not only short-term advertising effectiveness indicators, but also the long-term impact on reputation. Until 2022, such integrated solutions were rather the exception than the rule, as they required expensive individual developments and the involvement of narrow technical specialists. Now many of these capabilities are available in the form of ready-made products, which significantly lowered the threshold of entry. In my opinion, changes in professional roles and decision-making culture in advertising and PR systems deserve special attention. After the mass introduction of AI-based technologies, specialists are spending less and less time on mechanical operations, such as manual sorting of reviews, initial compilation of media lists, basic campaign statistics. Instead, they are focusing more on data interpretation, ethical aspects of using personal information, and the formation of meanings and value positions of the brand. Until 2022, a significant part of the work in the advertising and PR system was associated with routine information processing, and the very idea of transferring this to AI-based systems caused distrust, fear of loss of control, and concerns about the quality of results. The mass appearance of

understandable tools with simple interfaces gradually changed this attitude and made AI-based technologies a working partner, rather than an exotic experiment. The explanation for why the use of AI-based technologies in advertising and PR systems was relatively limited until 2022 is associated with a combination of technical, economic, and psychological factors. Algorithms were less mature, their implementation required significant investments in infrastructure, data storage and processing, as well as in specialists, of whom there were very few on the market. Data use regulations were just being formed, businesses were afraid of reputational risks associated with the opaque use of personal information. Therefore, after 2022, the situation changed, as the computing power of cloud services increased, mature platforms with ready-made work logic appeared, public attention to digital technologies sharply increased, and competition in online marketing forced companies to look for new tools. As a result, it was during this period that artificial intelligence-based technologies turned from a rare innovation into a mass standard that radically transforms the advertising and PR system and sets the direction for further research on this topic.

The human factor in advertising and PR remains decisive, even despite the mass introduction of artificial intelligence technologies after 2022. Therefore, at the center of this sphere is always a person with his emotions, values, experience, fears, hopes. Advertising and PR messages work only when they touch on the true needs and internal beliefs of the audience. It is people who formulate the brand's mission, feel public sentiment, understand cultural contexts, distinguish appropriate provocative creative from cynical manipulation. The human factor also includes ethical decisions, such as the willingness not to use sensitive topics for the sake of quick attention, admit a mistake, make an unpopular but honest decision in crisis communication. At the same time, the same human factor is a source of prejudices, emotional reactions, errors in judgment, fatigue, inattention, which sometimes leads to unsuccessful campaigns, reputational scandals, and inadequate response to criticism. That is why the combination of human creativity and empathy with the accuracy of digital systems is becoming a key theme in the modern development of advertising and PR. In essence, technologies based on artificial intelligence partially replace people where it comes to routine, mass and repetitive work, where speed and the ability to process huge amounts of data are important. Such systems are already able to independently optimize advertising placement, automatically select

audiences according to hundreds of parameters, test dozens of ad variants, predict which content formats will cause the greatest reaction, and adjust the campaign without constant intervention of the employee. In the PR sphere, technologies based on artificial intelligence can monitor thousands of sources, analyze the tone of texts, and identify trends in attitudes towards the brand even before a person intuitively notices a problem. In such areas, automation actually replaces traditional manual labor and allows you to do without large teams that previously performed technical functions. That is why after 2022, when such tools became widely available, many companies felt that some of the tasks performed by junior specialists could already be transferred to artificial intelligence-based systems.

Thus, at the most crucial moments, these technologies rather reinforce humans than completely replace them. AI-based systems can offer a thousand headline options, but it is humans who understand whether they correspond to the brand's values, whether they affect vulnerable groups, or whether they turn the campaign into a cheap scandal. Algorithms can show that certain topics or words evoke strong reactions, but the decision about whether to amplify these reactions should be made by people who are aware of the consequences for society and the company's reputation. In more crisis situations, where sincerity, tone guidance, recognition of responsibility, apology, empathy are important, it is the human voice of a PR specialist that builds trust. AI-based technologies can prepare analytical background, message options, and scenarios, but the final formulation of key messages and the choice of strategy remain the responsibility of humans. Looking more broadly, after 2022, a new model of division of labor between humans and technologies based on artificial intelligence in advertising and PR systems has emerged. Systems take on the heavy invisible part of the work associated with processing large amounts of information, searching for patterns, and technically optimizing campaigns. Humans focus on forming meanings, long-term brand positioning, creating complex communication strategies, and interpersonal interaction with partners, journalists, and opinion leaders. This does not mean that the risks of replacing professions have disappeared. On the contrary, those roles that are reduced to the mechanical execution of instructions without deep analysis and creativity are gradually disappearing or radically changing. However, for those who are ready to combine tools based on artificial intelligence with their own critical thinking, ethical sensitivity, and creativity, the opportunity to work at a qualitatively new level opens up (Table 4).

Table 4

Directions of transformation of advertising campaigns after introduction of AI based technologies

Direction of transformation with AI based technologies	Role of AI based tools	Changes in work of marketing teams	Effects on performance and risk profile
From manual optimisation to largely automated campaign management	AI based systems analyse large volumes of performance data, adjust bids, choose placements and schedule impressions without constant human intervention. They test many combinations of creatives, audiences and timings and gradually learn which patterns deliver better outcomes for given objectives. These tools handle repetitive calculations and technical adjustments that would be impossible to perform at the same speed and scale by human operators.	Specialists move from micro management of settings to supervision of automated strategies. They define goals, constraints and quality standards, then monitor whether the system behaves in a way that fits brand values and legal requirements. Time previously spent on manual tuning can be redirected to strategic planning, coordination with sales and product teams and more thoughtful briefing of creative work.	Performance often improves thanks to faster reaction to market changes and more precise resource allocation. However dependence on automation introduces new vulnerabilities, since errors in configuration or biased training data can be amplified very quickly. Organisations need clear procedures for human oversight, fallback plans and continuous auditing of algorithmic decisions to prevent financial waste and reputational harm.
From broad targeting to dynamic personalisation at scale	AI based technologies process signals such as browsing history, purchase logs, device type, location and interaction patterns to estimate what each person is likely to find relevant. They enable dynamic creative that changes images, messages and offers for different users viewing the same placement. Segmentation becomes fluid and ongoing instead of fixed at the planning stage, with audiences redefined as fresh data arrives.	Teams must design modular creatives and messaging frameworks that can be recombined by the system for many micro segments while still remaining consistent with the brand identity. Marketers also need to make policy decisions about acceptable levels of personalisation and how to communicate this to users. Collaboration with legal and compliance functions becomes more intensive, since sensitive data and consent management are central.	Campaigns can reach higher engagement and conversion levels because messages better match individual needs and contexts. At the same time there is an increased risk that users will feel manipulated or excessively tracked if targeting appears intrusive or unfair. Brands that manage transparency and give people meaningful choices are more likely to build long term trust, while careless use of AI driven personalisation can trigger backlash and regulatory scrutiny.

Source: formred by the author

So, the human factor in advertising and PR does not disappear under the influence of artificial intelligence-based technologies, but changes its nature. Mechanical skills of manually setting up campaigns are less important, instead, the ability to ask the right questions to the data, check the adequacy of algorithm recommendations, notice ethical risks in time, build valuable and emotional stories that go beyond dry statistics becomes more important. These technologies can replace people where speed, scale and accuracy are needed in routine processes. They can help people where deep analytics, scenario thinking, modeling the consequences of various communication decisions are needed. But the responsibility for what the advertising and PR system will be in society, how honest, humane and focused on long-term trust it will be, remains with the people who make strategic decisions and determine how to use artificial intelligence-based technologies in modern Internet marketing models.

Artificial intelligence technologies are becoming a permanent tool because they are already embedded in everything we use every day, just like search engines and social networks once were. In essence, they are becoming not a separate miracle, but a hidden mechanism inside familiar services. For example, product search, video recommendations, news filtering, advertising settings, automatic translations, customer support in chat, text drafting, review analysis, even email sorting are already powered by algorithms that learn from data and are constantly improving. When technology finds itself in such a large number of everyday tasks, it ceases to be a temporary trend and becomes a new "infrastructure" of communications, like the Internet or mobile communications. It is already difficult for businesses to abandon precise targeting, fast analytics and automation, because competitors use them, and consumers expect personalized, convenient and fast service. There is another reason why these technologies will stay with us for a long time. They create a self-reinforcing effect. The more companies use them, the more data, cases, ready-made tools, specialists, training programs appear. This lowers the barriers to entry for other players and accelerates their spread. Today, a marketer or PR specialist can work with AI-based technologies through simple interfaces, without deep technical knowledge. This is reminiscent of the moment Google appeared. At first, the search engine was just one of the capabilities of the Internet, and then it became a standard without

which it is difficult to imagine working with information. The same thing happened with social networks, at first they were entertainment, and then a key channel for business, politics, education. AI-based technologies are repeating this path, but even faster. They are already integrated into Internet marketing, advertising, PR, analytics, content creation, and therefore will not disappear in the future, but will change, becoming invisible in form but decisive in impact.

Summarizing the directions of the transformation of the advertising campaign on the Internet, we can say that the main shift is the transition from disparate media placements to holistic management of the user's path and continuous digital experience. Advertising no longer exists as a separate video, banner or ad, it is built into the sequence of human touches with the brand. The consumer sees the message in search, social networks, on the website, in video and in email, and each of these points should logically support the previous one. At the same time, the nature of communication is changing, as the Internet makes it interactive. The campaign turns into a dialogue with the audience, where user reactions, comments, feedback and discussions affect the perception of the brand no less than the initial creative. On this basis, the value of data increases. Campaign planning and adjustment increasingly relies on digital analytics, hypothesis testing, and behavior assessment at every stage of the user journey, rather than just managers' intuition or general statistical indicators. With the introduction of AI-based technologies, the transformation of advertising campaigns is becoming more complex and at the same time accelerating. Campaign management is moving from manual settings to automated systems that analyze large data sets in real time, change bids, select formats, reallocate budgets, and test dozens of creative options without constant human intervention. Targeting is changing from coarse broad segments to dynamic personalization, when the system shows different messages to different users depending on their history, interests, and context of interaction. Analytics goes beyond simple reports and increasingly relies on predicting behavior, expected customer value, and early detection of risks. In such a model, the roles of specialists shift from technical manual work to setting goals, controlling ethical boundaries of data use, interpreting results, and aligning automated decisions with brand values and long-term reputation strategy.

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4. Conclusions

Summarizing all that has been said, we can see that advertising and PR have come a long way from wall inscriptions, heralds and the first newspaper ads to complex integrated communication systems that operate in a digital environment in a mode of almost constant interaction with the audience. At first, their role was to simply inform and maintain the authority of the authorities or the seller, later they became a key mechanism for forming brands, stimulating demand and influencing public opinion. Thus, the very emergence of the Internet destroyed the old model of one-way communication, deprived the monopoly of traditional media, turned each user into an active participant in the process and created a completely new context in which advertising and PR are forced to work in conditions of constant dialogue, transparency, instant reactions and a fierce struggle for attention. On this foundation, Internet marketing was formed, which combined content, analytics, work with digital channels, reputation management, as well as building long-term relationships with customers based on their real experience of interacting with the brand online. Thus, the next turning point was the massive introduction of digital technologies based on artificial intelligence after 2022, when these solutions ceased to be a rare experiment and turned into a daily working tool for advertising and PR systems. They automated routine processes, made deep personalization possible, operational reputation monitoring, precise planning and adjustment of campaigns, combined data from different sources into a single analytical field and, in fact, became a new invisible communications infrastructure, similar to how search engines and social networks once took root. At the same time, the human factor has not disappeared, but has only changed its role, since it is people who shape brand values, set ethical boundaries for the use of technology, make decisions in crisis situations, build meanings that can evoke trust and emotional response. Technologies based on artificial intelligence can be considered as a permanent tool for supporting and strengthening professional activity, which takes on the heavy analytical and operational part, but cannot replace responsibility, empathy and strategic vision. That is why the transformation of the advertising and PR system under the influence of Internet marketing and digital technologies based on artificial intelligence is not a short-term fashion, but reflects a deep restructuring of how society communicates, how reputation is created

and how decisions are made in a world where more and more processes go through digital channels. This makes the topic not only relevant for business, but also extremely interesting for scientific research, education and understanding the future of communications.

The current stage of development of advertising and PR shows that the changes associated with Internet marketing and technologies based on artificial intelligence can no longer be reversed. Companies, consumers, media, educational institutions are getting used to the fact that any communication is subject to analysis, its result can be assessed through numerous digital indicators, and each action leaves a trace in the data. Advertising and PR cease to be a separate function that is added at the end, when the product has already been created. They are gradually integrated into all stages of the product and brand life cycle, from concept development to after-purchase service. Technologies based on artificial intelligence in this picture act not as an external superstructure, but as an internal mechanism that connects strategy, creativity, audience analysis and real actions of people in the digital environment. In parallel with technical changes, a new culture of expectations from society is being formed. People understand better and better how recommendation algorithms, targeting, data collection, automated responses work. There is a growing sensitivity to issues of privacy, transparency, and possible manipulation. This means that advertising and PR that use AI-based technologies can no longer be limited to sales efficiency alone. They must explain how digital tools work, why certain data is used, and what security guarantees the user receives. Alongside the concepts of creativity and return on investment, there are also concepts of digital brand responsibility, trust in algorithms, and ethical limits to automation. This forces companies to review their communication policies and align them not only with the law but also with the moral expectations of the audience.

For advertising and PR professionals, transformation means the need to constantly rethink their own roles. Those who see themselves only as copywriters or event organizers risk being marginalized, as digital platforms and systems based on AI-based technologies already take on a significant portion of the technical work. At the same time, the value of specialists who are able to combine an understanding of people and cultural contexts with the ability to read analytical panels, ask critical questions about data, and

see the long-term consequences of communication decisions is growing. In fact, the competence of a translator between the world of algorithms and the world of human meanings is coming to the fore, where it is necessary to preserve the humanistic nature of communication using the most modern digital tools. However, for science and education, this situation opens up significant space for new research and training programs. On the one hand, technologies based on artificial intelligence make it possible to analyze huge data sets, build models of information dissemination, and study people's real reactions to certain campaigns, rather than relying solely on surveys and experiments in laboratory conditions. On the other hand, there is a need for a deeper theoretical understanding of how the very nature of persuasion, influence, and trust formation changes if a significant part of communications is supported by automated systems. Universities and research centers have the opportunity to form a new generation of specialists who work equally confidently with the concepts of communication theories and with practical tools of Internet marketing, as well as critically assess the potential and risks of technologies based on artificial intelligence in advertising and PR.

If we look at the transformation of advertising and PR more broadly, it becomes obvious that we are talking not only about a separate industry, but about an important part of the functioning of modern society. Through communication practices, consumer habits, attitudes towards social and political topics, ideas about success, justice, responsibility are formed. When technologies based on artificial intelligence enter this sphere en masse, the quality of public discussion, the level of trust between different groups of people, and the stability of institutions depend on how they are configured and by whom they are managed. Therefore, the transformation of the advertising and PR system under the influence of the Internet and technologies based on artificial intelligence should be considered as a strategic issue that concerns not only the interests of business, but also the development of democracy, culture, and education. Understanding this broader perspective helps us see that this is not just about new tools for earning money, but about what the information environment in which future generations will live will be like.

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