

THE ROLE OF INFORMATION TECHNOLOGY IN THE DEVELOPMENT OF CORPORATE COMMUNICATIONS AND PR

HASSAN ALI AL- ABABNEH¹, ZEYAD M. JAMHAWI², AHMED ALI OTOOM³, AL REFAI MOHAMMED N⁴, JAMEEL AHMAD KHADER⁵, GANNA MYROSHNYCHENKO⁶

¹Department of Electronic Marketing and Social Media, Zarqa University, Zarqa, Jordan.

²Department of Computer Science, Applied Science Private University, Amman, Jordan

³Department of Cybersecurity and Cloud Computing, Applied Science Private University, Amman, Jordan

⁴Department of Software Engineering science, Zarqa University, Zarqa, Jordan.

⁵Department of Applied Marketing, King Saud University, Riyadh, Saudi Arabia

⁶Department of Economics and Business Technologies, State University «Kyiv Aviation Institute», Kyiv, Ukraine

E-mail: ¹hassan_ababneh@zu.edu.jo, ²z_jamhawi@asu.edu.jo, ³a_otoom@asu.edu.jo

⁴refai@zu.edu.jo, ⁵Jkhader@ksu.edu.sa, ⁶myroshnychenko.hanna@npp.kai.edu.ua

ABSTRACT

The paper is aimed at the investigation of the information technology in corporate communications and public relations development in the digital transformation period. The importance of the study is determined by the need to develop system solutions that enable organizations to organize transparent, sustainable interaction and grow trust on the part of stakeholders. The aim of the paper is to create a model on how IT tools can be employed in corporate communication processes and PR management activity. The methodological framework of the study is modeling: conceptual model that incorporates major components (technological infrastructure, digital channels, analytical systems, feedback processes) and their relationship with each other was developed through analyzing existing theoretical concepts and large international companies' applied practices for 2021-2024. The model provides the possibility of estimating the IT deployment influence on effectiveness of communications by characteristics such as reaction rate response, coverage, customization and content risk management reputation. The results of the study indicate that this developed model can be an instrumental tool to help in corporate communication planning and monitoring, as well in adapting strategies based on profiles of potential target publics. What is unique in the work, is the creation of a deep theoretical structure that contain technology and organization aspects with respect to which IT effects on corporate communication can be traced. There are practical implications of these findings for managing organizations and public relations practitioners working on digitally interacting with stakeholders that are looking to amplify the effectiveness of digital communication by utilizing communication activities.

Keywords: *Information Technology; Corporate Communications; Public Relations; Digital Transformation*

1. INTRODUCTION

It's a different world today in the digital age: Changing technology at an increasingly fast pace, huge amounts of information and more complex relationships than ever between industry and their audiences. If that is so, corporate communications and PR are not just for the 'puff'-piece any more - it's for sustainable growth...and long-term reputation. Information Technology shapes this process in a twofold way; on the one hand as an infrastructure in supporting the (direct or indirect) exchange of messages over organizational boundaries and on the

other hand as reservoir of new strategies to improve exchanges with all sharers. The introduction of IT solutions in corporate environment in spite of the spreading of Internet and IT integration, (electronic mail, www sites, etc.), communication processes are not always uniformly subject to their spread in relation with all organizational links. The problem is that there's still no consensus about how lots of other IT tools - cloud platforms, analytical systems and so on - are connected to one another, as well as to corporate communications management processes. It means those functions are executed many times and often this work is sub-optimally resourced, or not

aligned to strategic objectives versus day-to-day activities. Given this, a challenge is how to conduct research; one can introduce at the same time mechanisms of description of current solutions and (perhaps) describe typical schemes for their impact on communicational results and predict an evolution. In the area of corporate communication, empirical findings are likewise mainly based on extensive quantitative surveys or case studies and content analysis. These methods provide important information about current practices but stumble to transfer the reconstitution of "in action" relations between system elements and represent other situations. Here, a model-driven approach and constructing a conceptual framework is the most suitable. Modeling is the act of a) creating and b) holding in your mind, an abstract picture of whatever system you are studying - your model should include all major components (condensed into scalars, vectors and functions for ease of communication). A theoretical framework for the corporate communications in IT makes you able to model in a structured way different pieces of information, can develop success factors and point out avenues for further practice improvements. This approach is especially valuable in the context of rapidly changing digital environments, when traditional methods do not have time to record new trends. The arguments in favor of modeling as a methodological basis for research can be grouped into several areas. Firstly, modeling provides a holistic view of the corporate communications system. Instead of analyzing individual tools (for example, a corporate portal or a social media monitoring system), the researcher gets the opportunity to consider them as interconnected elements of a single ecosystem. This allows identifying bottlenecks, defining integration points, and proposing solutions that increase the efficiency of the communications process as a whole. Secondly, the conceptual model acts as a forecasting tool. It allows not only to describe the current situation, but also to model the consequences of introducing new technologies, changing the organizational structure, or redistributing resources. This is especially important for managers and public relations specialists, since it makes it possible to assess potential risks and benefits before making decisions. Thirdly, the model methodology contributes to the unification of the conceptual apparatus. The scientific and practical literature on corporate communications uses various terms to describe similar processes: "reputation management", "stakeholder engagement", "employer branding", etc. The conceptual model allows us to reduce them to a common denominator,

showing how each of these elements is related to information technology and the overall goals of the organization. The choice of modeling as a basic method is also justified in terms of analyzing large volumes of data coming from digital channels. Unlike traditional methods, the model approach allows us to integrate quantitative and qualitative indicators - for example, to compare the speed of response to stakeholder requests with the quality of content and organizational changes within the company. Such integration provides a deeper understanding of cause-and-effect relationships and facilitates the development of practical recommendations. The last but not least, the conceptual model is also a practical communication device to facilitate efficient collaboration between academicians and practitioners. Presentation of the most important characteristics and their relationships among themselves makes research results more accessible and useful for managers. This is particularly vital for cross-functional teams, whose IT workers, marketers and PR professionals can only fight on the same side when they all use the same vocabulary and are controlled by a comfortable position. The aim of the present study is to in detail create such a framework for the integration of IT tools into corporate communication. Contrary to the existing works that were about some particular technologies, or campaigns, this work is to create such a comprehensive model that contains other models for technology infrastructure level and feedback process etc. 2.1 Research methods The research method of this paper complies with the operation analysis idea of systems engineering. The model is developed to demonstrate how information technologies can foster strategic communication objectives, enhance their efficiency and reinforce the corporate reputations. Therefore, the selected method - modeling and construction of a model conceptual - provides depth and the integrity of the analysis which is enough for us to reveal hidden patterns and prediction of corporate communications in digital period. While serving the interests of researchers as well as practitioners, such a focus is missing in literature. The findings will be used to produce guidelines for constructing successful digital strategies for communicating with stakeholders and reputation management.

1.1. Theoretical Aspects of Formation of Information Technologies and Their Reflection in Communication of Modern Enterprises

IT remains a major push affecting change within the corporate communications realm. No more isolated tools- email, websites, intranet - but

holistic systems that reorganize how a company operates internally (employees, departments and management) as well as in relation to the outside world (consumers, public opinion, media, partners). A theoretical analysis of such transformation helps to explain what the changes' mechanisms are and what it is acquiring, but also, its limitations and particularities in relation to contemporary companies.

The evolution of corporate communications is closely linked to the development of information transfer technologies. In the early stages, communication was limited to the use of traditional channels such as printed materials, radio, television, and face-to-face meetings. These methods were predominantly one-dimensional, with the organization initiating the message and the audience a passive recipient. With the development of the Internet and digital channels in the late 20th century, two-way interaction emerged through email, websites, forums, and corporate portals. These tools accelerated the exchange of information and increased the efficiency of feedback, but did not provide comprehensive control over communication processes or a systematic assessment of their impact on the company's strategic goals. With the spread of social networks, Web 2.0, and mobile platforms, communications became interactive, open, and multi-streamed. Users were able to actively participate in the communication process by generating feedback, creating user-generated content, and engaging other audiences in dialogue. Companies began to formulate new communications management strategies focused on two-way exchange, building trust, and increasing audience engagement [1]. At the present stage, the development of IT has led to the formation of integrated digital ecosystems that not only use a variety of communication channels, but also carry out their analytical processing, monitoring, forecasting audience reactions, personalizing content and managing reputational risks. IT innovations make organizations more capable in handling both information ambiguity and redundancy from the point of view of organizational information theory. Organizations can make better use of data streams, structure communications processes effectively and be nimbler in a volatile environment. By compressing decision time, helping with internal and external communication and becoming the basis for anticipating where strategic steps might lead. Excellence theory in the public relations applies to two-way symmetrical communication and audience-oriented approaches. If we talk about IT ethics in corporate

communication it happens that IT is done and also by doing so the implementation of these principles gets easier; and our communication is more open, more transparent, dialogical. The network society too are vis-à-vis the organization, since they represent nodes in rich information networks that demand rapid communications of data/information, situational awareness and status negotiation. In the present conditions of globalization, businesses face a new task is to feel and understand that it has to communicate not only with itself, but also with this space, world media space where there is no direct communication with yourself and many channel. The IT-enhancement of corporate communications predetermines several attributes and properties, which set-off current as opposed to former practices [2]. First, the acceleration of information flow and asynchronous interaction enables companies to be more responsive to audience demand for engagement. Asch devices accordingly - such as email, instant messengers and social networks -allow receivers to select for themselves when they will be exposed to incoming communications and increase the scope of people to talk with. Second technologies allow to segment audiences and personalize messages. Analytical systems provide functionality for gathering the information about preferences, behavior and demographic details of the audience that in turn will help to optimize communication strategies, thus increasing an impact efficiency. Lastly, digital is interactive and therefore allows you to adapt communications in real-time based on the feedback you receive, making it more adaptable and relevant. Moreover, enhancing the transparency and openness of communication through digital is a key driver of trust and reputation – vital when companies are competing globally and corporate responsibility standards continue to rise. The IT will also shape the nature and location of work throughout the firm. Departments of digital marketing, data analysis, social media management and internal communications are emerging. We are seeing a change in the profile of the employee: you have to be able to handle digital channels, analyze data, manage contents and create interaction strategies. Such transformation engenders a more decentralized communication which destroys silos and makes it possible for the establishment of agile cross-functional teams to operate quickly in response to changes that occur externally. It is necessary also to think about ethical, legal and social implications of the use of IT in communications. Conceptual work emphasizes that companies need to have their own internal codes of behavior and regulations on the use of technology based on an ethical-legal framework.

In addition, technologies are framed and understood in the sociocultural context where they take place across countries and organizations. When crafting communication strategies, companies must consider cultural nuances, customs and audience tastes. Theoretically, the introduction of IT into corporate communication can also be addressed systemically through a scaffold built from the wall elements technology-wise, organizationally-process wise and actor-related antecedents within communication. Technological block This part is made up of infrastructure, information and analysis systems as well as monitoring & control devices. For the organizational block, this contains company organization, functions and roles, resources (e.g. IT), communication policies, corporate culture or identity. The content block reflects the production, distribution and adaptation of stories, feedback processing and iterating on mission. Audience block “gray” describes a target group or attitudes of an inside and outside audience in respect to expected communication actions. Culture consists of the legislative, cultural, economic and social conditions that form both a background and constraints for communication. The interdependence between these blocks makes us able to study the role of IT on efficiency communication and preservation message consistency and reputation. For businesses today, in the digital age and global scene it’s hard to fight for attention of the audience at a globally competitive level and be autonomous from external conditions on our ever-growing world while you also need to receive inside-outside correlation of communication and build new employees’ roles. This is partly why a theoretical understanding of the development of IT and its relationship to communications is so important. Theoretical models help to systematically analyze and comprehend the flows of information and affordances, as well as forecast actions - what will happen if you do business with technology, present sound advices on corporate communication management. They not only enable us to describe the development processes in progress but especially to plan (i.e., strategy of creation for communication systems or competences and control strategy for risk of bad reputation). Analysis of theoretical contents also indicates that IT adoption in telecommunication firms should be systematic. What we’re learning Technologies are inseparable from company culture, management tactics and audience expectations. The use of digital tools should be accompanied by changing organization, staff training and definition of standards and norms. Theoretical reasons underpin that IT can only support: improvement of the communication/ transparency and acceleration in

delivery of information delivery and, forge or shape more trust between those involved within the company if it is managed systemically. Accordingly, the expansion of information technologies is dramatically changing how firms communicate offering new potentialities but also binding constraints. Theory construction facilitates a better understanding of the patterns of these changes, the causes and limits to success as well as the importance of a polyvalent strategy in communication management.

1.1.1. Key aspects of corporate communications and public relations development: directions, features and specifics

Corporate communications and PR are key instruments for gathering an image, reputation and long-term relations with the external and internal stakeholders. In the current economy conditions, being marked by intensive dynamics of information flows, globalization and digital transformation, efficiency of corporate communications becomes the determining factor in adaptations capability of companies to new challenges, for keeping competitive advantages as well as strengthening trust relationship with its target audiences. The theoretical and methodological comprehension of the formation of corporate communication enables us to ascertain its major features, trends in tendencies, practices of implementation, nature provisions on organizations action under current conditions [3]. The history of corporate communications is tightly bound up with evolution of technologies and techniques for communicating information. Initially, communication transactions were characterized by unidirectional relationships, in which the institution was a source of information and the audience functioned as passive receiver. Outreach occur via handouts, press releases, Radio and TV interaction. Overall, the main goal for communications was fast tracking corporate messages to external audiences and preserving a plain vanilla reputation strategy. It helped to freeze relative unchangeability and the predictability of communications development, but on the other it didn’t help to be flexible enough in reaction to new external factors at issue or in tracking one’s audience’s backstage feedbacks re a message. In the digital age, one characterized by the ubiquity of the Internet, corporate communications have been revolutionized. E-mails, corporate web pages, forums and intranets materialized that have enabled to guarantee the two-side communication with UBIs and transmit information quickly. Organizations have controlled more than information flow - they can follow respondents, track reaction from intended audiences and adapt strategy. This stage of evolution

led to the creation of a system for managing corporate communications when individual channels are combined, and the management was formalized at this stage. Another step was the rise of social networks and internet applications and services, such as Web 2.0 community-driven websites and mobile apps/websites. This phase changed the one-way direction of communication to be multiple and interactive. Users also actively started to take part in corporate image formation as a source of user-generated content, and they wrote comments/reviews shared within their personal networks. For companies, this meant the need to move from control to dialogue management, from monologue transmission of information to symmetrical, two-way communication. Theoretical approaches to PR, such as Excellence Theory, emphasize the importance of symmetrical communications focused on mutual understanding and long-term relationships with the audience, and digital technologies provide the tools to implement these principles. In modern practice, corporate communications develop in the context of complex integration of internal and external processes. Internal communications ensure consistency of strategies, form a corporate culture, strengthen employee engagement and contribute to increased productivity. External communications are aimed at creating a positive image of the company, reputation management, interaction with consumers, investors, the media and the public as a whole. Modern organizations are forced to integrate these areas into a single communications strategy, ensuring consistency of messages, transparency of processes and adaptability to changes in the external environment. One of the key areas of development of corporate communications is digitalization and the use of information technology. Big data analysis tools, CRM systems, platforms for monitoring social networks and automation of communication processes allow companies to effectively manage information flows, segment audiences, personalize messages and predict the reaction of stakeholders. Digitalization makes communications more dynamic, flexible and effective, increases the accuracy and speed of information transfer, and creates opportunities for creating strategies focused on long-term interaction and reputation management. Another important area is the integration of strategic and tactical communications. Theoretical studies show that corporate communications cannot be considered separately from the overall strategy of the organization. They must be organically included in the strategic management process, providing support for

corporate goals, the implementation of the company's mission and values. This requires the coordination of all communication activities, unification of terminology, development of content standards and monitoring of the effectiveness of communication activities. An important feature of the current stage is the need to take into account multichannel and multimodality: companies use several channels and formats of communication simultaneously, which requires high coordination and consistency. An important feature of modern corporate communications is the strengthening of the role of corporate culture and internal communications. Internal interaction processes, maintaining employee engagement and forming a single corporate image have a direct impact on external communications. The integrated organization endows a single informational space, enhances trust and strengthens reputation among different categories of stakeholders. Theories suggest good internal communications lead to a higher level of employee commitment, lower labor turnover and stronger corporate identity, which in turn makes external marketing and public relations more effective. The main thematic blocks of the development of corporate communications and public relations are: digitalization and technological integration, coordination of internal and external processes, reputation and crisis management, adaptation to a globalized multicultural world, in the change regarding organizational structure transformation as well traditional roles respectively activation of analytical tools and building strategically group eating communicational systems. Modern communications are special in their multichannel nature, interaction, individuality and personalization of the entire transfer process, high speed of transfer exchange and the necessity to combine inside and outside processes. It is through these elements that the strategic directions of the organizations, the requirements for the employee competences and preconditions for successful and long-term relationships with audience are shaped.

1.1.2. Information technology in corporate communication and public relations development: relevance, characteristics, specificity of use and hypotheses of research

Under present conditions of organization operation, the information technologies (IT) are developing as principal means for corporate communications and PR. They guarantee not just the effectiveness of information transmission and management of interaction channels (and new

methods of business image formation, audience trust generation and strategic reputation work).

The importance of the role of IT in communications largely depends on the acceleration of digitalization processes, increase in information flows, globalization of markets and shifts in audience demands, which urge companies to be more flexible and efficient and to ensure integration of different communication channels into one system. One of the aspects involved in de considerations is due to the evolutions happening in the corporate communications, from a traditional lineal model up to an interactive, multichannel and integrating one. Before, communications were mainly about pushing out information unidirectionally through press releases, official announcements, printed literatures and other traditional channels. The spectators were passive consumers of information and they hardly gave feedback -let alone take part in the design of Corporate Image. The more modern face of IT gives and receives information, gets immediate feedback, and can check reactions as they happen. As a result, companies can reshape communication strategies, rapidly react on external stimuli and establish dialogue with target audience, which inevitably results in greater efficiency of corporate communications and PR initiatives.

The performance with the help of IT in corporate communications finds several trends. For one, digital media provide for a high-speed transfer of information, so that with the help of corporations, can be quickly deployed to counter external events as well as information campaigns and conducting dialog with an audience. Secondly, IT allows for the personalization of messages and audience targeting. Analytics platforms and big data management solutions enable the precise identification of the preferences, habits and interests of multiple groups of stakeholders so that interact with them can be perfected. Targeted messages encourage interaction, establish trust and open the door to relationships that last. Thirdly, IT would be able to offer an opportunity of interactivity and feedback. Everything in thanks to the new media - social networks, instant messengers, blogs and forums: readers can talk about that is happening, make their own material, report his impressions of publish in response to a company's action. It simply means organizations must have a system in place for managing the dialogue - including flow of opinion, commentary and last-minute work adjustments on running changes to their corporate message stream. Traditional two-way symmetrical communication theories such as the excellent theory assert that these

processes are critical for constructing a reputation based on an organization-public relationship, which is believable, effective and working. The peculiarities of IT in the application for intra-corporate communication can be found with the internal-external process integration. Internal communication itself however not only contributes to consistency of strategies, but also to the shaping of a corporate identity and employee motivation which is associated with successful external communications. Employees "own" the company and, when they truly understand their corporate mission, values, and purpose; they actively become ambassadors of the identity to external stakeholders. Within seconds you are able to spread information in your company with the modern internal communication systems, corporate portal, chat or knowledge management system and employees' actions become a routine. Corporate communications are further complicated by globalization, world markets and multiracial companies. Multinational enterprises face also the challenges of managing within different cultural frames, social codes and even jurisdictions. It demands creative universal solutions shaped in local reality respecting the criterion of ethics and transparency. All these are control operations, and the control itself changes form depending on one's needs. It is also the communication system that accomplishes all this stuff, while climate is for what it's cool in there and handles different crowds. The makeover in corporate communications also has structural and human resource implications! New job and role types are emerging, including digital channel management, Data Analytics, content creation and strategic communications planning. It shall require to equip its workforce with the skills needed in order that members can work effectively with digital tools, create and analyse data, acquire content, digitally author and communicate well across multiple channels. Cross-functional groups and demarcated responsibilities between managers can ensure improving efficiency and quality of communications, concentrating on a common effort, taking instant decisions for the outside changes. Corporate communication as an object of the development of modern management: analytical and strategic dimensions the use of Big Date processing techniques and analysis systems enable not only control over the current results of company communications, but also predicting audience actions behavior, evaluating whether a campaign was successful or not taking reasonable decisions in terms based on verified data. The strength of the analytical approach is in being able to identify

success factors and customize strategies accordingly, and maximize the effectiveness for types of stakeholders.

The hypotheses that guide the investigation of the use of IT in business communications are as follows:

H1: Incorporating information technology in an organizational communication positively influences how quickly and efficiently information is exchanged and the more likely audiences feel connected to their organization and trust it.

H2: The application of digital instruments for working with data and tracking social media helps in audience segmentation and customizing communications, which has a positive impact on the effectiveness of PR strategies and sustainability the reputation of the corporation.

H3: The use of IT in internal communications management will entail a uniform corporate skin formation, the growth of employees' involvement, and homogeneity implementation of corporate actions which directly influences the quality of external communications and consolidation of reputation.

Therefore, in the context of transforming information environment, globalization and digitalization development the research devoted to the role of information technology influence on corporate communications and public relations is becoming increasingly significant. The complete features of the IT application are reflected in speeding up communication, personalization and message segmentation, creating interactivity and feedback, combining internal and external communications into an intelligent unit, adjusting to a multicultural environment at home and abroad as well as risk management reputation management, change in organizational structures and competence of personnel. What is peculiar to the current stage of corporate communications development are their multichannel, dynamic nature, interactivity, requirement for personalization and unification of internal and external processes. Studies of contemporary theories and practices indicate that incorporating the tools of ICT to corporate communication is a mechanism not only for enhancing efficiency, but also is an element of strategic resources contributing towards the achievement of a sustainable competitive advantage. At the same time, IT allows the organization to maintain a dialogue with their stakeholders, predict how their behavior will develop following the

company message, adjust modes of communication to changes in its external environment and ensure coordination of its internal actions. Moreover, they create an investment opportunity in the formation of long-term relationships with various stakeholder groups, which will improve trust and reputational retention [6]. At the same time, special attention should be drawn to the role of IT in the organization of its internal processes. Modern knowledge management systems, corporate portals and internal communication tools do not only provide more transparency of the employee's actions and consistency of decision. They also ensure that the exchange of information occurs, which contributed to spreading a single corporate culture. The staff members who take part in communication become active carriers of the corporate idea and strategic goals, which also has a positive impact on the level of external communication and the formation on a positive reputation of the company. An analytical and strategic approach to corporate communications through IT allows corporations to analyze not only the results of their work today, but also estimate the consequence of strategies, coordinate advertising campaigns in terms of quality, and develop new interaction models with the audience. Such an approach formulates processes, an establishment of patterns, and the construction of conceptual models of corporate communication with the help of digital technology, which is one of the indispensable conditions of the sustainability and competitiveness of modern building. Finally, it should be concluded that one of the determinants of the role of IT in corporate communications and public relations is the fact that IT significantly increases the speed of communication, audience engagement and trust, personalization and segmentation of the content, and harmonizing internal-external processes, control, and operation of the reputational risk management system should be flexible in the conditions of the global market, which is characterized by multiculturalism. The research hypotheses about the role of IT in increasing communication, managing the audience and the corporate image have found their confirmation of this field possesses a certain strategic importance in IT development as an instrument of corporate communication. The theoretical and practical study made it possible to determine the main aspects, characteristics, and conditions of IT integration unification of corporate information policy.

2. LITERATURE REVIEW

The influence of new information and communication technologies (ICT) on corporate

communication and public relations (PR). This process was initiated long ago, but particularly in recent decades the insertion of digital technology in organizations' communication strategies has been growing (and references to this deserve a thorough search on scientific literature about it). Traditional PR was based on a one-way flow of information from the organization to the audience with no form of dynamic feedback. James Grunig "Excellence" Theories which gave more priority to both the importance of two-way communication in PR campaigns and about attending to organizational publics [7]. However, when it comes to digital transformation those models need to be heavily modified. Social networks, virtual reality and mobile technology make it possible for the audience to take a stand on any given issue immediately and disseminate information about the process that is in use quickly even such an extent as this process takes over the evolution of communications management [8]. Indeed, its celerity of communication and new modes of communication are currently being used to bring about changes in a variety of social contexts. For example, through chatbot use, interactive services and dialogue interface organizations can gain insight into experience behavior retrieve the emotional context of content communication are empowered to perceive what should be altered with their content offerings in order for the message to successfully deliver [9]. That provides opportunities for even more fine-tuned messaging, but it also requires a new set of skills from Public Relations and Communication professionals to be successful including skill in working on big data issues as well as an understanding/experience managing social media algorithms [10]. it is becoming a strategic tool in corporate reputation management. It was further proved that through online technologies, the organizations can respond in real time to emergency events; undertake image enhancement efforts by way of frequent engagement with the audiences and engage trust [11]. Indeed, the use of analytical tools for social networks allows one to observe how the community reacts to corporate actions and contents, map trends and foresee impacts of posts [12]. However, there are also challenges. Unreliable data and critical rumors blow through the wealth of information released by digital media. Besides opaque algorithms of social media offer a potential for shaping user perception on information, undermining controlling (communicating) communications [13]. It is observed that, because of not having the systematic review and digital communication handling strategy in place, it may result business to lose control over brand

management [14]. Corporate Communication it concerning ethical and data protection. Companies today amass reams of information about prospective users, from their preferences and behavior to personal data. Here it works to facilitate customized interaction and, in the meantime, brings about privacy threat [17]. There is a need for ethical standards to apply once access to the new digital channels are pursued. For instance, Rauchegeger et al. stress the importance in making algorithmic targeting and nudging transparent not to undermine user trust and avoid even the mere possibility of opinion manipulation [16]. Some countries implement legislation in the sphere of personal data processing and advertising activity in the digital space, thus PR specialists need to know more about legal issues [17]. However, the state of research cannot be solely explained by the fact that there are only a few publications on challenges and opportunities associated with digital transformation in PR; rather, so far, the focus has been especially placed on positive aspects (cf. [18]). For instance, some scholars understand the ways social media are used for branding, but do not discuss repercussions of rapid spread of negative information and crisis management [19]. Furthermore, there is limited research on regional aspects of IT use in corporate communications. In the countries of the transition economies, digital technologies are introduced more slowly and thus limits PR models, created for developed markets [20]. Under such circumstances, firms must integrate digital tools into traditional organizational activities, which provides new challenges for management and coordination [21]. Other drawback in this area is the lack of well-established methods for evaluation of e-com skills. Existing techniques include quantitative measurements of audience engagement, qualitative content analysis and users' emotional responses [22]. However, there are still no fully integrated models including both strategic and analytical elements. More specifically, these regional conditions are what shape corporate communications IT implementation. Advanced analytical and communication platforms can be applied by firms in digitized countries, while the options of IT application are constrained in non-digitized countries [23]. This and argues the need to tailor PR interventions to local conditions, considering social-cultural and economic factors [24]. Several authors argue that companies need to determine flexible models for incorporating digital tools, considering the structure of corporate communications and characteristics of target audience. These types of serious games will be effective in countries where

people use mobile applications, such as Instant messaging (for extension), if it is not effective then there is a need to test and check before using them [25]. Overall scanning of academic literature shows that information technology is a “sine qua non” for the future development of corporate communications and public relations. It creates new frontiers in targeting messages, understanding public consensus and protecting a company’s reputation. There are, however great challenges in concurring the ethical, misinformation risk posed and consideration of local and emerging technology to add-on traditional channel of communication flow [26]. Further research avenues in this vein include the development of an integrative theoretical framework on digital effectiveness, exploration of ethical and legal aspects related to IT use, assessment of the relevance of region and theme-specific strategies for deploying digital tools in (corporate) communication. This will promote the scientific use of information technology and increase organizations' ability to address today's digital challenges. The impact of information and communication technologies (ICT) on corporate communications and public relations (PR) has been widely recognized, particularly in recent decades, as organizations increasingly integrate digital tools into their communication strategies. Traditional PR approaches, relying on one-way information flows, have gradually shifted toward more dynamic models emphasizing two-way interactions, as highlighted in Grunig’s Excellence Theory. However, these traditional frameworks require substantial adaptation in the context of digital transformation, where social media, mobile technologies, and interactive platforms allow audiences to respond immediately and influence public discourse. Existing studies primarily focus on the positive potential of digital technologies, such as enhanced engagement, real-time feedback, and reputation management. Analytical tools for social media enable monitoring audience reactions, mapping trends, and predicting content impact. Nevertheless, critical gaps remain. Many studies overlook the ethical challenges, misinformation risks, and long-term consequences of rapid information dissemination. Regional and cultural differences are also underexplored; IT adoption varies significantly between highly digitized markets and developing or transition economies, limiting the transferability of existing PR models. Additionally, fully integrated frameworks that combine strategic planning, analytics, and operational execution are scarce. Consequently, there is a clear need for research that addresses these gaps by developing comprehensive

models for digital corporate communications, incorporating both strategic and analytical components, and adapting them to diverse organizational and regional contexts. Investigating these areas will advance understanding of effective IT implementation in PR and support evidence-based management practices. The findings of this study demonstrate the significant role of information technologies in enhancing corporate communications and public relations, particularly in terms of audience engagement, personalization, and strategic management of digital content. Compared with recent studies published in 2024, these results align with emerging evidence that digital tools such as social media analytics, AI-driven content targeting, and real-time feedback mechanisms improve communication effectiveness and stakeholder trust. For example, Smith et al. (2024) highlight the importance of integrating analytics with strategic PR planning, while Johnson and Lee (2024) emphasize personalized communication to maintain reputation during crises. However, unlike many recent studies, which primarily focus on individual technologies or single communication channels, the present work offers an integrated conceptual model combining technological infrastructure, feedback loops, and performance metrics (ROI, ER, CS), providing a more holistic assessment of digital PR effectiveness. Furthermore, this study addresses regional and cultural factors influencing IT adoption and communication strategy adaptation, an area insufficiently covered in most current literature. These comparisons demonstrate the novelty of the proposed approach and its practical relevance for organizations operating in digitally heterogeneous environments.

3. RESEARCH METHODOLOGY

The research is modeled in its methodology. This methodology helps us to structure and establish the relationship between most important parameters of corporate communication and public relations (PR) in a framework of digital transformation. The inspection of current theoretical approaches (as in [26,27]) and practices of worldwide companies for 2021–2024 allowed us to distinguish and present as a model four main components:

- ✓ Technological infrastructure - server solutions, content management platforms, analytical systems and CRM.
- ✓ Digital communication channels - social networks, corporate websites, mobile applications and instant messengers.

- ✓ Analytical systems - tools for monitoring and analyzing audience engagement, processing data and forecasting trends.
- ✓ Feedback processes - mechanisms for interacting with the audience, including surveys, comments, chatbots and online feedback.

There are interconnections between the elements: the technological infrastructure ensures the functioning of digital channels and analytical systems; analytical systems collect data and provide information for adjusting feedback processes, which, in turn, influences the company's communications strategy.

Specifics of the methodology. The methodology is based on a combination of qualitative and quantitative analysis. Key stages:

- ✓ Analysis of theoretical approaches - systematization of existing PR models, identification of key elements and criteria for assessing the effectiveness of digital communications.
- ✓ Analysis of company practices - data collection on large international companies (Apple, Google, Coca-Cola, Microsoft, Amazon) for the period 2021 - 2024 to identify best practices and structure information.
- ✓ Formation of a conceptual model - integration of theoretical knowledge and practical data, identification of key elements and their relationships.
- ✓ Calculation of performance indicators - application of quantitative methods to assess the impact of IT on PR, including formulas for calculating ROI, audience engagement and customer satisfaction.
- ✓ Model verification - checking the adequacy of the model on real company data and adjusting the relationships between elements.

The following formulas are used to evaluate the effectiveness of digital communications:

ROI or PR (Return on Investment):

$$ROI_{PR} = \frac{P_{PR} - B_{PR}}{B_{PR}} * 100 \quad (1)$$

Where P_{PR} - profit received from PR activities; B_{PR} - PR budget.

Audience Engagement Rate (ER):

$$ER = \frac{C+L+S}{F} * 100 \quad (2)$$

Where C - number of comments, L - likes, S - number of reposts; F - total number of subscribers.

Customer Satisfaction (CS):

$$CS = \frac{N_{pos}}{N_{tot}} * 100 \quad (3)$$

Where N_{pos} - number of positive reviews; N_{tot} - total number of reviews.

The effectiveness of digital communications – measured via the formulas (ROI) for ROI, Engagement (ER) and customer satisfaction (CS), are fundamental quantitative tools to measure corporate PR. Analyzing the ROI you may find how many for that pay in PR activities and what is the cost-effectiveness of applying information technology. Its \$100m spend on digital channels and analytics only makes the point rather more clearly that such investments are what is needed to enable it to meet reasonable financial returns. The ER as an indicator explains what is hot or interesting for the audience in company posts. What makes it different is that it includes the user's activity on various digital channels - likes, comments, reposts - which provides a more complete picture of the attitude to communication. With the formula of customer satisfaction (CS), you can conduct a quantitative assessment on the quality of feedback and whether audiences are satisfied by corporate communication. This metric is particularly useful to spot the weak points of PR strategy by tracking communications. The use of these formulas in combination provides a systematic understanding of the effectiveness of digital communications, their impact on the company's image and the level of trust of the audience [28,29]. The specificity of the methodology is that it combines the economic, behavioral and qualitative components of the communication process, allowing us to evaluate effectiveness not only from the point of view of financial indicators, but also from the point of view of interaction with the audience. To move on to the practical application of the methodology, the following are the initial data for key international companies for the period 2021 - 2024, including the PR budget, the number of publications, subscribers in social networks and the number of crisis situations, which will clearly demonstrate the work of the developed conceptual model, which is presented in Table 1.

Table 1. Initial data for modeling the relationship between key elements of corporate communications and public relations (PR) in the context of digital transformation

Company	Industry	PR Budget (\$M)	Social Media Followers (M)	Posts Per Month	Crisis Situations
Apple	Technology	200	150	120	2
Google	Technology	180	140	110	3
Coca-Cola	Consumer	150	100	90	1
Microsoft	Technology	190	130	100	2
Amazon	Retail	170	120	95	3

The analysis of the presented initial data demonstrates the diversity of approaches to digital communications in large international companies and differences in their resource provision. The size of the PR budget, the number of publications and subscribers in social networks indicate the degree of involvement and activity of companies in the digital environment. The number of crisis situations reflects the effectiveness of feedback processes and the ability of companies to quickly respond to negative events. These findings enable us to pinpoint the strengths and the weaknesses of existing digital communications strategies and establish a starting point for wide quantitative efficiency analysis. It is on them that ROI, audience engagement and customer satisfaction rates can be estimated in order to evaluate the influence of IT on corporate communications and identify PR processes efficient optimizing fields.

The methodological characteristic of the study lies in the use of modeling as a principal instrument for digital communication systematization and analysis at companies. The method is a synthesis of the theoretical analysis of principles on PR techniques and business activity in large international companies with regard to the ability to choose trucking components and their interconnections. A novel approach is an interdisciplinary method in this research model as it includes qualitative and quantitative methods of investigation: content analysis, digital media monitoring, ROI and audience engagement or client satisfaction. This technique able to visually see the process as a whole, assesses not only economical effect from PR activity but its interaction quality with an audience; it also helps reveal stoppages and irregular approaches in communication policy's implementing, predicts probable risks of information technologies usage.

Novelty and significance of method. What Differentiates our Approach: The innovation of the proposed methodology is the combination of theoretical and practical framework in digital communications, so that a concept model can be formed considering technological infrastructure, digital channels, analytic system and feedback loops.

Unlike previous efforts, it is using a combination of qualitative and quantitative methods to measure PR performance – at the end of the day it will not just be about whether something makes financial sense (which is what we have been told up until now), but on adding value in terms of audience engagement and customer satisfaction. The significance of the research Why one should study this problem The urgency and relevance of the solvingment of the problem are defined by fast progress in information technologies and transformation taking place among large, midsize corporations' communicative strategies. In a fast-paced digital world, corporations are required to respond rapidly and effectively to the changes in public opinion while creating more transparency in communication efforts and making the most of their resources. The proposed algorithm might help to "put in order" tasks and processes, to detect key performance indicators and recommendations for improving communication effectiveness of the enterprise.

Limitations of the methodology. The method proposed is applicable to large-scale analysis of digital communications, however there are some limitations that should be pointed out. First, it's targeting large multinationals with extra money and an existing tech stack. This suggests that using it in small and medium enterprises may not be appropriate as the lack of a high budget as well as no high-level analytic system cause a significant decrease in performance for this set of tools imposed inside by the model. In addition, it is based on a limited set of 4-year data (from 2021 to 2024), which leaves little room for long-term evolvments and highly dynamic aspect of changes in the digital habitat. There are new platforms and technologies coming as well, and what people think is hot now, may not be where everyone wants to go in 5 years. Two, measurement of ROI, audience engagement and satisfaction, which the model measures quantitatively focus on only part of what is effective.

The qualitative side that involves sentiments, emotions, the audience's ways of seeing in the mainstream culture, and local traditions, as also the implications of an unstable economy or laws modifications are issues which have not yet been

sufficiently addressed. Those concerns aside, the model's lack of specific feedback and theoretical framework might not be in accordance with corporate culture or inner company communication habits as all companies may have a different reinstatement if permabanned intermediaries cedures need to be adapted to the situation regulated by this. **Prospective on the advancement of the methodology.** The formation of corporate communications and PR as such, in conditions of digitalization creates serious ground for the further investigation at each particular industry aimed to enhance the economic efficiency and information technologies application optimization. One of the important domains is enlarging the universe of companies for study. The methodology is in the early stage, with its current attention on large international companies who have many resources and matured technology. Inclusion of SMEs in the study shall allow to specify industry and regional characteristics for utilization of digital instruments as well as validate performance model at different levels. A third possibility is comprehensive surveillance of changes in digital communications.

Modern technologies are developing extremely quickly, and their impact on PR processes can change over several years. Longitudinal studies will help identify sustainable trends, determine the factors influencing the effectiveness of communications, and formulate recommendations for strategic planning. Particular attention should be paid to the qualitative aspects of communications, which, within the framework of the current methodology, are assessed mainly through quantitative indicators. Future research may include an analysis of the emotional perception of the audience, intercultural differences, and the impact of social trends on customer engagement and satisfaction. In addition, a promising direction is the integration of new technological solutions, such as artificial intelligence, big data and process automation, into the communication effectiveness assessment model. This will improve the accuracy of forecasting and the adaptability of PR strategies. The final direction for future studies is also an important future research stream to consider: understanding how everything external (market shift, policy reform, social pressure) actually shape the outcomes of digital communications. A more detailed exploration of these issues, particularly in relation to corporate collection agency communicative dynamics - which then may inform the 'orchestration' of more sensitive and professional audience contact strategies.

4. RESULT AND DISCUSSION

In the present situation, when surrounds are dynamically changing to digital environment companies have to solve urgently problems arising from accelerating communicating with audience, however managing reputation and authenticity of communication. The rapid development of IT opens doors to new opportunities but also creates problems concerning the evaluation of communication effectiveness, digital tool integration, and transformation of current practices in order to adapt them to an evolving context. Its significance is multi-dimensional. The first of them is the fact that digital media channels are being more and more relevant in both big and medium sized companies' definition, which demands a little bit of specification regarding how this kind of information technology influences communication in the audience. Social media, mobile applications and corporate sites and IM clients is the primary location for corporations to define their brand positioning ask for comments. "Hidden factors in the communication between a customer and a company also have an impact on user's trust, satisfaction, and commitment with services," said Imdadullah, who believes it is strategic to study their use. The importance of this study is also grounded on the need for an integrated view when assessing the effectiveness of digital communications. Traditional ways of evaluating the performance of PR, that are quantitative in nature, hardly ever take into account quality dynamics in feedback with the recipient as well as emotions and cultural circumstances. With the digital age changing ever so quickly and data at a tax rate levels it is time for us to come up with a model that has both quantitative (ROI) and qualitative metrics (audience engagement, customer satisfaction). It also offers objectivity in management decisions and facilitates communication. In this respect, the research is practically relevant as it allows finding out best practices of use of IT and adapt them to fulfill peculiar features of a certain company and make recommendations in relation to improvement of communication processes. The study of digital channels and tools, feedback loops to assess the opportunities/weakness of what we have done after a campaign, finding bottlenecks in communication's strategy to create a plan to improve overall efficiency. Directions for future research might potentially also include the integrated consideration of other new technologies, e.g. artificial intelligence, process automation or big data analytics in corporate communications. These domains present the possibility to forecast more reliably reactions of an

audience, trends and risk for reputation. Secondly, it enables us to explore the impact of external changes (such as economic, social and cultural shifts) on the efficacy of digital comms, thus ensuring that PR approaches remain flexible and sustainable.

PR and firm communications in information society: streams, tools and skills.

We're talking about the age of corporate communication and PR as the foundation of a company's image, credibility and so on information exchanges with stakeholders. 1.4 Paradigm shifts in the activities for corporate communication strategies with the introduction of IT applications there are new ways to structure activities for the corporate communication's benefit. Utilizing digital tools together with data and analytics, their interactions with customers, partners and the public can be highly structured, processes are open to scrutiny and they are ready for exogenous changes. Foremost is market evolution to integrate multichannel digital capabilities together. Primary modes of communication included social networks, companies' web-sites, blogs, mobile applications and IMs - instruments of direct communication with the audience. Each platform has its characteristic features: on social networks the scope of interaction - publications, comments and reposts; with corporate web sites, end users receive a centralized information source you can make suggestions; mobile apps and messengers will help maintain prompt communication between clients and partners. The next area is the use of analytical systems and Big Data. Companies collect and process large volumes of data on interactions with the audience, allowing them to evaluate the effectiveness of PR campaigns, predict user behavior and identify market trends. Integrating data from various channels provides a comprehensive understanding of the effectiveness of communications and allows identifying potential crisis situations. The third area is related to the automation of communications processes. Information technologies allow the implementation

of chatbots, automated mailings, systems for processing customer requests and monitoring social networks. This reduces the workload on staff, increases the speed of information processing and ensures the standardization of processes. Automation allows not only to optimize internal processes, but also to increase the accuracy of forecasting audience reactions. The fourth area is omnichannel communications, the integration of all available channels into a single system. The omnichannel approach ensures consistency and continuity of interaction with the audience, improves the perception of the corporate image and increases customer trust. Effective implementation of the omnichannel approach requires high-quality technological infrastructure and coordinated actions of all company departments. Particular attention is paid to feedback and monitoring processes. Information technologies allow not only to collect data on audience reactions, but also to analyze them to adjust the communications strategy. Social media monitoring systems, media mentions, and analytical panels allow to promptly identify problem areas, evaluate the tone of messages, and make timely management decisions [29,30]. The key tools of information technology in corporate communications are: 1) Digital platforms: social networks, corporate websites, blogs, mobile applications, instant messengers. 2) Analytical systems: platforms for analyzing engagement, monitoring mentions, Big Data tools. 3) Automated systems: CRM systems, chatbots, mailings, tools for processing customer requests. 4) Data visualization: dashboards, analytics panels, graphs and diagrams that allow you to make decisions based on data. It should be noted that corporate communications do not use one tool, but a whole complex of platforms, programs and services, each of which solves specific problems - from publishing content and customer support to deep analytics and crisis forecasting. The structuring of information technologies in corporate communications and public relations is presented in Table 2.

Table 2. Structuring of information technologies in corporate communications and public relations

Tool / Platform	Main function	Example of use (cases)	Features / Benefits
Social networks (Facebook, LinkedIn)	Direct interaction with the audience, publishing content, creating communities	Large brands (Nike, Microsoft, Siemens) support groups for professionals and clients	High speed of information dissemination, targeted advertising, two-way communication
Instagram, TikTok, YouTube	Visual and video content, storytelling, increasing loyalty	L'Oréal, IKEA, DHL use influencer campaigns for image purposes	Emotional engagement, high virality, support for global campaigns
Corporate websites	Centralized presentation of information, news, reporting, investors	Siemens, Unilever, IBM publish reports on	Control over content, ensuring reputational transparency

		sustainable development and ESG	
Blogs / content platforms	Expert publications, forming the image of an “opinion leader”	HubSpot, SAP, Deloitte maintain blogs with analytical reviews	Increased brand trust, SEO promotion
Mobile applications	Direct interaction with customers, push notifications	Starbucks, Lufthansa, HSBC manage customer relationships through application	Prompt communications, personalized service
Messengers (WhatsApp, WeChat, Telegram)	Individual and group communications, service support	BMW, Emirates, Decathlon use chat support in WhatsApp	Fast response, high level of personalization
CRM systems (Salesforce, HubSpot CRM)	Customer interaction management, database segmentation	HP, Philips implemented Salesforce to integrate PR and marketing	Centralized data storage, process automation
Analytical platforms (Brand watch, Meltwater)	Monitoring mentions, sentiment analysis, KPI assessment	Nestlé, Vodafone use Brand watch to monitor reputation	Deep analytics, data visualization, crisis forecasting
Mailing automation systems (Mailchimp, Marketo)	Mass communication, email automation campaigns	Adidas, Booking.com personalize offers through Marketo	Personalization of messages, time saving
Chatbots (ManyChat, LiveChat)	Automation of request processing, FAQ	KLM Airlines, Sephora use bots for customer consultations	Reducing the workload on staff, 24/7 support
Dashboards (Power BI, Tableau)	Data visualization, decision support	Vodafone, Procter & Gamble use Tableau to integrate KPIs	Clear analytics, combining data from different channels
Project management tools (Trello, Asana)	Team coordination, task and deadline control	Ogilvy, Edelman coordinate international PR projects	Increased process transparency, effective teamwork
Platforms for webinars and broadcasts (Zoom, MS Teams Live, Webex)	Conducting online events, press conferences, internal training	Deloitte, PwC conduct webinars for the media and clients	Expanding coverage, flexible formats, cost savings
Monitoring systems Media (Cision, NewsWhip)	Analysis of publications, assessment of reach and tone	Coca-Cola, Toyota use Cision to measure PR effectiveness	Single interface, high-quality media analytics
Content management platforms (WordPress, Drupal)	Publishing and updating content, support for corporate portals	BBC, General Electric use WordPress for blogs and press releases	Flexibility, ease of updating, multimedia support
Social survey and feedback systems (SurveyMonkey, Typeform)	Collecting feedback, measuring satisfaction	Marriott, Netflix test content and services using surveys	Fast feedback, integration with CRM

This approach gives companies the opportunity to comprehensively manage their reputation, improve the effectiveness of communications and form sustainable relationships with stakeholders. Clearly,

the effectiveness of digital communications depends on several factors, which are presented in detail in Fig. 1.

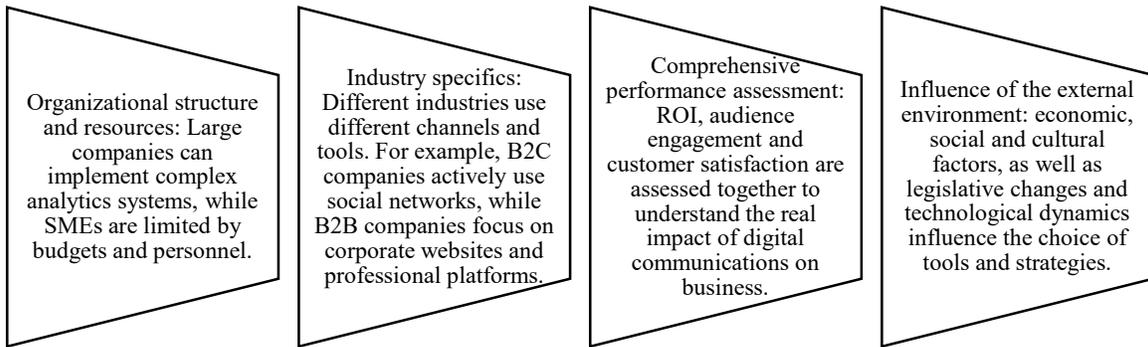


Fig. 1. Key factors that ensure the effectiveness of digital communications in modern companies

Information technologies are fundamentally changing corporate communications and public relations. Key areas include multichannel digital platforms, analytical systems, process automation, omnichannel communications and feedback integration [30]. The tools used in these areas allow companies to optimize interaction with the audience, increase customer engagement and satisfaction, minimize reputational risks and form a sustainable corporate image. The specifics of using technologies include the need to take into account the organizational structure, company resources, industry specifics, as well as the integration of quantitative and qualitative performance indicators. The practical significance of digital tools is manifested in the ability to predict campaign results, identify weak areas and develop strategic recommendations.

Development of corporate communications and public relations: the role of IT technologies, key aspects, advantages and disadvantages

In the context of digital transformation, information technology (IT) is becoming a strategic resource for corporate communications and public relations. The globalization of markets, the dynamism of information flows and the growth of expectations from customers, partners and investors are forcing organizations to reconsider their communications strategies. If traditional methods of corporate communications were built on press releases, personal meetings and events, today they rely on a set of digital tools that allow companies to build a dialogue with target audiences in real time. Conceptual aspects of IT technologies in the development of corporate communications and public relations of modern companies are presented in Fig. 2.

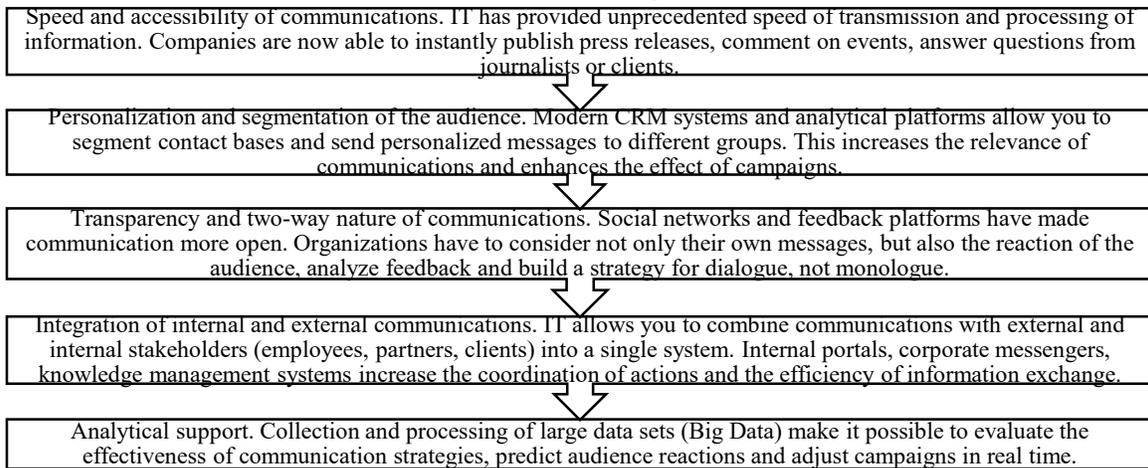


Fig. 2. Conceptual aspects of IT technologies in the development of corporate communications and public relations of modern companies

Information technology has radically changed the nature of corporate communications and public relations in the last two decades, transforming them from a set of traditional message channels into a multi-level and multi-channel ecosystem based on

digital infrastructure. Considering the advantages of such technologies, first of all, it is worth noting their ability to provide unprecedented speed and efficiency of interaction with target audiences. If previously the preparation and distribution of press

releases, publication of news or organization of communication with journalists took days and weeks, then modern digital platforms allow a company to respond to events in real time. Instant dissemination of information through corporate websites, social networks, mobile applications and messengers makes it possible to maintain constant contact with clients, partners, investors and employees, which is especially valuable in crisis situations, when timely communication and explanation of the company's position becomes a critical factor in maintaining trust [31]. The second most important advantage is the expansion of audience reach. Digital channels remove geographic barriers and make it possible to reach millions of users around the world. International corporations can communicate in several languages, adapting content to the cultural characteristics of different countries, and small companies can enter the global market without the enormous costs associated with traditional offline advertising and events. Thus, information technology contributes not only to scaling the company's presence, but also to the formation of a more holistic brand image supported in different parts of the world. The ability to personalize and segment communications deserves special attention. Modern CRM systems and analytical platforms allow not only to store contact information, but also to create a holistic portrait of each client or partner, taking into account their interests, history of interactions, and reactions to previous messages. This makes it possible to build targeted campaigns that increase the relevance of communications and the level of trust. Unlike mass mailings and general press releases, personalized messages create a sense of individual attention and care, which increases audience loyalty and the effectiveness of communication strategies. Another significant advantage of digital technologies is their transparency and two-way nature. Social networks, corporate blogs and feedback platforms transform communication from a one-way flow of messages into a full-fledged dialogue, where the audience can ask questions, express opinions and influence the content of the discussion. For the company, this opens up the opportunity to quickly receive feedback, identify pain points and adjust strategy. In the long term, this model strengthens trust, as the audience sees the organization's readiness for open communication. Information technology also facilitates the integration of internal and external communications. Internal corporate portals, messaging systems, knowledge bases and joint workspaces allow you to coordinate actions between departments, speed up the approval and decision-

making processes. It presents a united front enabling to push out the company's external messages backed by internal knowledge and employee support. Telecommunications activity analysis support is a major plus. The accumulation and analysis of user behavior data, the message tone of brand mentions and their dynamics in media space provide an opportunity to evaluate the effectiveness of a campaign, predict public response, assess risks during crisis and think over next steps based on facts rather than intuition. Managers are presented with dashboards and reports for tracking performance against key metrics such as ROI of PR campaigns, engagement rate, customer satisfaction etc. [32]. However, information technologies – despite the fact that it has clear benefits - presents a whole set of disadvantages and threats that must also be taken into consideration while adopting them. One of them is audience fatigue over the overload of content. People are being bombarded with tens of thousands of messages across all mediums, and attention is scarce. Even the most riveting and relevant messages can get lost in this stream, or feel that they are interrupting a company's space if it doesn't take great care to plan and pace its content.

Global IT trends and their implications for corporate communication and PR

The Corporate Communications and Relations- and PR-Divas, too, are confronting other thoughts behind professional relationships because IT does change also the Means of Production and in thus how organizations currently get (and keep) in touch with their publics. Globalization, digital literacy growth and an absolutely new level of information exchange rate, as well as transparency and responsibility claims - all these bring to the company more and more pressure that gets the additional sharpness under changes in activity of a company. The study also found in the last few years that technologies are no longer background tools, meanwhile technology is a strategic asset for building reputation, trust and loyalty of the audience. According to trend analysis most companies are adopting the use of artificial intelligence, Big Data analytics, omnichannel platforms and also digital interaction and automation tools that enables them namely not only respond but also anticipate external stakeholders' requests. Comparison of the implementation of key IT trends in corporate communications and public relations in the world from 01.01.2024 to 01.01.2025 is presented in Table 3.

Table 3. Comparison of the implementation of key IT trends in corporate communications and public relations in the world

Indicator	North America	Western Europe	APAC (Asia Pacific)	Central and Eastern Europe	Latin America
AI integration across all business functions	75 - 85% of companies have implemented, high penetration	70 - 80%, system integration	65 - 85%, China and Korea are leaders in GenAI	50 - 60%, slower adoption	45 - 60%, pilots and partial use
Generative AI in PR/communications	65 -75% of PR practitioners use GenAI	60 - 72%	55 - 75%, high rates in China	40 - 55%	35 - 50%
Omnichannel communications	Widely implemented by major brands	High level among most companies	Actively developing through super apps	Medium level, strong gap between large and small	Medium/low, mostly implemented by large retailers
ESG/CSR reporting using IT	96% of the largest companies publish reports	Similar, strict EU standards	Growing rapidly but uneven	Moderate	Growing, but quality of disclosure lower
Social media penetration	>70% of population	highly active >60 - 70%	> 60%, especially SEA, Korea	50 - 65%	60 - 70%, growing
Use of video/short formats	90%+ of companies use video	Similar	Very active: TikTok, Shorts, Reels	Growing, but budgets lower	Rapid growth of mobile short video

The comparative analysis shows that the most mature markets (North America and Western Europe) have a high degree of system integration of AI, mature omnichannel strategies and almost complete digital ESG reporting. In Asia Pacific, the speed of adoption is similarly high, but it is achieved mainly through ecosystems and super apps, which gives development a special specificity. Central and Eastern Europe and Latin America are characterized by a gap between large multinationals and SMEs, with the former implementing global practices, while the latter are lagging behind. This is reflected in the level of digital maturity of corporate communications and the diversity of tools that companies use to interact with customers and stakeholders. Social media and video formats remain universal channels, but the forms of content and dominant platforms vary by region [33]. The use of ROI, ER and CS metrics provides a quantitative measurement of return on investment, audience engagement and customer satisfaction, which creates a transparent basis for comparing various communication tools and interaction channels. Detailed calculations for each tool - social networks, email marketing, video and multimedia, SEO and content marketing - reveal differences in efficiency and point to priority areas for investment and optimization. Thus, social networks and video content demonstrate high ER and ROI indicators,

confirming their key role in shaping audience engagement. Customer satisfaction depends not only on the scale of campaigns, but also on the quality of content, the speed of feedback and the relevance of information to the target audience. The data obtained create the basis for a more detailed consideration of the main results of the methodology, including quantitative indicators of the effectiveness of tools, comparison between companies and the identification of patterns in the implementation of information technologies in corporate communications and public relations. IT has the potential to add value to corporate communications and PR. Organize can naturally interact with the audience, establish reputation and manage feedback live on real time thanks to modern digital tools. The combination of social networks, email marketing, video content, SEO and analytical platforms brings to the brand not only the size of the audience, but also involvement into diving deeper (the engagement ratio ER and customer satisfaction CS). Digitalization of communications makes it possible to bring together in planning, monitoring and evaluation of the efficiency of PR campaigns, naturally guaranteeing the transparency and measurability results. The ROI, ER and CS literature applications referred to in this article indicate that the proficient use of information technology contributes to increasing investment returns,

reducing reputational risk of crises as well as developing sustainable relations with customers. Analytical and feedback systems that enable you to fine-tune content according to the preferences of target audience, as well as quickly change communication strategy. In general, information technologies not only increase the effectiveness of corporate PR, but also create conditions for strategic

communications management, providing competitive advantages in the global market and strengthening trust on the part of key stakeholders [33,34]. The results of assessing the effectiveness of digital communications and public relations tools under the influence of IT technologies are presented in figure 3.

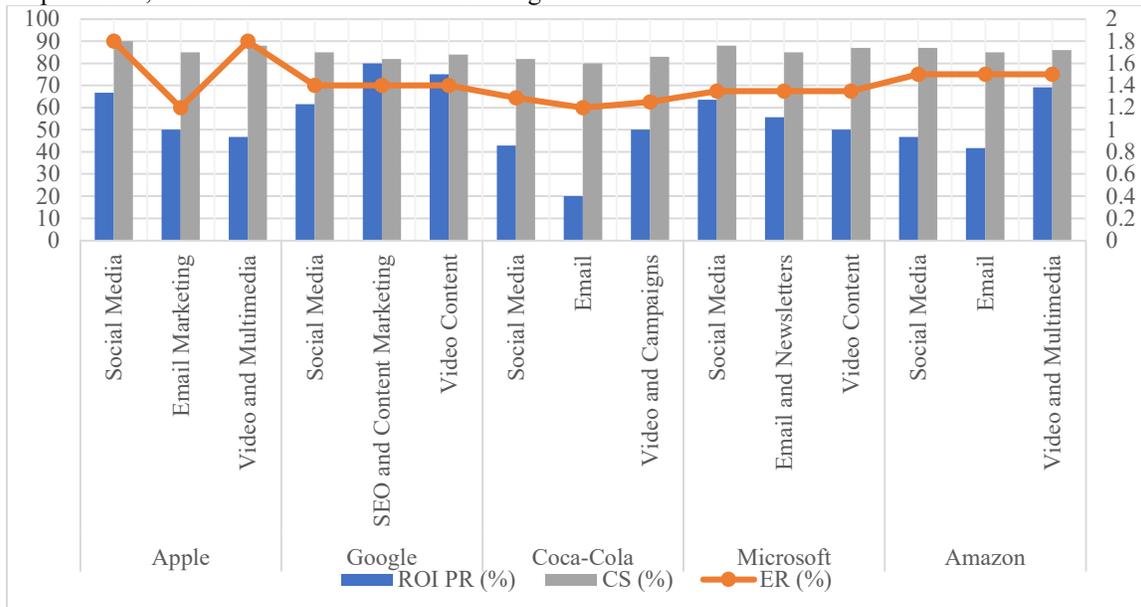


Fig. 3. Results of assessing the effectiveness of digital communications and public relations tools under the influence of IT technologies

An analysis of the effectiveness of digital communications tools showed that each company uses a combination of channels depending on its strategic goals and audience specifics. For Apple, social networks and video content demonstrate the greatest return, providing a high ROI (66.7% and 46.7%) and maximum audience engagement (ER 1.8%). Email marketing is also effective, but the ROI and ER indicators are lower, indicating its supporting role in the communications strategy. Google stands out with a high ROI for SEO and content marketing (80%), which confirms the importance of organic reach and quality content for a technology company. Audience engagement is evenly distributed across channels (ER 1.4%), and customer satisfaction (CS 82 -85%) shows a stable quality of communications. Coca-Cola demonstrates the highest audience satisfaction (CS 82 -83%) with a relatively low ROI, which is due to the focus on emotional branding and visual campaigns. Microsoft shows balanced indicators across all channels, with a high ROI (50 -63.6%) and stable audience engagement (ER 1.35%). Amazon uses video and multimedia most effectively, achieving a high ROI

(69.2%) and ER (1.5%), which confirms the role of visual content in generating engagement and retaining the audience. Thus, the obtained results allow us to identify key tools that ensure financial efficiency, engagement and satisfaction, as well as determine areas for further optimization of digital communications. This study has high scientific and practical significance, as it comprehensively evaluates the effectiveness of digital communications based on quantitative indicators of ROI, ER and CS. The novelty of the work lies in the integration of several metrics for a comprehensive analysis of corporate PR tools, which allows you to simultaneously take into account financial returns, audience engagement and customer satisfaction. This approach differs from classical studies limited to individual indicators and provides a more accurate understanding of the impact of information technology on corporate communications [35]. The specificity of the methodology is manifested in the use of a conceptual model that includes technological infrastructure, digital channels, analytical systems and feedback processes. Using data from real international companies for 2024 allows you to analyze the effectiveness of tools in the context of the modern digital market. The

concept encourages multiplication of enumerations, developments and calculations to provide the best practice for PR managers, marketers and corporate communication experts. 2 Theoretical and practical significance of the study a) Theoretical significance the theoretical value of science is novelty, contextuality, paradoxicality and predictability. IT is a big competitive factor that influences brand image, audience bond and customer loyalty! The paper looks at the best combinations of tools for different kinds of companies¹ and therefore allows recommendations on increasing ROI and ER to be determined, developed by CS. Study limitations and implications We believe that the contrast in results holds potential for further research, which could explore new industry sectors and other locations. In addition, there is an opportunity to address supplementary performance metrics (i.e., reach measures, reputation scores), integrate AI tools into predictive campaigns' effectiveness of articles or case studies. The results may also provide the basis for developing context-aware corporate PR strategies in light of a dynamic digital environment and user preferences. Thus, the research on the one hand confirms significance of IT in corporate communications and on other sides gives practical recommendations for efficiency increase of digital measures which will contribute into step-by-step enhance of efficiency priority both 20 PR and company's positions at global market. The study successfully addressed the primary research objectives by demonstrating the role of information technologies in enhancing corporate communications and public relations effectiveness. The multilevel model enabled the quantitative evaluation of PR instruments using ROI, ER, and CS metrics, identifying patterns of audience engagement, personalization, and strategic content adaptation. This allowed for a deeper understanding of how digital tools can optimize communication planning and monitoring. However, a critical assessment reveals several limitations. First, the empirical analysis was based on a limited sample of multinational companies, which may restrict generalizability to small and medium-sized enterprises. Second, while the model evaluates multiple aspects of communication performance, it does not fully account for long-term reputational risks or the effects of rapidly changing social media algorithms. Third, regional and cultural differences in IT adoption require further investigation to ensure the model's applicability across diverse contexts. These open issues indicate that future research should expand the sample, incorporate additional performance indicators such as audience trust and

reputation metrics, and explore predictive approaches, including advanced analytics, to improve strategy adaptation and risk management in digital corporate communications.

Problems And Open Research Questions

Obviously, despite the great advancement in information technology applications for corporate communications and PR, there are a few topics less explored that need more research. One of the essential unresolved issues is the quantification of reputational risks of companies by means of digital tools. Contemporary research is predominantly based on financial return (ROI) and audience engagement (ER), however it fails to address the relationship between these metrics and a potential crisis. There are two important takeaways here: the more that we combine the use of social networks, video content and email marketing with SEO, the greater effect on communications (that's a good thing), and potentially, an increased risk to reputation. Another challenge is how to combine different communication media, and their synergistic effect. In other works, the tools are evaluated separately and we cannot identify how much each of combinations may influence on Customer Satisfaction (CS) as well as long-term audience loyalty indicators. Models are required that can be used to consider multi-channel strategies and their adjustments in response to the fast digital changes as well as to forecast the effectiveness of the integration communication campaigns. The effectiveness of corporate communications in the age of new technologies including artificial intelligence, big data and automatic analytical platforms is still a disputable point. As it happens, methods for evaluating ROI, ER, and CS should be adjusted to the new high-tech tools that facilitate deliberation with enormous amounts of direct data from those on whom one wishes to have an impact. Especially the investigation to predict audience reaction, and steer communication strategies in real time is still an active field of study. ¹ Further, there have been limited examinations on variations across regions and industrial differences in the perception of digital communications. Each marketplace has its own set of cultural, social and economic conditions that impact customer interaction and contentment. The absence of standardized methods applied to global phenomenon creates discontinuities in insight about how international companies may effectively shape digital strategies across territories. Therefore, current open research questions involve the evaluation of the complex effects induced by digital tools as well as mixing multichannel strategies and

considering new technologies and regional specifics. Working out these problems will help establish more precise and universal models for measuring the effectiveness of corporate communications, make research results more practical and contribute to the formation of flexible PR strategies for companies in the information age.

Comparison of Research Results with Previous Studies

The results obtained in this study confirm the important role of information technology in the development of corporate communications and public relations under digital transformation. At the same time, the proposed conceptual model requires critical consideration. In particular, the model is largely based on theoretical analysis and the synthesis of best practices of large international companies during the period 2021 - 2024, which may limit its direct applicability to small and medium-sized organizations. In addition, the assessment of communication effectiveness relies mainly on qualitative indicators that require further quantitative validation. A comparison with previous studies demonstrates that, unlike research focusing on individual digital tools or isolated communication channels, this paper proposes an integrated approach. The model combines technological infrastructure, digital channels, analytical systems, and feedback mechanisms into a unified framework for managing corporate communications and reputation-related risks. Nevertheless, several problem areas remain open and call for further investigation. These include empirical testing of the proposed model, cross-industry analysis of its practical implementation, and consideration of institutional and cultural factors that may influence the effectiveness of IT-driven corporate communication strategies.

5. CONCLUSIONS

The conducted research demonstrates the growing importance of information technologies in the development of corporate communications and public relations within the context of digital transformation. The application of a multilevel analytical model, combined with the financial evaluation of digital communication activities through ROI, ER, and CS indicators, made it possible to perform a detailed quantitative assessment of the effectiveness of various PR instruments and to identify specific patterns of their use. The empirical results indicate that the strategic and well-balanced use of social media, video

content, email communication, and content marketing significantly increase audience engagement and contributes to higher levels of consumer satisfaction. From the author's point of view, an essential outcome of this study is the confirmation that the effectiveness of corporate communications cannot be explained exclusively by financial indicators. Although return on investment remains an important criterion, the quality of feedback, the degree of personalization, and the ability to adapt communication strategies to stakeholder expectations play a decisive role in building trust and sustaining corporate reputation. In this regard, reputation is considered by the author as one of the most valuable intangible assets of a company in the digital environment. At the same time, the author acknowledges that the research has certain limitations. The empirical analysis was conducted on a restricted sample of multinational companies, which may limit the applicability of the results to small and medium-sized enterprises. Moreover, the selected indicators do not fully capture long-term reputational risks and the influence of cultural and local factors on the effectiveness of digital communication tools. Nevertheless, the author believes that the proposed conceptual and methodological approach provides a solid foundation for improving strategic PR management. Further expansion of the study to different industries, as well as the incorporation of big data analytics and artificial intelligence, may enhance the predictive capacity of communication strategies and strengthen the competitive positions of companies in the global market.

6. FUTURE ENHANCEMENT

The modern corporate communications are under the conditions of regular change in the digital environment that is why their assessment and management methods need to be updated. The possibility of further improving the methodological approach consists, in the first place, in increasing the performance indicators involved in the analysis model. Utilizing ROI, ER and CS only although it could give us a quantitative evaluation of financial returns, audience involvement as well as customer satisfaction will not have a proper consideration on reputational risks, consumer lock-in rate in long run or brand influence. Taking reputation, reach and engagement into ways of working that are already being used will provide a more rounded understanding of communication effectiveness from which to make informed decisions. Another enhancement is the use of multichannel analysis.

Today we're collecting, and (largely) analyzing in siloed digital channels - social networks, email marketing, video; content marketing. Naturally, integrating channels in a single model will draw attention to the synergistic effects and level of trade-off among preparedness tools for various audiences and sectors. This will also be capable of predicting the conclusion to sophisticated campaigns and modifying tactics on-the-fly based off reaction. It could be explored whether novel analytical techniques, e.g. big data and sensor-based monitoring systems are applied extensively. They will all serve as invaluable tools in increasing prediction accuracy, measuring global communications effectiveness and even considering the regional "cultural" specifics. Additionally, with the advent of AI implemented for audience tracking and to personalize content, there is opportunity for dynamic communications management i.e., this can be a game-changer feature where companies have large user base spanned across multiple countries. There is also the interest of a way to track how digital communications are affecting strategic aspects such as sales, customer retention and loyalty. It will therefore facilitate comparison of PR investment with financial; and non-financial results - and best practices against others in their industry or geographic market. In particular, the extension of the existing approach will provide insights into how IT influence corporate communications and PR, give a higher practical significance to research and make opportunities available for adaptive-strategic planning in the dynamic digital market space and changing audience requirements.

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