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FORMATION OF MARKETING AUTOMATION SYSTEM

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PROBLEM STATEMENT. This article highlights the main problems and prospects for the development of a marketing automation system through the lens of academic research.

RESEARCH OBJECTIVE. The aim of the article is to conduct a comprehensive analysis of the main approaches to the formation of a marketing automation system through the lens of modern academic research, which will allow identifying the most promising approaches from the perspective of practical implementation.

RESEARCH HYPOTHESIS. It is hypothesized that the key method, regardless of the approach to the formation of a marketing automation system (MAS), is the approach known as project management.

METHODS. The author utilized general scientific and specialized research methods. Systematic method and content analysis were used to define the key concepts of the marketing automation process. Comparative analysis was used to identify differences between approaches to forming MAS in B2B and B2C sectors. Case study method was used to investigate specific examples of MAS formation in various business organizations.

RESULTS. It has been determined that scientists successfully highlight many of the key elements of of Marketing Automation Systems (MAS), particularly focusing on specific aspects of marketing automation functions. However, there remains a need for further research on the approaches, methods, and tools for MAS development. Specifically, when considering the effect of implementing comprehensive, multifunctional, and integrated systems, the impact is undoubtedly extensive, especially in the case of leading martech companies, as documented by researchers. The study of their experience in developing of MAS, not only in the context of advancing technologies such as Artificial Intelligence (AI), Big Data, and others, but also the challenge of integrating the human component with the corresponding software in this process, should become one of the primary directions for future research.

CONCLUSIONS. It has been shown that the problem of forming a marketing automation system is gradually moving beyond the scope of business activities of companies and becoming the subject of academic research. At the same time, specialized studies still predominantly focus on specific aspects of the application of marketing automation (MA) functions, which are potentially considered as components of a holistic MAS. It has been proven that the main practical approaches to forming MAS are independent development and implementation by the business organization itself; acquisition of a ready-made solutions; or a combination of both approaches with corresponding advantages and risks.

KEYWORDS: marketing; marketing automation; marketing automation system; project management; business processes; marketing processes.

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
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ФОРМУВАННЯ СИСТЕМИ АВТОМАТИЗАЦІЇ МАРКЕТИНГУ

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ВСТУП. У цій статті висвітлюються основні проблеми та перспективи формування системи автоматизації маркетингу скрізь призму академічних досліджень.

ГІПОТЕЗА ДОСЛІДЖЕННЯ. Припускається, що ключовим методом, незалежно від підходу до формування системи автоматизації маркетингу (САМ), є підхід, відомий як управління проектами.

МЕТА ДОСЛІДЖЕННЯ. Метою статті є комплексний аналіз основних підходів до формування системи автоматизації маркетингу скрізь призму сучасних академічних досліджень, що дозволить виділити найбільш перспективні з них з точки зору практичної реалізації.

МЕТОДИ. Автором використано загальнонаукові та спеціальні методи дослідження, зокрема системний метод та контент-аналіз – для визначення ключових понять процесу автоматизації маркетингу; компаративний аналіз – для визначення відмінностей між підходами до формування САМ у сферах B2B та B2C; метод кейс-стаді – для дослідження конкретних прикладів формування САМ у різних бізнес-організаціях.

РЕЗУЛЬТАТИ. З'ясовано, що науковці успішно висвітлюють багато з ключових елементів САМ, зокрема вони переважно зосереджуються на конкретних аспектах застосування функцій автоматизації маркетингу; водночас існує потреба в подальшому дослідженні підходів, методів і інструментів формування САМ Зокрема якщо говорити про ефект застосування та впровадження саме комплексних багатофункціональних й інтегрованих систем, то він безсумнівно є всеосяжним, особливо у випадку з передовими компаніями martech, що і фіксується науковцями. Саме вивчення їх досвіду з формування САМ, не лише в контексті розвитку технологій, таких як штучний інтелект (ШІ), Big Data тощо, але і проблеми поєднання людського компоненту і відповідного програмного забезпечення в цьому процесі має стати одним із основних векторів новітніх досліджень.

ВИСНОВКИ. Показано, що проблематика формування системи автоматизації маркетингу поступово виходить за рамки бізнес-діяльності компаній і стає об'єктом академічних досліджень. Водночас серед фахових досліджень поки що превалює висвітлення конкретних аспектів застосування функцій автоматизації маркетингу (АМ), які потенційно розглядаються як компоненти цілісної САМ. Доведено, що основними підходами формування САМ на практиці є: самостійна розробка та впровадження власними силами бізнес-організації; придбання готового рішення; поєднання обох підходів із відповідними перевагами та ризиками.

КЛЮЧОВІ СЛОВА: маркетинг; автоматизація маркетингу; система автоматизації маркетингу; управління проектами; бізнес-процеси; маркетингові процеси.

Introduction. The issue of developing Marketing Automation Systems (MAS) is gradually moving beyond the realm of business activities and becoming a subject of academic research. This shift is driven by the growing relevance of this topic for companies operating in both consumer and B2B markets, as they face a range of challenges, primarily related to perception, culture, structure, processes, and people – typical areas that require attention when implementing any complex system.

At the same time, it is important to consider that the transition from a "sales mentality" to a "marketing mentality" presents a significant challenge for companies. Modern marketing automation (MA) solutions offer so many ways to optimize and enhance marketing efforts that they often exceed the understanding and competencies of many individuals working in both marketing and sales. Consequently, the focus of professional research is gradually shifting towards the issue of developing a technological MA architecture based on an integrated approach, which allows for the automation of the entire marketing complex, rather than just isolated marketing tasks.

This highlights the need to fill a knowledge gap in the formation of MAS, as substantial studies by M. Salmi, D. Murphy, R. Titola, Y. Tobon, J. Järvinen, H. Taiminen, S. Voitovych, I. Lorvi, N. Bukala, and others have primarily addressed specific problems or features related to the implementation of marketing automation.

Materials and methods. To achieve the research objective, a comprehensive approach was employed, which included the analysis of academic literature (over 25 scholarly sources focused on contemporary approaches, challenges, and prospects in the development of marketing automation systems), analytical studies, as well as the synthesis and evaluation of practical cases of marketing automation implementation in various business organizations (more than 10 cases from large and medium-sized companies across different business sectors – B2B and B2C).

In conducting a comprehensive analysis of the primary approaches to the formation of marketing automation systems, the author utilized both general scientific and specialized research methods. These included the systematic method and content analysis for identifying key concepts in the marketing automation process; comparative analysis to determine differences between approaches to forming MAS in B2B and B2C sectors; and the case study method to investigate specific examples of MAS formation in various business organizations, with the aim of assessing their impact on the productivity and efficiency of business processes.

Results and discussion. The challenges related to the development and implementation of Marketing Automation Systems (MAS) by companies operating in both consumer and B2B markets have become a key focus of

academic research today. A notable example of research on this topic is the comprehensive study dedicated to the issues of marketing automation implementation in Finnish B2B companies (Salmi, 2020). The central idea of M. Salmi's work is that the complexity of marketing automation (MA) and the corresponding choice of specific software tools for its implementation necessitate addressing a range of issues, including understanding and commitment from top management, clear development priorities and expectation management, creating and maintaining a data-driven culture, revising or even restructuring marketing and sales, leveraging the capabilities of system integrators, metrics, content production and distribution, adapting sales activities to maximize the benefits of marketing automation software, developing and disseminating customer insights, and ensuring the recruitment and continuous training of personnel with the necessary competencies for working with these tools.

In a related study by the well-known marketing automation expert and consultant at the Australian technology company Squiz, D. Murphy (Murphy, 2018), which focuses on the impact of MAS implementation, a few general prerequisites that companies should consider and adhere to before, during, and after the formation/implementation of such systems are also highlighted. These include having the necessary human resources and expertise, revising and implementing new business processes, properly defining the scope of the MAS implementation project, obtaining organizational support at the highest management level, focusing on creating customer-centric content through MAS, making continuous investments, and setting realistic expectations.

Similar conclusions are drawn in R. Tiitola's study (Tiitola, 2022), which analyzes the impact of marketing automation software on the effectiveness of international marketing and heavily relies on D. Murphy's work. The success of implementing relevant software depends on how its usage is planned and how its effectiveness is measured. According to the author, the universal factors influencing the success of this process include analyzing and developing internal marketing and business processes within the company, clearly defining the requirements for MAS and its implementation project, the leadership role of top management and the presence of a qualified project CEO, using MAS primarily for creating and delivering relevant and timely content to the target audience in real-time and quickly responding to customer inquiries, setting realistic expectations for the implementation of such software, continuing to invest in marketing automation, and redistributing the resources freed up by this process towards developing the company's capabilities, effective human resource management, and adapting MAS to the specifics of local markets.

Other studies address specific issues related to the research topic, but they are no less significant. For example, one study (Lampinen, 2018), dedicated to

the issue of timely and targeted communication by marketers at appropriate stages of customer interaction, notes that one of the challenges companies often face is underestimating the potential of MAS software, particularly in automating data collection.

Others emphasize, in our opinion, one of the most important aspects of MAS formation and implementation – the analysis and development of management processes for marketing and other business activities within the company. Several publications, such as (Berghofer, F. et al., 2018; Wood, 2015), rightly point out that without properly organized marketing process management, the development or acquisition of software – considered to be the main ways of implementing MAS – may lead to additional costs, as the desired results may not be achieved precisely due to the irrational belief that technical solutions alone can correct imperfect management processes and procedures.

When it comes to the process of implementing MA software, top management and the marketing department must keep a close watch on whether the financial, time, and human resources spent on the project are justified. This is emphasized by several researchers (Lin et al., 2018), who argue that organizational support from top management is vital for securing the budget and resources necessary for implementing specific programs or comprehensive automation systems. Moreover, one of the most important factors determining the success of this process is the competence of the project manager responsible for MAS implementation, as they make critical decisions during project execution and ensure communication with the company's top management (Lin et al., 2018).

Therefore, a crucial factor in MAS formation is the issue of competencies and perceptions of marketing automation. For instance, in Y. Tobon's study (Tobon, 2017) on marketing automation implementation in B2B companies, it is rightly noted that the transition from a "sales mentality" to a "marketing mentality" is a significant challenge for companies, as modern marketing automation solutions provide so many ways to optimize and improve marketing that they go beyond the understanding and competencies of many people working in both marketing and sales. A particular problem highlighted by researchers is the lack of analytical skills. This is difficult to disagree with when it comes to the perception and development of complex innovative solutions like MAS.

Studies closely related to this topic focus on the challenges of involving direct users of marketing automation software in the project of forming or implementing these products. Several studies (Hassandoust et al., 2016; Sorgenfrei et al., 2014) convincingly demonstrate that the attitude of marketers, who are expected to become users of new corporate software, is also a crucial

factor in the success of MAS implementation, as it influences their willingness to use or not use it.

In this context, some researchers (Silva et al., 2023) especially emphasize the problem of overcoming resistance to the implementation of such technical innovations by staff and management, primarily because it requires them to develop new competencies that were not previously considered inherent in the field of marketing. Refusing to use new available tools in favor of relying only on previous experience can have negative consequences for the overall effectiveness of companies (Silva et al. 2023). Many studies also focus on the need to emphasize the correct aspects when implementing specific functions of MAS software.

One of the ultimate expected outcomes of a MA technology infrastructure project in a company should be to increase the overall effectiveness of lead generation and building relationships with potential clients through lead management, marketing channel management, and content management functions.

For example, in the article by J. Järvinen and H. Taiminen (Järvinen et al., 2016), dedicated to integrating content marketing with sales processes in the B2B sector, it is convincingly argued that when companies use MA software for behavioral targeting and content personalization to make it interesting, useful, and generally relevant to client requests and expectations – based in particular on the capabilities of software systems for data collection, storage, and analysis – they generate more unique leads than before.

The automation of labor-intensive manual tasks related to content creation is also considered by researchers to be an important element of any modern MA software product. Many studies increasingly focus on the use of machine learning and AI capabilities as a means of creating media advertising as the foundation of modern digital marketing. Most of these studies focus on applying machine learning models and text-based generative AI for these purposes (Brand et al., 2023), but recently there has been increasing attention to the issue of implementing AI for generating visual marketing content (Jansen et al., 2023).

The issue of CRM integration with MA software has also long been a central focus of academic research. However, it has mostly been considered as a process of adapting MA functions within the structure of CRM systems, such as automating marketing campaign planning, segmentation, and campaign performance analysis. However, in several academic works, this issue is now being examined in the context of digitized marketing systems. For example, in the work of Ukrainian researchers S. Voitovych, I. Lorvi, and N. Bukalo (Voitovych et al., 2022), dedicated to the automation of company-client interaction processes in the context of marketing digitalization, it is argued that all stages of an organization's interaction with service consumers should be

subject to automation through CRM technology: the initial contact stage, the service delivery stage, and the post-operation interaction stage during after-sales service. According to the authors, such an integrated system should encompass areas such as the MA module, SFA module (sales force automation), CSS module (customer service automation), and CSA module (customer support automation).

Today, the focus of professional research is gradually shifting towards the development of a MAS technological architecture based on an integrated approach that allows for the automation of the entire marketing complex, rather than just individual marketing tasks. This has led to a trend towards the formation of multifunctional MAS, with the most common form being Marketing Automation Platforms (MAP). This is driven by the fact that the initial perception of MAS by businesses and part of the academic community primarily as software with isolated technological architecture (Pardillo, 2019), i.e., hundreds of digital applications acquired from various providers, has been largely mistaken. The obvious drawbacks of such an approach include, among others (Pardillo, 2019):

- Weak ability of personnel to make rational decisions, particularly when dealing with fragmented software functionalities and, consequently, multiple non-overlapping databases. In other words, employees either must spend a lot of time searching for information, such as client profiles, across different databases, or simply act without this information based on intuition, increasing the likelihood of risky decisions.
- Low marketing department productivity due to inefficiencies in business processes, particularly caused by duplication of operations resulting from focusing on individual software solutions that are not integrated into a single system. This, in turn, leads to the marketing team's distraction from coordinating individual operations, thus resulting in time loss and an increased risk of errors in implementing marketing campaigns and other activities. Consequently, this can negatively affect client acquisition and retention as well as the retention of qualified staff within the team.
- Ineffectiveness of targeted communications with clients and leads, especially in the absence of integration between data-gathering software tools and CRM systems. As a result, this leads to a lack of understanding of client needs.
- Loss of time and profitability, as many businesses, when investing in the automation of marketing processes, often do not consider that the mere implementation of software tools – whose maintenance costs are already quite high – without integrating them into a holistic technological architecture and without viewing them as part of a unified organizational management system,

leads to bottlenecks in marketing processes and reduces the overall productivity of the relevant department.

In addition to this, there are also objective problems and challenges related to the implementation of MA software solutions, including technical dependency caused by the need for constant adaptation of business organizations to new technologies, which change over very short periods. Nowadays, every large and medium-sized company has IT departments constantly working on integrating, updating, and testing various applications. This consumes a lot of time for IT departments, making them more overloaded than ever before, thus increasing companies' costs of supporting the IT component of their organizational systems.

MAPs have undergone extraordinarily rapid evolution in the second decade of the 21st century and continue to develop. This development, as noted by many researchers (Stone et al., 2021), is partly related to the emergence of giant companies that develop business process automation software based on cloud computing and AI, unified into a single software ecosystem. These companies, as mentioned in the previous section, include Adobe, Amazon Web Services, Google, Microsoft, Salesforce.com, and others.

The successful formation of such platforms depends on a range of factors that determine the implementation of information and communication technologies (ICT). For example, in the work of J. Mero, A. Tarkiainen, and Y. Tobon (Mero et al., 2020), it is rightly noted that these factors include the competitive structure of the industry, the type and size of the business organization, the product or service range, the size and structure of the customer base, communication channels, available budget, system perception and relevant competencies, and corporate culture.

Other experts reasonably add that in addition to the above, the main differences between the B2B and B2C sectors, if any, also play a role. These include, primarily (Stone et al., 2021):

- Costs, for example, for involving the sales sector in marketing processes, which is more relevant in B2B, where the sales component typically plays a more critical role;
- The need to increase competitiveness over time, which, incidentally, is more important for the B2C sector, as so-called "impulse" and "quick purchases" are phenomena characteristic of this business segment;
- The need to better understand clients, which is equally important for both B2B and B2C sectors;
- The demands from the most valuable clients, e.g., distributors, for more professional marketing, which is a particularly important factor for the B2B sector, where collaboration between marketing and sales departments is the most important area of activity for many companies;

- The need for user-generated content to increase product value, which is equally significant for both B2B and B2C sectors;
- Changes in product technology, such as the implementation of modularity, requiring the digitalization of marketing (and sales) processes to provide better choices for clients – especially important for B2B but may also be important for B2C;
- The equally important role of supplier pressure, especially those higher up the supply chain, to ensure transparency in marketing and supply;
- Regulatory pressure on quality and confidentiality; this aspect is particularly relevant for the B2C sector, where privacy is a cornerstone of regulation, and fines are potentially more severe;
- The digitalization of other aspects of business and the general adoption of a more digital business model or the automation of other business processes (equally important for both B2B and B2C).

Researchers (Stone and Woodcock, 2021) rightly note that the problem of division between marketing and sales activities has mostly disappeared in leading B2C companies and those providing services to B2B companies. These functions are merging with marketing because they are more e-commerce oriented, where the client's journey from product/service awareness to purchase becomes much shorter. Therefore, when developing MAPs, the business model assumes the provision of a ready-to-use platform for end clients with customization options, i.e., the ability to choose the functions (modules) they need, integrate them with AI through a user-friendly delivery method – usually subscription-based – with easy management and fewer issues with development and adoption than before.

This is why some studies have already emphasized that the active implementation of such systems already has significant consequences for global marketing. For example, in the study (Agüera, 2019), it is noted that before the boom of MA technological solutions, segmentation, for example, was the result of studying each market, followed by the manual process of targeting, managing contact information, and interacting with the sales and service sectors. However, now with the possibility of fully automated marketing, the issues of customization mentioned above come to the forefront.

This means that for the largest, usually global, companies, after they have invested in the development or integration of MAPs, the practical application of the latter in various markets is mostly reduced to adapting the components of these systems responsible for content management to local languages and cultural specifics, as the rest of the functions are already automated.

Thus, in summarizing the literature review, it appears that there are now three main approaches to forming MAS:

1. Independent development and implementation by the business organization itself, which, as the studies mentioned show, is a rather costly and risky method;

2. Acquiring a ready-made solution, a MAP, from specialized providers, usually giants of the martech industry, which is extremely convenient (flexible), the least risky, and the most widespread method, as it does not require the company to make large investments in developing such a system (maintaining a large IT department, equipment, and risk management, etc.), except for ongoing staff training. Maintenance, security systems, service support, configuration, and adaptation to the specific needs of the customer (if necessary) fall on the shoulders of the platform provider;

3. A combination of both approaches with the corresponding advantages and risks, where MAS formation is carried out by integrating specific components (modules) from various platforms or individual applications into the company's own system. In addition, this requires the company, at both the top management level and the project leader, to have a clear understanding of what specific tasks the system should solve and, accordingly, which marketing functions should be automated and which should not.

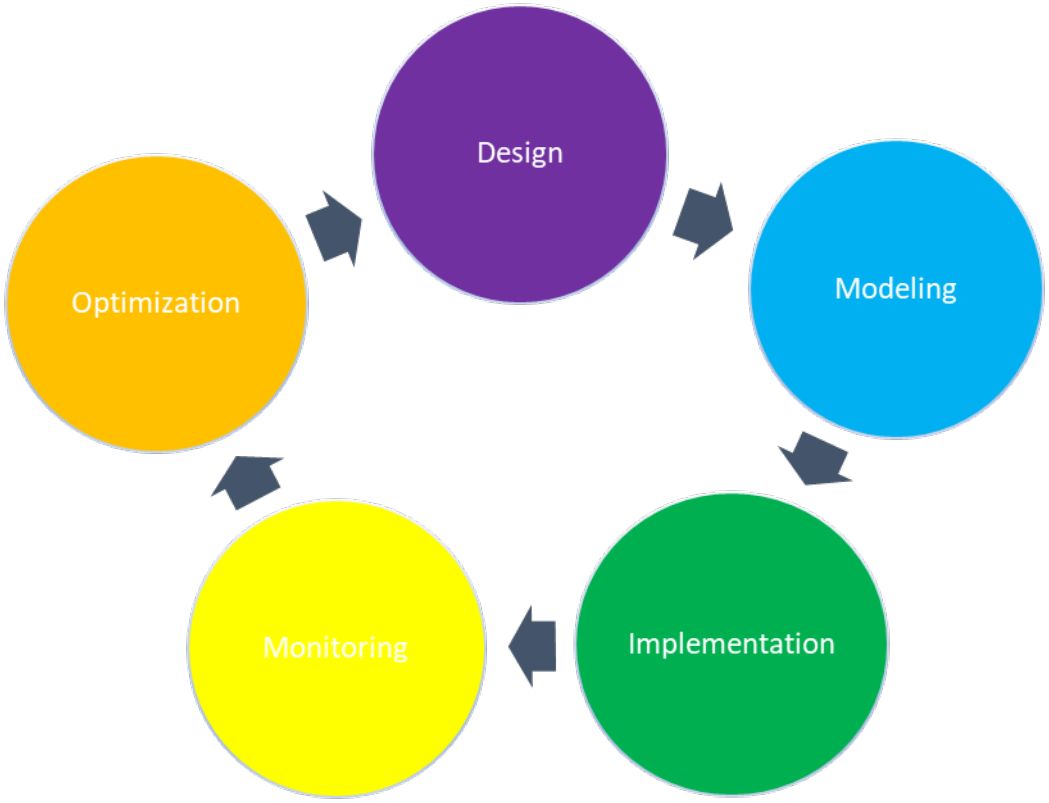
However, regardless of the MAS formation approach, it involves applying proven business process management methods. And the main such method is undoubtedly project management, as it is used to ensure that the planned activities align with the goals and objectives of the project throughout its lifecycle. This ensures clarity in the work of the teams involved in the project and adherence to the project schedule (Marketing Project Management Guide, 2023).

Overall, according to J. Heagney's classic work on project management (Heagney, 2016), a project, by its nature, is a well-planned undertaking that goes through a specific lifecycle with a defined beginning and end. This cycle allows project managers to carefully plan each task and activity to maximize the chances of success.

The process of MAS formation is essentially managed using the same project management principles common to other fields and industries. Although the details of the project implementation workflow may vary depending on technical capabilities, budget, and the team, it is undoubtedly a step-by-step process. Considering the understanding of the classical (five-step) business process management cycle (as in Fig. 1) and based on the work of various researchers (Araf, 2023; Heagney, 2016), the MAS formation project can be represented as consisting of the following stages:

- Design: This stage involves defining and analyzing various aspects of the process, from initiation, identifying key tasks, methods, tools, and technologies for MAS creation, project budget, and stakeholders (people,

technical support, and specific modules) responsible for tasks and functions related to this process, to forming a vision of the final state of the implementation process and approval.



Source: developed by the author

Fig. 1. **Management cycle of MAS formation project**

- Modeling: The creation of a marketing automation system model, in this case, can be considered a separate stage, involving the clear definition of stakeholders (project management, including the project leader, marketing director, marketing manager, or other marketing department employees and/or client managers; internal stakeholders, including top managers, heads of other departments, sales department employees, technical specialists; external stakeholders, including MAP and/or other MA software providers, freelancers (web designers and programmers, consultants), and sometimes investors, clients, or users) and their functional roles in building the system according to the tasks set, outlining its key features and functionality.
- Implementation: This stage begins when all key stakeholders have agreed on the project, a schedule has been created, and each task has been assigned to specific team members. During this stage, the project team brings the MAS launch plan to life, taking into account the need for change management and extensively using team communication tools. Additionally, the

project leader (project manager) is responsible for defining expectations regarding task execution by the team.

- Monitoring/Measurement: The collection of data (documentation) by project managers, analysts, and/or external specialists (e.g., MAP providers) regarding the effectiveness and productivity of MAS (measuring key performance indicators (KPIs), using visualization tools such as tables and charts that can be updated in real-time).
- Optimization/Adjustment: Continuous or periodic optimization of MAS operation and its components to maximize and scale efficiency, minimize costs, reduce time for implementing management or technical decisions regarding the system's operation, ensure adherence to corporate business practices, and maintain compliance with regulatory requirements.

Therefore, a review of the literature reveals that, although scholars highlight some of the most important elements of MAS, they generally focus on specific aspects of marketing automation functions, while there is still a lack of attention to the approaches, methods, and tools for MAS formation. When it comes to the impact of applying and implementing comprehensive multifunctional and integrated systems, it is undoubtedly far-reaching, especially in the case of leading martech companies, as noted by researchers. In our opinion, studying their experience in MAS formation – not only in the context of technological developments such as AI, Big Data, etc., but also the challenges of integrating the human component and relevant software in this process – should be one of the primary vectors of recent research.

Conclusions. It has been demonstrated that the issue of developing Marketing Automation Systems (MAS) is gradually transcending the boundaries of corporate business activities and becoming a subject of academic research. However, current professional studies predominantly focus on specific aspects of marketing automation (MA) functions, which are potentially considered as components of a comprehensive MAS. While the trend in research is gradually shifting towards the development of a comprehensive technological architecture for MA functions – one that enables the integration of various functions on a unified software platform to automate the entire marketing complex (evident in the trend towards the formation of multifunctional MAS, with Marketing Automation Platforms (MAP) being the most common form) – there is still a lack of studies that examine the approaches, methods, and tools for MAS formation.

Nevertheless, the existing body of literature allows us to identify three main practical approaches to MAS formation: independent development and implementation by the business organization itself; the acquisition of a ready-made solution, such as a MAP, which is the least risky and most common method of MAS formation; and a combination of both approaches, with their

corresponding advantages and risks, wherein MAS formation is achieved through the integration of specific components (modules) from various platforms or third-party applications into the organization's own system.

It has been shown that regardless of the approach to MAS formation, the primary method employed is project management, which allows the relevant process to be modeled as a five-stage business process management cycle consisting of the following phases: design (defining and analyzing various aspects of the process); modeling (creating the expected MAS model, including its structure, components, stakeholders, and their functional roles); implementation (executing the plan for launching MAS with consideration for change management); monitoring/measurement (documenting the progress of the project and assessing its effectiveness and productivity); and optimization/adjustment (undertaking periodic optimization of MAS operations and its components).

REFERENCES:

A Quick Start Guide to Business Process Management for the Enterprise. *Agile Point.* URL: https://www.agilepoint.com/insights/business-process-management/a-quick-start-guide-to-business-process-management-for-the-enterprise.

Agüera, M. (2019). Understanding E-Marketing Strategies. *Handbook of Research on Entrepreneurship and Marketing for Global Reach in the Digital Economy.* L. C. Carvalho, P. Isaías (eds). Hershey: IGI Global. P. 383–417.

Araf, S. (2023). The Role of Artificial Intelligence in Marketing Project Management. Master's Thesis. Degree Programme and place of study: MBA. Vaasa: Novia University of Applied Sciences. 68 p. URL: https://www.theseus.fi/bitstream/handle/10024/817570/Sayem_Araf.pdf?sequence=2.

Berghofer, F., Hofbauer, G., Sangl, A. (2018). Indicators to choose a suitable marketing automation platform. *International Journal of Management Science and Business Administration,* 4 (3): 52–60. URL: http://dx.doi.org/10.18775/ijmsba.1849-5664-5419.2014.43.1006.

Brand, J., Israeli, A., Ngwe, D. (2023). Using LLMs for Market Research. *Harvard Business School Marketing Unit Working Paper,* 23-062. URL: http://dx.doi.org/10.2139/ssrn.4395751.

Dew, R., Ansari, A., Toubia, O. (2022). Letting logos speak: Leveraging multiview representation learning for data-driven branding and logo design. *Marketing Science,* 41(2): 401–425. URL: https://doi.org/10.1287/mksc.2021.1326.

Hassandoust, F., Techatassanasoontorn, A. A., Tan, F. B. (2016). Factors influencing the infusion of information systems: A literature review. *Pacific Asia Journal of the Association for Information Systems*. 8 (1): 1–32.

Heagney, J. (2016). Fundamentals of Project Management. 5th ed. New York: American Management Association.

Jansen, T., Heitmann M., Reisenbichler M., Schweidel D. A. (2023). Automated Alignment: Guiding Visual Generative AI for Brand Building and Customer Engagement. URL: https://ssrn.com/abstract=4656622.

Järvinen, J., Taiminen, H. (2016). Harnessing marketing automation for B2B content marketing. *Industrial Marketing Management,* 54: 164–175. DOI: 10.1016/j.indmarman. 2015.07.002.

Lampinen, A. (2018). Utilising marketing automation to support sales in digital business-to-business environment. Master's Thesis. Master´s Degree Marketing. Jyväskylä: University of Jyväskylä. URL: https://jyx.jyu.fi/bitstream/handle/123456789/59743/ URN%3ANBN%3Afi%3Ajyu-201810034311.pdf?sequence=1.

Lin, A., Chang, T. H., Fu H. P., Yeh H. P., Hsu K. Y., Tsai H. Y. (2018). Analysis of the CSFs affecting project execution: A case application. *Total Quality Management & Business Excellence,* 29 (7–8): 848–865. DOI: 10.1080/14783363.2016.1245581.

Marketing Project Management Guide: Expert Tips, Workflows, and Skills. *Smartsheet,* 2023. URL: https://www.smartsheet.com/content/marketing-project-management.

Mero, J., Tarkiainen, A., Tobon, J. (2020). Effectual and causal reasoning in the adoption of marketing automation. *Industrial Marketing Management,* 86: 212–222.

Murphy, D. (2018). Silver bullet or millstone? A review of success factors for implementation of marketing automation. *Cogent Business & Management,* 5 (1). DOI: 10.1080/23311975.2018.1546416.

Pardillo, J. C. (2019). Marketing Automation. Oakville: Society Publishing.

Salmi, M. (2020). Aligning Marketing and Sales – The Case of Marketing Automation in Finnish B2B Companies. Master's Thesis. Master's Degree Programme in Economics and Business Administration/Marketing. Tampere: Tampere University. URL: https://trepo.tuni.fi/bitstream/handle/10024/119219/SalmiMiikkael.pdf.

Silva, S., Corbo, L., Vlačić, B., Fernandes, M. (2023). Marketing accountability and marketing automation: evidence from Portugal. *EuroMed Journal of Busines*s. 18 (1): 145–164.

Sorgenfrei, C., Ebner, K., Smolnik, S., Jennex, M. E. (2014). From acceptance to outcome: Towards an integrative framework for information technology adoption. *Proceedings of the European Conference on Information Systems* (ECIS). URL: https://www.researchgate.net/publication/262584496_From_acceptance_to_outcome_Toward s_an_integrative_framework_for_information_technology_adoptio.

Stone, M., Aravopoulou, E., Stott, R., Parnell, B. D., Machtynger, J., Foss, B., Machtynger, L. (2021). The evolution of business models of information and communication technology suppliers. *The Bottom Line*. 34 (1): 1–19.

Stone, M., Woodcock, N. (2021). Developments in B to B and B to C Marketing and Sales Automation Systems. *Journal of Business-to-Business Marketing*. 28(2): 203–222. DOI:10.1080/1051712X.2021.1920702.

Tiitola, R. (2022). The impact of marketing automation software on international marketing efficiency. Master's Thesis. Master´s Degree Science in Economics and Business Administration. Vaasa: University of Vaasa. URL: https://osuva.uwasa.fi/bitstream/handle/ 10024/14766/Master's%20thesis%20Tiitola.pdf?sequence=2.

Tobon, J. (2017). Marketing automation adoption in B2B companies. Master's thesis. Master´s Degree Programme in International Marketing Management. Lappeenranta: Lappeenranta University of Technology. URL: https://lutpub.lut.fi/bitstream/handle/10024/ 147578/Masters_Thesis_Tobon_Juliana.pdf?sequence=1&isAllowed=y.

Wood, C. (2015). Marketing automation: Lessons learnt so far…. *Journal of Direct, Data and Digital Marketing Practice,* 16 (4): 251–254. DOI:10.1057/dddmp.2015.31.

Voitovych, S., Lorvi, I., Bukalo, N. (2022). Zastosuvannia CRM-tekhnolohii dlia avtomatyzatsii protsesiv vzaiemodii iz spozhyvachamy zakladu posluh [Application of CRM

technology to automate processes of interaction with consumers of the service establishment]. Ekonomichnyi forum = *Economic Forum*, 4: 68–73. DOI:10.36910/6775-2308-8559-2022-4-8 [in Ukrainian].

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