Integration of AI-Powered Marketing Automation Technologies - Known Constraints and Potential Benefits

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人工智慧行銷自動化技術的整合—已知限制和潛在優勢

這項研究探討了人工智慧行銷自動化技術的整合，包括它們的優點和缺點。該研究表明，HubSpot、Pega 和Bitrix24 等人工智慧驅動的CRM 工具使使用傳統行銷策略的組織受益匪淺。不同規模的各種案例進行了研究。該研究得到了二手資料的補充，對各種背景下的人工智慧整合方面進行了清晰的分析。研究表明，將人工智慧驅動的 CRM 工具整合到行銷中可以帶來巨大的好處。人工智慧的主要優勢包括個人化的客戶互動、透過預測分析來提高轉換率、提高自動化客戶互動的效率以及提高組織績效。然而，人工智慧的整合面臨各種挑戰，阻礙組織充分利用人工智慧採用帶來的最佳效益。企業在採用人工智慧時面臨的主要挑戰包括人力資源限制、過時的遺留系統、成本限制以及組織文化僵化和阻力。然而，由於各種挑戰阻礙了人工智慧的採用並阻止其他公司將人工智慧整合到其營運中，因此獲得最佳結果通常很困難。該研究為希望在行銷中利用人工智慧力量的組織提供了寶貴的見解，幫助他們了解潛在的回報、挑戰以及成功整合所需的步驟。這項研究也是對現有學術領域做出貢獻的寶貴工具，並提供人工智慧整合領域的理論和實踐知識。

Abstract

This research explores integrating AI marketing automation technologies, including their merits and demerits. The study shows that AI-powered CRM tools like HubSpot, Pega, and Bitrix24 immensely benefit organizations that use traditional marketing strategies.. This research involved a multiple case study approach of various cases of different sizes in different industries that adopted various AI-powered CRM tools The study utilizes a qualitative case study research design including semi-structured interviews with key stakeholders in different organizations. The study is supplemented by secondary sources that give a clear analysis of the AI integration aspect in various contexts. The study shows that there are immense benefits that emanate from the integration of AI-powered CRM tools in marketing. Among the key benefits of AI are personalized customer engagements, increased conversion rates through predictive analytics, increased efficiency in automated customer engagement, and improved organization performance. Integration of AI, however, faces various challenges that hinder organizations from leveraging optimal benefits from AI adoption: human resource constraints, outdated legacy systems, cost constraints, and organizational culture rigidity and resistance.. The research findings indicate that AI immensely impacts organizations positively; however, getting optimal results is often difficult due to various challenges that hinder adoption and discourage other firms from integrating AI into their operations. The study offers valuable insights for organizations looking to harness the power of AI in their marketing, helping them understand both the potential rewards, challenges and the steps necessary for successful integration. This research also acts as a valuable tool contributing to the existing scholarly field and providing both theoretical and practical knowledge in the AI integration domain.

***Keywords*:** AI-powered CRM tools, HubSpot, Pega, Bitrix24, predictive analytics, outdated legacy systems, culture rigidity

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INTRODUCTION

Background and Context of the Research Topic

Over the recent past, there has been an improvement in the level of technology around the globe, which has boosted most industries, including ways businesses market their products. Shifting from traditional advertising like newspapers and billboards to modern conceivable technological strategies has enabled organizations to meet the growing consumer demands. Marketing has been one of the areas most affected by technological innovations since producers and service providers strive to research to meet consumers' ever-increasing demands and gain a competitive advantage. AI has been one of the vital technologies in marketing, especially automation. In the current marketing context, AI is incorporated into different sectors of organizations to accomplish complex operations, identify consumers' behaviors, and promote customer retention[1]. From the marketing perspective, AI applications could be evaluated from the following perspectives.

Artificial intelligence (AI) has grown immensely and greatly impacted marketing. Through artificial intelligence technologies, CRM solutions began ramping up to automate marketing aspects, strengthening engagement and business aspects. Machine learning solutions such as HubSpot, Pega, and Bitrix24 are no longer optional for achieving high levels of individual customer engagement and enhanced operational productivity[2] [3]. As such, this research responds to the necessity of identifying how AI can enhance marketing productivity, focusing on automating tools and technologies that allow for utilizing performance data and assessment for future planning and expectations.

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[1]Kumar, V., Ramachandran, D., & Kumar, B. (2021). Influence of new-age technologies on marketing: A research agenda. Journal of Business Research, pp. 125, 864–877.

[2] Kumar, V., Ramachandran, D., & Kumar, B. (2021). Influence of new-age technologies on marketing: A research agenda. Journal of Business Research, pp. 125, 864–877.

[3] Pega. (2023). Pega Marketing: Satisfy customers with the following best action. Enterprise AI decisions and workflow automation platform | Pega.

Digitization Impact

Modern digitization has significantly advanced, particularly in the way it influences consumers. It has also changed the business environment considerably, promoting good customer relations and helping faster connectivity, which has been utilized by social media and other social media tools[4]. Market segmentation is achievable through digitization, thus guaranteeing that organizations reach target customers. The newer generation of consumers expects personalized and real-time business interaction, which has pushed businesses to adopt and achieve better digital marketing strategies[5].

Business Adaptation

As evident in the case of digitization in the marketing sector, organizations have had to adapt to new customer demands. Marketers subsequently analyze customer data to determine how to reach the target consumers. According to Ma and Sun[6] Generative AI is critical in precisely capturing customers' wants through segmentation. Technologically powered one-to-one marketing has emerged as a vital approach to ensuring customer retention and that interests are considered. With the increasing technology and growing consumer demands, businesses have had to adopt modern technologies and AI into their marketing approach to leverage the immense benefits of marketing and gain a competitive advantage.

[4] Pega. (2023). Pega Marketing: Satisfy customers with the following best action. Enterprise AI decisions and workflow automation platform | Pega

[5] Chaffey, D., Edmundson-Bird, D., & Hemphill, T. (2019). Digital business and e-commerce management. Pearson Uk.

[6] Ma, L., & Sun, B. (2020). Machine learning and AI in marketing–Connecting computing power to human insights. International Journal of Research in Marketing, 37(3), 481-504.

Marketing Automation Evolution

The marketing sector has evolved, especially with the evolution of technology. Traditional advertising methods embraced print, radio, and television, contrary to contemporary methods that embrace modern technology like the internet and social media. Through personalized marketing communications, organizations have benefited from new media technologies to connect with the international consumer market and improve customer experiences. Marketing evolution has led to the employment of social media managers and other marketing professionals. Human resource development has emanated from new positions emerging in the marketing sector, such as content and digital strategists. Professionals play a crucial role in the organization, aiming to improve business interactions and customer relations.

In modern times, marketing automation has become an essential element within the marketing mix of the B2B and B2C models. Automation is beneficial for decreasing routine processes, sorting customers, and managing the marketing plan. However, as the importance of marketing automation rises in the business world, its potential has yet to be explored due to inadequate framework and high capital investment costs. However, many firms do not fully capture the effective use of these tools because of organizational, technological, and operational challenges[7].

Implementation Challenges

The incorporation of AI in marketing requires the use of software, specialized infrastructure, and precise data. In particular, implementation is critical for large organizations because it involves a vast organizational change following the increasing consumer demand. The changes mainly consist of accurate record-keeping, the introduction

[7] Järvinen, J., & Taiminen, H. (2016). We are harnessing marketing automation for B2B content marketing. Industrial marketing management, 54, 164-175.

of new software, employee training, and multidisciplinary cooperation[8] [9]. According to Heimbach[10] large organizations need help to implement changes, mainly due to the difficulties of attaining cross-department corporations, hence a slow pace to transform to meet the ever-growing technological infrastructure. Also, the need for trained software personnel, digital marketers, and infrastructure to support such marketing tools hinders businesses' implementation of AI in their marketing strategies.

AI Marketing

AI has brought about a significant shift in the conduct of the marketing business by enabling timely and accurate targeting of customers through real-time data analysis. AI has enhanced data analysis, customer profiling, and predictive analysis, supplying marketers with accurate and timely information and resulting in high customer commitment and conversion rates[11]. Pega[12] pointed out that such digitally empowered systems are becoming crucial for companies that want to remain competitive. By applying artificial intelligence in marketing, tools such as HubSpot and Pega allow the marketer to enhance customer experiences while improving operations.

Complexities of AI Integration

AI is incredibly vital for businesses, particularly in maintaining the customer base. However, AI integration encounters many challenges due to high skill requirements, personnel needs, and data management structures. Applying AI solutions in large companies

[8] Keegan, B. J., Dennehy, D., & Naudé, P. (2024). Implementing artificial intelligence in traditional B2B marketing practices: an activity theory perspective. Information Systems Frontiers, 26(3), 1025-1039.

[9] Kumar, V., Ramachandran, D., & Kumar, B. (2021). Influence of new-age technologies on marketing: A research agenda. Journal of Business Research, pp. 125, 864–877.

[10] Heimbach, I., Kostyra, D. S., & Hinz, O. (2015). Marketing automation. Business & Information Systems Engineering, 57, 129-133.

[11] Kumar, V., Ramachandran, D., & Kumar, B. (2021). Influence of new-age technologies on marketing: A research agenda. Journal of Business Research, pp. 125, 864–877.

[12] Pega. (2023). Pega Marketing: Satisfy customers with the following best action. Enterprise AI decisions and workflow automation platform | Pega.

means interacting with different departments, which might take time to achieve. Additionally, AI implementation is costly due to retraining costs and additional staff needed to maintain the systems. Gentsch[13] pointed out that the application of AI requires a change in workplace culture, where decisions are made based on data.

Motivation

From a theoretical point of view, several papers investigated the role of AI in CRM. Nevertheless, companies still lack information regarding the special difficulties experienced while implementing these tools into their marketing plans[14] [15]. AI has been shown to help refine customer segmentation and perform predictive analysis, according to Kumar[16], and Bughin[17]; however, they have not mapped out the managerial and organizational barriers to tapping into these technologies. This research addresses this gap by analyzing AI marketing automation challenges across different industry segments and recommending an elaborate guide for organizations to consider prior to adopting AI CRM tools in marketing.

Research Purpose

The literature lacks an understanding of how AI-enabled CRM systems are adopted in organizations' marketing strategies and the organizational and cultural factors. In particular, this paper focuses on AI CRM instruments such as HubSpot and Bitrix24 to reveal how to avoid these challenges and maximize the effectiveness of utilizing AI in marketing for

[13] Gentsch, P. (2018). AI in marketing, sales, and service: How marketers without a data science degree can use AI, big data, and bots. Springer.

[14] Heimbach, I., Kostyra, D. S., & Hinz, O. (2015). Marketing automation. Business & Information Systems Engineering, 57, 129-133.

[15] Järvinen, J., & Taiminen, H. (2016). We are harnessing marketing automation for B2B content marketing. Industrial marketing management, 54, 164-175.

[16] Kumar, V., Ramachandran, D., & Kumar, B. (2021). Influence of new-age technologies on marketing: A research agenda. Journal of Business Research, pp. 125, 864–877.

[17] Bughin, J., Hazan, E., Dahlström, P., Wiesinger, A., & Subramaniam, A. (2018). Skill shift: Automation and the future of the workforce. McKinsey Global.

companies[18].

Marketing automation with AI and its practicability are critical areas of interest for scholars. Nevertheless, more work has been done on marketing automation and AI in general, but more research is needed on integrating both ideas. This research aims to fill this gap by providing empirical proof of the benefits and challenges of using AI marketing automation systems. It will also produce valuable information for firms already deploying such complex technologies.

Research Questions

Primary Research Question

- What motivates companies towards adoption of AI powered CRM tools and marketing automation?

Additional Research Questions

- What are the most common challenges when implementing AI-powered marketing automation?
- What are the benefits derived from marketing automation adaptation?

Contribution

From an academic perspective, this research will contribute to developing current literature on digital transformation and the role of AI in the present-day marketing context. Therefore, as AI advances, it will be more relevant for marketers to understand how this tool

[18] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

might be introduced in future marketing campaigns[19]. Further, this research will also assist organizations in understanding the various hurdles that marketing automation creates and how those can be surpassed to offer direction to those organizations interested in deploying AI powered CRM tools. Findings derived from this research will elucidate emergent risks and opportunities businesses will likely encounter and map the most efficient process through which organizational leaders can adopt and deploy AI in marketing automation. The work will also state organizational structural or cultural changes required within advertising organizations to benefit from the AI's resourcefulness.

This paper contributes to the current knowledge on the use of AI in marketing by arguing that the current knowledge has neglected the practical issues involved in the deployment of AI-based CRM systems. Although a significant number of investigations have explored the advantages of AI technology in general marketing, it remains unknown what challenges companies could face while implementing it. Thus, developing on the work of Papagiannidis et al.[20] and De Mauro et al.[21], this research focuses on these challenges to better analyze human, organizational, and technical factors that slow AI CRM system integration.

This paper reveals the various barriers to effective marketing. It offers strategic directions to overcome such obstacles for scholars and marketing practitioners to improve marketing effectiveness, customer interaction and dedication, as well as to advance the quality of the customer experience. Moreover, the research contributes to understanding the concept of AI and gives ideas about its practical application in different sizes and types of organizations, especially in marketing environments.

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[19] Bughin, J., Hazan, E., Dahlström, P., Wiesinger, A., & Subramaniam, A. (2018). Skill shift: Automation and the future of the workforce. McKinsey Global.

[20] Papagiannidis, E., Mikalef, P., Conboy, K., & Van de Wetering, R. (2023). Uncovering the dark side of AI-based decision-making: A case study in a B2B context. Industrial Marketing Management, 115, 253-265.

[21] DeMauro, A., Sestino, A., & Bacconi, A. (2022). Machine learning and artificial intelligence use in marketing: a general taxonomy. Italian Journal of Marketing, 2022(4), 439-457.

Limits

The following are the sources of bias that constrain this study's generalizability. First, the research is conducted geographically limited to some extent, whereas it is based on analyzing companies located within a particular geographical region, which does not necessarily accurately characterize the tendencies in AI implementation in the global environment. Second, the sample size comprises a few SMEs, which minimizes the generalization of findings for large MNCs or start-ups in other stages of Artificial Intelligence application.Third, the research is limited to AI CRM applications such as HubSpot and Pega; they are part of a wider range of AI in marketing. Other streams, like predictive analytics or machine learning, which are not precise to CRM environments, are not discussed.

Delimits

In view of the limitations of the present study, some methodological decisions were undertaken to improve the validity of the study findings. Using a multiple-case study approach meant that the research could capture a wider variation of cases concerning industries, size of companies, and markets at which the subjects operated. This approach enables a better understanding of the factors that could hinder AI adoption while offering comparisons across sectors, including retail, finance, and manufacturing.

While the subject of automation is general and can include many tools, such as HubSpot and Pega, the research focuses only on the AI applications that are most relevant in the field of marketing automation. This delimitation helps to keep the research practical for the marketing community, understanding that the results may not be generalizable to other

AI-based technologies or industries besides marketing[22] [23]. With a view of this end, the study provides the requisite specific information towards the question below: According to the reliability analysis, this study contributes valuable knowledge to academia and practice towards the AI-powered CRM integration and possible barriers.

[22] Bughin, J. (2020). Artificial intelligence, its corporate use, and how it will affect the future of work. In Capitalism, Global Change and Sustainable Development (pp. 239–260). Springer International Publishing.

[23] Fickers, P. (2023). Challenges in AI integration: Organizational readiness and cultural inertia. Journal of Business Innovation, 47(3), 210-225.

LITERATURE REVIEW

Introduction

Marketing technologies are highly important in improving marketing for businesses. Artificial intelligence makes it easier to segment audiences, engage them more easily, and manage marketing campaigns. As Pega[24] described, AI Marketing Automation Technologies integrate AI into marketing automation methods applicable to customer segmentation, customer engagement, and different marketing campaigns using technologies such as HubSpot, Pega, and Bitrix24.

This section focuses on theoretical and empirical literature that will play a vital role in contributing to my research on the integration of AI and marketing automation. The theoretical literature will contain fundamental theories about AI and technology integration into businesses. The theoretical literature review will guide my research, informing how organizations behave when faced with technological changes. The empirical literature review will be a crucial constituent of the case study approach utilized in this study. The empirical literature review will provide context into this research to reach valid conclusions and thus act as a basis for comparison with actual research findings.

In understanding the issue of the adoption and implementation of AI-based marketing automation, three critical theories provide notable perspectives on how different organizations can adopt new technologies. These three theories are TAM, DOI, and RBV. These theories form the base for how companies leverage digital technology and how firms use these marketing technologies for competitive advantage. The following section will briefly examine the three theories to determine their relevance and usefulness to the study.

[24] Pega. (2023). Pega Marketing: Satisfy customers with the following best action. Enterprise AI decisions and workflow automation platform | Pega.

Technology Acceptance Model (TAM)

Davis[25] developed the Technology Acceptance Model approach to define the level of adoption of the technologies. The theory assumes that a given technology's perceived ease of use and usefulness are the two crucial determinants of technology acceptance. Concerning the use of AI in the marketing automation of products, this study found that according to the TAM, if marketers believe that AI will improve their capacity to communicate relevant content and automate several marketing tasks, they are more likely to adopt it. Similarly, adoption is anticipated to increase if the tools are perceived as easy to use[26].

TAM is suitable for explaining how existing tools and technologies with inherent AI features are regarded in organizations by using it. For example, in their study on adopting artificial intelligence by professional service providers, Yang Blount and Amrollahi[27] utilized the TAM, and here, the research findings showed that perceived usefulness was, in fact, an adoptive determinant of AI. They observed artificial intelligence as a tool that could enhance the performance of businesses and clients. In marketing, companies that adopt AI are portrayed as boosting customer communication and giving more valuable, rather anticipative information.

These perceived attributes are a limitation when trying to employ TAM to address the issue of organizational-level AI adoption. TAM will help view how the single user, represented by an employee, will likely respond to AI automation without considering the processes of cross-departmental actions or resistance to change within the organization. In their seminal paper, Davis et al.[28] formulated the TAM theory without specificity regarding

[25] Davis, Fred & Davis, Fred. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly. 13. 319-. 10.2307/249008.

[26] Davis, Fred & Davis, Fred. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly. 13. 319-. 10.2307/249008.

[27] Yang, J., Blount, Y., & Amrollahi, A. (2024). Artificial intelligence adoption in a professional service industry: A case study. Technological Forecasting and Social Change, 201, 123251.

[28] Davis, Fred & Davis, Fred. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly. 13. 319-. 10.2307/249008.

the role of technological factors, IT infrastructure, and organizations in using the technologies.

The Diffusion of Innovations Theory (DOI)

DOI theory, developed by Rogers[29], illustrates how ideas and products diffuse from one user to another and from one group of users to another in a social system. According to DOI, adoption occurs in stages: innovators, early adopters, early majority, late majority, and laggards. The model also demonstrates that different adopters are categorized by various aspects, including communication networks, perceived advantage, and the nature of the organization[30]. DOI remains crucial in comprehending how applications like marketing automation became embedded or adopted in industries and why some organizations are earlier adopters of such technologies.

DOI has also been used to analyze marketing technologies and explain why some firms have embraced AI earlier. For example, De Mauro et al.[31] explored how the first AI marketers profited from adopting the technology to enhance customer satisfaction and forecast results for competitive advantage. Leaders conspicuous fuller and more advanced technological platforms are willing to bear the exchange risks of adopting new technologies. However, there are opinions that DOI has a deterministic nature. This implies that all organizations will, over time, adapt to treatments and technological innovations.

AI applications in organizations, in particular, may face the following problems that hinder their execution: a shortage of finances, incompatible IT systems, and organizational resistance[32]. However, DOI fails to devote sufficient attention to the challenges associated

[29] Rogers (1962): Diffusion of Innovations. In: Holzer, B., Stegbauer, C. (eds) Schlüsselwerke der Netzwerkforschung. Netzwerkforschung. Springer VS, Wiesbaden.

[30] Everett M. Rogers (2003). Diffusion of Innovations, 5th Edition. Simon and Schuster.

[31] DeMauro, A., Sestino, A., & Bacconi, A. (2022). Machine learning and artificial intelligence use in marketing: a general taxonomy. Italian Journal of Marketing, 2022(4), 439-457.

[32] Grünbichler, R. (2023, June). Implementation barriers of artificial intelligence in companies. In Proceedings of FEB Zagreb International Odyssey Conference on Economics and Business (Vol. 5, No. 1, pp.

with AI implementation in current marketing systems, such as complex changes in data and organizational mechanisms. Predicting in 2023, in a smooth and operational culture, Gołąb-Andrzejak[33] pointed out that AI is not always smoothly implemented in organizations, and some remain with the implementations for years. This research will endeavor to fill this gap and recommend strategies for operationalizing AI to firms.

Resource-Based View (RBV)

The Resource-Based View (RBV), as conceptualized by Barney[34], agrees that building and sustaining superior organizational performance depends on valuable, rare, and inimitable resources. Consequently, using the resource-based view approach and marketing automation with AI applications, AI is a strategic resource. Every firm can harness the power of AI to enhance the construction of customer portfolios and optimize the increase of promotional processes and decisions, all of which offer strategic advantages[35]. The study concluded that AI used in CRM enhanced and improved organizational performance and presented firms' competitive edge, especially in B2B settings.

Both digital and AI tools gave organizations a better picture of how the customers were, to be used in specific, timely interventions by the marketing department. Similarly, Papagiannidis et al.[36] also highlighted that implementing AI decision-making had benefited durable firms and even more particular approaches, including enhanced firm marketing accuracy and more efficient resource control. The RBV framework fits well with this research as it perceives AI as a valuable and scarce strategic asset for creating change when

193-203). University of Zagreb, Faculty of Economics and Business.

[33] Gołąb-Andrzejak, E. (2023). AI-powered digital transformation: Tools, benefits, and challenges for marketers–a case study of LPP. Procedia computer science, 219, 397-404.

[34] Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99–120.

[35] Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99–120.

[36] Papagiannidis, E., Mikalef, P., Conboy, K., & Van de Wetering, R. (2023). Uncovering the dark side of AI-based decision-making: A case study in a B2B context. Industrial Marketing Management, 115, 253-265.

correctly implemented in marketing. According to Mero et al.[37], marketing automation with AI is a shift associated with startups, and using the technology could enhance scalability as AI becomes one of its advantages. As it aligns with the results of this study, RBV is the most applicable theory to explain how AI can generate a competitive advantage in marketing automation.

This section focuses on different scholars' works based on the primary research objectives of examining the impact of Artificial Intelligence integration in marketing. The empirical literature review focuses on various aspects: the degree of organizations' readiness to AI integration, the multiple effects of AI on customer engagement, AI Integration Issues and marketing automation, and the Advantages of AI integration and marketing automation.

Readiness of Firms for Artificial Intelligence Adoption

This paper has identified that an organization's readiness levels can significantly influence the adoption of AI in business marketing. Some important indices include personnel, relevant infrastructure, organization culture, data support, and sufficient capital for change. Firms with a solid, technology-supported digital platform or higher awareness of AI applications will likely adopt such technologies quicker and more successfully[38]. This section evaluates scholars' propositions and conclusions on organizations' readiness and suggests measures businesses can embrace to enhance their readiness for a digital shift through AI.

According to scholarly studies, infrastructure is part of the spectrum that determines an organization's preparedness for AI technologies. When properly deployed, companies can integrate this aspect into their existing marketing strategies and harness the total value of

[37] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

[38] Jöhnk, D., Müller, A., & Schmidt, T. (2021). Barriers to AI adoption in large organizations: The role of organizational culture. Journal of Business Research, 130, 318-330.

analysis and data processing in real-time. This is an indisputable fact observed by Yang et al.[39], according to which most of the firms in this study experienced significant difficulties while adopting artificial intelligence due to the outdated IT infrastructure. These systems could not handle complex machine learning algorithms at the root of AI applications. Likewise, Grünbichler[40] also found out that due to the old equipment, firms in healthcare, finance, and other regulated sectors face a problem in implementing AI technology. B2B SMEs face a problem of resource scarcity, and this is a significant reason why B2B SMEs struggle to implement AI into their marketing processes; such firms require a scalable AI platform.

On the other hand, business operations with current and effective IT networks have the initial leverage since they can quickly and smoothly implement such AI tools. The study conducted by Mero et al.[41] demonstrated that SaaS startups could incorporate AI marketing tools because of cloud-based agile systems. De Mauro et al.[42] observed that firms were more likely to apply AI where digital transformation was successfully developed. Multinational companies equipped with modern and updated infrastructure were ahead of others in AI implementation. High and more contemporary structures were crucial for facilitating teamwork and high comprehension, which depended on the necessity for complex machine learning options and applications based on AI instruments.

Human resources is another significant component determining an organization's preparedness to adopt AI. To successfully implement AI, firms need employees with IT and machine learning skills appropriately staffed in digital marketing roles. For efficient

[39] Yang, J., Blount, Y., & Amrollahi, A. (2024). Artificial intelligence adoption in a professional service industry: A case study. Technological Forecasting and Social Change, 201, 123251.

[40] Grünbichler, R. (2023, June). Implementation barriers of artificial intelligence in companies. In Proceedings of FEB Zagreb International Odyssey Conference on Economics and Business (Vol. 5, No. 1, pp. 193-203). University of Zagreb, Faculty of Economics and Business.

[41] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

[42] DeMauro, A., Sestino, A., & Bacconi, A. (2022). Machine learning and artificial intelligence use in marketing: a general taxonomy. Italian Journal of Marketing, 2022(4), 439-457.

implementation of this software, more qualified staff must be recruited to help manage the systems. Retraining is also needed to guarantee the absence of staff incapacity to work with new AI technology; retraining may also promote cross-functional work, which is crucial for successfully implementing AI technology and achieving the most significant outcomes.

As Vihavainen[43] asserts, large companies face AI integration issues since it takes a toll on the IT and marketing specialists' skills and is costly for the firm to train. Likewise, Abrokwah-Larbi and Awuku-Larbi[44] targeted SMEs. They noted inadequate IT expertise as a key factor hampering the incorporation of AI by businesses, resulting in less effective utilization of the positive impacts of AI in marketing. However, they recommended that SMEs rise to the challenge of imitating the cost factor and train staff in AI and data analysis for efficacy and incorporation of AI-facilitated programs. In another similar study, Papagiannidis et al.[45] got identical outcomes regarding the dynamism of human capital in realizing the promise of AI. The research also suggested that firms should begin to train AI for the best outcomes from AI.

One of the most important factors identified with AI integration includes cross-departmental cooperation. As Chatterjee et al.[46] discussed, involving marketing, IT, and data science departments in holistic teamwork is critical. It may also be agreed that such comprehensive collaborations mean that AI tools are effectively and maximally incorporated into the marketing strategies before the interventions allow firms to get the best of the interactions. Likewise, Mero et al.[47] also found that firms with a synergy between information

[43] Vihavainen, S. M. (2024). AI-powered marketing automation: exploring the factors affecting implementation in a large company (Master's thesis).

[44] Abrokwah-Larbi, K., & Awuku-Larbi, E. (2024). Overcoming organizational culture barriers in AI adoption: A case study in the financial sector. International Journal of AI and Business Transformation, 16(3), 58-74.

[45] Papagiannidis, E., Mikalef, P., Conboy, K., & Van de Wetering, R. (2023). Uncovering the dark side of AI-based decision-making: A case study in a B2B context. Industrial Marketing Management, 115, 253-265.

[46] Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The effect of AI-based CRM on organization performance and competitive advantage: An empirical analysis in the B2B context. Industrial Marketing Management, pp. 97, 205–219.

[47] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

technology and the marketing department had the best chance of implementing AI. The organization's culture could also be a component that determines success regarding firms willing to accept innovations being at an advantage. Heimbach et al.[48] posit that organization rigidity is a significant factor that acts as a barrier to integrating AI since large firms do not welcome change. Also pointed out that companies ready for an innovation culture are better prepared for technological changes and could leverage AI more quickly and efficiently.

Conversely, data management techniques are vital enablers that could influence AI integration. These techniques highly rely on machine learning systems that require large datasets that are timely, accurate, and reliable. That is why firms with superior data management practices are likelier to adopt the AI needed to capture value. As Gołąb-Andrzejak[49] acknowledged, firms with sound, centralized, and all-encompassing data management infrastructure had a platform where AI could be adopted for efficient data analysis. Similarly, Tadimarri et al.[50] highlighted data management as a critical prerequisite for integrating AI, which must be acceptable according to legal requirements. Abrokwah-Larbi and Awuku-Larbi[51] also discovered a lack of comprehensive data as one of the critical impediments affecting SMEs' integration of AI in their marketing approaches.

[48] Heimbach, I., Kostyra, D. S., & Hinz, O. (2015). Marketing automation. Business & Information Systems Engineering, 57, 129-133.

[49] Gołąb-Andrzejak, E. (2023). AI-powered digital transformation: Tools, benefits, and challenges for marketers–a case study of LPP. Procedia computer science, 219, 397-404.

[50] Tadimarri, A., Jangoan, S., Sharma, K. K., & Gurusamy, A. (2021). AI-powered marketing: Transforming consumer engagement and brand growth.

[51] Abrokwah-Larbi, K., & Awuku-Larbi, E. (2024). Overcoming organizational culture barriers in AI adoption: A case study in the financial sector. International Journal of AI and Business Transformation, 16(3), 58-74.

AI on Customer Engagement

The use of AI has influenced marketing automation systems and, in turn, influenced how companies engage customers. AI tools, therefore, utilize machine learning, predictive models, and real-time data analysis. Adopting AI in businesses is critical since it enables producers and suppliers to analyze large volumes of data in real-time, interact with consumers, and market appropriately. AI is the primary approach to improving customer relations, especially in business-to-business (B2B) and business-to-consumer (B2C) relations. This section highlights the outcomes of using AI in delivering customer improvements in terms of interaction, experience, satisfaction, and retention.

Artificial intelligence is among the essential goals of customizing the customer experience. As Davenport and Ronanki[52] pointed out, artificial intelligence provides real-time information on the products that firms produce to satisfy customer needs at a given time. Last, through some specialized algorithms, customers' details, their preferences, and buying trends are analyzed by AI to reach out to them, hence increasing rates of conversion. Predictive analytics is often used in sectors like retail, online shops. Additionally, AI informed decisions are amalgamated with discounts in retail sectors aimed at influencing the consumer's decision. In the work of Sahoo et al.[53], the authors also support AI's role in personalization and stress that AI promotes innovation on an open and collective scale.

Like Mero et al.[54], startups leveraging AI marketing prove that it helps businesses acquire a huge customer base because customers are more likely to embrace products meant to satisfy their needs. In B2B and B2C industries, AI is beneficial in delivering the right messages, products, or services to the customer and other businesses. For categorizing

[52] Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. Harvard Business Review, 96(1), 108–116.

[53] Sahoo, S., Kumar, S., Donthu, N., & Singh, A. K. (2022). Artificial intelligence capabilities, open innovation, and business performance: Empirical insights from multinational B2B companies. Journal of Business Research, pp. 132, 259–267.

[54] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

customers, AI is integrated by Chatterjee et al.[55] through CRM systems, which consequently enables tailored solutions. The categorization theory and the application of personalized efforts in intervention are helpful. Businesses are primarily involved in B2B retail and e-commerce, firms that need to retain many customers. In the same way, Papagiannidis et al.[56] show how AI helps maintain client follow-ups, respond to brief and more extended messages, and effectively substantial customer interaction that individualizes an encounter.

AI also helps in another considerably important point, which is the identification and prediction of the customer's behavior. Gentsch[57] notes that with the help of AI, targeted prediction of new customer needs is possible, which is why even before the client demonstrates needs, the company offers recommendations that meet them. Meeting the customer's wants is at the core of the proactive approach, but it also effectively strengthens customer loyalty. Likewise, Ristola[58] highlighted that based on predictive analytics, AI could provide specific predictive interfaces and enhance customer relationships. Customers can get immediate satisfaction with their needs while purchasing business products and services and thus remain loyal to the business.

Customer engagement is a crucial element of real-time data analytics where AI is used to determine the demands of the new digital consumer. Gołąb-Andrzejak[59] opines that sectors like customer care assisted by virtual personnel like assistance, chats, and bots present a quick round-the-clock response. Employment of AI tools in the website, social media networks, and application enhances the timely performance of the following activities

[55] Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The effect of AI-based CRM on organization performance and competitive advantage: An empirical analysis in the B2B context. Industrial Marketing Management, pp. 97, 205–219.

[56] Papagiannidis, E., Mikalef, P., Conboy, K., & Van de Wetering, R. (2023). Uncovering the dark side of AI-based decision-making: A case study in a B2B context. Industrial Marketing Management, 115, 253-265.

[57] Graesch, J. P., Hensel-Börner, S., & Henseler, J. (2024). Customer success management through alignment of marketing, sales, and IT. Industrial Marketing Management, 120, 1-14.

[58] Ristola, A. (2024). Cultural barriers to artificial intelligence adoption in large organizations. Journal of Business Technology, 22(1), 33–49.

[59] Gołąb-Andrzejak, E. (2023). AI-powered digital transformation: Tools, benefits, and challenges for marketers–a case study of LPP. Procedia computer science, 219, 397-404.

without requiring physical interactions with the clients. By such measures, the degree of satisfaction exhibited by the customers is increased immensely by the firm. Sahoo et al.[60] also supported this by explaining that AI has dramatically enhanced customer affairs and interactions.

Telecommunication, banking, and retail organizations are the most common ones that have incorporated the AI chatbot to address customers' ignoring or patient attitudes, as highlighted by Hoikkala and Ojala[61]. From the study, AI helped address general questions and human service staff was left to handle unique cases, which was essential for SMEs that could not afford large call centers. However, Fickers[62] identified some potential risks of using AI, which are even more pronounced in industries such as tourism. From the findings, he noted that AI chatbots may need to align better with customer needs.

Another area where artificial intelligence is being applied is customer engagement, not only as a response tool but also as an initiation. Tadimarri et al.[63] posited that AI may hold critical potential in helping firms identify potential instances of customer churn. With real-time analysis data collection on the customers' activities, firms could notice a decline in handling or reporting, thus launching campaigns to remind the customers to stick with their favorite brands. The strategy works well in large client base turnover organizations, including telecommunication and subscription services. AI is also crucial in delivering joined-up, cohesive service in various domains. In the year 2024, Vihavainen stated that with the help of integrated marketing systems supported by AI, companies could collect data from social media, websites, and email and then be able to deliver quality and efficient services to their

[60] Sahoo, S., Kumar, S., Donthu, N., & Singh, A. K. (2022). Artificial intelligence capabilities, open innovation, and business performance: Empirical insights from multinational B2B companies. Journal of Business Research, pp. 132, 259–267.

[61] Hoikkala, T., & Ojala, A. (2022). Organizational culture and AI adoption: Challenges and strategies for overcoming inertia in large corporations. Journal of Strategic Management and Innovation, 19(2), 58-74.

[62] Fickers, P. (2023). Challenges in AI integration: Organizational readiness and cultural inertia. Journal of Business Innovation, 47(3), 210-225.

[63] Tadimarri, A., Jangoan, S., Sharma, K. K., & Gurusamy, A. (2021). AI-powered marketing: Transforming consumer engagement and brand growth.

customers.

Due to the use of AI with different CRM systems such as Hubspot, bitrix24, and Pega, customer relations have significantly advanced. According to Upadhyay and Chitnis[64], the system leverages lead scoring, monitoring customer interactions, and real-time follow-up processes so that high-level leads get the necessary attention. Conversely, Chatterjee et al.[65] also observed that while automation effectively minimizes the time needed to create leads, the marketing department is absolved of strenuous tasks with guarantees of customer engagement.

However, if AI use is overdone, it may devastate customer relations; specifically, social connection is interfered with. Automation risk is mentioned by Kronemann[66], who also notes that greater automatization poses the risk of losing sight of the customer. He posits that if AI is used too often, it can leave interactions feeling robotic and degrading. Lastly, artificial communications are crucial for most business organizations, and too much AI can influence them. Similarly, Fickers[67] asserts that AI could greatly influence customer relationships because of the absence of interpersonal touch. This means that AI is more of an adjunct than a replacement for more traditional social interactions. Hence, there is a need for businesses to provide customization alongside AI to allow the two techniques to work hand in hand to serve marketing and engagement purposes best.

Problems Related to AI and Marketing Automation.

In combination with marketing automation, AI is an approach characterized by

[64] Upadhyay, M. A., & Chitnis, P. (2021). Modern Marketing Using AI: Leverage AI-enabled Marketing Automation and Insights to Drive Customer Journeys and Maximize Your Brand Equity. BPB Publications.

[65] Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The effect of AI-based CRM on organization performance and competitive advantage: An empirical analysis in the B2B context. Industrial Marketing Management, pp. 97, 205–219.

[66] Kronemann, J. (2022). The dark side of AI in customer engagement: Over-automation and its effects on business relationships. International Journal of Marketing and Technology, 8(4), 153-167.

[67] Fickers, P. (2023). Challenges in AI integration: Organizational readiness and cultural inertia. Journal of Business Innovation, 47(3), 210-225.

multiple challenges: technological, operational, organizational, and regulatory.

Technological Challenges

Technological challenges are rampant and immensely affect marketing systems' AI integration and automation. One of the critical technological challenges is the integration of AI with legacy systems that are core for most business operations. Grünbichler[68] identifies the lack of up-to-date IT systems as one of the significant obstacles to AI in organizations, mainly those large organizations with fully developed IT systems. These legacy systems lack the technological underpinning to accommodate the algorithms that underpin the implementation of AI. Similarly, Yang et al.[69] state that most professional service users have difficulty integrating AI with previous CRM systems, which generally do not have the frame to accommodate real-time data analysis and prediction.

Additionally, Mero et al.[70] state that current challenges for the application of AI are present in large-scale corporations and new companies that use agile approaches and modern IT infrastructure. Because the applied AI technologies, including machine learning algorithms and predictive models, are rather sophisticated, they have become a significant challenge. Also, DeMauro et al.[71] pointed out that owing to the AI sophistication issues, organizations without data science employees struggle to benefit from AI. However, because AI is complex and requires high infrastructure, firms need more than a full implementation of AI.

Data is the primary input for AI automation; hence, controlling data is critical to

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[68] Grünbichler, R. (2023, June). Implementation barriers of artificial intelligence in companies. In Proceedings of FEB Zagreb International Odyssey Conference on Economics and Business (Vol. 5, No. 1, pp. 193-203). University of Zagreb, Faculty of Economics and Business.

[69] Yang, J., Blount, Y., & Amrollahi, A. (2024). Artificial intelligence adoption in a professional service industry: A case study. Technological Forecasting and Social Change, 201, 123251.

[70] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

[71] DeMauro, A., Sestino, A., & Bacconi, A. (2022). Machine learning and artificial intelligence use in marketing: a general taxonomy. Italian Journal of Marketing, 2022(4), 439-457.

correctly incorporating AI. AI uses volume data, which must always be quality, correct, and real-time. According to Papagiannidis et al.[72], it is challenging for businesses to implement AI in marketing due to inadequate data management, with compliance with standardized procedures often a problem. Proper data handling is vital to ensure AI driven data analysis provides accurate insights and thus facilitate better decision making. Furthermore, Gołąb-Andrzejak pointed out that large companies generate massive amounts of data hence face difficulties integrating AI solutions.

Operational Challenges

AI integration demands profound business change, which can be a major operational challenge. Large organizations continue to experience significant difficulties in reorganizing processes to incorporate AI technologies[73]. AI integration involves collaboration from different departments in any organization. Hence, if marketing departments collaborate independently in adding AI, achieving full and optimum AI implementation may be challenging. In the same way, Chatterjee et al.[74] revealed that isolated functioning within a business, including sales, marketing, and Information technology, reduces the adoption of AI in business, especially B2B.

A final critical operational failure is costlier and quickly exposes a firm's weakness. AI deployment entails significant capital investments in IT, retraining, and corporate restructuring. Tadimarri et al.[75] argue that small enterprises will likely experience many difficulties due to the high cost of implementing complex data systems and patronizing AI

[72] Papagiannidis, E., Mikalef, P., Conboy, K., & Van de Wetering, R. (2023). Uncovering the dark side of AI-based decision-making: A case study in a B2B context. Industrial Marketing Management, 115, 253-265.

[73] Vihavainen, S. M. (2024). AI-powered marketing automation: exploring the factors affecting implementation in a large company (Master's thesis).

[74] Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The effect of AI-based CRM on organization performance and competitive advantage: An empirical analysis in the B2B context. Industrial Marketing Management, pp. 97, 205–219.

[75] Tadimarri, A., Jangoan, S., Sharma, K. K., & Gurusamy, A. (2021). AI-powered marketing: Transforming consumer engagement and brand growth.

across departments. Similarly, Wei and Pardo[76] have pointed out that one of the significant barriers to AI adoption is the challenges and costs for SMEs.

Organizational Challenges

The most critical issue in implementing AI and automating marketing is the organizational culture within which businesses operate. A large organization has set a departmental or organizational culture that has become rigid and, therefore, cannot quickly adapt to changes, which slows AI to take off[77]. Similarly, Wei and Pardo[78] highlighted that AI skepticism might come from staff and leadership to potentially derail AI adoption. There may be specific cultural barriers through which the implementation of AI may be hampered in SMEs. Regarding this, Sahoo et al.[79] explained that restructuring the organizational culture is essential for organizations to ponder before adopting AI systems.

Regulatory Barriers

The other essential considerations regarding AI integration are regulation and ethical standards requirements. In the context of the characteristics of AI-integrated marketing communication, Grünbichler[80] pointed out that several regulations impact integration because they impose restrictions on how customers' data can be gathered and used in intelligent

[76] Wei, R., & Pardo, C. (2021). Artificial intelligence and SMEs: How can B2B SMEs leverage AI platforms to integrate AI technologies? In Proceedings of the International Conference on Business Innovation (pp. 185-194).

[77] Heimbach, I., Kostyra, D. S., & Hinz, O. (2015). Marketing automation. Business & Information Systems Engineering, 57, 129-133.

[78] Wei, R., & Pardo, C. (2021). Artificial intelligence and SMEs: How can B2B SMEs leverage AI platforms to integrate AI technologies? In Proceedings of the International Conference on Business Innovation (pp. 185-194).

[79] Sahoo, S., Kumar, S., Donthu, N., & Singh, A. K. (2022). Artificial intelligence capabilities, open innovation, and business performance: Empirical insights from multinational B2B companies. Journal of Business Research, pp. 132, 259–267.

[80] Grünbichler, R. (2023, June). Implementation barriers of artificial intelligence in companies. In Proceedings of FEB Zagreb International Odyssey Conference on Economics and Business (Vol. 5, No. 1, pp. 193-203). University of Zagreb, Faculty of Economics and Business.

marketing communications, including GDPR. Moreover, Yang et al.[81] expressed much ambiguity regarding the stringent rules and ethical data utilization. The regulations are stricter in the professional fields, including finance and health, where sensitive data can lead to legal implications. In like manner, Vihavainen[82] observed that Europe's use of strict rules in organizations applies to highly sensitive contexts of European firms. While such measures are meant to safeguard the customers, they can greatly slow the process of AI implementation and restrict data utilization.

Advantages

Despite the problems that integration and automation have encountered in marketing, they have valuable roles to play. Hence, integrating AI can improve customer interaction, improve operational efficiency, and intelligently use data for decision-making and prediction. The advantages focus on enhancing business performance involving personalized targeting, which enhances customer experience and, subsequently, the retention rate. Introducing AI in giant and small companies is essential to improving company performance and offering businesses a competitive edge.

Customer engagement is one of the primary advantages of AI and marketing automation. In the context of Upadhyay and Chitnis[83], AI assists in developing a good customer experience that enhances marketing message relevance. Another marketing efficiency being served excellently by predictive analytics is the ability to predict customer behaviors and improve the chances of sending the right messages, leading to improved conversion rates. Likewise, Davenport and Ronanki[84] state that AI is used to identify the right

[81] Yang, J., Blount, Y., & Amrollahi, A. (2024). Artificial intelligence adoption in a professional service industry: A case study. Technological Forecasting and Social Change, 201, 123251.

[82] Vihavainen, S. M. (2024). AI-powered marketing automation: exploring the factors affecting implementation in a large company (Master's thesis).

[83] Upadhyay, M. A., & Chitnis, P. (2021). Modern Marketing Using AI: Leverage AI-enabled Marketing Automation and Insights to Drive Customer Journeys and Maximize Your Brand Equity. BPB Publications.

[84] Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. Harvard Business

time for the organization to interact with potential customers according to set algorithms and then boost the conversion rates. Chatterjee et al.[85] posits that in the B2B setting, AI is integrated into CRM as a significant booster of communication quality and responsiveness, with benefits extending to business relations with customers and overall efficiency.

Another area of application is task automation, which also has a positive effect on the minimization of human error. Further, startups using AI automation for SaaS solutions described by Mero et al.[86] indicated that follow-ups were easy to manage, categorizing customers was easy, and performance was enhanced with little or no human influence. In the same regard, Touré[87], in a study on SMEs', confirms the centrality of AI-CRM interfaces in facilitating individualized communication using automated social media platforms. The automation process has benefited the marketing department by cutting some of its workload and enabling it to address other significant issues that help the firm.

AI is essential in firms when it comes to decision-making. A company can process extensive data analysis using AI and make timely decisions on market or customer matters. Gentsch's opinion about marketing decisions and techniques that can increase ROI is based on the role of AI in identifying customer preferences. In the same way, DeMauro et al.[88] have argued that applying AI through machine learning models and predictive analytics enables better decision-making tools to understand the best marketing strategies to get towards the target customers.

Another area where AI is crucial is in enhancing organizational performance. That is

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Review, 96(1), 108–116.

[85] Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The effect of AI-based CRM on organization performance and competitive advantage: An empirical analysis in the B2B context. Industrial Marketing Management, pp. 97, 205–219.

[86] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

[87] Touré, S. (2024). Artificial intelligence and CRM usage and capabilities in Lille Metropolitan Area SMEs' social media marketing.

[88] DeMauro, A., Sestino, A., & Bacconi, A. (2022). Machine learning and artificial intelligence use in marketing: a general taxonomy. Italian Journal of Marketing, 2022(4), 439-457.

why the investigation of the case of LPP company by Gołąb-Andrzejak[89] showed that the use of AI could cause significant changes in the organization and lead to a drastic decrease in delays and mistakes in the communication and analysis of customer data. Also, Papagiannidis et al.[90] found out that while AI enhances operational speed, there is also an enhancement of accuracy. It is owed to AI that businesses can grow their markets without necessarily having to hire more people to do marketing. AI also ensures that business functions are in the correct position with comprehensive strategies. The study by Graesch et al.[91] shows that AI-supported CRM systems enhance interdepartmental cooperation and thereby boost the probability of better handling of customers.

According to Yang et al.[92], such assistance is also provided to ensure the business marketing approach complies with set legal standards. This is especially required in business lines like finance and health since they handle a lot of information. This highlighted the possibility that deviation from the norms and ethical practices could result in severe lawsuits. On the other hand, AI is relevant in market segmentation and customer targeting. According to Vihavainen[93], when using marketing automation with the help of AI, customers are updated with constant content so as not to change their preferences, thus attaining customer loyalty. It is the most strategic plan to give a firm a competitive edge over its competitor firms.

[89] Gołąb-Andrzejak, E. (2023). AI-powered digital transformation: Tools, benefits, and challenges for marketers–a case study of LPP. Procedia computer science, 219, 397-404.

[90] Papagiannidis, E., Mikalef, P., Conboy, K., & Van de Wetering, R. (2023). Uncovering the dark side of AI-based decision-making: A case study in a B2B context. Industrial Marketing Management, 115, 253-265.

[91] Graesch, J. P., Hensel-Börner, S., & Henseler, J. (2024). Customer success management through alignment of marketing, sales, and IT. Industrial Marketing Management, 120, 1-14.

[92] Yang, J., Blount, Y., & Amrollahi, A. (2024). Artificial intelligence adoption in a professional service industry: A case study. Technological Forecasting and Social Change, 201, 123251.

[93] Vihavainen, S. M. (2024). AI-powered marketing automation: exploring the factors affecting implementation in a large company (Master's thesis).

Conclusion

Integrating AI-powered CRM tools like HubSpot, Pega, and Bitrix24 is vital in organizations. This is evident in numerous scholarly works. Organizations' critical benefits from AI integration and marketing automation include streamlined processes, better customer management, increased customer satisfaction through personalized experiences, and improved business performance. AI impacts organizations immensely, as evidenced by the empirical literature. However, various factors affect the successful integration of AI in marketing operations. Critical challenges across multiple sources include regulatory barriers, outdated legacy systems, cost barriers, organizational culture, and human resource constraints. Overcoming these challenges is crucial for any company seeking to leverage AI's immense benefits in marketing. Additionally, the merits derived from marketing were consistent for numerous industries and businesses of varying sizes.

METHODOLOGY

This paper focuses on assessing the AI integration process in firms, including potential benefits and challenges in the implementation. This research uses a multiple-case study approach, allowing in-depth research on real-life cases. Through an analysis of firms that have adopted various AI-powered CRM tools like HubSpot, Pega, and Bitrix24, the study seeks to uncover critical factors for AI's success and determine the multiple challenges that could affect the successful adoption of AI and marketing automation. With the use of in-depth interviews with various stakeholders from firms that have adopted HubSpot, Pega, and Bitrix24 in their marketing approach, the research seeks to assess multiple factors that will be vital in giving insights for other firms to consider for the successful adoption of AI into their operations. This paper aims to contribute to the broader pool of knowledge, providing a deeper understanding of AI in marketing, including various aspects of its integration.

Research Design

This paper employs a multiple-case study research strategy. The research design was chosen purposefully to capture several aspects that influence AI integration, taking into account the company size and the industry. A qualitative case study approach also captures different dimensions of integrating AI in businesses. This study shall offer comprehensive recommendations that cut across all industries that seek to incorporate AI and marketing automation across all their operations.

The following paper aims to assess the application of AI marketing automation technologies concerning constraints coupled with potential. This research seeks to understand the best practices by which companies implement AI CRM solutions, such as Hubspot, PEGA, and Bitrix24. The research will also take cognizance of some of the actual cases of

companies that have adopted AI-powered CRM tools and automation, which are consistent with the research objectives of this study. Some specific research objectives include identifying the extent to which these AI CRM applications have been implemented and the advantages and difficulties that arise with their implementation.

The multiple case study approach is vital in this research since it zeroes in on actual organizations' practices in integrating AI-powered CRM tools. The multiple case study research methodology enables the researcher to acquire profound insights into the effects of AI on organizational procedures, thus providing a clear assessment of firms' difficulties and opportunities. It also facilitates the comparison of cases and identifies common and peculiar patterns from various organizations. The recommendations we derive from the case studies will be vital for other companies to understand the prerequisites of marketing automation and AI adoption and the effects shaping their decisions. The case study design also enables other companies intending to adopt AI to access their organization and determine their readiness concerning human resources investment and infrastructure readiness for AI and marketing automation. The findings from this study will significantly enhance the literature base of AI CRM applications such as Hubspot, PEGA, and Bitrix24 in organizations.

Data Collection Methods

Semi-structured interviews

This research recruited the interviewees using a purposeful sampling technique. It was conveniently based on the practical currents and the characteristics suitable for the study. To this end, I used semi-structured interviews as the primary data collection method. The semi-structured interviews ranged between 60 and 90 minutes, and participants consented to having the interviews taped. The interviews were transcribed into approximately 30 verbatim

manuscript pages. Participants in the study were sampled based on (their accessibility in fact) the roles played by organizations in adopting AI marketing automation. These positions included:

- Digital Marketing Heads (Interview 1, 3)
- AI System Integrators (Interview 2)
- Small Business Owner – Marketing Head, AI System Integrator, IT Specialist, cool guy (Interview 4)

These roles were selected to obtain as many opinions as possible regarding AI's technical, operational, and strategic implementation in marketing systems. The interviewees belonged to different service industries, such as the SaaS, retail, and telecommunication industries. This diversity helps ensure that the research is well-informed about the wide prospects of AI's effects on organizations.

The research method included interviews concentrating on the company's struggles in the integrated AI process. In-depth interviews investigate essential issues, provide a great deal of pre-eminence during data collection to participants, and thus explain their experiences in more detail[94]. The interviews were structured by the research objectives focusing on the motive behind AI integration, cumulated challenges faced, advantages achieved out of integration, and critical learning pointers for companies looking forward to AI integration in the marketing sector. While interviewing, some difficulties were experienced because of the language barrier that necessitated specialized technologies to translate the contents into English.

[94] Patton, M. Q. (2014). Qualitative research & evaluation methods: Integrating theory and practice. Sage publications.

Secondary Data Collection

In addition to the interviews, I will include other case studies, industry reports, journal articles, or any other publication. The secondary data will help complement the interviews and enhance the background and overall understanding of the integration of AI across various industries. Secondary data comprised industrial reports, academic journals, and company case studies. The results highlighted, supported the overarching themes and gave context to contemporary AI trends and difficulties in various sectors, thereby increasing the credibility of the qualitative data. These sources were necessary for this research as they helped provide more insight and details into the benefits, impacts, and challenges of AI implementation across multiple sectors; hence, they were a critical support structure for the research and gave more context to the case studies.

Method

Thematic Analysis:

Coded qualitative data from the interviews was analyzed after identifying themes. The interviews were then analyzed qualitatively by developing codes which assisted in categorizing the interview transcripts and various dominant themes resulted as shown in table 1. Coding was done by placing the collected data under different themes and then analyzing it to determine the relationship between the challenges of adopting AI and its benefits.

Table 1. *Comparing the Overall Themes of the different Enterprises*

Category	Large Enterprises	Small & Medium Enterprises
Example of Companies	Large Company in Finland Finance (Secondary data), Large Company in Poland Retail (Secondary data), Tobacco Company (Interview)	SAAS B2B Startup (Secondary data), Online Gambling Service (Interview), Mid-sized Norway Energy Company (Secondary data), SAAS B2B Small Company (Interview)
Type of Organization	Primarily Public companies	Mostly Private, with some varied types of organizations
Location	Finland, Central Europe, Central Asia including Russia	Global, EU (primarily)
Industry	Financial services and retail sectors	SAAS (B2B), online gambling, energy, and other varied industries
AI & CRM Tools Used	Comprehensive CRM systems like SAP and Pega, with AI for logistics, customer service, project management, and supply chain management	CRM systems like Bitrix 24, Jira, odoo, monday.com, Optimove, and Customer.io, and Smartico with AI for project management, customer evaluation, segmentation and tracking
Implementation Strategy	Planned integration of AI and CRM tools across multiple departments, focusing on overcoming legacy systems	Focus on affordable CRM tools integrated with AI for marketing and customer management.
Goals and Motivations	Enhanced Efficiency, Personalization, Data Analysis and Insights, Competitive Advantage, Scalability, Cost reduction, Customer retention, Risk Management	
Challenges	High costs, Integration with legacy systems, Employee resistance, Skill gaps, Regulatory and Compliance Issues, Scalability Concerns, Cultural Barriers	
Organizational Impact	Operational efficiency, Employee roles, Innovation culture, Data utilization, Risk management	

Note: This table summarizes the different enterprises' overall themes and critical features.

Research Challenges and Unexpected Outcomes

While undertaking the interviews, several difficulties arose from the interview technique employed in this study. These discussions involved issues beyond the research and needed to be constantly re-directed back to the research goals. Interviewees would sometimes introduce other problems that needed to be essential in the study, and the result was that the respondents spent much time analyzing the data. Most participants also stressed the need for more organizational support for AI at the managerial level. This was especially evident in the SaaS startup, which required colossal support to successfully integrate AI-powered CRM tools and marketing automation. The need for support was not perceived earlier but cropped up as one of the important considerations during the final analysis.

DATA ANALYSIS

This research examines samples of organizations that adopted AI-based marketing automation tools, including HubSpot, Pega, and Bitrix24. The companies include multinational corporations and SMEs from various industries, including SaaS, retail, and telecommunications. Each case was chosen to examine the organizational, operational, and technological enablers and antecedents of AI. This research intends to generate relevant information for various sectors relating to AI's incorporation into businesses and marketing automation.

This research aims to find the effects of implementing AI, problems encountered, and opportunities in the multiple case studies under consideration. The case studies were chosen purposively using the convenience sampling technique. The companies' strategic choice was deliberate as it offered an ideal case of companies that successfully integrated AI and possessed adequate information on integrating AI CRM tools. This section will involve a thematic analysis of the interview results and cross-case analysis to better understand the integration of AI CRM tools in marketing across multiple industries. The research objectives shall define the themes of this study.

Motivations for AI Integration

Various companies derive motivations based on their unique challenges and goals. In this section, I included some interview information to compare the motivations of large, small, and medium enterprises while integrating AI. The motivations varied immensely based on the company, industry, and organization size. However, after a background search, I discovered that firms of similar sizes had closely related needs, thereby influencing their motivations. With this background information, I then made a table showing the motivation based on two broad categories: large enterprises and SMEs.

Table 2. *Motivations for AI Integration*

Motivation	Large Enterprises	SMEs
Enhanced Efficiency	- Streamline complex processes to save time and cut costs. - Automate repetitive tasks, letting employees focus on higher-value work.	- Simplify customer relationship management. - Use automation to handle daily tasks effortlessly.
Personalization	- Deliver hyper-personalized experiences to customers. - Tailor marketing campaigns based on individual preferences.	- Send personalized messages and offers that resonate with each customer's interests. - Make customers feel valued and understood.
Data Analysis and Insights	- Large data analytics to uncover actionable insights. - Improve decision-making and strategic planning based on accurate data.	- Simpler data analytics on customer data to refine marketing strategies and boost engagement. - Understand customer behaviors to tailor offerings.
Competitive Advantage	- Stay ahead in the market by adopting cutting-edge technology. - Improve customer satisfaction to stand out from the competition.	- Differentiate from competitors by offering unique, personalized experiences. - Be the go-to choice for customers looking for specific needs.
Scalability	- Implement AI systems that grow with the business. - Manage increasing data and customer interactions effortlessly.	- Adopt solutions that can evolve as the business expands. - Stay adaptable in a fast-changing market.
Cost Reduction	- Reduce operational costs through automation. - Minimize manual interventions to streamline processes.	- Lower marketing and operational expenses with efficient tools. - Maximize value from every dollar spent.
Customer Retention	- Boost customer loyalty by anticipating their needs. - Create a positive experience that keeps them coming back.	- Build stronger relationships with targeted communications. - Ensure timely responses that show customers you care.
Risk Management	- Identify and mitigate risks using predictive analytics. - Make data-driven decisions to enhance security and compliance.	- Use AI to manage customer data securely. - Enhance security measures, especially in sensitive sectors like finance.

Note: This table shows the different motivations that informed AI integration.

As seen in Table 2 above, numerous motivations lead companies to integrate AI-powered CRM tools and market automation. The motivation immensely varies across different sizes, with larger companies having more reasons to automate routine processes and increase efficiency. However, small and medium enterprises are more interested in improving their customer base by offering unique experiences that will give them a competitive advantage. However, the motivation for implementing AI was to increase customer retention, facilitate better risk management, improve operational efficiency, offer personalized customer experiences and scalability, and facilitate better data management.

The research evidence derived from the case studies suggests that good AI starts with organizational preparedness, specifically, the capacity to retrofit the organization's architecture for AI. Another finding was that businesses that had updated their IT systems—as seen in the large finance company in Finland—could implement AI more readily. On the other hand, firms with legacy systems, such as a mid-sized energy company based in Norway, suffered a delay in their project due to system integration.

Moreover, inter-organisational collaboration was important here. Firms that engaged marketing, IT, and data science teams at the onset of the AI project, including the SaaS start-up under consideration in this paper, were better placed in terms of AI integration processes and outcomes.

Challenges in AI Integration

As highlighted during the literature review, organizations experience several challenges implementing AI-based CRM tools. Likewise, this research found that different firms faced different kinds of challenges. These challenges varied at the organizational level, while there were some cross-sectional challenges. The challenges for the multiple cases in this research were combined into two broad categories, indicating large and small businesses.

Table 3. *Challenges of AI Integration*

Challenge	Large Enterprises	SMEs
High Resource Demand	- The price tag for advanced AI systems can be daunting.	- Limited budgets make it hard to invest in sophisticated AI tools. - Need to balance cost with functionality - Lack of human resources
Integration with Legacy Systems	- Transitioning to new platforms requires careful planning and execution. - Previously decentralized marketing - Unsuitable and fragmented data	- Largely painless
Employee Resistance	- Employees may resist adopting new technologies out of fear or uncertainty. - Training staff on new systems requires time and resources.	- Practically none
Skill Gaps	- Ongoing training is necessary to keep skills up-to-date.	- Smaller companies may need more expertise in implementation of MA systems and AI successfully. - Training is needed to use new AI tools effectively.
Regulatory and Compliance Issues	- Information and data security - Navigating regulations related to data privacy and security can be complicated.	- Information and data security
Scalability Concerns	- No information	- Need for solutions that can grow with the business - Not enough marketing content that's already been created - can not use the system to get it's full benefit - Initial set-up, Creation of automation materials and some other processes remain manual
Cultural Barriers	- Company culture must be conducive to rapid change or innovation - Encouraging a data-driven mindset across departments can take time.	- In case of SAAS start-ups there are practically none due to employees being accustomed to flexibility and rapid changes in the workplace and predominantly small team sizes

***Note**:* The table shows various challenges faced in integrating AI.

Table 3 shows that all the companies experienced many difficulties implementing AI solutions. The results aligned with the article review, which listed essential challenges such as expensive, scarce human resources and a decrepit IT environment. The multiple case analysis and comparison showed outdated IT structures, which, in turn, resulted in higher cost issues in procuring new, modern IT structures capable of facilitating the AI CRM tools, including intricate machine learning algorithms and predictive analytics. The studies show that the challenges in integrating AI significantly delayed firms from attaining optimal CRM and marketing efficiency benefits. The challenges:

High Costs: In all the cases explored, one factor that stood out was the level of capital investment needed to undertake the AI initiative; this included investments in IT infrastructure and staff.

Interview 2 about the costs:

> *No, here's the question again. It's all about money in our case. We'll never recoup the cost of a Pega subscription by having, I don't know, 20 more clients there. Well, that is, what will Pega do for us, and what won't it do, well, for example, Odoo or Bitrix or someone else, right?*

Interview 4 about costs of Hubspot and Salesforce and Pega:

> *Well, it's all relative, it's relatively expensive, yes, that is, it still depends on what you're using it for. That is, if, well, that is, I divide it for myself, that is, I probably divide it for myself, maybe it's not divided in the world, but that is, if you work online and you have every next lead, which is just a person for the full form on the site or, I don't know, some kind of conditionally found contact, that's one approach, yes. If these are purely physical sales there with calls, with some old clients, the number of clients is measured, well, in tens or*

several hundred, that's a different conversation. That is, there are different things here. That is, for example, for online casino clients we still have CRM, yes, that is, where all the email distribution is organized, where all these marketing companies are organized and so on, all this is there. This is a very specialized product, because the number of clients is measured in hundreds of thousands. Not one normal CRM like Salesforce, well, I mean, it can, of course, survive, but it will cost so much that no one needs it.

The large Finnish company case also pointed out that replacing old technologies to host AI was the most costly deployment procedure. The large retail firm was reluctant to integrate AI, mainly from employees who set their operations in a fixed traditional way. These included cultural change and the acceptance of data as a tool for decision-making that was inconsistent with the initiative's main premise. Following organizational and employee related challenges were mentioned: Involvement of different roles in the decision-making, Needs cooperation across different teams, Dependencies, Decentralized marketing, Prioritization, Allocation of resources, Employee commitment and turnover, Compatibility of the technology and the business requirements.

Interview 4 about the potential problems within the “old school” businesses:

But if, say, I don’t know, the manager yesterday, he wrote down in an accounting book or somewhere in a ledger, I don’t know, the passport details of each new client, yes, and his e-mail, or in an Excel table, at best, and today they give him some kind of system, and he doesn’t understand at all how the data goes around in a circle, then that’s a different story. He’ll either quit or learn, that’s one of the two, I suppose. Yes, that’s the whole problem. And often

the staff will always resist with all their might, simply resisting the introduction of anything new, especially if they're used to it.

Interview 2 about benefits of tight cooperation within small teams, relatively easy training process, overall team's alignment and benefits of having a tech-savvy team:

Well, at that time there were never more than 25, 25-30 people. That is, everyone more or less understood how and why they were switching. And you could approach everyone, say, take them by the hand, show them how to do what. So, yes, in our case everything was wonderful and simple. Well, we are a small team, we are not very indicative, and then our team is still mostly IT specialists, in terms of people who work with a computer on a daily basis and work closely, that is, they write software, and they write code, and it is easier for them, yes

Interview 4 about the company structure impeding implementation:

Well, this is very closely related to the structure of the company, that is, these conditional giants, when there is a department of departments, this is, well, this is crap, that is, this is actually a cancerous tumor that needs to be cut out in a good way and make a normal structure. That is, maybe it was justified a long time ago, when information traveled slowly and the management of this information took a lot of human resources, that is, now what is all this for?

Interview 4 about choice of software for different business types:

We use monday to keep track of clients, yes. That is, we don't need much there, we need mailings, we need to track customers there, understand there, in fact, who is hot or who is cold, bring someone from the exhibition there. We use

monday (monday.com), we are quite satisfied. In fact, we just need to keep records, yes. That is, this is a kind of New Year's sign, by the way. Another time is the possibility of sending an email. We still used it at one time for... When we were actively working there with hotels and so on, selling post-terminals, we had freshsales, yes. Freshsales, in principle, is also sophisticated, beautiful, but not very convenient, because somehow everything there seemed too confusing to us. But, nevertheless, they worked. That is, fresh sales also worked. There's also a builder called Odoo, yes. And it's like... Yes. Well, conditionally, a free thing. There are website builders, yes, built into CRMs, yes. But it also did not suit us at such an initial level. But as for large types, there, Salesforce, we have never even looked there. That is, this is not about our size. That is, when our customers measure in the hundreds, why do we need Salesforce?

Interview 2 about the existing solutions and industry requirements that are essential for businesses operating in certain sectors, but are only available separately as a specialized solution:

Any companies that are engaged in risk assessment, yes, of course, yes. Well, that is, when there is something about money, in terms of, I don't know, a credit card deposit, there is a chargeback risk, yes, we set it up through Seon.io, this is done, again, manually, there is AI for, let's say, scoring management, that is, it is a system that allows you to add data, that is, it does data enrichment, just collecting data, and then, based on this data, it allows you to write rules manually. Each rule adds, let's say, some points to the transaction scoring. The more points in the scoring, the more suspicious this

transaction is, accordingly. Well, and then some threshold is set, with the help of which the transaction is either put on hold or rejected, and so on. The rules, of course, are made manually. Here, and often it allows you to make very simple rules, that is, a deposit is made, for example, two credit cards, and it gets, there, the first part of the numbers is called the BIN of the card - this is the bank. That is, it determines that the bank issuing the card, for example, is located in the capital of England. According to the player's attributes, it sees that both the IP and, in fact, the location of the player is Germany. Yes, and here the question arises, how is that? A person from Germany makes a deposit of a credit card that is issued in England. Immediately there in the scoring, there, some points. Well, and such things, in general, allow for fairly flexible management, reducing risks

AI system limitations were also mentioned by Vihavainen[95] - Unclear decisioning logic – how the system makes decisions Limitation of AI models.

Interview 2 about the limitations of existing solutions:

That is, I was looking for my own, well, two or three weeks ago I was looking for some product that would then be ready-made, well, that is, it allows you to build a sales agent out of the box, yes. Well, I didn't really find anything. That is, there are a lot of automation tools, like a lock, yes, something else. That is, you can connect everything there, plug it in, but there is nothing ready-made out of the box inside the CRM. That is, often inside the CRM from what I found, these are some helpers for writing emails, this is automatic compilation of digests, dialogues, there, well, some automatic pictures, but nothing more.

[95] Vihavainen, S. M. (2024). AI-powered marketing automation: exploring the factors affecting implementation in a large company (Master's thesis).

Interview 4 about content creation for automated outreach:

No, our content, we are old-fashioned in this sense, we have a team of copywriters writing it. It is clear that they use automated translation under the hood, sometimes they use GPT for some primitive things, they use mid-journey, well, some beautiful posters and graphics, because it needs to be generated en masse, that is, this is a fairly passable thing. But in general, marketing ideas are still made by a person.

Interview 1 about the most common problems encountered by large corporations:

In order to integrate or change a system, the first thing is to suffer in every sense of the word. Financially, you need to spend it on the purchase of another system, that's the first thing. Second, you need to adapt the information to other software. Well, that takes time too. Especially people who understand and will be able to translate the date into the right software. Third, teach everyone, all commands. Guys, forget it, now we don't press that button. Now we press another button. It is desirable that this goes away in one day, because the company's work should not stop. And God forbid, you will now mix up, do not load this one, do not turn on the button and tra-ta-ta. That is, this change in the implemented CRM system in large companies usually goes through pain. Over the past 30 years, it has not changed. Not because it's the best, but because it's expensive and painful.

Interview 1 about size:

The smaller the company, the easier. Large companies, usually there will be such old systems. Just because, I've already explained to you, if the team is

young, small, it will look for a fashionable, cheap, well, some average functionality and program.

Interview 3 about integration in general:

When a company decides that, we're just willing to spend, willing to take the time to train everyone, and we're willing to... The company is immediately prepared that there will be mistakes, f-ups, something does not work somewhere. Plus, the new program has not yet been fully implemented. Maybe at some stages it will really be, for example, in some processes it will be dumb, it will not work smoothly enough, because of the XYZ. No one had worked with it before. How to implement a new system into established processes? - Just to suffer.

Interview 3 about data:

If this is a huge database, especially since they lived before, when they encounter a company, let's imagine that this is a different matter, and everyone lives with their own tables, well, conditionally, yes, with some data, now they need to be married in one place according to some common parameters, it is really difficult to do this, or it is written, in general, analysts people do this, they process this information once, assign the format of a single data management system, and then train everyone to do this, either people do it, or programmers write code, but this is just specifically in order to process this or that database, according to some parameters, a bunch of filters, and so on, and so on, in short, either these are analysts, or these are programmers with code, or they do something there

Some downsides in managing big data for AI in the SaaS start-up were reported. The AI tools were possible but not especially useful without proper data infrastructure[96]. Additionally, can be seen in the Large Finish company case - Unsuitable and fragmented data, Need for high amount of quality data[97].

The main problems with AI in current marketing automation are costs, resistance, and data. Mastering such issues is possible only with the help of organizational management, changes in culture, and the provision of funds for investment in technology and personnel.

Derived Benefits from AI Integration

The third aim was to assess AI's derived benefits through a cross-comparison between firms of different sizes. This comparison was crucial in determining whether performance improvement results from successful AI integration, as hypothesized.

[96] Mero, J., Leinonen, M., Makkonen, H., & Karjaluoto, H. (2022). Agile logic for SaaS implementation: Capitalizing on marketing automation software in a startup. Journal of Business Research, 145, 583-594.

[97] Vihavainen, S. M. (2024). AI-powered marketing automation: exploring the factors affecting implementation in a large company (Master's thesis).

Table 4. *AI Implementation Benefits: Forecasted and Realized*

Benefit	Large Enterprises	Small & Medium Enterprises (SMEs)
Operational Efficiency	- Automated operations in logistics and supply chains - Streamlined customer service processes	- Faster marketing campaign execution - Reduced manual tasks in customer management
Personalization	- Tailored customer experiences and product recommendations - AI-driven marketing content	- Hyper-personalized emails and offers - AI for dynamic ad targeting
Better Data Insights	- Advanced analytics for customer behavior and operational data - Informed decision-making	- Data-driven audience segmentation - Predictive insights for marketing optimization
Cost Reduction	- Automation reduces labor costs - Optimized resource allocation	- Lower operational costs with AI automation - Better ROI from marketing spend
Scalability	- Scalable AI solutions across multiple departments - Easy expansion of operations	- Affordable AI tools for scaling marketing efforts - Cost-effective customer management growth
Improved Customer Retention	- Personalized interactions leading to higher customer loyalty - Proactive customer service	- Improved customer engagement through personalized communication - Loyalty programs powered by AI insights
Competitive Advantage	- AI-enhanced decision-making and faster response times - Operational efficiency gives an edge over competitors	- Ability to stand out with more intelligent marketing campaigns - More practical use of limited resources
Risk Management	- AI for fraud detection and compliance management - Real-time risk assessments	- Enhanced fraud detection with AI tools - Better risk mitigation in customer transactions

Note: Table 4 shows various benefits of integrating AI.

The table shows that integrating AI-powered CRM tools with marketing automation leads to multiple benefits. From the analysis, the companies significantly increased operational efficiency and also benefited from reduced manual operations. The companies also benefited from increased customer satisfaction, increased ability to manage risks, increased innovation and agility, improved data management, and reduced labor costs from the automation of routine marketing tasks. Competitive advantage and personalized customer experiences were also highlighted among the key benefits derived from AI integration.

Marketing automation involving artificial intelligence enhances productivity since it assumes routine responsibilities that employees can handle. However, firms must overcome any resistance from their employees through employee training and change management.

Interview 3 about GPT agents and their use for hyper personalization (CRM plugins):

> *They are called GPT agents, and you can already make them in the fourth and fourth PRO versions. What does it mean? Well, let's say, you set up GPT for a task, describe it only for communication directly in some network. Well, on the web, I mean, now, through... On the website or through, for example, mail. This agent in the GPT chat, but it is a neural network, filters incoming messages based on the trained... And you know that GPT chat can be taught, right? That is, you, for example, uploaded information about your consumer, about what questions and answers you need to teach him first, right? You must know this, yes, how you should answer. Here it is, this is Tone of Voice. Reply to all incoming messages according to this algorithm. Now, if there are any difficult situations there, if there is a team, he will want to buy, and you can still give him a task there. Get the customer to buy. And do, well, that is, every last, well, that is, every final message, make a soft offer to buy. That is, you*

can still compose a Tone of Voice. And so, in general, you let go, create this agent, implement it with the help of your IT team, and that's it, and enjoy life, and watch how GPT chat communicates with customers. But I have such a question. For example, GPT communicates with customers, yes, and, accordingly, some information about customers is collected either from a conversation with GPT, or from their actions on the site, in the continuation of whatever.

Interview 1 about supply chain automation:

What is one of the cool cases, for example, Ozon (online retail, Rus) and Wildberries (online retail, Rus) 100 years ago (not literally), they were one of the first to automate their CRM system and logistics. What does this mean? Their AI rings the bell if from the moment customers press the "buy on Ozon" button to the delivery point. that you ordered this product, it is in that distribution warehouse, the red button in the distribution warehouse lights up, that's it, take the product, put it in that box, the box went, scanned and arrived exactly three days in advance. And they have no right to make the goods arrive less. For example, if you have ever used the "delivery within 24 hours", "delivery tomorrow" or "the day after tomorrow" buttons on Ozon, this is controlled by the entire neural network (the delivery period is calculated automatically based on the product availability in one of the warehouses, as well as the available delivery options). It's cool, cool, they implemented it a few years ago. That is, it is not people who do this, but for some reason everything is cool for them from distribution centers for delivery, this is only thanks to the neural network. So, they automate logistics

Interview 3 about other benefits of CRM systems and tools:

Some CRM systems too. What did they do? A summary after meetings. For example, you held a meeting, recorded it on video, your neural network makes top 5, top 10 topics about what the meeting was about, and those who could not attend, just quickly dumped the summary, and that's it. That is, all this is automated by the neural network. And it is already being implanted by programs and Zoom, and, for example, Google Meet, and some CRM systems are also already implementing it. That is, you get a summary after each meeting that the neural network displays to you. Well, these are the moments, at the moment they are filtering

No matter how you touch it, they can be really different, different names. And their goal and task is to make a convenient ecosystem within the company, where each department can quickly exchange information (team communication tools), set tasks based on the same data (project management), in each department, respectively, based on these tasks, to coordinate some aspects internally, and to understand the most important thing – the internal workings of the business. What is meant by internal workings? For example, Bitrix. Well, on the example of current experience. Each of them, well, I don't know, maybe they have already understood whether they have encountered it or not, plus or minus about the same thing. That is, you have a CRM system. This is a kind of aggregator that brings the entire data into one convenient, visual cipher (data organization). Let's imagine that you have a date, for example, a certain number of customers or a number of outlets, or in general

you need to somehow collect information about your customers. So, any company collects this information, whether it is a manufacturing company, or in a company with many departments, they create something, sell something, and so on. This is traffic control, let's call it that. And so a kind of base is being created. The first source that begins to create it at all, let's imagine that it is being implemented is a CRM system in business. And when you, well, he is introduced into the business, you begin to monitor, first of all, the internal cycle of employees, tasks, routines, the number, who can even be controlled there. (Team management and employee monitoring and performance tracking) When he (your employee) started the workday, when he finished, how much he processed, tasks, clients, and so on and so forth. That is, you can still look inside and control your team, company – that's the inner workings that can be controlled. And from the outside. And what is it from the outside? You recruit the number of customers or the number of products that you produce into this ecosystem, and look at the number there, where you ship, to which customers, how often, in what geographies, and so on and so forth.

That is, you either set up, optimize the customer base and put a lot of filters there, starting there, for example, what I heard, you made a filter there, Well, or, let's say, about the master card, yes, you can highlight it. Large clients, medium-sized clients, set up geography, set up the top 5 customers who make you 90% of your revenue there, and so on and so forth. Well, and somehow set up their interaction.

Interview 4 about data enrichment, customer evaluation and categorization:

Customer.io, it's, well, conditionally, CRM, yes, but, by and large, it's more about marketing communications, about setting up processes. So, there is an even more interesting product, there, in addition to CRM, there are a bunch of all sorts of AI things, demification and so on, called Smartico. In Sofia, the guys are doing a very good thing too. Inside, under the hood, there is also a CRM. Everything related to data collection, well, we also do it not only from the point of view of marketing, but from the point of view of security scoring, that is, in order to understand that you simply cannot stand it and do not use other people's cards there. So, there is such a product called Sion.io. It allows, in fact, to collect additional data about this e-mail by e-mail, that is, to pick up the concept of whether there are profiles on this e-mail in any social networks, there, more, there, 50 different ones, respectively, if there is, you can, when possible, pull out a photo from there, see that this is the same person. So, see if this e-mail has appeared in some databases, block lists or something else, and the same thing about the phone number. That is, this is what is called Data Enrichment, in fact, well, some kind of collection of additional data for a short-term source, yes, in the most trivial way, there, by e-mail and phone number. Here, and then, accordingly, if a person, for example, has filled out Facebook profiles for this e-mail conditionally, then, most likely, you can get, for example, age from Facebook profiles. But age, as it were, is not very interesting to us. We are more interested in, let's say, this is a real e-mail or some kind of disposable e-mail that was created specifically to play right now. That is, we are more concerned about risk than age. And for segmentation, for cutting, well, behavioral models are used here more than age. That is, to say

that all forty-year-olds or fifty-year-olds there play the same way. Therefore, there are more behavioral models, taking into account, in fact, what he plays, how often, what bets he makes, well, let's say, with what amounts. And then, in fact, all this is cut into separate segments, and a person automatically gets there or there. And, accordingly, depending on this, we know what we can offer him.

Interview 2 about the use of “Not AI” for customer data analysis:

No, AI is still quite useless in this sense. Well, let's just say that AI in a far-fetched form can, let's say, be attached for analysis, well, I don't know, a store, for example, analyzes previous purchases, yes, and knows related products. Well, that is, conditionally, everyone who bought, I don't know, towels, you can probably suggest shampoo for them. Well, conditionally. That is, this is also far-fetched, this is done by analyzing data, that is, what was usually bought by those who also bought this. Yes. That is, this question is answered by conditional neural networks, that is, this is, well, conditionally far-fetched AI. And pure cutting by behavioral characteristics is often also a conditional machine learning algorithm, it's not neural networks, it's clustering. Here. The output will be something like groups, well, that is, segments, yes, but often to name this segment, that is, to understand what kind of people are in this segment, that is, what a person has in common with them. That is, it will be clear that this pack of people stands apart from others, and there are some metrics, I don't know, the amount of deposits, the frequency of deposits, well, everything that was included in the clustering. Then you have to look at it with your eyes and name who it is.

Interview 2 about Amazon and the their publicly available tool for product recommendations:

> *(Amazon's neural network for personalized recommendations for customers) Well, look, about these things, about who bought what and what else to offer him, this is a ready-made server, that is, based on neural networks, there, for example, Amazon, yes, that is, a large CSV file is uploaded there, roughly speaking, with the IDs of buyers of their goods, on the basis of which a neural network is trained, Well, then she knows how to answer the question for some pennies, what else would she offer him. Yes, that is, it is, in fact, the same, the same engine that Amazon uses, in fact, in its store. That is, there is nothing new here. That is, they just sell it as a separate service.*

Interview 2 about CRM systems allowing for easy data search and segmentation:

> *As for CRM, a custom meter, it can't do anything with some kind of AI clustering or with a clustering algorithm under the hood, yes, but it can make quite interesting segments based on setting rules, that is, you can click on the rules that will be based on the parameters of people, and, accordingly, people will automatically fall into this segment, or get out of it. Well, that is, for example, with clicks of the mouse, you can make a segment like a person who has registered in the last 7 days, but has not made a single purchase, yes, well, for example. And, that is, conditionally, he did not buy anything there. Accordingly, this person, there, on the fifth day, can be sent a reminder of the fue, we have some kind of promo here today. That is, such segments that are formulated on the basis of rules, they are easily made without any AI, without*

any segmentation to customs. This is something that, well, let's say, for new clients, because there is not enough data for them yet. That is, we don't know much about them, which, well, in terms of behavior. Here. Accordingly, something more complex, it's either the same smartico, they have some kind of built-in AI package, although we haven't used it more than once, to be honest.

Interview 4 about abnormal activity detection:

AI fits well on, well, in such behavioral models, on finding non-standard, yes, that is, there, let's say, a deviation from the standard. Well, of course, if a person, we know from history, He has an average deposit rate there, I don't know, 10 euros, yes, and according to statistics, we add 3 sigma back and forth, and then suddenly 10 thousand arrives. Well, accordingly, such things are easily tracked and, accordingly, highlighted. That is, it is useful.

Organizational Impact

This literature review shows that AI CRM tools are crucial in business operations. As evidenced by the interview data, the significant effects of AI integration included collaboration, infrastructure improvements, employee skills development, better data management, increased innovation, and enhanced performance.

AI adoption greatly benefited the different companies' case studies under review. AI integration dramatically changes the manner of business operations and thereby helps streamline processes and increase efficiency in crucial operations such as marketing. From the findings, AI integration in marketing immensely boosted operational efficiency, data management, innovation, customer engagement, employee roles, risk management, and scalability. Therefore, integrating AI-powered CRM tools through specialized machine

algorithms and predictive analytics improves customer experiences and thus increases the customer base.

Additionally, marketing automation reduces routine tasks, reduces labor costs, and increases focus on other vital organization areas. Moreover, efficiency is improved through accurate real-time real-time data processing. Overall, cases showed a high impact on operations from integrating AI technologies. In the case of the large tobacco company, analytical tools were used to design and implement customer segmentation and targeted promotional materials, rationalizing the business and the organization and heeding compounded human labour costs. Workers were moved from manual, monotonous tasks to more creative tasks, including analyzing data and managing campaigns.

Similar to the telecommunication company's case, AI also helped automate customer services through chatbots, improving response rates and customer satisfaction. A major threat was that the necessary technological changes provoked employees' refusal to accept the change; hence, significant training programs are needed to bring staff into the new environment with the support of AI.

Summary

The data analysis shows that Artificial Intelligence is a crucial enabler of business change, particularly in marketing. Based on the analysis, companies have received substantial advantages from employing AI. The study indicates that AI intelligent marketing automation offers great advantages; however, it also has implementation issues. Companies should be ready to meet these challenges, and if so, AI will be a great opportunity for more effective customer interaction, increasing efficiency, and reducing costs.

The findings from the data analysis were consistent with the literature review. From the multiple case studies, integrating AI-powered CRM tools in marketing offers unique

customer experiences. The experiences are informed by predictive analytics, ensuring product recommendations are based on customer needs at a specific time. Therefore, this helps increase the customer conversion rate, which is vital for company profitability and customer satisfaction. Other benefits of AI integration and marketing automation include increased efficiency, better data management, innovation, scalability, personalized customer experiences, risk management, and redefining employee roles.

Businesses also experience various challenges when integrating AI. These challenges include organization resistance, outdated legacy systems, high costs, lack of skilled personnel, and time constraints. Despite the challenges, AI integration benefits are immense, with increased customer satisfaction and personalized interactions through predictive analytics being among the key benefits of adopting AI-powered CRM tools. Therefore, in the fast-paced digital world, the integration of AI is vital for optimal company performance and effective marketing.

CONCLUSION

AI in marketing has been vital in creating immense transformation in businesses. The data analysis and literature review findings show that AI has vast benefits in marketing, especially in providing personalized customer interactions through predictive analytics. Analyzing AI-powered CRM tools like Bitrix24, Pega, and HubSpot across the company and other mentioned cases has provided an in-depth understanding of various themes in AI integration and marketing automation. This paper utilized a multiple case study approach to analyze companies that had adopted AI tools in numerous aspects and an in-depth literature review to provide more context for the case study findings.

AI adoption is immensely beneficial for improved customer experiences and marketing efficiency. However, the integration of AI in marketing faces various constraints. Among the key constraints is high costs; organizations seeking to implement AI in their marketing department must bear high costs in retraining staff and updating IT infrastructure. Other challenges include legal barriers, organizational culture, outdated IT infrastructure, and resistance from either managers or employees.

Integrating AI CRM tools into marketing has greatly benefited organizations despite the challenges. The benefits of AI adoption included upskilling, decreased manual input and customer management, increased customer retention, personalized customer interactions, better resource management, and increased data accuracy. To leverage the AI benefits, the companies had to make a tradeoff and endure substantial cost implications to update infrastructure, retrain employees, and foster cross-departmental collaborations. The shift to AI also provided companies with real-time and predictive data, thus fostering personalized interactions and facilitating better decision-making.

In conclusion, this research offers an in-depth analysis of the vitality of AI integration and marketing automation for businesses of all sizes and industries. This study provides a

comprehensive overview of the various aspects a company should consider before and during the implementation of AI CRM tools to ensure optimal benefits. This research finds vital themes, including detailed secondary research studies and practical case examples from actual companies that have already adopted AI CRM tools. The secondary sources' case studies and increased context show that AI integration is vital. However, businesses should be ready to incur considerable costs in developing IT infrastructure, human resources, and departmental reorganization. As we look to the future with technology and organizational evolution, AI will remain the key driving force of marketing automation and CRM.

APPENDIX

Appendix A

Interview Questions for the company's top management on AI-Powered Marketing Automation Integration

Introduction:

- **Interviewer**: (Name)
- **Interviewee**: (Name, Job Title)
- **Company**: (Name, Industry, Size)
- **Date**: (Date of Interview)

Introduction statement

Background and Context

- Can you briefly describe your company and your role within the organization?
- What are the key marketing activities that your company focuses on?
- How has your company's marketing strategy evolved over the last few years, mainly by introducing new technologies?

Motivations

- What were the main drivers behind your decision to adopt AI-powered CRM tools like HubSpot, Pega, or Bitrix24?
- Why did you choose these specific tools over others in the market?
- What problems or inefficiencies were you aiming to solve with these AI-powered tools?
- Was there any resistance to adopting these technologies initially? If so, how was it addressed?

Implementation Process and Challenges

- Can you walk me through the implementation process for these AI-powered tools?

- What were the most significant challenges your company faced during the implementation process?
- How did your company overcome these challenges?
- Were there any unexpected difficulties or barriers that emerged after implementation began?

Expected Benefits vs. Actual Outcomes

- What were your expectations for the benefits of integrating these AI-powered tools?
- In reality, how did the actual outcomes compare to your expectations?
- Did integrating AI-powered tools lead to measurable improvements in customer engagement or marketing efficiency?
- Were there any unexpected positive outcomes after implementation?

Organizational Impact and Future Plans

- How has integrating AI-powered marketing automation tools impacted your company's internal processes?
- What has been the impact of AI-powered CRM tools on employee roles and responsibilities within the marketing team?
- Has AI-powered automation changed how your company approaches customer segmentation and targeting?
- How have leadership and management supported or influenced the adoption of these technologies?
- What is the future of AI-powered marketing automation in your company?

Reflections and Key Takeaways

- Looking back on the process, what were the critical success factors that enabled the successful integration of AI-powered tools in your company?
- If you were to do it all over again, is there anything you would do differently?
- What advice would you give other companies considering adopting AI-powered marketing automation tools?

Appendix B

INFORMED CONSENT FORM

Title of Study: Integration of AI-Powered Marketing Automation Tools: Assessing Benefits, Challenges, and Organizational Impacts

Institution:

This interview aims to gain valuable insights into your experience with integrating AI-powered marketing automation tools, specifically focusing on the challenges and benefits your organization has encountered. Your participation is voluntary, and your responses will be used for academic purposes only and will not be published without your consent. The discussion is estimated to last between 60 to 90 minutes. Please read this form carefully and feel free to ask any questions before consenting.

1. **I have been provided with a detailed explanation of the purpose and nature of this study. This research aims to contribute to knowledge in the field of marketing and technology integration.**

   Yes ☐ No ☐

2. **I acknowledge that my participation in this study is voluntary, and I am not obligated to participate.**

   Yes ☐ No ☐

3. **I understand that I can withdraw from the study at any stage for any reason without explaining.**

   Yes ☐ No ☐

4. **I understand that all information I provide will be treated with the utmost confidentiality. My responses will be kept anonymous and confidential to the researchers. Only in cases where statutory obligations necessitate confidentiality be**

breached for the participant's or others' safety.

Yes ☐ No ☐

5. **I agree that audio recordings taken during this study can be stored for future research.**

   Yes ☐ No ☐

6. **If "No" to the above, I confirm that the audio recordings taken during this study can only be used for this study and should be disposed of upon completion of the research on [Date].**

   Yes ☐ No ☐

7. **I have read and understood this consent form.**

   Yes ☐ No ☐

8. **I have had an opportunity to ask questions about my participation, and all my queries have been addressed to my satisfaction.**

   Yes ☐ No ☐

9. **I willingly agree to participate in this study.**

   Yes ☐ No ☐

Participant Information:

- **Name**: _____
- **Signature**: _____
- **Date**: _____

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