

Challenges of Using Artificial Intelligence (AI) in Small and Medium-Sized Enterprises (SMEs) in Latvia

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Abstract: - AI solutions in customer service and the digitalization of internal processes: the role of chatbots and digital agents in SMEs. The aim of the study is to develop guidelines for the implementation of AI chatbots in SME customer service and the digitalization of internal processes. The study used a mixed methodology: literature review, quantitative survey (n=109), and semi-structured interviews, as well as a single case study. The results show that the implementation of AI chatbots in Latvia is at an early stage of maturity. The main benefits are 24/7 availability, faster information provision, and reduction of employee workload, but the challenges are data security, system integration, and accuracy of responses, as well as change management (48% mention resistance). The article concludes with actionable guidelines for implementation stages, KPI system, security, and ethical requirements, as well as ensuring multilingualism and reliability.

Key-Words: - artificial intelligence, chatbot, digital agent, digitalization, SME,

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1 Introduction

The rapid development of AI technologies and their availability on cloud platforms has accelerated the digital transformation of companies, especially in customer service and internal process automation. One manifestation of this process is the use of AI-based solutions, such as chatbots and digital agents, in customer service and the digitalization of internal processes. These tools allow companies to accelerate operations, reduce costs, automate repetitive tasks, and provide customers with fast, personalized service in a 24/7 mode. At the same time, the implementation of AI also creates a range of new challenges related to implementation costs, technology integration, and shortages in employee skills.

In the global context, the growth of the generative AI market is particularly rapid. If in 2023 it was estimated at approximately USD 45 million, it is forecast to exceed USD 207 million by 2030, representing an increase of about 361% compared with 2023. This dynamic indicates not only a strong demand for AI solutions but also companies' willingness to invest in innovations that improve operational efficiency. The use of artificial

intelligence in the EU continues to grow, and this trend is reflected in the use of artificial intelligence technologies by European companies, which reached 13.5% in 2024, a significant increase compared to 8% in 2023, [1]. However, in Latvia, although this indicator increased from 4.53% in 2023 to 8.83% in 2024, it is still below the EU average. These data highlight the need for Latvian companies to accelerate their digital transformation to keep up with the overall European development and remain competitive. The implementation of AI in customer service in Latvia is already showing real results in several companies. According to DESI data, Latvia lags other EU countries in enterprise digitalization. Only 15% of Latvian companies use e-invoices, while the EU average is 32%, [1]. This gap indicates the need for research into the barriers to the implementation of AI technologies. Although chatbot and digital-agent implementation models have been studied internationally, Latvia still lacks local, empirically grounded guidelines applicable to its business environment and level of digital development. The practical value of this study lies in its ability to offer recommendations to Latvian companies that would

promote AI implementation and increase its impact on business productivity. To develop these guidelines, the following goal was set: to develop guidelines for the implementation of AI chatbots in SME customer service and the digitalization of internal processes. To achieve this goal, the following theses were defined: 1) to analyse the theoretical basis of AI chatbot and digital-agent technologies, their functionality, and their application in business; 2) to analyse the practice of AI chatbot implementation in Latvian companies using quantitative and qualitative research methods, and to collect and analyse empirical data by identifying the main conditions and factors that influence the successful implementation of AI solutions in SMEs; and 3) to develop guidelines for the implementation of AI chatbots suitable for SMEs, based on the results of the study.

The following methods were used in the study: a monographic or descriptive method to explore the theoretical basis of the use of artificial intelligence technologies in business; a survey to obtain quantitative data on companies' experience in implementing artificial intelligence; semi-structured interviews to explore companies' motivation, challenges and decision-making aspects in the process of implementing artificial intelligence; and case analysis to understand the situation of individual SMEs. Research period: from 2025 to 2026.

2 Problem Formulation

2.1 The concept and development trends of artificial intelligence

Recently, artificial intelligence (AI) has emerged as one of the most important digital technologies impacting business, society, and the global economy. Its implementation spans a wide range of industries, from customer service and manufacturing automation to healthcare, education, and government. AI is considered one of the fastest-growing technologies and is fundamentally changing the business environment around the world. AI services are increasingly integrated into cloud computing infrastructures, such as Amazon Bedrock, Azure OpenAI, and Google Vertex AI. This allows companies, regardless of their size or technological capabilities, to access advanced AI capabilities without having to develop complex internal systems themselves. This accessibility contributes to the democratization of AI solutions, allowing SMEs to compete with large enterprises, [2].

Chatbots and digital agents are the most widely used AI solutions in enterprises. Their main purpose

is to ensure automated communication between the system and the user by using Natural Language Processing (NLP), Machine Learning (ML), and data-analysis methods, which make it possible not only to understand user input but also to generate appropriate and personalized responses. The functionality of such technologies has expanded significantly in recent years, enabling companies to provide context-based, multichannel customer service and to introduce automation into internal business processes, [2]. Chatbots can be divided into several levels according to their technical complexity and capabilities. The simplest, or rule-based bots, use predefined dialogue trees or response scripts that allow them to respond only to a limited set of questions and commands. They are suitable for standardized, frequently repeated tasks but are unable to adapt flexibly to new scenarios. By contrast, machine-learning-based chatbots use deep-learning methods, such as neural networks and Large Language Models (LLMs), which allow them to process more complex language structures, interpret user intent, and learn from previous conversations, [3]. Such solutions can offer a personalized experience and are less constrained by a static set of scenarios. The authors' previous study demonstrated the effectiveness of chatbots, [4].

Digital agents are considered the next stage of development compared with traditional chatbots. They not only manage dialogue but can also autonomously perform tasks that require more complex data processing or integration with other systems. For example, digital agents can book services, process and analyse documents, generate reports, or make data-driven decisions, [4]. Such functionality is achieved through integration with enterprise information systems, including CRM, ERP, and other platforms. Thus, digital agents act as intermediaries between the user and the company's IT infrastructure, ensuring automated data flows and processes.

With the development of AI, chatbots and digital agents are moving beyond simple customer-support functions and are becoming strategic tools in companies' digital transformation. They can operate across multiple channels simultaneously, for example, websites, mobile applications, social networks, and voice platforms, thereby ensuring a continuous, consistent, and user-friendly experience, [4]. Every year, the available capabilities expand integration with cloud services, data analytics tools, and business systems, allowing AI chatbots to take on increasingly complex tasks, from personalized recommendations to proactive customer outreach. For example, in e-commerce, AI solutions help customers find suitable products, track orders, or request returns, while in the

financial sector, they can provide information on account balances, lending opportunities, or security issues, [5]. Customer service is one of the areas in which AI chatbots and digital agents have found the broadest application. Companies increasingly use these technologies to improve the speed, accessibility, and efficiency of communication while reducing labour costs and improving the customer experience, [6]. Chatbots provide immediate support in a 24/7 mode by answering frequently asked questions, helping users navigate products or services, and directing them to the most appropriate solutions. In addition, AI solutions significantly improve companies' ability to process large volumes of information simultaneously. Automation also makes it possible to standardize service quality and avoid errors that arise in manual communication, [7].

AI digital agents are also increasingly becoming an important instrument in the automation and digitalization of internal company processes, ensuring substantial productivity gains, cost reductions, and workflow optimization. Unlike chatbots, which serve as the interface between the company and the user, internally applied digital agents focus on improving support functions, processes, and tasks related to employees' day-to-day work and administrative functions. These agents can perform tasks that were previously performed manually, time-consuming, and error-prone. This is achieved by combining the use of technologies such as robotic process automation (RPA), natural language processing (NLP), and machine learning (ML), which allow processing of both structured and unstructured data, [8].

Companies that use AI in customer service report increased communication speeds, lower costs per customer, and higher levels of customer satisfaction. Academic research by the McKinsey Global Institute shows that companies that implement AI solutions strategically and systematically can achieve profit rates 3% to 15% higher than those of competitors, [6]. At the same time, the study emphasizes that the effect of AI implementation differs considerably depending on the sector, company size, employees' digital skills, and the maturity level of AI adoption. In addition, the literature highlights AI's positive impact on innovation and decision quality. According to Brynjolfsson's research, AI can process and analyze huge volumes of data with a speed and accuracy that are impossible for humans, thereby supporting data-driven management and faster adaptation to market changes [9]. Other publications focus on the challenges of AI implementation, including data quality, ethical issues, employee resistance, and the complexity of integrating AI solutions with existing information systems [10]. These studies emphasize

that technological progress alone is not sufficient, as organizational adaptation, change management, and a long-term strategic approach are also required. In the Latvian context, research on the impact of AI solutions is still limited, but the 17th digitalization report prepared by the Ministry of Smart Administration and Regional Development indicates that an increasing number of Latvian companies are beginning to use automated solutions in customer service and internal processes, [11]. Particularly positive examples have been observed in the financial sector, logistics, and retail, where AI solutions help not only optimize costs but also develop new customer experiences. Table 1 summarizes various studies analyzing the impact of AI implementation in companies of different sizes, as well as identifying the main benefits and challenges.

Table 1. A compilation of studies on the impact of AI solutions in businesses

Source, year	Study type	Company group	Key findings
[12]	Survey	Global companies in various industries	>80% of companies that have integrated AI solutions report increased productivity and lower costs per customer
[7]	Empirical study	International	In the case of strategic implementation of AI, profits increase by 3-15% compared to competitors; conditions for success: type of industry, level of digitalization, and employee skills.
[13]	Analytical study	Companies	AI solutions provide data processing with accuracy and speed, which promotes decision-making and innovation.
[11]	National report	Large-scale corporations	The use of AI solutions in customer support and internal processes is growing, with positive results in finance, logistics, and retail.

Source: [7]; [11]; [12]; [13]

As can be seen in Table 1, the implementation of AI solutions in companies is regarded as a significant factor in increasing both productivity and

competitiveness. International studies, [6], [9], [12], place the main emphasis on such economic benefits as lower costs, higher profits, more efficient use of data, and the stimulation of innovation. This shows that AI is no longer perceived merely as a technological tool, but as an essential part of company strategy and management.

2.2 Quantitative survey on the implementation of AI chatbots and digital agents in Latvian companies

To analyze in depth the practice of implementing AI solutions in Latvian SMEs, a quantitative survey was conducted. The survey aimed to obtain empirical data on the extent to which, and the circumstances in which, companies use or plan to use AI chatbots, as well as to identify the factors influencing companies that do not currently use such solutions. The survey made it possible to identify the main benefits, challenges, and barriers hindering the broader integration of these technologies. The results obtained serve as a basis for further analysis and for the development of practical recommendations.

The questionnaire covers the main aspects of implementing AI chatbots in companies. It consisted of 17 questions divided into three thematic sections:

1. General questions (e.g., company industry, sector, and number of employees).
2. Questions for companies that use AI chatbots (duration of use, goals, implementation benefits and challenges, assessment of usefulness, future).
3. Questions for companies that do not yet use chatbots (implementation plans, main barriers to digitalization, need for additional information).

This structure made it possible to distinguish companies according to their level of experience in implementing AI solutions and provided an opportunity to compare differences among various groups of companies. More than 300 Latvian companies participated in the survey. It included companies that are already using AI chatbots, as well as those that are just considering using such tools. 209 Latvian SMEs participated in the survey.

The survey was distributed to Latvian companies through several channels. A direct-outreach approach was used by sending invitations to company representatives by e-mail and by sharing the survey link on professional networks such as LinkedIn. The study used non-probability sampling, combining elements of purposive sampling. The survey was publicly available, but its distribution was carried out among companies that potentially use or could use AI solutions, thus ensuring compliance with the research objective. This approach is typical of exploratory research, where obtaining diverse and qualitative

information is more important than obtaining a statistically representative sample. Since the sample is not based on the principle of randomness, the obtained data cannot be statistically generalized to the entire population of Latvian companies; however, they are indicative, reflect the main trends, and allow conclusions to be drawn about the prerequisites, obstacles, and development opportunities for the implementation of AI solutions in SMEs. 77% of small enterprises and 63% of medium-sized enterprises with 50–249 employees participated in the survey. Thus, SMEs in Latvia act as adaptive innovators, which, unlike large companies, can adapt faster to the implementation of AI solutions, especially in customer service, marketing, and e-commerce. This observation suggests that technology adoption in the SME sector occurs gradually, starting with companies that are willing to experiment and invest in innovation, and continuing with broader adoption when the first benefits become visible.

The survey participants represented various sectors of the economy. The trade and e-commerce sector were the most represented, indicated by 21.5% of respondents. The healthcare and social care sector ranked second, accounting for 19.8% of participants. The financial services sector was represented by 14% of survey participants. The consulting and professional services sector was represented by 18.5% of respondents. The logistics sector accounted for 9% of the participants. Other sectors were less represented: information and communication technologies (ICT) 5.4%; manufacturing 3.6%; education and research 6.5%; energy and utilities 2.8%; cultural and creative industries 1.8%; and agriculture, forestry and fisheries 0.7%. To assess the prevalence and usage trends of AI chatbots in Latvian companies, the survey included a question on whether companies are already using such a solution. The results show that 61.5% of companies are not currently using AI chatbots, while 38.5% of respondents indicated that such solutions have been implemented. These data confirm that the integration of AI chatbots in the Latvian business environment is still at an early stage of development, which is in line with global trends in smaller market economies, such as OECD data, [14].

The survey data confirm that the introduction of AI chatbots in Latvia is relatively new. Almost half of the companies (49.5%) indicated that they have been using the solution for about 1–2 years, 45% for less than a year (6–11 months), and only 5.5% reported a longer period, about two years. This is also in line with trends in the Baltic region, where AI solutions have been actively implemented since 2021–2022, [15]. These indicators confirm that the AI chatbot market in

Latvia is in the early stages of adoption and adaptation. A wider spread of the technology is expected in the coming years, as companies gain experience and develop a better understanding and trust. It is important to emphasize that these results reflect a transitional stage of digital transformation, in which companies move from the position of “observer” to the phases of experimentation and use. Such a development dynamic assumes that the spread of new technologies begins with early adopters, followed by broader market adaptation. In the case of Latvian companies, this indicates an initial stage in the innovation-adoption cycle that could evolve into institutionalized use of the technology in the coming years, especially in customer service and internal-efficiency areas.

Analyzing the digital environments in which Latvian companies primarily use AI chatbots, these solutions are most often integrated into company websites (51%). This result is expected, since a company website usually serves as the primary point of customer contact and the first channel of communication with potential and existing customers. Integrating AI chatbots in this environment allows companies to automate customer service, improve response speed, and reduce the workload on human resources while maintaining a high level of availability in a 24/7 mode. This trend is consistent with international studies, for example, PwC, [16], which show that websites remain the dominant environment for the commercial use of AI chatbots, especially in companies with a B2C orientation. A relatively smaller share of companies uses chatbots in internal systems such as customer relationship management (CRM) platforms (21%). On social media platforms, AI chatbots are used by approximately 15% of companies, mainly for communication with customers and for handling frequently asked questions outside standard working hours. By contrast, AI chatbots are used in mobile applications by only 13% of companies, indicating that this form of integration is still at an early stage of development in Latvia. Mobile platforms require more advanced technical integration and adaptation of application architecture; therefore, such implementations are more common in larger companies with broader digital infrastructures. However, the mobile environment is regarded as the main future direction of AI interfaces, given users’ growing desire to receive personalized, contextually adapted support in real time, [17]. This means that in the coming years, a gradual transition of AI chatbots from the web and social media environment to integrated mobile platforms is expected, especially in the financial, retail, and customer service sectors.

These results confirm that Latvian companies are following the global AI implementation process, starting with customer service automation on websites and gradually moving towards more complex and internally integrated AI solutions. As can be seen in Figure 1, the main purpose of using AI chatbots in Latvian companies is customer service, which was emphasized by all surveyed companies (100%). This result was expected, as customer service is traditionally considered the most suitable and least risky area for starting the implementation of AI solutions. As shown in Figure 1, the main purpose of AI chatbot use in Latvian companies is customer service, as indicated by all surveyed companies (100%). This result is expected, since customer service is traditionally considered the most suitable and least risky field for the initial implementation of AI solutions, [17].

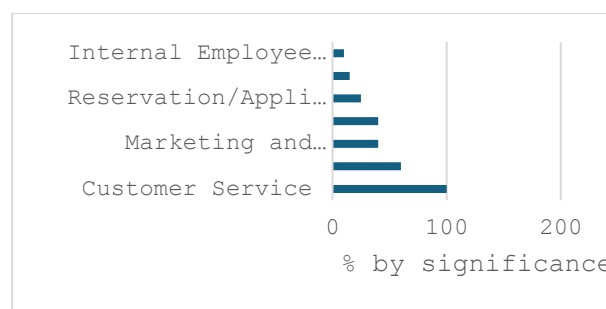


Fig. 1: Distribution of a I conversational bot usage goals in Latvian companies (n=209)
(Created by the authors)

At the same time, the data show that AI chatbots are also widely used for sales support (60%), marketing and campaign activities (40%), and lead generation (40%). Such functions reflect a commercial approach to the use of AI technologies, whereby AI solutions are employed to increase customer engagement and sales efficiency. Fewer companies use AI chatbots for booking or submitting applications (25%), assessing customer satisfaction (15%), and providing employee support (10%). This distribution reveals that in Latvia, AI technologies are mainly used to optimize external communications, rather than to automate internal processes. These trends are consistent with the technology adoption lifecycle model, in which companies initially use innovations in customer interactions to demonstrate quick, visible benefits, and only later move on to digitizing internal processes. In Latvia, this stage is still early, but positive experience in customer service may serve as a precondition for broader implementation of AI solutions within organizations as well.

The survey results show that, overall, companies

evaluate the impact of AI chatbots on the quality of customer service very positively. Most respondents (68%) indicated that the impact is “very positive,” another 25% “rather positive,” while 7% maintained a neutral position. The positive assessment by the surveyed companies indicates that AI solutions in customer service have reached an early level of stability and trust.

The survey results reveal that the most significant benefits of integrating AI chatbots into companies are directly related to improving the quality and efficiency of customer service (see Figure 2). All surveyed companies (100%) indicated that the main benefit is faster provision of information to customers, while 95% highlighted the availability of services in a 24/7 mode. These results confirm that the main contribution of AI solutions is currently seen in operational and continuous customer service, which directly improves the quality of customer experience and the company’s reputation.

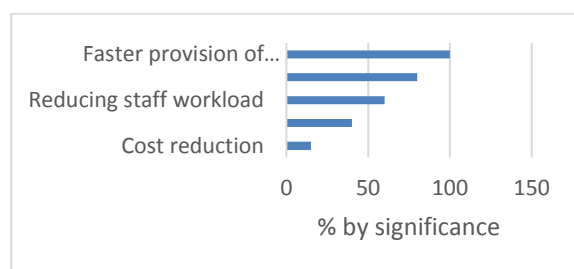


Fig. 2: Key benefits of using AI chatbots (n=209)
(Created by the authors)

This trend is described in studies, [12], [15], which indicate that companies most often implement AI solutions specifically for the automation of customer interaction, because in this field, the impact of technology is easiest to measure and justify through concrete indicators such as reduced response time, increased customer satisfaction, and ensured availability. In Latvia, this approach reflects the pragmatic nature of technology implementation, with organizations starting in those areas where AI solutions provide direct and rapid returns before being applied in more strategically complex processes.

A significant benefit noted by 60% of companies is the reduction of employee workload. This indicates that chatbots are perceived not only as a customer-service instrument but also as a tool for internal efficiency and work optimization. By automating repetitive or routine tasks, companies can reallocate resources to activities with higher added value, thereby improving the organization’s overall productivity. This approach reflects a transition from operational to analytical AI applications, which is characteristic of more technologically mature

companies. A relatively small number of respondents (15%) emphasized direct cost reduction as the most significant benefit. This indicates that in the short term, companies value qualitative aspects more - customer experience, accessibility, and process speed - than financial effects. This situation is typical of the early stages of technology implementation, when organizations first focus on the practical utility of the technology and operational improvements, and only later analyze its economic return. Data collection and analysis were mentioned in 40% of cases, indicating the role of chatbots not only in customer service but also in strategic information gathering processes. Only a small number of respondents (15%) emphasized cost reduction, which indicates that in the short term, companies value the benefits related to quality and availability more than real financial savings. When analyzing the survey data on the main challenges following the implementation of AI chatbots, most companies (60%) indicated that there had been no significant problems, and that the solution was working successfully. This confirms that the implementation of AI technologies in Latvia is generally evaluated as stable and functionally effective, especially where the implementation process has been well prepared and adapted to the company’s specific context. The results also show several significant barriers that characterize the challenges of AI implementation at different levels – technological, organizational, and human. Understanding these barriers is important to assess the level of AI integration in Latvian companies and determine the necessary factors for sustainable technological development.

Compliance with data security requirements was mentioned in 25% of cases, confirming the importance of processing sensitive data and the legal risks associated with the use of AI. Data security is particularly important in areas such as healthcare, where sensitive patient data is processed, and the public sector, where much of the information is related to regulatory restrictions and personal data. In these sectors, the implementation of AI solutions requires not only technological, but also legal and ethical compliance, and therefore, companies must consider stricter requirements and greater risks. By contrast, in retail or e-commerce, for example, challenges are more often associated with protecting customers’ purchasing habits and contact information, which are less sensitive than data in the healthcare or financial sectors.

Low employee trust in the solution was mentioned by 20% of companies. This indicates that the implementation of technology in organizations is not always solely a technical issue - it is also a human-

factor issue. Lack of trust often stems from a lack of understanding of how the system works, and the belief that automation could replace human work. Therefore, successful implementation requires comprehensive internal communication, employee training, and a clear explanation of the added value of AI, so that such a solution is perceived not as a replacement but as a supporting tool.

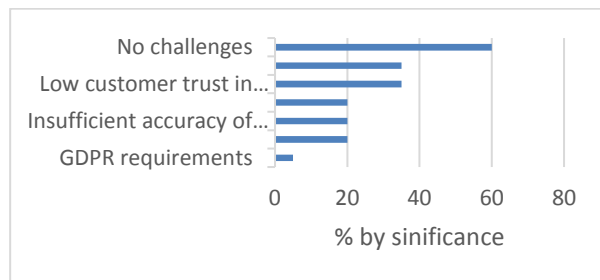


Fig. 3: Challenges and problems in using AI chatbots after their implementation (n=209)
(Created by the authors)

The question about challenges showed an interesting result (see Figure 3): 60% of companies indicated that there had been no significant problems after implementation. However, the remaining respondents emphasized several issues: complex integration with existing systems (35%); low customer trust in the solution (35%); implementation costs (20%); insufficient accuracy of responses (20%); and data security and compliance with GDPR requirements (20%). An additional 5% of respondents selected “Other” and provided more detailed comments.

The next part of the survey analyzed companies’ attitudes toward the further development and integration of AI solutions in the future. The survey results indicate that companies are positive about the development and wider application of AI solutions. A large proportion of respondents (80.5%) indicated that they plan to expand the use of AI in the future, including by introducing voice assistants, digital agents, or extended automation solutions. This indicator confirms that company management no longer perceives AI solutions as a temporary innovation, but as part of a sustainable digital transformation and competitiveness strategy. Approximately 16% of companies chose the answer “maybe”, indicating a cautious attitude and the need for additional information about potential benefits, costs, and risks. This group is important because it could become a catalyst for future AI implementation if convincing examples of successful technology integration and clear indicators of value become available on the market. A small proportion of companies (approximately 3.5%) indicated that they

do not plan to expand the use of AI solutions. The result shows that the rejection rate is very low and, in general, Latvian companies see significant potential for wider use of AI solutions in the future. These data confirm that the trend of using AI solutions in Latvian companies is positive. Most companies are ready to continue using AI, which means that faster implementation and use of AI technologies can be expected in the coming years. This indicates the need to develop practical guidelines and examples of good practices that would help companies accept the challenges and make the most of the benefits offered by AI. The survey data shows that some companies that are not currently using AI chatbots are nevertheless thinking about implementing them. 12.5% of respondents indicated that they plan to implement such AI solutions in the next 1-2 years, while 47.5% answered “maybe/under consideration”, demonstrating some interest, but also a cautious stance. Only 40% of companies indicated that they do not currently plan to implement AI chatbots. This means that more than half of companies see the potential of AI technologies in the future; however, the decision is postponed due to several constraints.

The survey shows that the main barriers to implementing AI chatbots (see Figure 4) are related to a lack of information about the solutions (37.5%) and concerns that automation could worsen the quality of customer service (37.5%). The results show a trust and knowledge gap that still exists between technology providers and business leaders. A similar trend has been found in international studies (OECD, 2023), which indicate that insufficient information and limited understanding of AI principles are among the main factors hindering its implementation in SMEs.

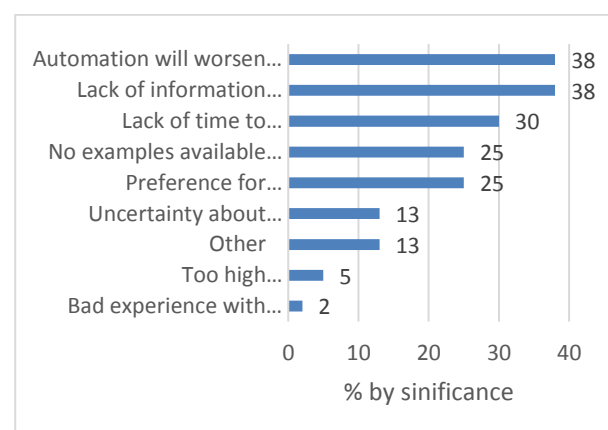


Fig. 4: Reasons added by respondents for not using AI chatbots (n=209) (Created by the authors)

In addition to the reasons mentioned above, 12.5% of respondents answered “Other” and explained in more detail. These included concerns about data

security and the reliability of the solution; the absence of guarantees regarding the quality of responses and the ability to perform responsible tasks; doubts about whether customers would use the chatbot at all, which could make the costs unnecessary; the need first to update the company's website to implement such a solution there; and the degree of bureaucracy within the company, which makes the implementation process long and complicated.

These data clearly show that the implementation of AI solutions can be hindered not only by technical or financial aspects, but also by organizational culture, infrastructure readiness, and employee or customer trust in the technology.

According to the survey results, it can be concluded that the barriers to digitalization in Latvian companies are multidimensional, covering both human and organizational, as well as financial and technical aspects. The main problem is the lack of information and knowledge about available AI solutions, as well as the increasing awareness of their potential. This means that the wider implementation of AI solutions in Latvia depends not only on the availability and cost of technologies, but also on understanding, employee training, and trust in the practical application of value-added technologies.

Summarizing all the results, the authors conclude that the potential for implementing AI chatbots in Latvia is high, but this technology is evaluated unevenly. The most important conclusions are that the implementation of AI chatbots in Latvia is determined not so much by the availability of technology as by the organizational readiness, awareness, and willingness of companies to make changes. Successful implementation of AI in SMEs requires a strategic, not just a technological, approach, with significant attention paid to employee engagement, infrastructure adaptation, and fostering core trust.

2.3 Qualitative interviews on the implementation of AI solutions in Latvian companies

To achieve the aim of the study, not only a quantitative but also a qualitative research approach was used. The quantitative survey made it possible to obtain a broad body of data on companies' experience, benefits, and challenges in relation to AI implementation, whereas the qualitative approach provided an opportunity to analyze these issues more deeply and contextually.

The results obtained in the interviews complement and clarify the findings of the surveys, allowing not only to identify the most important factors, but also to understand how they manifest themselves in companies of different sizes, sectors, and levels of

digital tool use. As a complementary method for the survey, semi-structured interviews were chosen to answer the research question: what factors and conditions influence the successful implementation of AI chatbots in SMEs? This method was chosen to gain a deeper understanding of companies' motivations, strategic choices, organizational culture, and practical problems that may not be fully covered in the survey. Semi-structured interview guidelines with common thematic blocks were used and adapted to three situations: (1) companies using AI chatbots/digital agents; (2) companies considering or planning their implementation; and (3) companies that have decided not to implement the opportunities offered by AI. The following topics were discussed during the interviews: motivation for the decision and its connection with the company's strategy; implementation challenges (technical, organizational, financial, legal, and human) and their solutions; practical benefits and measurement approaches; risks, limitations, and their management, as well as plans and sustainability prerequisites.

The interviews were conducted according to common guidelines, and the responses were systematically recorded and structured into thematic blocks. After data collection, a thematic content analysis was carried out: open coding (to identify concepts), category development, and interpretation of relationships between themes. This approach allowed the authors to identify not only the most frequently mentioned factors but also the underlying logic of the implementation process.

To reduce interpretation errors, the conclusions are based on the comparison of multiple sources. In addition, a cautious induction approach was used in designing the recommendations: only those insights that were repeated in several interviews or were clearly consistent with the quantitative data were transferred into the guidelines.

The sample size is small and not representative; some insights may be industry-specific. The responses are self-reported; therefore, possible optimism or scepticism in the assessments must be balanced against the survey results and the theoretical literature.

To gain a deeper understanding of companies' experience with the implementation and use of AI chatbots, a thematic analysis of the interviews was conducted. This method allows us to identify the main themes that are visible among representatives of different sectors and to reveal both common features and sector-specific ones. The data obtained from the interviews show five different sectors (ICT, logistics, healthcare, e-commerce, and consulting services), which differ in terms of operational specificity, regulatory framework, and customer

service process organization.

Such diversity made it possible to identify both general tendencies in AI implementation and factors characteristic of each industry.

According to the data obtained in the study, it can be concluded that the sustainable use of AI solutions requires a balance between technological innovations and the human factor, which indicates the company's ability to derive maximum value from AI.

1. Efficiency and cost reduction - AI chatbots reduce employee workload and increase customer satisfaction, which is especially true in the ICT, logistics, and healthcare sectors.

2. Trust and challenges - both employees and customers are initially sceptical of AI solutions, but trust increases with practical improvements, testing, and the ability to transfer information to a specialist.

3. Industry specifics - in healthcare, legal and security requirements dominate; in e-commerce, integration and language functionality are most important; while in the consulting sector, the importance of personal contact and a sceptical attitude toward automation remain barriers.

The results of the interviews confirm and, at the same time, complement the facts obtained in the survey. The survey showed that most companies use AI chatbots to improve customer service and ensure faster communication. In turn, the interviews revealed deeper problems that the survey data only superficially revealed. The quantitative results indicated that the biggest obstacles are the integration of complex systems (35%) and the lack of information about solutions (37.5%), while the interviews emphasized that these obstacles are often determined by the organizational culture, employee trust, and management support.

3 Problem Solution

The implementation of AI technological tools in business processes in Latvia is still at an early stage of development; however, the empirical study analysis confirms that companies increasingly agree with the potential of these solutions and are starting to integrate them into the digitalization of customer service and internal processes. Based on the results of the study, the authors have developed guidelines for the successful implementation of AI chatbots and digital agents in SMEs. These guidelines are based on both theoretical insights and empirical data from surveys and interviews and are intended as a practical framework for companies wishing to introduce AI solutions in a sustainable and purpose-driven manner.

The guidelines stipulate that the implementation of AI solutions should have clearly defined goals that

reflect specific business needs or function improvements, such as increasing the speed of customer service, reducing employee workload, or ensuring data availability. The implementation process should begin with an assessment of the company's digital development, evaluating the quality of the existing infrastructure, data availability, and employee readiness to work with technologies. The guidelines include five factors.

1. Ensure employee involvement and trust in AI solutions. Successful implementation requires strengthening the organizational culture by promoting understanding of the role of artificial intelligence technologies as a support tool, not a threat. Companies should provide regular training, involve employees in the solution development process, and create open channels for feedback.

2. Integrate AI solutions while adhering to security and data protection requirements. The company is recommended to divide AI applications according to their sensitivity level and use human supervision in those processes where the risk level is higher.

3. Implement inclusive access and multilingual solutions. To ensure equal customer service, companies should ensure that artificial intelligence chatbots operate in at least two languages (Latvian and English). Accessibility should also be ensured for people with limited digital knowledge.

4. Key performance indicators (KPIs) should be defined and monitored. A system should be implemented that regularly monitors such AI efficiency indicators as the accuracy of answers, the proportion of human involvement, the level of customer satisfaction, and the time saved in processes.

5. Principles of continuous improvement should be implemented. AI solutions should be dynamic and regularly review content and data, adjust models, and evaluate user experience. This will ensure the sustainable development of the system and adaptation to changing company needs.

For the effective implementation of AI guidelines, a division of responsibility is essential. The company's management determines strategic goals and resources; the IT department is responsible for technical integration and security; data protection specialists determine compliance with legal requirements; and functional departments determine the implementation of processes and participate in the evaluation of results. Such a management model provides an opportunity to reduce implementation risks and ensures coordinated implementation within the organization.

4 Conclusion

The results of the study indicate that the main benefits of implementing AI chatbots are faster provision of information to customers, constant availability, and reduced employee workload, while the main problems are related to system implementation, data security, and trust in technology.

The data confirm that the human factor is a significant precondition for successful AI implementation. 48% of respondents pointed to employee or management resistance to change, which demonstrates the need for internal communication, education, and management support in the technology-adoption process.

Management involvement and a company's digitalization readiness play a significant role in the implementation of AI solutions. Companies where management supports innovation and provides the necessary resources for testing achieve more successful and sustainable use of AI. The study confirms that a balance between technological readiness, organizational culture, and human resource management is necessary for successful AI implementation. The synergy of these factors determines the sustainability of AI implementation projects and their real impact on business results. Most companies (80%) positively assess the expansion of AI, which indicates the maturity of the companies and the long-term perception of AI as a strategic investment, rather than a short-term innovation. Companies are advised to systematically assess their digital infrastructure, data quality, and employees' digital skills to determine the potential for AI integration and reduce implementation risks. This approach provides a practical basis for planning the next steps in digital transformation. It is essential to create a clear implementation plan with goals, deadlines, responsible parties, and clearly defined evaluation criteria. The roadmap should also include pilot project phases that allow testing of AI solutions in a limited environment before implementation, thereby reducing uncertainty and enhancing company learning and development.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this work, the author(s) utilized artificial intelligence (AI) technologies solely for the purpose of linguistic refinement and grammatical correction. Following the application of these tools, the author(s) comprehensively reviewed, verified, and edited the resulting text. The author(s) maintain full accountability and responsibility for the accuracy, integrity, and final content of the publication.

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Iveta Linina is lead author and developed the experimental plan and organized its execution. Rosita Zvirgzdina was responsible for the data processing. Velga Vevere the article was translated into English.

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