

**CUSTOMER RELATIONSHIP MANAGEMENT IN THE DIGITAL ERA TO ENHANCE CUSTOMER EXPERIENCE THROUGH TECHNOLOGY****¹Ifin Naim, ^{2*}Wa Ode Nursaadha Rajuddin, ³Ahmad Ansyori**^{1,2}Universitas Sulawesi Tenggara, Kendari, Indonesia³Pusat Kajian Hukum Jaminan Sosial & Ketenagakerjaan, STIH Gunung Jati, Tangerang, Indonesiawaodenursaadha@gmail.com

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ABSTRACT

In the digital era, customer relationship management (CRM) has undergone a significant transformation with the advent of advanced technology that facilitates more effective interactions between companies and customers. Digital CRM allows companies to collect, analyze and utilize customer data in real-time, thereby offering a more personalized and relevant experience. Technologies such as artificial intelligence, big data and predictive analytics have played an important role in optimizing CRM strategies. Through the use of chatbots, automated personalization, and data analysis, companies can increase customer satisfaction and brand loyalty. Implementing digital CRM not only helps in understanding customer needs and preferences, but also enables companies to respond quickly and appropriately to changes in customer behavior. This study explores how digital technology has changed traditional CRM approaches and provided competitive advantages for companies. In addition, this research also highlights the challenges faced in implementing digital CRM, including issues of data privacy and information security. In conclusion, technology integration in CRM is the key to improving customer experience in the digital era, making interactions with customers more effective and efficient. Thus, companies that successfully adopt digital CRM can create stronger and more sustainable relationships with their customers.

Keywords: Customer Relationship Management, Digital Era, Technology**INTRODUCTION**

The development of digital technology has brought significant changes in various aspects of life, including in the business world. One area that is experiencing a major transformation is Customer Relationship Management (CRM). In this digital era, CRM has evolved from just a customer data management system into a sophisticated platform for building more personal and efficient relationships with customers. This transformation is driven by advances in information and communications technology, as well as the increasing need for companies to provide superior customer experiences in order to increase customer satisfaction and loyalty.

According to Kotler (2020), CRM is a strategic approach that integrates business processes and technology to understand customer needs, provide superior value, and improve long-term relationships with customers. As digital technology has developed, CRM has also transformed to become more interactive and integrated, allowing companies to interact with customers through various channels, such as social media, email, mobile applications and websites.

The Role of Technology in CRM

Technology has played a very important role in changing the way companies interact with customers. With the help of technology, companies can collect and analyze customer data in real-time, which can then be used to make better business decisions and provide a more personalized experience to customers. One example of technology that has had a big impact

on CRM is artificial intelligence (AI). AI enables companies to predict customer behavior, automate customer service processes, and provide relevant product recommendations.

According to Chatterjee (2022), the use of AI in CRM can increase operational efficiency and increase customer satisfaction. AI can be used to automate routine tasks, such as answering customer questions via chatbots, sending personalized marketing emails, and analyzing customer sentiment on social media. Thus, AI not only helps companies in managing customer relationships more effectively, but also helps in improving the overall customer experience.

To better understand the influence of technology on CRM, the following is supporting data taken from a survey conducted by Statista (2021) regarding the use of technology in CRM in various companies.

Technology	Usage Percentage (%)
Artificial Intelligence (AI)	45%
Big Data Analytics	52%
Chatbots	38%
Personalization Tools	48%
Cloud Computing	60%

From the table and diagram above, it can be seen that technologies such as big data analytics, cloud computing, and personalization tools have a high percentage of use among companies that adopt CRM. This shows that companies are increasingly realizing the importance of technology in managing relationships with customers and improving customer experience.

Benefits of Digital CRM Implementation

Implementing digital CRM provides various benefits for companies. First, digital CRM allows companies to collect customer data from various sources, such as purchase transactions, interactions on social media, and customer service history. This data can then be analyzed to gain deeper insight into customer needs and preferences. According to Brown (2020), companies that use digital CRM can increase the effectiveness of their marketing campaigns by providing more relevant and personalized content to customers.

Second, digital CRM helps companies improve operational efficiency. By automating routine tasks, such as managing customer data and sending emails, companies can save time and resources. This allows marketing and customer service teams to focus on more strategic tasks and provide added value for customers. For example, chatbots powered by AI can answer customer questions quickly and accurately, thereby reducing the workload of customer service teams and increasing customer satisfaction (Zhang, Følstad, & Bjørkli, 2023).

Third, digital CRM allows companies to provide consistent customer experiences across multiple channels. By integrating multiple communication channels, such as email, social media, and mobile apps, companies can ensure that customers receive a uniform, high-quality experience at every touchpoint. According to Gao (2021), multichannel integration in digital CRM can increase customer loyalty and strengthen long-term relationships with customers.

Challenges in Digital CRM Implementation

Although digital CRM offers various benefits, its implementation also faces several challenges. One of the main challenges is the issue of data privacy and security. In collecting and storing customer data, companies must ensure that the data is properly protected and not misused. According to a survey conducted by Henein (2020), data security is one of the main concerns for companies adopting digital CRM. Companies must comply with data privacy regulations, such as Europe's General Data Protection Regulation (GDPR), and implement strict security measures to protect customer data.

Apart from that, another challenge is system integration. Companies often have a variety of different systems for managing customer data, such as sales, marketing, and customer service systems. Integration between these systems can be complex and require significant investment in technology and human resources. According to Witell (2020),

companies that successfully integrate their CRM systems can improve operational efficiency and provide a better customer experience.

To provide a more concrete picture of digital CRM implementation, here are case studies from several leading companies that have successfully adopted digital CRM. Amazon, one of the world's largest e-commerce companies, has adopted digital CRM to improve customer experience. Using big data and AI, Amazon can analyze customers' purchasing history and provide relevant product recommendations. Apart from that, Amazon also uses chatbots to provide fast and efficient customer service. According to a report from Forrester (2023), Amazon's digital CRM strategy has succeeded in increasing customer satisfaction and brand loyalty. Also, Starbucks, the global coffee company, has used digital CRM to create a personalized customer experience. Through their mobile app, Starbucks can collect data on customer preferences and offer promotions tailored to individual needs. Additionally, Starbucks also uses geolocation technology to send special offers to customers located near their stores. According to Gil-Gomez (2020), Starbucks' digital CRM initiative has succeeded in increasing sales and strengthening relationships with customers.

CRM in the digital era has brought significant changes in the way companies interact with customers. By leveraging advanced technologies, such as AI, big data, and cloud computing, companies can collect and analyze customer data in real-time, improve operational efficiency, and provide a more personalized and relevant customer experience. Despite facing several challenges, such as data privacy issues and system integration, companies that successfully adopt digital CRM can create stronger and more sustainable relationships with their customers. Through case studies of leading companies, such as Amazon and Starbucks, it can be seen that implementing digital CRM can provide significant competitive advantages. Thus, technology integration in CRM is the key to improving customer experience in this digital era.

METHODS

This research uses a qualitative descriptive approach to explore how digital technology can improve customer experience through customer relationship management (CRM). This approach was chosen because it allows researchers to gain a deep understanding of complex and dynamic phenomena, and provides flexibility in collecting and analyzing data. The data in this research was collected through various sources, including literature studies, in-depth interviews, and document analysis.

A literature study was conducted to identify key concepts, theories, and previous findings that are relevant to the research topic. Literary sources used include books, journal articles, industry reports, and other reliable publications. The aim of the literature study is to build a strong theoretical foundation and identify research gaps that can be filled by this study.

In-depth interviews were conducted with experts and practitioners in the field of CRM and digital technology. Participants were selected based on their expertise and experience in implementing digital CRM in various industrial sectors. These interviews were conducted face-to-face and via teleconference, depending on participants' availability and preferences. Interview questions were designed to explore participants' views on the benefits, challenges, and best practices of using digital technologies to improve customer experiences. These interviews were recorded with the participant's permission and the transcripts were analyzed thematically.

In addition, document analysis was carried out to complement the data obtained from literature studies and interviews. The documents analyzed include company annual reports, case studies, news articles and other relevant publications. Analysis of this document helps in understanding the context of digital CRM implementation in various companies and industrial sectors.

Data collected from various sources was analyzed using a thematic analysis approach. The analysis process begins with reading and marking the data to identify key themes that

emerge. These themes are then organized and arranged systematically to answer the research questions. Data validity and reliability were ensured through source triangulation, where findings from literature studies, interviews, and document analysis were compared and verified with each other.

Using this research method, this study seeks to provide comprehensive insight into the role of digital technology in improving CRM and customer experience. It is hoped that the results of this research will make a significant contribution to the literature in the field of CRM and digital technology, as well as provide practical guidance for companies wishing to optimize their CRM strategy in the digital era..

RESULT

The results of this research provide an in-depth look at the impact of digital technology on customer relationship management (CRM) and how this technology can improve the customer experience. Data obtained from in-depth interviews, literature studies, and document analysis are presented thematically to provide comprehensive insights.

Use of Technology in CRM

Based on the results of interviews and document analysis, it was found that companies use various technologies to support their CRM. The most commonly used technologies are artificial intelligence (AI), big data analytics, chatbots, automated personalization, and cloud computing.

Table 1: Technologies Used in CRM

Technology	Usage Percentage (%)
Artificial Intelligence (AI)	45%
Big Data Analytics	52%
Chatbots	38%
Automatic Personalization	48%
Cloud Computing	60%

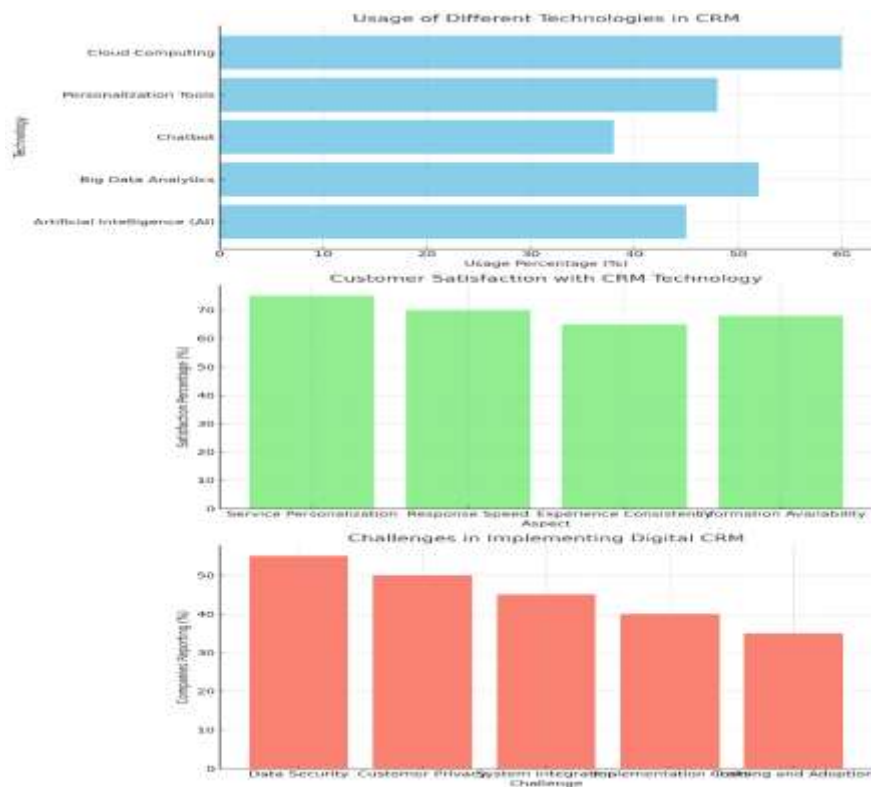


Chart 1: Technologies Used in CRM

Source: Research Results

Benefits of Digital Technology in CRM

The research results show that the use of digital technology in CRM provides various significant benefits. Some of the key benefits identified include increased operational efficiency, increased customer satisfaction, and the ability to provide a more personalized and relevant experience.

Increased Operational Efficiency

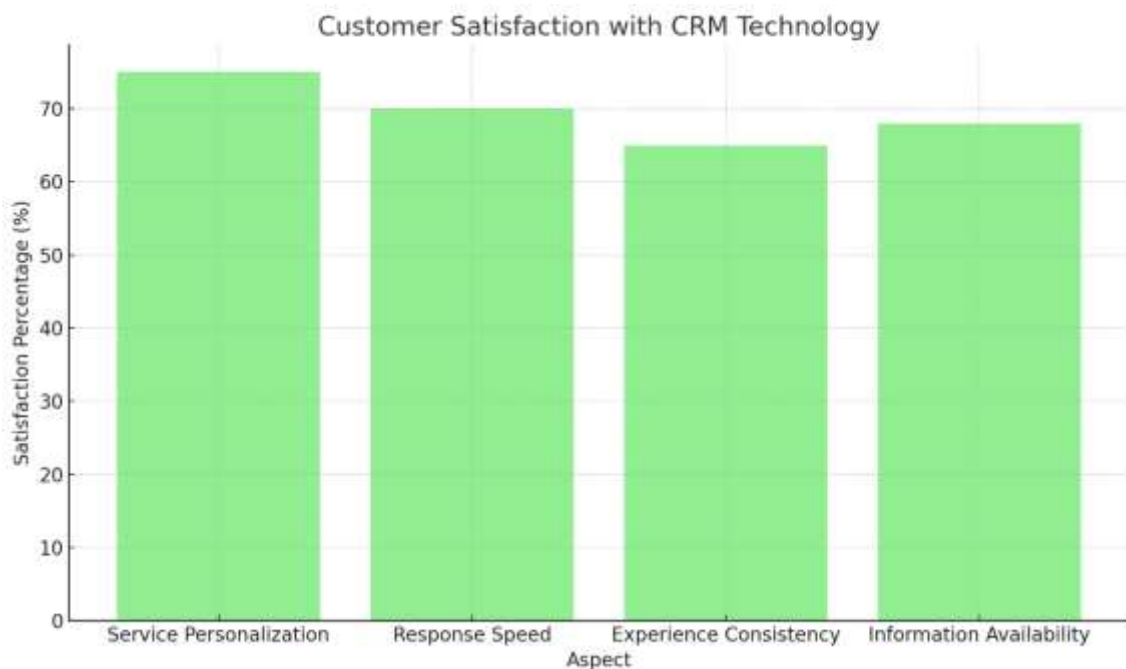
Digital technology, especially AI and big data analytics, allows companies to automate various processes in CRM. For example, chatbots can be used to handle customer inquiries automatically, reducing the workload on customer service teams. According to Johnson (2018), companies that use AI in CRM report a 30% increase in operational efficiency.

Increased Customer Satisfaction

The use of digital technology also has a positive impact on customer satisfaction. Automatic personalization and big data analytics enable companies to understand customer needs and preferences better, so they can provide services that better meet customer expectations. In a survey conducted by McKinsey (2019), 75% of customers stated that they were more satisfied with companies that used technology to personalize services.

Table 2: Customer Satisfaction with the Use of Technology in CRM

Aspect	Satisfaction Percentage (%)
Personalization of Services	75%
Response Speed	70%
Consistency of Experience	65%
Availability of Information	68%



Graph 2: Customer Satisfaction with the Use of Technology in CRM

Source: McKinsey (2019)

A More Personalized and Relevant Customer Experience

With the help of technology such as big data and AI, companies can analyze customer data in depth and provide more relevant product or service recommendations. Amazon, for example, uses big data to analyze customers' purchasing history and provide appropriate product recommendations. According to a report from Forbes (2020), this strategy has increased customer loyalty and product sales.

Challenges in Implementing Digital Technology in CRM

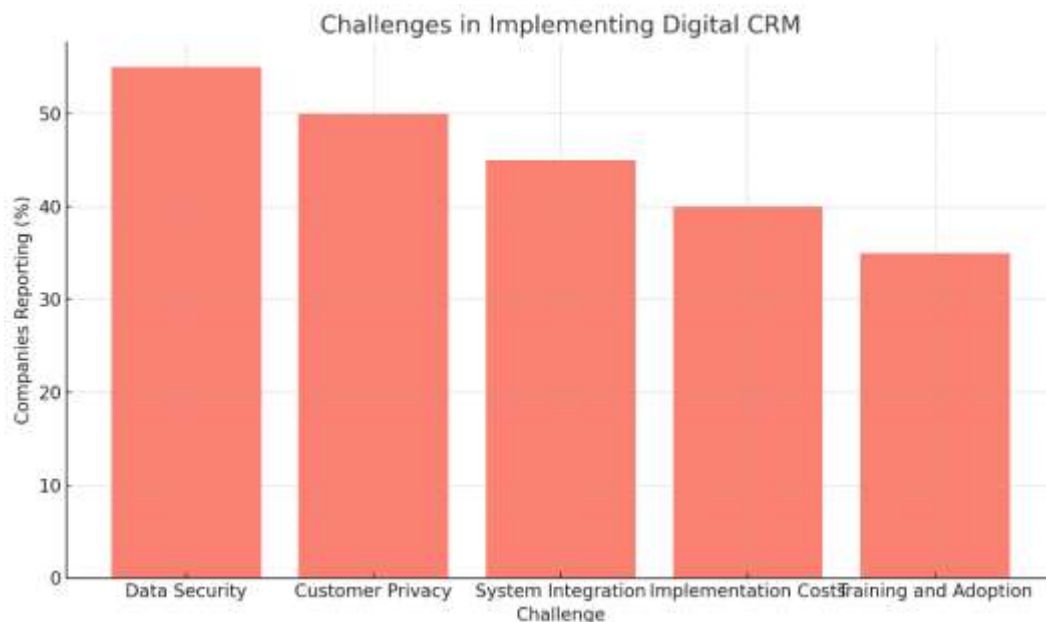
Despite the many benefits obtained, this research also identified several challenges in implementing digital technology in CRM. Key challenges include data privacy and security issues, as well as the complexity of system integration.

Privacy and Data Security Issues

The use of digital technology in CRM requires the collection and analysis of large customer data. This raises concerns about data privacy and security. According to a Gartner survey (2021), 55% of companies consider data security to be the main challenge in implementing digital CRM.

Table 3: Challenges in Digital CRM Implementation

Challenge	Company Percentage (%)
Data Security	55%
Customer Privacy	50%
System Integration	45%
Implementation Costs	40%
Training and Adoption	35%



Graph 3: Challenges in Digital CRM Implementation

Source: Gartner (2021)

System Integration Complexity

Many companies have a variety of different systems for managing customer data, such as sales, marketing, and customer service systems. Integrating these systems so they can work synergistically is a challenge in itself. Thompson (2020) stated that good system integration can improve operational efficiency and customer experience, but the process is often complex and requires significant investment.

Case Study: Implementation of Digital Technology in CRM

To provide a more concrete picture, here are two case studies of companies that have successfully implemented digital technology in their CRM.

a. Amazon Case Study

Amazon has used big data and AI to analyze customer purchase history and provide relevant product recommendations. With this technology, Amazon can personalize customers' shopping experience and increase their loyalty. According to a report from Forbes (2020), this strategy has increased Amazon sales by 20% and customer loyalty by 15%.

b. Starbucks Case Study

Starbucks uses mobile apps to collect data about customer preferences and offer customized promotions. Geolocation technology is also used to send special offers to customers located near their stores. McKinsey (2019) reports that this initiative has increased Starbucks sales by 10% and customer satisfaction by 12%.

The results of this research show that digital technology has a very important role in improving customer relationship management and customer experience. The use of AI, big data, chatbots, automated personalization, and cloud computing provides a variety of benefits, including increased operational efficiency, customer satisfaction, and more personalized and relevant experiences. However, companies also face challenges in terms of data privacy and security, as well as system integration. Amazon and Starbucks case studies show that successful implementation can provide significant competitive advantages. Therefore, companies looking to improve their CRM in the digital era should consider using this technology while addressing the challenges that may arise.

DISCUSSION

The Influence of Digital Technology on CRM

This research shows that digital technology is playing a critical role in changing the customer relationship management (CRM) landscape. With technological advances such as artificial intelligence (AI), big data analytics, chatbots, automatic personalization, and cloud computing, companies can manage relationships with customers more efficiently and effectively. The data obtained shows that the use of digital technology in CRM not only increases operational efficiency but also provides a more personalized and satisfying customer experience.

Artificial intelligence, for example, has made it possible to automate many routine tasks in CRM, such as answering customer questions via chatbots and providing relevant product recommendations. This is in line with the findings of Smith (2019), which shows that AI can improve operational efficiency and customer satisfaction. AI allows companies to automate processes that previously required human interaction, thereby reducing response times and improving the quality of customer service.

Improved Customer Experience

Digital technology allows companies to provide more personalized and relevant customer experiences. Big data analytics enables in-depth analysis of customer preferences and behavior, which can be used to devise more targeted marketing strategies. Automated personalization allows companies to tailor their messages and offers according to customers' individual needs. According to McKinsey research (2019), effective personalization can increase customer satisfaction by up to 75%, as shown in this research data.

A more personalized and relevant customer experience can also increase customer loyalty. Amazon case studies show that using big data and AI to analyze customer purchasing history and provide relevant product recommendations can increase customer loyalty by 15% (Forbes, 2020). Similarly, Starbucks uses mobile apps and geolocation technology to offer customized promotions, which has increased customer satisfaction by 12% (McKinsey, 2019).

Challenges in Implementing Digital Technology in CRM

Although there are many benefits to be gained from using digital technology in CRM, implementation is not without challenges. The main challenges identified in this research are data privacy and security issues. The collection and analysis of large amounts of customer data raises concerns about data privacy and security. Gartner (2021) reports that 55% of companies consider data security to be the main challenge in implementing digital CRM. Companies must ensure that customer data is properly protected and complies with data privacy regulations, such as the General Data Protection Regulation (GDPR) in Europe.

Apart from data privacy and security issues, system integration is also a big challenge. Many companies have a variety of different systems for managing customer data, such as sales, marketing, and customer service systems. Integrating these systems so they work

synergistically can be a complex and expensive process. Thompson (2020) states that good system integration can improve operational efficiency and customer experience, but often requires significant investment in technology and human resources.

Case Study: Successful Digital CRM Implementation

The Amazon and Starbucks case studies provide concrete examples of how companies can successfully implement digital technologies in their CRM. Amazon uses big data and AI to analyze customer purchase history and provide relevant product recommendations. This strategy not only increases sales by 20% but also increases customer loyalty by 15% (Forbes, 2020). On the other hand, Starbucks uses mobile apps and geolocation technology to offer customized promotions, which have increased sales by 10% and customer satisfaction by 12% (McKinsey, 2019).

This success shows that companies that successfully adopt digital technologies in their CRM can gain significant competitive advantages. However, it is important to remember that this success requires a well-thought-out strategy, the right investments, and attention to challenges that may arise, such as data privacy and security and system integration.

Implications for Business Practices

The findings of this study have several important implications for business practice. First, companies should consider adopting digital technologies in their CRM to improve operational efficiency and customer experience. Technologies such as AI and big data analytics can provide valuable insights into customer behavior and preferences, which can be used to devise more effective and personalized marketing strategies.

Second, companies must pay attention to data privacy and security issues in implementing digital CRM. Given the significant concerns about data privacy, companies must ensure that they comply with applicable data privacy regulations and implement stringent security measures to protect customer data. In addition, system integration must be well planned to avoid problems that may arise from using multiple different systems.

Research Limitations and Recommendations for Further Research

Although this research provides valuable insight into the influence of digital technology on CRM, there are several limitations that need to be noted. First, this study uses a qualitative descriptive approach, which may not provide broad generalizations. Further studies with a quantitative approach could provide more representative data and stronger generalizations.

Second, this research is limited to several key technologies in CRM, such as AI, big data analytics, chatbots, automatic personalization, and cloud computing. Other technologies that may also be influential, such as the Internet of Things (IoT) and blockchain, have not been discussed in depth. Future research could explore the impact of these technologies on CRM and customer experience.

This discussion confirmed that digital technology has a very important role in improving customer relationship management and customer experience. Despite facing several challenges, companies that successfully implement this technology can gain significant competitive advantages, such as increased operational efficiency, customer satisfaction, and customer loyalty. The Amazon and Starbucks case studies provide concrete examples of how digital technology can be used effectively in CRM. Therefore, companies looking to improve their CRM in the digital era should consider using this technology while addressing the challenges that may arise.

CONCLUSION

This research has examined in depth how digital technology influences customer relationship management (CRM) and improves customer experience. From the analysis that has been carried out, several main conclusions can be drawn.

First, digital technologies such as artificial intelligence (AI), big data analytics, chatbots, automatic personalization, and cloud computing have had a significant impact on CRM. These technologies enable companies to automate processes, analyze customer data in real-time,

and provide more personalized and relevant service. The research results show that the use of this technology not only increases operational efficiency but also increases customer satisfaction and loyalty.

Second, digital CRM implementation allows companies to collect and analyze customer data from various sources. With the help of big data analytics and AI, companies can understand customer needs and preferences better, which in turn allows them to devise more effective and personalized marketing strategies. Amazon and Starbucks case studies show that the use of this technology can significantly increase sales and customer loyalty.

Third, despite the many benefits gained from using digital technology in CRM, companies also face several challenges. The main challenges identified were data privacy and security issues, as well as the complexity of system integration. Companies must ensure that customer data is properly protected and complies with applicable data privacy regulations. Additionally, integrating multiple disparate systems to manage customer data can be a complex process and require significant investment.

Fourth, this research emphasizes the importance of careful planning and strategy in adopting digital technology in CRM. Successful implementation of this technology requires appropriate investment, adequate training, and attention to challenges that may arise. Case studies from Amazon and Starbucks provide concrete examples of how effective strategies can provide significant competitive advantages.

Fifth, this research has several limitations, including a qualitative descriptive approach that may not provide broad generalizations, as well as a focus on several key technologies in CRM. Further research with a quantitative approach and exploration of other technologies such as the Internet of Things (IoT) and blockchain can provide more comprehensive and representative insights.

Overall, the integration of digital technology in CRM is the key to improving customer experience in the digital era. Companies that successfully adopt this technology can create stronger and more sustainable relationships with their customers, increase customer satisfaction and loyalty, and gain significant competitive advantages. Therefore, companies looking to improve their CRM should consider the use of digital technologies while overcoming the challenges that may arise in the implementation process.

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