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Digital Crm Solutions in Customer Relationship Management: International Experience and Prospects for Application in Uzbekistan

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Abstract: The article examines international experience in implementing digital CRM solutions in enterprises and the possibilities of adapting this experience to the context of Uzbekistan. The role of CRM systems in improving customer service quality, personalizing services, strengthening customer loyalty, and ensuring business competitiveness in the digital economy is substantiated. Based on a comparative analysis of practices in the United States, Japan, and European Union countries, the main approaches to customer relationship management are identified, including the use of artificial intelligence, big data, loyalty programs, omnichannel communications, and sustainable development principles. Particular attention is paid to the challenges of CRM implementation in Uzbekistan, including insufficient digital literacy, limited IT infrastructure among small and medium-sized enterprises, fragmented customer data, and a shortage of analytical competencies. As a result of the study, a step-by-step model for adapting international experience to national conditions is proposed, and key indicators for evaluating CRM effectiveness are identified.

Keywords: CRM systems, customer relationship management, digital transformation, customer experience, personalization, artificial intelligence, big data, digital economy, customer loyalty, omnichannel communications.

Introduction

The modern business environment is characterized by intensive digital transformation, as a result of which digital technologies have ceased to be merely operational tools and have become a key element of strategic customer relationship management. For enterprises operating in conditions of intense competition, CRM systems serve as the basis for creating a sustainable customer experience, improving service quality, and making data-driven management decisions [1].

The spread of social networks, mobile applications, artificial intelligence technologies, big data analytics, and cloud services is significantly changing the ways organizations interact with customers [2]. In modern conditions, companies seek not only to respond promptly to consumer requests but also to forecast customer needs, generate personalized offers, ensure omnichannel communication, and maintain long-term loyalty [3].

In the Republic of Uzbekistan, a regulatory and legal framework has been established to accelerate the introduction of digital technologies into enterprise activities. The “Digital Uzbekistan – 2030” Strategy, approved by Decree of the President of the Republic of Uzbekistan No. DP-6079 dated October 5, 2020, defines objectives for the development of the digital economy, digital infrastructure, electronic services, and human capital [4]. In addition, the Address of the President of the Republic of Uzbekistan Sh. M. Mirziyoyev to the Oliy Majlis and the people of Uzbekistan dated December 26, 2025 emphasizes the growing role of digitalization and artificial intelligence in transforming the economy and the labor market [5].

Despite the active development of the digital economy, the implementation of CRM systems in Uzbek enterprises remains uneven. This problem is especially relevant for small and medium-sized businesses, where digital infrastructure, the culture of customer data management, analytical competencies, and skills in using modern information systems are still insufficiently developed. In these conditions, studying international experience in implementing CRM solutions and identifying ways to adapt it to the national economy acquire particular scientific and practical significance.

The purpose of this study is to examine international experience in implementing digital CRM solutions in enterprises and to develop recommendations for their adaptation and effective use in the context of Uzbekistan.

To achieve this purpose, the following tasks were defined: to reveal the essence and evolution of CRM systems in the digital economy; to analyze CRM implementation practices in the United States, Japan, and European Union countries; to identify the challenges of applying CRM technologies in Uzbekistan; to propose a model for adapting CRM systems for national enterprises; and to determine indicators for evaluating their effectiveness.

The scientific novelty of the study lies in the systematization of international experience in implementing CRM systems and the development of directions for adapting this experience to the conditions of Uzbekistan, taking into account the level of digital infrastructure, the characteristics of small and medium-sized businesses, the need to improve digital literacy, and the formation of a culture of customer data management.

Literature Review

Customer Relationship Management (CRM) is a strategic approach to the systematic management of an organization’s interaction with existing and potential customers. It integrates organizational practices, marketing strategies, information technologies, and data analysis tools aimed at customer retention, sales growth, and improvement of service quality [6].

The scientific literature emphasizes that the implementation of CRM systems makes it possible to improve the quality of customer communication, increase repeat purchase rates, reduce the costs of attracting new customers, and strengthen the competitive advantages of an enterprise. At the same time, CRM effectiveness is determined not only by the availability of software but also by the degree to which customer data are integrated into managerial and marketing processes.

The CRM concept has undergone significant changes since the early 1990s. At the initial stage, CRM systems were regarded primarily as tools for contact management and sales automation. Later, they transformed into complex digital ecosystems integrated with big data analytics, artificial intelligence, social networks, mobile applications, and cloud platforms. Petrov and Milev note that the main purpose of CRM is to consolidate disparate sources of data on customers, sales, competitors, responses to marketing campaigns, and market trends in order to build closer relationships with customers [7].

The development of CRM in the digital era is associated with a transition from a transactional approach to a strategic model of customer experience management. Payne

and Frow consider CRM as a system that enables customer data to be transformed into a strategic asset for business decision-making [8]. In this context, CRM acts not only as a technological solution but also as an element of corporate strategy.

According to P. Kotler, CRM is aimed at establishing, maintaining, and developing mutually beneficial relationships with customers through a high level of service and an individualized approach [9]. Therefore, CRM can be defined as a set of strategic, technological, and organizational tools aimed at increasing customer value and business sustainability.

Thus, CRM systems should not be considered as separate software but as an integrated management system based on data, customer analytics, personalization, and long-term interaction with consumers.

Research Methodology

The methodological basis of the study consists of systemic, comparative, analytical, and case-study methods. The systemic approach made it possible to consider CRM systems as a comprehensive tool for customer relationship management that integrates technologies, data, marketing, sales, and service support.

The comparative method was used to study international experience in implementing CRM solutions in the United States, Japan, and European Union countries. This approach made it possible to identify differences in the priorities of CRM strategies: personalization and data analytics in the United States, long-term relationships and service culture in Japan, and sustainable development and social responsibility in European practice.

The case-study method was applied to examine the practices of large international companies using CRM systems in e-commerce, retail, services, and industry. This made it possible to identify the factors of CRM effectiveness, including customer data quality, integration of digital channels, communication automation, loyalty programs, and the use of predictive analytics.

The information base of the study consisted of scientific publications, international analytical materials, statistical data, regulatory legal documents of the Republic of Uzbekistan, and open sources on the development of the global CRM market. This approach made it possible to identify the main challenges of CRM implementation in Uzbekistan and to develop recommendations for adapting international experience to national conditions.

Analysis and Results

According to Fortune Business Insights, the global CRM solutions market was valued at USD 112.91 billion in 2025. It is forecast to reach USD 320.99 billion by 2034, with a compound annual growth rate of 12.40% [10]. These figures confirm the sustained growth in demand for CRM technologies and their increasing role in the digital transformation of business.

International experience shows that enterprises in developed countries have made significant progress in implementing CRM technologies. In the United States, Germany, Japan, and South Korea, CRM systems have become an important part of the operations not only of large companies but also of small and medium-sized businesses. Salesforce, HubSpot, Oracle CRM, SAP CRM, and other platforms are used to manage customer data, analyze consumer behavior, automate marketing, and improve sales efficiency.

In the United States, CRM strategies are primarily focused on personalization of customer experience, precise segmentation, and data-driven decision-making. Companies use CRM systems to interact with customers in real time, analyze their behavior, predict needs, and offer personalized products and services.

Amazon is one of the most prominent examples of the effective use of CRM technologies. As the world's largest e-commerce platform, Amazon deeply integrates

artificial intelligence and big data analytics into its CRM strategy. The company constantly tracks users' search history, purchase history, product ratings, items added to the cart, and interactions with advertisements. On the basis of these data, Amazon provides each user with personalized product recommendations in real time through its AI-based CRM system [11].

Amazon also segments customers by purchase frequency, product categories, price range, geographic location, and individual preferences. Separate messages, promotions, and special price offers are created for each segment. For example, users who frequently purchase expensive electronics may be offered premium services and exclusive discounts [12]. This approach contributes to improving the effectiveness of marketing strategies.

A particular role in Amazon's CRM strategy is played by recommendation algorithms. The "Recommendations for You" system offers relevant products based on user behavior. It includes collaborative filtering based on similarities with other users, content-based filtering that suggests products similar to previously purchased items, and deep learning algorithms that forecast user behavior using neural networks. As a result, each user receives personalized offers when entering the website.

An important component of Amazon's customer-oriented CRM strategy is the Amazon Prime loyalty program. This system provides customers with fast and free delivery, access to services such as Prime Video and Music, and exclusive discounts. These services are aimed at long-term customer retention and increasing purchase frequency. According to available data, the number of Amazon Prime members continues to grow, confirming the effectiveness of loyalty programs within CRM strategies [13].

Amazon also widely uses voice assistants such as Alexa and automated chatbot systems to provide round-the-clock customer service. These tools help process customer requests quickly, personalize responses, and provide services corresponding to the user profile.

All these approaches show that Amazon achieves significant results by implementing a customer-oriented CRM strategy (Table 1).

Table 1. Amazon's results achieved through a customer-oriented strategy [13].

Customer-oriented strategy	Result
In-depth analysis of customer data	Formation of personalized offers and services
Segmentation-based marketing	Optimization of advertising costs and increased communication accuracy
Personalized recommendation system	Growth in conversion and sales volume
Loyalty programs	Long-term customer retention
Automated service	Improvement of service quality and customer satisfaction

In Japan, CRM technologies are primarily based on maintaining long-term and reliable relationships with customers, ensuring high service quality, and applying an individualized approach. The concept of "omotenashi", which refers to customer service based on the principle of hospitality, is a key criterion in Japanese CRM strategies.

The concept of customer relationship management in Japan has unique features compared with other countries. This system is based on deep respect for the customer, anticipation of customer needs, and a high level of service culture. In this approach, the customer is viewed not only as a buyer but also as an important social partner of the company. The idea of omotenashi is deeply integrated into CRM systems, through which personalized services, pre-planned recommendations, and individual offers are created.

Japanese companies consider CRM systems as a means of maintaining long-term partnership relations with customers. Accordingly, regular customers are offered special

services, exclusive offers, souvenirs, and privileges on special dates, such as birthdays. Customer needs are constantly monitored, and information about them is regularly updated [14].

Japanese companies integrate CRM systems with ERP technologies, artificial intelligence, and the Internet of Things (IoT). This improves the quality of customer service. For example, IoT devices can monitor product condition and offer automated customer service through CRM systems. Round-the-clock communication is also carried out using chatbots and voice assistants, including technological solutions such as SoftBank's Pepper robot .

Japanese companies develop new products and services by analyzing customer feedback in CRM systems using the Voice of Customer approach. Customer complaints, questions, and suggestions are recorded on specialized platforms, and continuous improvement is carried out on the basis of this information. As a result, companies create opportunities for growth through cooperation with customers.

Companies such as Uniqlo, Lawson, and JAL implement loyalty programs using digital point systems, QR-code-based cards, and mobile applications. These systems are analyzed through CRM according to criteria such as purchase frequency, purchase amount, and product type, and customers are automatically provided with bonuses, discounts, or exclusive services. This increases the share of loyal customers (Table 2).

Table 2. Results achieved by Japan through a customer-oriented strategy.

Customer-oriented strategy	Result
Approach based on the principle of omotenashi	Anticipation of customer needs and increased loyalty
Maintenance of long-term relationships	Strengthening customer trust in the company
Integration of IoT and artificial intelligence	Automated service and individual solutions
Use of the Voice of Customer approach	Innovative product development together with customers
Loyalty programs and bonus systems	Growth in purchase frequency and an increase in the share of loyal customers

In European Union countries, especially Germany, customer relationship management systems are considered an important tool for achieving environmental and social sustainability. Companies use CRM data not only for commercial purposes but also to fulfill social responsibility toward society.

CRM systems make it possible to identify customer preferences in the field of sustainable development and to provide corresponding services. They allow companies to analyze customers' environmental and social interests and to offer individualized products or services. For example, BSI uses CRM systems to determine customer preferences related to sustainable development in the insurance sector and to provide appropriate services [15].

The integration of environmental, social, and governance (ESG) criteria into CRM systems enables companies to better understand customer expectations regarding sustainability and to provide personalized services. This approach strengthens customer trust and contributes to the development of long-term relationships.

CRM systems also support sustainable development initiatives by helping enterprises implement environmentally and socially responsible practices. For example, environmental impact can be reduced by decreasing paper consumption, distributing resources efficiently, and communicating with customers in digital formats.

In Germany, enterprises achieve several results by using CRM systems to support environmental and social sustainability. Companies that support sustainable development values increase customer trust and loyalty. For instance, ALDI has launched a line of

environmentally friendly products and achieved higher customer loyalty [16]. Enterprises that introduce sustainability practices also improve their brand reputation and strengthen their competitiveness in the market. Siemens, for example, offers products for energy efficiency management and contributes to sustainable development through innovative solutions [17].

Thus, in European Union countries, especially Germany, CRM systems play an important role in helping enterprises achieve environmental and social sustainability and develop long-term, reliable relationships with customers.

As the economy of Uzbekistan enters a phase of accelerated digital transformation, CRM implementation remains a necessary and urgent task for national enterprises. Table 3 presents a comparative analysis of international experience in implementing CRM systems and the possibilities of applying this experience in Uzbekistan.

Table 3. Comparative analysis of international experience in implementing CRM systems

Country / region	Main approach	CRM	Technologies used	Practical result	Possibility of application in Uzbekistan
United States	Personalization of customer experience	of	Big Data, AI, recommendation systems, cloud CRM	Sales growth, increased loyalty, precise customer segmentation	Suitable for banks, e-commerce, telecommunications, and retail trade
Japan	Long-term relationships with customers	with	CRM, IoT, chatbots, loyalty programs	Strengthened trust and high service quality	Can be used in services, tourism, education, and retail
Germany / EU	Sustainable development and social responsibility	and	CRM, analytics, digital communications	Increased brand trust and improved reputation	Relevant for large enterprises and export-oriented companies
Uzbekistan	Initial stage of digital adaptation	of CRM	CRM, mobile applications, databases, digital platforms	Potential improvement in service quality	Digital literacy, IT infrastructure, and data management are required

The economic structure of Uzbekistan largely relies on small and medium-sized businesses. Most enterprises in this sector interact directly with consumers; therefore, the implementation of CRM systems can improve service quality, ensure personalization of offers, improve feedback, and strengthen the competitiveness of companies.

At the same time, the full implementation of CRM systems in Uzbekistan faces a number of challenges. First, the level of digital literacy among employees and entrepreneurs remains insufficient, which complicates the use of modern digital tools. Second, many small and medium-sized enterprises do not have the necessary IT infrastructure, equipment, and qualified specialists. Third, customer data are often stored in a fragmented way, are not centralized, and are not used for real-time analytics.

Taking the identified challenges into account, the following step-by-step model for adapting CRM systems for enterprises in Uzbekistan is proposed:

1. Diagnosis of the enterprise's digital readiness: assessment of IT infrastructure, employees' digital skills, and the quality of the customer database.
2. Formation of a unified customer database: centralization of information about customers, purchase history, inquiries, complaints, and preferences.

3. Selection of an adapted CRM platform: use of affordable solutions for small and medium-sized businesses, including cloud CRM and localized software products.

4. Integration of CRM with communication channels: connection of the website, mobile application, social networks, call center, messengers, and e-mail.

5. Analytics and personalization of service: use of data for customer segmentation, demand forecasting, loyalty improvement, and service quality enhancement.

The effectiveness of CRM implementation should be evaluated through a KPI system that includes customer retention rate, customer lifetime value, churn rate, net promoter score, conversion rate, average response time, repeat purchase rate, and customer satisfaction score.

Table 4. Key indicators for evaluating CRM effectiveness.

Indicator	Description
Customer Retention Rate	The level of customer retention
Customer Lifetime Value	The lifetime value of a customer
Churn Rate	The level of customer churn
NPS	The index of willingness to recommend the company
Conversion Rate	The conversion coefficient
Average Response Time	The average response time to a customer
Repeat Purchase Rate	The share of repeat purchases
Customer Satisfaction Score	The level of customer satisfaction

Conclusions and Recommendations

The conducted study shows that in the digital economy the relationship between an enterprise and a customer is moving to a qualitatively new level. CRM systems are becoming not only a tool for automating sales and communications but also a strategic basis for managing customer experience, personalizing services, and increasing enterprise competitiveness.

The analysis of CRM evolution confirms that modern CRM systems have transformed from simple databases into multichannel digital ecosystems based on big data analytics, artificial intelligence, mobile technologies, and cloud solutions. In this regard, enterprises need to move from a transactional approach to a strategic CRM model in which customer data are considered an important managerial resource.

International experience demonstrates that CRM systems in different countries develop in accordance with national characteristics and market conditions. In the United States, priority is given to personalization and data analytics; in Japan, to the culture of long-term relationships and high service quality; and in European countries, to sustainable development, social responsibility, and brand trust. A combination of these approaches can be used to form an adapted CRM model for Uzbekistan.

For the effective implementation of CRM systems in the economy of Uzbekistan, it is necessary to implement a set of measures on the part of the state, enterprises, and educational organizations. On the part of the state, it is advisable to support the digitalization of small and medium-sized businesses, introduce subsidies or preferential programs for the acquisition of CRM solutions, develop digital literacy programs, and stimulate local CRM platforms.

Enterprises need to create a unified customer database, train employees to work with CRM systems, introduce omnichannel communication, use analytics to personalize services, and regularly evaluate CRM effectiveness through KPIs. Educational organizations should include CRM, Big Data, AI, and digital marketing in curricula,

organize training for entrepreneurs, and develop practice-oriented courses on the digital transformation of business.

Thus, the implementation of CRM systems in Uzbekistan requires the simultaneous development of digital infrastructure, improvement of digital literacy, and enhancement of the culture of data management. Joint actions by business, the state, and the educational sector will expand the use of CRM technologies, improve the quality of customer service, and strengthen the competitiveness of the national economy.

REFERENCES

- [1] Kotler, P., & Armstrong, G. (2021). *Principles of Marketing*. Pearson.
- [2] Verhoef, P. C., et al. (2021). Creating Omnichannel Customer Experiences. *Journal of Retailing*, 97(2), 186–197.
- [3] Brynjolfsson, E., et al. (2023). The Digital Economy: What Roles Can We Play? *Academy of Management Perspectives*.
- [4] Decree of the President of the Republic of Uzbekistan No. DP-6079 dated October 5, 2020 “On Approval of the Digital Uzbekistan – 2030 Strategy and Measures for Its Effective Implementation.” URL: <https://lex.uz/ru/docs/5031048>
- [5] Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis and the people of Uzbekistan dated December 26, 2025. URL: <https://president.uz/ru/lists/view/8834>
- [6] Kumar, V., & Reinartz, W. (2018). *Customer Relationship Management*. Springer-Verlag GmbH Germany, part of Springer Nature.
- [7] Petrov, P., & Milev, V. (2024). Analysis and application of CRM systems in the field of education. *Environment. Technology. Resources. Proceedings of the 15th International Scientific and Practical Conference*, 2.
- [8] Payne, A., & Frow, P. (2016). Strategic Management of Customer Relationships. *Journal of Relationship Marketing*.
- [9] Kotler, P., Kartajaya, H., & Setiawan, I. (2021). *Marketing 5.0: Technology for Humanity*. Wiley.
- [10] Fortune Business Insights. Customer Relationship Management Market Report [2034]. URL: <https://www.fortunebusinessinsights.com/customer-relationship-management-crm-market-103418>
- [11] Zarouali, B., et al. (2020). Adolescents’ advertising literacy and privacy protection strategies in the context of targeted advertising on social networking sites: implications for regulation. *Young Consumers*, 21(3), 351–367.
- [12] Chen, Y., & Xie, J. (2008). Online consumer review: Word-of-mouth as a new element of marketing communication mix. *Management Science*, 54(3), 477–491.
- [13] Amazon Prime Statistics 2025. URL: <https://www.yaguara.co/amazon-prime-statistics/>
- [14] Kotabe, M. M., & Helsen, K. (2022). *Global Marketing Management*. John Wiley & Sons.
- [15] BSI Group. URL: <https://www.bsigroup.com>
- [16] ALDI. URL: <https://www.aldi.de/>
- [17] Siemens. URL: <https://automation-products.com/brand/SIEMENS>