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WAYS TO IMPLEMENT INNOVATIVE TECHNOLOGIES IN THE DEVELOPMENT OF DIGITAL BANKING SERVICES

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Abstract: In the context of the digital economy, the speed, convenience, and security of banking services are among the important factors determining the competitiveness of the financial system. Mobile applications, remote identification, artificial intelligence, and instant payment technologies are transforming the relationship between banks and customers. The purpose of this thesis is to analyze the development of digital banking services in Uzbekistan based on official indicators for 2025 and to develop practical proposals for the implementation of innovative technologies. According to the Central Bank of the Republic of Uzbekistan, as of January 1, 2025, the number of users of remote banking service systems amounted to 52,917,166. Of these, 51,455,447 were individuals, while 1,461,719 were legal entities and individual entrepreneurs. This indicator represents the total number of users across banks, and it would be incorrect to interpret it as the number of unique individuals, since one custo

By October 1, 2025, this indicator had reached 74,178,175. In particular, 72,493,744 users were recorded among individuals, while 1,684,431 users were recorded among legal entities and individual entrepreneurs. Calculations based on a comparison of the total indicators for the two dates show that growth during the first nine months amounted to approximately 40.2 percent. This result indicates the expansion of the scale of digital services; however, to determine the level of active usage, it is also necessary to examine the number of transactions and the proportion of regularly active customers.

The first way to develop digital banking services is to expand remote identification capabilities. According to the Central Bank's report on the results of 2024, as of January 1, 2025, the number of commercial banks using Face ID technology had reached 28, while the number of payment organizations had reached 15. The number of customers who underwent digital identification through their mobile applications amounted to 12.2 million. This indicator increased by 5.4 million compared with the corresponding date of the previous year. These figures reflect the situation at the beginning of 2025. In this area, it is proposed to combine biometric verification with tools for automatically comparing document data and detecting image liveness. As a result, the process of opening accounts and accessing services can be simplified. At the same time, alternative identification methods should be maintained for customers who cannot pass biometric verification. Technological convenience should be combined with the accessibility of services for all users.

The second way is the gradual introduction of artificial intelligence and data analytics into banking processes. Artificial intelligence can be used to classify customer inquiries, answer frequently asked questions, detect suspicious transactions, and analyze cash flows. In lending, the results of automated assessments should be explainable, and opportunities should be provided to correct inaccurate data and request a review of decisions. It is advisable to initially conduct testing within a limited process and expand the technology after evaluating the results.

The third way is to strengthen integration between banks and financial technology companies. Connecting payment, account, and other services through standardized application programming interfaces can enable customers to perform several operations within a single environment. For example, an entrepreneur may monitor sales revenues, maintain accounts, and submit payment orders through one system. In such integration, the use of data should be based on customer consent, clearly defined permissions, and access restrictions.

The fourth way is to develop cybersecurity simultaneously with digital services. It is proposed to strengthen device identification, risk-based additional authentication, data encryption, and continuous transaction monitoring mechanisms in mobile applications. Applications should provide simple management tools that allow customers to quickly block their cards and contact the bank in the event of suspicious activity. Improving employee qualifications and explaining fraud methods to the public through simple examples complement technical protection.

The evaluation of innovation effectiveness should not be limited to the number of application downloads or registrations. The proportion of active customers, transaction processing time, the rate of failed payments, the

speed of resolving customer inquiries, and service delivery costs can be used as the main criteria. Developing applications that consume less data traffic for areas with poor internet quality, simplifying interfaces, and improving digital literacy are also priority tasks. In conclusion, the official indicators for 2025 demonstrate that the scale of remote banking services in Uzbekistan has expanded. At the next stage of development, it is necessary to implement biometric identification, artificial intelligence, intersystem integration, and cybersecurity within a unified service strategy. The proposed measures can contribute to saving customers' time, simplifying banking processes, and expanding access to financial services.

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