277. THE EFFECTIVENESS OF LOW-CODE PLATFORMS IN THE CONTEXT OF DIGITAL TRANSFORMATION

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The economic efficiency of developing information systems on low-code platforms in comparison with traditional programming is investigated. The data of analytical agencies Gartner, Forrester, IDC is analyzed. The expediency of a hybrid approach to optimize the development of enterprise applications is substantiated.

In the conditions of the digital transformation of the economy, organizations face the necessity of rapid information systems development with limited budgets. Traditional programming methods require significant time and financial resources, which makes companies search for alternative approaches. Low-code platforms are a perspective solution for speeding up development and reducing costs.

The term “low-code platforms” does not mean a single tool, but a diverse group of platforms united by the principle of visual development. Analytical agencies Gartner, Forrester and IDC show that the low-code platform market is steady growing. Experts say that its volume amounted to 24.83 billion US dollars in 2023 and is projected at 187 billion dollars by 2030. According to Gartner forecasts by 2025, 70 % of new applications developed by organizations will use low-code or no-code technologies [1].

The relevance of the platforms is conditioned by a significant reduction in development time. Low-code platforms decrease the time to create applications by 50-90 % compared to traditional programming [2]. If traditional application development of medium complexity takes 4-8 months, with the use of low-code platforms, this time is reduced to several weeks. Moreover, the integration of AI into low-code platforms will reduce the time to market for products allowing to implement more functional applications that work with large amounts of data.

Low-code platforms are very diverse and, depending on the project goals, can be used for web application development (Mendix, OutSystems), process automation (Appian, Pega), creating mobile interfaces (Microsoft Power Apps, Google AppSheet) or system integration (Zapier, Make).

Considering the important role of low-code platforms in modern programming, it should be noted how much they lower the cost of development. Low-code platforms provide a 30-70 % reduction in development costs compared to traditional methods [3]. A subscription to a low-code platform costs an average of $300 per year, while traditional app development costs $70,000-$100,000. At the same time, 80 % of enterprises note an increase in productivity when using low-code, and 79 % report a decrease in operating costs.

In addition to reducing costs, such projects pay off quite effectively. Forrester’s Total Economic Impact study demonstrated that organizations can achieve a return on investment (ROI) of more than 500 % when using high-performance low-code platforms [4]. Other studies confirm that ROI ranges from 224 % to 363 %, depending on the platform and scale of implementation.

However, traditional development retains its advantages when creating complex systems with unique business logic and high security requirements. Thirty-seven percent of organizations express concern about vendor dependence when using low-code platforms, while thirty-five percent worry about the scalability of solutions [5]. But many companies are having trouble hiring professional developers. Low-code platforms solve this problem: employees with no coding experience master the platforms within one month. Seventy-five percent of large enterprises use at least four low-code platforms to support application development.

In conclusion, the choice depends on project requirements and budget constraints. Low-code platforms reduce dependence on scarce human resources, allowing employees without programming experience to develop functional applications. Traditional development remains cost-effective for complex, unique systems with high security and scalability requirements. Companies, which combine the speed of low-code with the power of traditional programming can optimally balance product withdrawal time and architecture complexity gaining a competitive advantage in the market.

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