Economy

Semchenkova Olha
Director at Quadrasoft IT Company
(Chicago, USA)

DIGITAL BUSINESS TRANSFORMATION: THE ROLE OF CORPORATE IT SOLUTIONS IN IMPROVING MANAGEMENT EFFICIENCY

Summary. *The article discusses the theoretical foundations of digital business transformation and the role of corporate IT solutions in improving management efficiency. Based on an analysis of international research, key categories of corporate solutions have been identified: ERP, CRM, BI, RPA, and ECM. These solutions have a significant impact on strategic, tactical, and operational management. Factors ensuring the success of their implementation are also discussed.*

Statistical data on the scale of investments in digital transformation and trends in the transition to cloud models are presented, as well as the proliferation of analytical tools. Special attention is paid to criteria for evaluating the effectiveness of corporate IT solutions, such as ROI, cost reduction, and productivity growth.

The main risks and barriers to digitalization, including financial, organizational, personnel, and cyber threats, have been identified. The article also outlines the prospects for the development of digital business transformation in the future.

Key words: *digital transformation, corporate IT solutions, ERP, CRM, BI, RPA, management efficiency, ROI, cloud technologies, digitalization risks.*

The relevance of the research is determined by global economic development trends, where digital transformation has become a key factor in the sustainability and competitiveness of companies. According to analytical agencies, more than 90% of organizations worldwide are already involved in digital initiatives, indicating the inevitability of a shift from traditional to digital business models. Corporate IT solutions, such as ERP and CRM systems, cloud platforms, business intelligence, and artificial intelligence, play a crucial role in this transition, as they automate routine processes and form new management practices that enhance decision-making speed and quality.

At the same time, research shows that many digital transformation projects fail to achieve the desired results. The main reasons for this are related to companies' lack of digital maturity, staffing shortages, resistance to change, and difficulties integrating IT infrastructure. These obstacles reduce the effectiveness of implemented solutions and necessitate a rethink of approaches to digital transformation. Another factor contributing to the need for updated thinking is the challenging business environment we face today. Economic instability, increased competition, complex supply chains, and demands for environmental sustainability all contribute to the pressure on businesses to adapt. In this context, IT solutions become essential not only for improving efficiency but also for ensuring strategic flexibility and resilience.

The aim of the research is to conduct a systematic analysis of the role of corporate IT solutions in enhancing business management efficiency. The study involves identifying key factors and mechanisms that determine the success of digital transformation, as well as developing practical recommendations to help organizations maximize the potential of digital technologies for optimizing management processes and strengthening their competitive position.

Digital transformation (DT) is a multidimensional process that involves organizations using digital technologies to transform their operations, business models, and value creation methods. According to academic literature, DT refers

to "the use of technology to significantly improve the productivity and reach of an organization." [1].

The key components of the theory of digital transformation are: technology (innovations in IT, cloud computing, artificial intelligence, Internet of Things, big data, etc.), organizational structure (management, process coordination, digital maturity, leadership), human factor (skills, digital literacy, culture of change) and the external environment (competition, regulation, customer expectations).

The technologies most frequently mentioned in the context of DT include cloud services, data analytics, AI/ML (artificial intelligence/machine learning), and the Internet of Things (IoT). These technologies act as drivers of change, but their implementation requires appropriate organizational changes, such as the development of digital competencies of employees, changes in management processes, and a culture of risk acceptance. The meta-research review highlights that a technological component without leadership and cultural support may not bring the expected benefits [2].

Corporate IT solutions play a crucial role in modern management systems, acting as the technical "backbone" for various processes. They facilitate resource planning, customer relationship management, analytics, process automation, and content management. Internationally, these solutions are commonly referred to as ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), BI (Business Intelligence), automation platforms, including RPA (Robotic Process Automation) and workflow, as well as content and document management systems for corporations. The most mature and widely used solutions in the market are ERP and CRM. The global market for open-source ERP is estimated to be around 53-54 billion USD in 2022, with a double-digit compound annual growth rate projected by the end of the decade. The cloud deployment model is dominating this market.

For CRM, Salesforce has confirmed its leadership in the global distribution of market shares based on IDC trackers for 2022-2023. This shows a trend

towards market concentration and a shift towards platform-based customer experience management.

These findings are important for managers. ERP connects finance, supply, production, and HR with unified processes. CRM builds a value cycle around the customer, providing a single "picture" of their interactions [6].

From the perspective of the corporate solutions portfolio, business intelligence (BI) and analytics provide data-driven management solutions. Robotic process automation (RPA) and workflow automation eliminate routine tasks and shorten approval cycles. Corporate content management (CCM) and enterprise content management (ECM) platforms ensure the lifecycle of documents and knowledge.

Customer relationship management (CRM) systems play an equally significant role. According to Grand View Research, the global CRM market was valued at 58.8 billion US dollars in 2022. Salesforce continues to lead the market, holding the largest share, as confirmed by IDC. This reflects a strategic trend - companies aim to create a seamless customer experience and manage the entire interaction cycle with customers through integrated digital platforms.

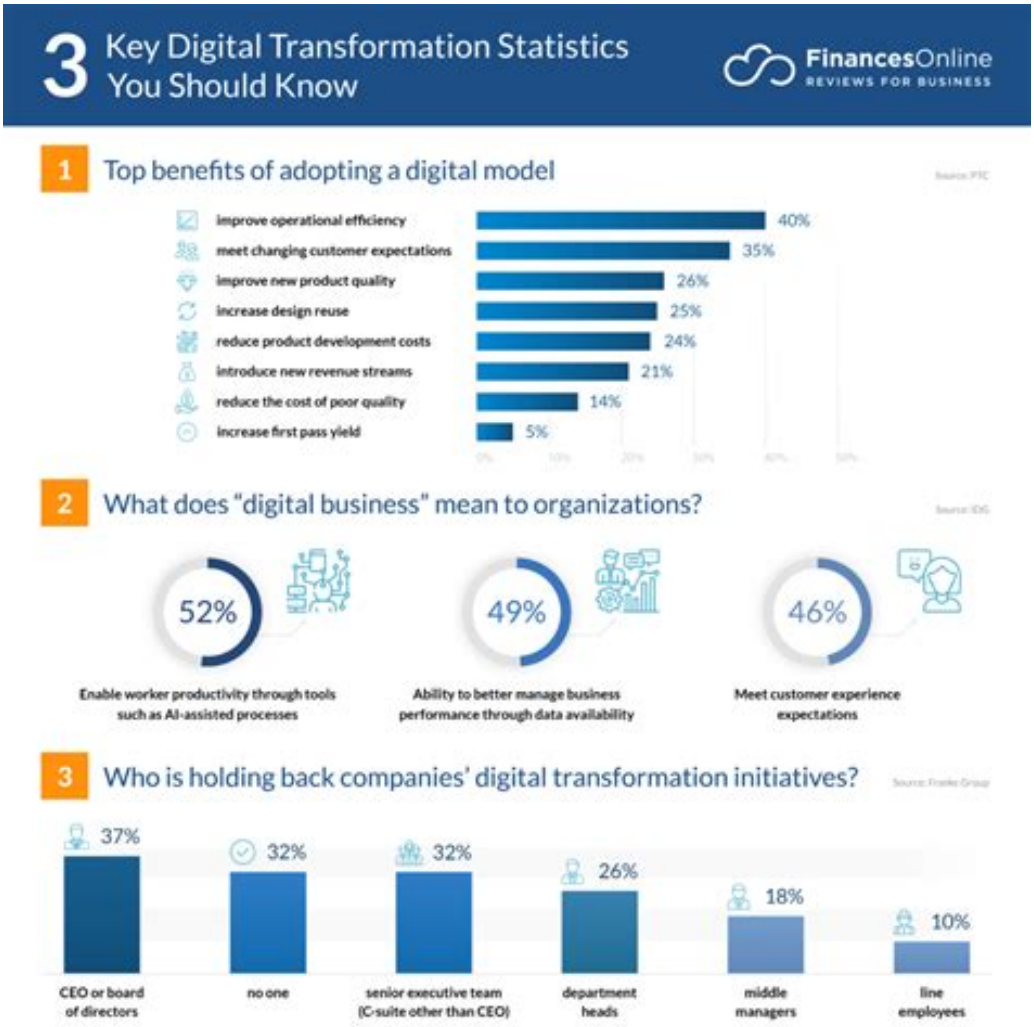

Fig. 1. Salesforce's leadership in the CRM segment according to IDC data, 2022-2023 [3]

Together, these solutions have a significant impact on management. ERP and ECM ensure standardization of processes and unified data. CRM and BI speed up the management cycle and improve forecast accuracy. RPA reduces operational costs and risks.

There is a trend towards cloud models, which simplify scaling and integration. Corporate IT solutions are not just automation tools but strategic platforms that influence the effectiveness of management and the competitiveness of organizations in the digital economy.

The effectiveness of using corporate IT solutions can be assessed by a combination of managerial and economic outcomes, such as cost reduction, increased productivity, faster decision-making cycles, and improved service

quality. According to international reviews, technological investments have a significant impact only when "processes, data, and people" are aligned. The success of digital transformations is below 30% without a systematic approach to goals, competencies, and cultural change. Therefore, it is essential to plan and monitor performance metrics at the business case and return on investment (ROI) levels [8].

The economic impact of corporate platforms has been confirmed by industry data, as recorded in the Panorama Consulting annual report for 2022. This report found that organizations that had calculated the expected return on investment (ROI) for ERP systems before implementation and linked it to specific business processes were more likely to achieve their desired outcomes after the system's launch. The key drivers of success identified in this study include clearly defined project goals, active management involvement, comprehensive user training, and effective change management. These factors all contribute to the successful implementation of ERP systems and help organizations achieve their business objectives [7].

At the same time, the significance of process automation continues to grow. According to Gartner, the RPA market increased by 31% in 2021, and it is expected to reach $2.9 billion in 2022. This reflects a consistent demand for reducing transaction costs and eliminating manual operations in management. To evaluate the effectiveness of RPA, it is essential to link key metrics with the duration of approval cycles, the percentage of automated transactions, and the frequency of errors [5].

The systemic impact of corporate IT solutions is also evident through infrastructure trends that ensure the scalability of the effect. According to IDC, global investments in digital transformation reached $1.8 trillion in 2022, an increase of 17.6% from 2021, and the revenue from public cloud services amounted to $545.8 billion in 2022 (+22.9% year-on-year), with SaaS applications accounting for over 45% of total revenue. This indicates that the

cloud model is a fundamental mechanism for replicating the benefits of ERP/CRM/BI solutions and automation [9].

An important tool for assessing the success of corporate IT solutions is the Return on Investment (ROI) indicator. This metric reflects the ratio of the benefits received from an investment to the costs incurred. The basic calculation of ROI is shown in Figure 2, which allows you to see the connection between the achieved effect and the financial return. This method is used in post-evaluation of IT projects to measure their success.

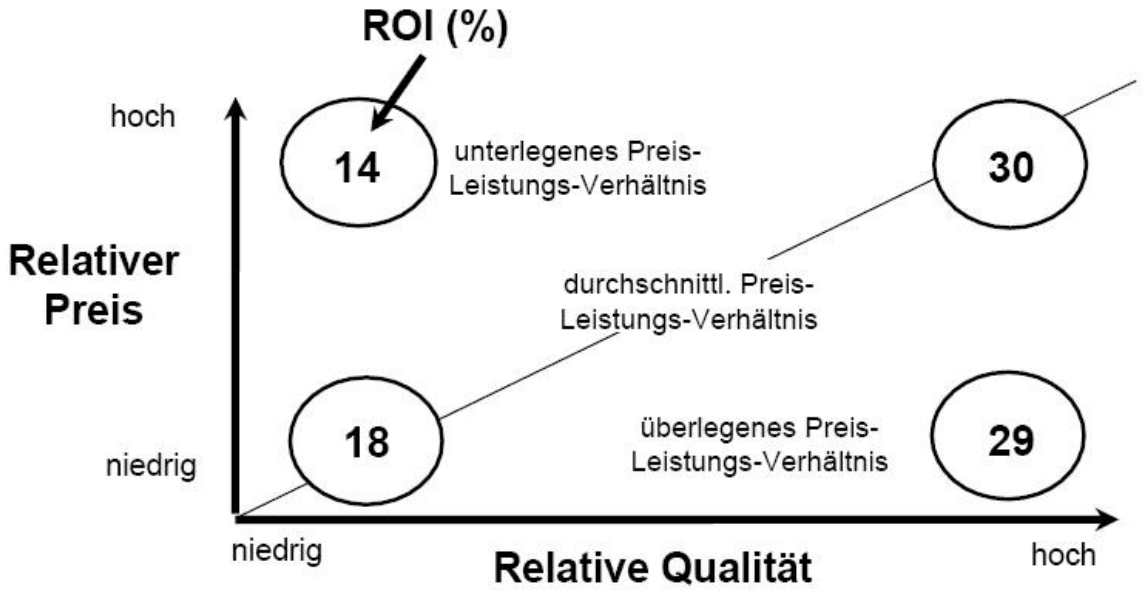

Fig. 2. The basic ROI formula for evaluating the effectiveness of corporate IT projects [4]

The practical interpretation of the data boils down to several conclusions for performance management. Firstly, the economic impact of corporate platforms is higher when project KPIs are linked to "end-to-end" process indicators (cycle time from event to solution, forecast accuracy, transaction cost, inventory turnover), and not just to "internal" IT metrics. Secondly, the role of the cloud model and data integration is critical for replicating the effect – scaling without data gaps is directly related to the growing share of SaaS and data services. Thirdly, automation of routine operations increases predictability and reduces

costs, but management measures are required to retrain staff and reassemble processes, otherwise the statistically low "base" for the success of digital transformations will hinder the achievement of targets.

In the process of implementing corporate IT solutions, companies face several challenges that can significantly impact the effectiveness and outcomes of digital transformation. These challenges can be categorized into four main groups: financial, organizational, human resources, and information security. The following table outlines the typical risks associated with each category and their potential consequences.

Table 1

The main risks and barriers to the implementation of corporate IT solutions

Risk category	Specific manifestations	Potential consequences
Financial	Exceeding the project budget, hidden integration costs, high cost of licenses and support.	Increasing the payback period, reducing ROI, and freezing the project.
Organizational	Resistance to change, lack of a digital transformation strategy, and poor project management.	Reduced engagement, "failure" of implementation, duplication of processes.
Personnel	There is a shortage of IT and analytics specialists, low digital literacy of employees, and lack of training.	Errors when working with the system, increased dependence on contractors, and decreased efficiency.
Cyber threats	Vulnerabilities in cloud systems, attacks on corporate databases, weak protection of personal data.	Data loss, system downtime, reputational and legal risks.

Source: author's development

The practical aspects of digital transformation can be seen in how companies implement corporate IT solutions and adapt them to their business models. International experience has shown that successful projects are based on several key principles.

Firstly, digitalization is not just about buying technology - it requires a review of processes and organizational structures. Companies that implement ERP, CRM, or BI systems without changing their working practices are likely to see low returns.

Secondly, training employees is crucial. Training, developing digital skills, and creating a culture of change are all important. According to Deloitte, the personnel aspect remains one of the biggest barriers, which is why upscaling and downscaling programs for personnel are becoming an essential part of the transformation process.

Thirdly, practical cases confirm that the maximum effect is achieved by combining several solutions: ERP ensures process transparency, CRM provides customer service, BI offers analytics for decision-making, and RPA eliminates routine tasks. McKinsey and BCG reports emphasize that complexity has a multiplicative effect on performance.

Finally, significant attention is being paid to security and data management issues. The growing number of cyber incidents during the digital transformation period forces companies to implement additional layers of protection, which has become an integral part of their practical strategies.

Corporate IT solutions are essential for digital business transformation as they ensure the integration of processes, increase transparency, and speed up decision-making, leading to increased productivity and reduced costs. However, in order to achieve sustainable results, it is necessary to engage in comprehensive work on organizational changes, employee competencies, and cybersecurity. Scaling up investments, transitioning to cloud platforms, leveraging artificial intelligence, and cultivating a data-driven culture are among the most significant trends in the near future.

Thus, the digital transformation of businesses forms a new management paradigm, in which technology becomes not just an auxiliary resource but a strategic factor for competitiveness.

References

1. Developing a unified definition of digital transformation – ScienceDirect. URL: https://www.sciencedirect.com/science/article/abs/pii/S0166497220300894.

2. Digital Transformation and Interoperable Data Source 2021 Global | Images and Photos finder. URL: https://www.aiophotoz.com/photos/digital-transformation-and-interoperable-data-source-2021-global.html?utm_medium=organic&utm_source=yandexsmartcamera.

3. Digital transformation: A meta-review and guidelines for future research – PMC. URL: https://pmc.ncbi.nlm.nih.gov/articles/PMC9860428/.

4. File:ROI-HD.jpg – Wikimedia Commons. URL: https://commons.wikimedia.org/wiki/File%3AROI-HD.jpg.

5. Global RPA software revenue to reach $2.9bn in 2022 – Gartner. URL: https://www.information-age.com/global-rpa-software-revenue-to-reach-2-9bn-in-2022-gartner-20099/.

6. Salesforce Ranked №1 in CRM Market Share for Ninth Consecutive Year – Salesforce. URL: https://www.salesforce.com/news/stories/idc-crm-market-share-ranking-2022/.

7. The 2022 ERP Report. URL: https://f.hubspotusercontent40.net/hubfs/4439340/The%202022%20ERP%20Report%20-%20Panorama%20Consulting%20Group.pdf.

8. The keys to a successful digital transformation | McKinsey. URL: https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/unlocking-success-in-digital-transformations.

9. Worldwide Digital Transformation Investments Forecast to Reach $1.8 Trillion in 2022, According to New IDC Spending Guide. URL: https://www.businesswire.com/news/home/20220512005848/en/Worldwide-Digital-Transformation-Investments-Forecast-to-Reach-%241.8-Trillion-in-2022-According-to-New-IDC-Spending-Guide.