Comparative Characteristics of the Managerial and Economic Aspects of Digital Business Transformation[1]

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Abstract. *Digital transformation is a key element of modern business that impacts its management and economic development. The article is dedicated to the analysis of the essence and importance of digital transformation in the context of managerial and economic aspects. The key factors and manifestations of digital transformation in the business environment are studied, particularly its impact on business models, internal work processes and interaction with consumers. It has been determined that new digital platforms and services can create innovative ways to generate revenue and attract new customers. The article focuses on strategic planning as a necessary stage before the implementation of digital transformation. Before implementing digital initiatives, it is extremely important to conduct an analysis, clearly define goals and objectives, and understand how they will be integrated into the overall development strategy of the company. The study confirmed that leadership plays a critical role in the process of implementing technology initiatives. The effective contribution of leadership involves its active engagement in this process, facilitating the adoption of well-founded strategic decisions, and providing the necessary resources for the successful realization of initiatives. The article emphasizes that successful digital transformation requires not only technological changes, but also cultural ones, corporate culture should be aimed at accepting changes and being ready to adapt to the new digital environment. Research shows that successful implementation of digital initiatives requires employees to develop new skills, as well as flexibility and readiness for constant change, not only for IT professionals, but also for all levels of staff. The article highlights the significance of collaboration and partnership in modern business during digital transformation, emphasizing the opportunities presented by digital technologies to enhance interaction with partners and increase the efficiency of business processes.*

Keywords**:** *digital transformation, business models, strategic planning, corporate culture, employees, partnership.*

JEL Classification: *M21, G34, J54*

1 Introduction

Digital transformation, particularly concerning managerial and economic aspects, holds significance not solely for isolated enterprises but resonates with entire industries. This trend is reshaping the business landscape, leading to a paradigm shift in the operational dynamics of contemporary companies, impacting nearly every member of their workforce. An incisive exploration of the managerial and economic dimensions of digital business transformation underscores that choices pertaining to the integration of cutting-edge technologies can yield varying economic outcomes. When the primary

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objective of digital transformation is enhancing the customer experience, prudent managerial choices should be geared towards cultivating personalized interactions, consequently fostering economic growth in tandem with customer satisfaction.

The acceleration and enhanced flexibility of business processes act as catalysts for perpetual organizational adaptation. Moreover, the capacity for innovative business expansion can yield positive economic dividends, contingent upon the establishment of a well-structured management framework. Contemporary data-driven technologies empower a more efficacious oversight of individual companies as well as entire businesses. This transformation is accompanied by a reshaping of partnership dynamics and collaborative efforts, thereby altering established management paradigms and driving advancements in economic performance. An in-depth examination of the distinctive characteristics intrinsic to the managerial and economic dimensions of digital business transformation furnishes insights into the optimal trajectory for businesses and distinct enterprises to initiate and effectuate efficacious transformations.

2 Analysis of the Recent Research and Publications

The analysis of the recent research and publications affirms that enterprise digital transformation unfolds through the incorporation of diverse digital technologies, facilitated by potent centralized and distributed computing resources (super and quantum computers), cloud and edge computing, software grounded in artificial intelligence systems encompassing machine learning, next-generation networking resources that amalgamate Big Data through neural network principles, and the development and implementation of software-hardware complexes. In the domain of network infrastructure, the development of widely accessible information and communication networks should pivot around synchronous digital hierarchy (SDH) networks, serving as the foundation for the subsequent integration and expansion of machine-to-machine (M2M) interaction technologies and the Internet of Things (IoT) (Ostrovska, Tsikh, Strutynska, Kinash, Pietukhova, Golovnya, Shehynska, 2021).

According to (Tang, Yang, 2022) digital transformation pertains to the utilization of information technologies to alter the IT architecture of an organization and its business architecture. The pathway of digital transformation commences with the reconstruction of the IT architecture, the modification of the original production and marketing paradigms, and the expansion of distribution channels to address the impact of digital technologies, adapt to changes in the external environment, and ensure sustained growth. By analyzing financial indicators of profitability, operational capacity, debt-paying ability, and development potential before and after transformation, it becomes evident that digital transformation has the potential to enhance enterprise efficiency.

The authors (Vorzhakova, Khlebynska, 2021) have formulated their own definition of digital transformation as the process of transitioning to a new level of conducting business, involving changes in operational models, management, and business processes, through the utilization of modern digital technologies across all spheres of activity. They identify the key principles of this process: a complete restructuring of the enterprise's structure; re-equipping for the purpose of automation; the process of rethinking management models; consideration of the fundamental components of the enterprise in digital transformation: technology, people, and processes; implementation of modern technologies to enhance the operational efficiency of the enterprise; changes in the model and process of organizational activity within the enterprise; a leap towards new methods of organizing work, ranging from reevaluating relationships to integrating digital technologies into the enterprise's operations.

Digital transformation is a key component of an overall business transformation strategy and is critical to the success or failure of any transformation. The right technology, combined with people, processes and operations, enables organizations to quickly adapt to disruptions and/or opportunities; meet new and evolving customer needs; and stimulate further growth and innovation (SAP, 2023).

3 Highlighting Previously Unresolved Parts of the General Problem and Formulating the Goals of the Article

Previous studies of digital business transformation have unveiled it’s diverse facets. However, certain critical questions persist unanswered, necessitating further profound investigation. The goal of this article is to address these gaps through a comprehensive analysis of the managerial and economic aspects of digital business transformation. By crafting a plan that encompasses both managerial and economic aspects, the authors strive to provide practical recommendations to contemporary enterprises for informed decision-making and effective implementation strategies and to contribute to the existing knowledge.

4 Presentation of the Primary Research Material

Digital technologies make it possible to organize the most personalized interaction with customers of companies that gives the opportunities and competitive advantages for businesses. People already deal with digital communication channels, robotization, artificial intelligence in everyday life. Acceleration and agility of business processes allow companies to make managerial decisions faster, adapt their work to current requirements and meet customer needs. Digitalization creates new opportunities for cooperation with other companies. Due to modern technologies, it makes possible to conduct business and look for partners anywhere in the world, make cooperation easier and more convenient. The digital transformation of companies contributes to the use of modern technologies for working with data, due to which, for example, Big Data or Artificial Intelligence (AI), the information flows are processed. Based on this, it is possible to adapt the offers for specific customers and forecast their behaviour.

Digital transformation can also be considered as a deep transformation of business and organizational activities, business processes, important competencies and models to use fully the changes and opportunities for combining the digital technologies and achieving business goals such as:

– improvement of client experience;

– acceleration and agility of business processes;

– innovative opportunities for business development;

– use of modern technologies for working with data;

development of partnership and cooperation.

The human element is key one at different levels and stages of digital transformation: collaboration, risk management, different ecosystems and skills, corporate culture, empowerment. It is also important for the transformation itself. The value of personal interaction, depending on the context, will bring elements of direct contacts. Business-wide digital transformation is possible not only in companies with new business models. It requires leadership, no matter how everything is organized. Pilot projects are often executed from the bottom up (e.g.: some divisions, departments), moving towards a more holistic approach for the entire company. This is acceptable at the early stages of transformation, but later it can give a rise of a potential risk to strategic success. Strategic goals should be clearly defined and key performance indicators (KPIs) should be monitored.

Analysis of various aspects of digital transformation made it possible to identify the key elements of the process and develop a generalized plan for digital business transformation, presented in Table 1.

Conscientious planning and a systematic approach are the key to a successful digital transformation of an enterprise. The first stage consists in the involvement of top management to the analysis of the strategic and economic benefits of implementing changes and making the necessary management decisions. It is important to create an expert working group to study the state of the market, its evolution as a whole and key growth points.

The next step is to assess at what point of development the business is situated as a whole as well as individual companies. Strategic planning includes an internal consulting project and strategy development. This stage helps to determine the strategic goals and development path of enterprises.

Strategic planning focused on results is integral to successful transformation. These can be large-scale activities, so developing a results-oriented strategy that outlines immediate and long-term goals will help focus attention on the path of transformation (Kelley, 2023).

Determining the economic opportunities of the business towards the digital transformation, carrying out the necessary preparation to start the process, determining available and required investment resources is the next stage. It is important to implement an internal organizational project, identify available human resources and possibility of employing in order to assess staff skills, corporate culture and readiness for changes. It is necessary to focus on key intangible assets (i.e. customers and data), to determine aspects of asset management and carry out calculations of fixed costs.

An important task is to perform the consolidation of resources, the involvement of external assistance of key partners, using existing partnerships. It is necessary to perform an internal analysis of «bottlenecks», to identify where the transformation has the expected and intended result, and calculate resource costs. After that, it is necessary to hold sessions of a working group of key employees, to develop a roadmap to get the achievements of needed digital transformation objectives and to determine important economic goals. Planning of costs and transformation should be performed to implement the innovation, optimization, agility and scaling. It is important to analyse the maturity of the information, to optimize company's data by conducting internal analysis and optimization of the data, including accounting information.

Table 1 Generalized plan for digital business transformation

Stages	Managerial aspect	Economic aspect
Engaging Leadership Support	Involving the top business management.	Determining the strategic and economic benefits of digital transformation
Market Analysis and Strategic Insights	Establishing an expert task group to conduct comprehensive market research.	Determining economic indicators pertinent to the market's condition.
Assessing Business Development Stage	Implementing the internal consulting project.	Defining the essential business growth indicators.
Analyzing and Establishing Priorities for the Strategic Change	Holding the strategic sessions of the top management.	Defining the economic and strategic goals of the business.
Developing Directional Strategy	Creating expert task group for strategy development.	Identifying economic and strategic business indicators of the business.
Identifying Business Economic Opportunities towards Digital Transformation	Making the necessary preparations for starting the transformation process.	Identifying existing and required investment resources.
Evaluating Workforce Skills and Corporate Culture	Implementing an internal organizational project.	Determining available human resources and potential recruitment possibilities.
Focusing on Key Intangible Assets: Customers and Data	Defining the aspects of asset management.	Calculating fixed costs.
Engaging External Assistance from Key Partners	Leveraging existing partnerships.	Performing the consolidation of resources.
Defining Expected Transformation Outcomes	Conducting an internal «bottleneck» analysis.	Calculating the resource overruns.
Creating a Roadmap for Desired Achievements	Holding sessions of a working group of key employees.	Identifying important economic goals.
Utilizing Planning for Innovation, Optimization, Flexibility, and Scaling	Planing the transformation tasks.	Carrying out costs planning.
Analyzing Data Maturity and Optimizing Company Data	Conducting an internal analysis and optimization of company data.	Optimizing accounting data.
Integrating Technologies and Data Sources into Functional Strategies	Starting the management of strategic changes.	Determining the long-term economic effect.
Identifying the Discrepancies between Employees and Stakeholders	Preparing for the digital transformation tasks execution.	Determining the economic incentives.
Setting Goals, KPIs, and Elements of Control	Including KPI into the business management system.	Determining the economic elements of KPI.
Deploying and Establishing the Ecosystem and Platforms	Involving the information technology management.	Determining the costs of IT resources.
Focusing on Long-Term Perspective and Achieving Intermediate Goals	Analyzing plan execution and making adjustments if required.	Defining the economic indicators of the transformation process.
Studying, Measuring, Reassessing, and Scaling Intermediate Results	Managing the digital transformation project.	Determining current economic indicators.
Implementing and Controlling the Innovation Processes	Managing the quality control cycle.	Determining the economic indicators of results.

Source: compiled by the authors

Built-in processes and policies govern much of what happens in any large organization. However, many digital transformations result in workflow changes that mimic these existing processes or ignore existing regulatory policies, failing to achieve the desired benefits while remaining compliant (Kelley, 2023).

To achieve the long-term economic effect, it is necessary to combine technologies and data sources into functional strategies and start managing strategic change. The next step is to identify disagreements between employees and stakeholders, to implement economic incentives and to start preparing for digital transformation implementation. After that, the goals, KPIs and controls should be set. They should be included into the business management system and the economic incentives should be used. It is necessary to deploy and establish an ecosystem and platforms, to involve IT management and to calculate the costs of IT resources.

It is important to focus on the long-term perspective and the achievement of intermediate goals. To this end, it is necessary to analyse constantly the implementation of the plan and redevelopment, in case of necessity, to use the economic indicators of the transformation process. It is essential to use digital transformation project management as well as to study, measure, reevaluate, scale intermediate results by analysing current economic indicators.

Project management in digital transformation involves a method of planning, executing and monitoring digital transformation initiatives using project management tools and methodologies. This involves developing a project strategy, bringing together multiple teams and stakeholders, and ensuring deadlines are met within budget. The goal of digital transformation project management is to ensure that the company achieves its goals and delivers value to its customers (Singh, 2023).

The final stage is quality assessment and control, which include a detailed analysis of innovative solutions and the study of economic indicators. Thanks to the steps taken, a structured and effective plan for the digital transformation of the enterprise is formed, which allows achieving results in accordance with strategic goals. The rapid introduction of digital solutions into the connected business mix against the backdrop of Industry 4.0 challenges companies and service providers to develop, test and certify effective and reliable quality management and support across multiple locations and online platforms (DEKRA, 2022).

The conducted analysis of the managerial and economic aspects of the digital business transformation and the compiled general plan make it possible to determine which elements and at what stages of transformation should be given more attention. For each stage, it is necessary to make managerial decisions and to determine and control economic indicators as an important component of the intermediate and final results of planned changes implementation.

5 Conclusions

The research yielded the following findings and conclusions.

The comparative analysis of various aspects of digital business transformation led to the identification of key elements and the formulation of a generalized plan for digital business transformation. The main stages of the plan consist of obtaining the support of leaders, assessing the state of the market, it's integral evolution and key growth points, the need to determine the priorities of changes and the strategic direction of development. Important milestones are finding out the economic opportunities of the business in the field of digital transformation and assessing the qualifications of the workforce, corporate culture and readiness for change.

A strategic focus on intangible assets such as customers and data, enlisting the help of key partners, and defining expected transformation outcomes are critical. Developing a roadmap that includes innovation, optimization, flexibility, and scalability is critical to innovation success. Data analysis, their optimization and integration of technologies into strategies contribute to effective digital transformation. Eliminating disagreements among employees and stakeholders, setting goals, KPIs and controls, as well as innovative monitoring are an integral part of the process. When implementing a plan, it is important to take a long-term perspective and achieve milestones. Studying, measuring, reassessing and scaling intermediate results, as well as controlling innovation processes are fundamental components of successful business transformation.

In further research, it is important to focus on studying the impact of digital transformation on organizational culture, the relationship between different stages of transformation and their impact on economic results, and also compare different approaches to digital transformation in different business sectors.

References

Ostrovska, H., Tsikh, H., Strutynska, I., Kinash, I., Pietukhova, O., Golovnya, O., & Shehynska N. (2021) Building an effective model of intelligent entrepreneurship development in digital economy. *Eastern-European Journal of Enterprise Technologies*, vol. 6 (13 (114)). Available at: https://journals.uran.ua/eejet/article/view/244916 (accessed on 20.08.2023)

Tang, W., & Yang, S. (2022) Digital Transformation and Firm Performance in the Context of Sustainability: Mediating Effects Based on Behavioral Integration. Journal of Environmental and Public Health. Available at: https://www.hindawi.com/journals/jeph/2022/8220940/ (accessed on 20.08.2023)

Vorzhakova, Yu., & Khlebynska, O. (2021) The essence of digital transformation from position of entrepreneurs and scientists. *Economy and the state*, vol. 9. Available at: https://www.economy.in.ua/pdf/9_2021/19.pdf (accessed on 20.08.2023)

SAP (2023). Available at: https://www.sap.com/insights/what-is-digital-transformation.html (accessed on 20.08.2023)

Kelley, R. (2023) Six Keys to Successful Digital Transformation. Forbes. Available at: https://www.forbes.com/sites/forbestechcouncil/2023/01/25/six-keys-to-successful-digital-transformation/ (accessed on 20.08.2023)

Singh, U. (2023) The Role of Project Management in Digital Transformation. Tutorialspoint. Available at: https://www.tutorialspoint.com/the-role-of-project-management-in-digital-transformation (accessed on 20.08.2023)

DEKRA (2022). Available at: https://www.dekra.com/en/digital-transformation-of-quality-management/ (accessed on 20.08.2023)

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