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## **LEADERSHIP COMPETENCIES AND DIGITAL TECHNOLOGIES AS FACTORS IN INCREASING THE EFFECTIVENESS OF ORGANIZATIONS**

### **Abstract**

The article examines both theoretical and practical aspects of how leadership competencies and digital technologies impact organizational efficiency in the age of digital transformation. Key leadership components are analyzed in relation to modern digital challenges, along with the role of digitalization in improving organizational performance. The Republic of Kazakhstan serves as an example, with real statistical data showing progress in digital government services, digital infrastructure, IT sector development, and enterprise readiness for digital transformation. The synergy between enhancing leadership skills and adopting digital technologies is shown to foster sustainable efficiency gains, increase competitiveness, and improve service quality. The findings offer value to researchers, managers, and policy makers.

**Key words:** Leadership competencies, digital technologies, digitization, organizational effectiveness, management, digital transformation

### **Introduction**

Current stage of economic development with the transformation of Digital has accelerated the organization, it becomes clear that not only in the processes of technological, but also in the management culture also changes with the. In the current environment, etc. digitizing an integral part of the strategic development of the organization and factors determining competitiveness, they can be transformed. A number of studies have emphasized that the transformation of digital to increase efficiency and improve the quality of services, as well as increased transparency in the management processes and customer satisfaction can help.

In addition to the technological aspects, leadership is an important element of successful digital transformation-the ability of managers to form a strategic vision, motivate employees, innovate and ensure organizations adapt to change. Leadership competencies include the ability to work with data, manage change, make informed decisions, and create conditions for effective communication in a digital environment.

The Republic of Kazakhstan is actively developing digital platforms in the public and private sectors. Today, more than 92% of public services are available online, reflecting the deep digitization of the state apparatus and interaction with citizens [1].

The aim of this paper is to analyze the relationship between the development of leadership competencies and the use of digital technologies as key factors to improve the effectiveness of organizations using the example of the Republic of Kazakhstan.

### **Materials and methods**

Research materials included scientific papers on leadership, organizational effectiveness, digital transformation and Personnel Management, as well as analytical materials on the introduction of digital technologies into the activities of modern organizations. This article approaches to understand the merits of leadership, including strategic thinking, skills of communication, decision-making, managing change, intelligence, emotion, etc. Literacy Digital and the ability to form teams effectively reviewed.

Domestic and foreign authors ' publications, regulatory and policy documents on digitization, reports from international organizations, as well as material that reveals the way digital tools are used

in organizational management, were used as a research information base. Particular attention was paid to areas such as Business Process Automation, the use of data analysis, the introduction of digital platforms, the development of remote and hybrid work formats, the use of artificial intelligence and digital communication tools. The methodological basis of the research was based on general scientific methods. The theoretical analysis method was used to study scientific approaches to leadership and digital transformation of organizations. The system methodology allowed us to consider leadership competencies and digital technologies as interrelated factors that influence the effectiveness of organizational activities, the quality of management decisions, and the adaptation of the organization to changes in the external environment.

A comparative method was used to compare traditional management models and modern approaches based on digital technologies. This made it possible for us that in a digital economy, the effectiveness of an organization depends not only on technical equipment, but also on the ability of managers to use digital tools to coordinate work, analyze data, motivate employees and make informed decisions. The structural and functional analysis method was used to identify the main functions of leadership competencies in the digital environment. Within the framework of this methodology, functions such as forming a strategic vision, change management, Developing Digital Culture, organizing teamwork, supporting innovation and ensuring the flexibility of management processes were identified. In addition, the study used a generalization method that allowed to formulate core conditions for improving the effectiveness of organizations through a combination of leadership competencies and digital technologies. These conditions include developing digital literacy among managers and employees, introducing modern information systems, forming an open communication environment, supporting innovative thinking, enhancing employee compatibility and data-driven management.

Thus, selected materials and methods made it possible to comprehensively examine leadership competencies and digital technologies as complementary factors to improve the effectiveness of organizations. This approach demonstrates that digital transformation only becomes effective if there is competent leadership that can drive change, develop human capital and ensure sustainable organization development.

#### *Theoretical analysis*

Leadership competencies are a set of skills, knowledge and personal qualities that ensure the leader's ability to effectively manage an organization in the face of uncertainty and change. The literature highlights the importance of strategic thinking, communication skills, emotional intelligence, and the ability to innovate as components of leadership competencies. The development of these competencies helps to increase the effectiveness of interaction with the team, accelerate decision-making and increase the adaptability of the organizational structure to innovations.

Digital technologies include information systems, data management platforms, cloud services, automation, and analytics tools that optimize processes, reduce costs, speed up information processing, and quality of decision making. According to OECD reports, the transformative conditions of digital business require reliable infrastructure, high-quality networks and digital security that lay the groundwork for sustainable development of the digital economy [2].

Combine competencies leadership is developed, and the introduction of active digital tools, etc. the basis for the sustainable development of organizations creates. A leader with literacy digital not only be able to understand the features of technology is, but they can effectively manage the strategic implementation of it. the culture, innovative, stimulate, and the competence of employees to improve.

#### **The results and their discussion**

According to the latest data, Kazakhstan is experiencing a digital active public sector and business. For the year 2025:

- 92 percent of the state service for online delivers;
- Providing more than 23 million service through digital channels;

\* Ranked country in the index of e-Government Development Organization United Nations (EGDI) 24;

- More than 80% of businesses have access to computers and the internet [2].

Table 1. Key indicators of digitization of Kazakhstan and readiness of organizations for digital transformation (2021-2025)

| №   | Index                                     | Meaning  |
|---|---|----------|
| 1.  | Share of public services available online | > 92 %   |
| 2.  | Number of online services                 | > 1 200  |
| 3.  | Digital services provided (2025)          | > 23 млн |
| 4.  | EGDI rank (UN)                            | 24       |
| 5.  | Computers in companies                    | 81.4 %   |
| 6.  | Internet access in companies              | 79.5 %   |
| 7.  | Automation of internal processes          | 16.7 %   |
| 8.  | Cloud technologies                        | 11 %     |
| 9.  | Big Data Technologies                     | 1.9 %    |
| Note: Compiled by author based on sources [3] |   |          |

The data shows that the basic level of digital infrastructure in Kazakhstan is high (for example, computers and the internet are available in most organizations), but the level of advanced digitization (automation, cloud systems, big data analysis) is relatively low and requires development [3].

Digitalization makes it possible to improve management processes, improve service quality and reduce the time spent on operations. For example, digital public services in Kazakhstan significantly simplifies the daily operations of citizens and organizations, which increases user satisfaction and reduces administrative costs [4].

In addition, the report shows that the expansion of digital infrastructure leads to improvements from digital skills staff and increases their readiness for digital transmission, which is an important factor in the effectiveness and competitiveness of organizations.

Competency leadership is becoming an important factor in digital success. In this active field of technology its adoption is required that managers must:

1. Strategic vision and understanding of digital opportunities;
2. Change management and staff motivation skills;
3. Ability to create an innovative corporate culture;
4. Digital literacy for the effective use of analytical tools and automation systems [5].

Table 2. Leadership and digital technologies as factors of organizational effectiveness

| №  | Factor                                 | Specific elements                                     | mechanism of influence in the organization            | Result for efficiency                        |
|----|--|---|---|--|
| 1. | Strategic leadership                   | Development vision, long-term planning , adaptability | Forming a clear digital development strategy          | Growth of competitiveness and sustainability |
| 2. | Transformational leadership            | Employee motivation, change management                | Increasing employee participation in digital projects | Growing labour productivity                  |
| 3. | The emotional intelligence of a leader | Understanding AI,                                     | Improving teamwork                                    | Reduced staff turnover                       |
| 4. | Digital competence of management       | Big data, automation,                                 | Informed management decisions                         | Improving the quality of management          |
| 5. | Automation of the business process     | ERP ERP, CRM and RPA systems                          | Reduced manual operation                              | Reduced costs                                |
| 6. | Use of data analysis                   | Two systems, predictive analysis                      | Optimizing planning and control                       | Growth of financial indicators               |

|    |   |   |  |   |
|----|---|---|--|---|
| 7. | the introduction of artificial intelligence | Chat bots, prediction, personalization  | Accelerate processes and improve the accuracy of solutions | Improving the quality of Service            |
| 8. | Digital organizational culture              | Flexibility, innovation, staff training | Quick adaptation to changes                                | Sustainable development of the organization |

The data presented shows that the effectiveness of modern organizations is formed at the junction of two key factors-the characteristics of the leadership of the head and the level of implementation of digital technologies.

First, strategic leadership and transformation ensure the formation of a clear vision of digital development and contribute to successful management of organizational change. The boss becomes the initiator of innovations and the conductor of digital transformation.

Second, emotional intelligence plays an important role in maintaining a favorable psychological atmosphere in the face of digital change, reducing employee resilience and increasing engagement.

Thirdly, digital technologies (ERP, CRM, data analysis, artificial intelligence) directly affect operational efficiency: they reduce costs, accelerate processes, improve the accuracy of management decisions and the quality of customer service.

It is especially important to achieve maximum effect with the synergy of leadership and digital technologies. Even the most modern technologies do not guarantee productivity growth without skilled management capable of integrating them into the organization's strategy. It can therefore be concluded that leadership qualities create a managerial basis, and digital technologies serve as a tool to increase the productivity, innovation and competitiveness of the organization [6].

Research shows that organizations that has the competence of the executive are high in. and 20 to 30 percent higher performance in the implementation of digital technologies have faster with the changes, adapt and competitiveness more show.

The most important effect with a combination of leadership is developed, and the introduction of digital technologies comes to hand:

- Organizations integrate innovation faster;
- Increase employee engagement and adaptation to new tools;
- Improved strategic performance and productivity.

Table 3. The impact of the competence of leadership on the effectiveness of digitizing (based on surveys of companies, 2024)

| Level of leadership competencies | Productivity growth | Reduced costs | Innovative projects |
|----------------------------------|---------------------|---------------|---------------------|
| Down                             | 5–10 %              | 3–5 %         | 1–2                 |
| Average                          | 15–20 %             | 8–10 %        | 3–5                 |
| Tall                             | 25–35 %             | 10–15 %       | 6–8                 |

This table shows a high level of leadership competence enhancing the digital effect and directly on key performance indicators.

The analysis of data for Kazakhstan confirms that tulghord is an organization that is needed at a relatively high level but in order to realize its full potential:

1. Advanced digital development of infrastructure (Big Data, cloud technologies);
2. Emphasis on training and development of leadership competencies among managers;
3. Integration of digital technologies into strategic management and decision making [7].

Thus, combining digitalization and strong leadership forms a sustainable platform to improve the efficiency and competitiveness of organizations.

### Conclusion

Research conducted confirms that digitization in modern conditions is one of the key factors in the development of organizations and the transformation of management processes. In the context of

global technological change, the introduction of digital solutions is becoming a prerequisite for increasing operational efficiency, optimizing internal processes and improving the quality of services provided [8,9].

An analysis of the current digital state of development in the Republic of Kazakhstan has shown a high level of early digital formation of infrastructure and significant advances in the electronic field of public services. At the same time, it has been found that the level of advanced digitization of organizations, including the introduction of cloud technologies, big data analysis and integrated automation of business processes, is inadequate and requires further systemic development and investment.

The leadership competencies of managers are of particular importance in the digital transformation process. It is managers who set strategic digital development priorities, form an innovative organizational culture and ensure employee engagement in change processes. Insufficient levels of leadership and digital competencies can significantly reduce the effectiveness of implementing even modern technological solutions [10,11,12].

Thus, the greatest impact is achieved in increasing the efficiency of organizations with a synergistic combination of developed leadership competencies and active use of digital technologies. Such interaction helps to improve management processes, increase competition and increase the sustainability of organizations in the digital economy. These findings can be used in the development of digital development strategies and management training programs.

### References

1. Analiticheskij otchet o cifrovizacii gosudarstvennyh uslug v Kazahstane (2025 god). Gov.kzOECD Improving framework conditions for digital business transformation in Kazakhstan. - Paris: OECD publications, 2023. - 146 P.
2. United Nations e-government review 2024: accelerating digital transformation for Sustainable Development. - New York: United Nations, 2024. - 300 P.
3. Ministerstvo cifrovogo razvitiya, innovacij i aerokosmicheskoy promyshlennosti Respubliki Kazahstan Cifrovoy Kazahstan: fakty i perspektivy. - Porog, 2024. - 84 s. Yukel, G. Leadership in organizations. Eighth edition-Pearson Education, 2013. - 528 P.
4. Shafariah, H., Asril, A., & Agoestyowati, R. Leadership Transformation in the Digital Age: Implications for Employee Performance and Engagement in Modern Organizations. *International Journal of Management Science and Information Technology*, 2024, Vol. 4, No. 2, pp. 482–491. DOI: 10.35870/ijmsit.v4i2.3372
7. Otchet Pravitel'stva Respubliki Kazahstan (gov.kz ) o razvitii elektronnyh gosudarstvennyh uslug v Respublike Kazahstan. - Porog, 2025 god. - 62 s.8. Kalimullina O., Ivanova E. Cifrovoe liderstvo i organizacionnaya effektivnost'. *Problemy i perspektivy upravleniya*, 2024, Vol. 22, No. 3 - pp. 112-124.
5. Business prospects preparation for digital transformation of Kazakh companies: mapping regional and sector capacities. *Problems and perspectives in management*, 2024. - Pp. 45-61.
6. Schwab, K. *The Fourth Industrial Revolution*. Geneva: World Economic Forum, 2017. 192 P.
7. Tulibov K. S. Cifrovaya transformaciya kak instrument povysheniya konkurentosposobnosti organizacij. *Innovacii v nauke i tekhnike*, 2024. S. 33-41. Avulio, B. J., Kahai, S., Dodge, G. E. E-leadership: implications for Theory, Research and practice. *Leadership quarter*, 2001, Vol. 11, No. 4- pp. 615-668.

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## **КӨШБАСШЫЛЫҚ ҚҰЗЫРЕТТЕР МЕН ЦИФРЛЫҚ ТЕХНОЛОГИЯЛАР ҰЙЫМДАРДЫҢ ТИІМДІЛІГІН АРТТЫРУ ФАКТОРЛАРЫ РЕТІНДЕ**

### **Түйін**

Мақалада көшбасшылық құзыреттер мен цифрлық технологиялардың цифрлық трансформация жағдайында ұйымдар қызметінің тиімділігін арттыруға әсер етуінің теориялық және практикалық аспектілері қарастырылады. Қазіргі цифрлық сын-қатерлерге қатысты көшбасшылықтың негізгі компоненттері, сондай-ақ ұйымдастырушылық тиімділікті арттырудағы цифрландырудың рөлі талданады. Мысал ретінде цифрлық мемлекеттік қызметтер, цифрлық инфрақұрылым деңгейі, IT секторын дамыту және кәсіпорындардың цифрлық трансформацияға дайындығы бойынша ресми статистикалық деректер негізінде Қазақстан Республикасындағы ұйымдардың цифрлық трансформациясы келтіріледі. Көшбасшылық құзыреттілікті дамыту мен цифрлық технологияларды қолдану арасындағы синергия басқару тиімділігінің тұрақты өсуін, бәсекеге қабілеттілікті арттыруды және қызмет көрсету сапасын жақсартуды қамтамасыз ететіні көрсетілген. Зерттеу нәтижелері зерттеушілерге, менеджерлерге және мемлекеттік органдардың өкілдеріне пайдалы.

**Кілттік сөздер:** Көшбасшылық құзыреттіліктері, цифрлық технологиялар, цифрландыру, ұйымдастырушылық тиімділік, басқару, цифрлық трансформация.

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## **ЛИДЕРСКИЕ КАЧЕСТВА И ЦИФРОВЫЕ ТЕХНОЛОГИИ КАК ФАКТОРЫ ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ ОРГАНИЗАЦИЙ**

### **Аннотация**

В статье рассматриваются теоретические и практические аспекты влияния лидерских компетенций и цифровых технологий на повышение эффективности деятельности организаций в условиях цифровой трансформации. Анализируются ключевые компоненты лидерства применительно к современным цифровым вызовам, а также роль цифровизации в повышении организационной эффективности. В качестве примера приводится цифровая трансформация организаций в Республике Казахстан на основе официальных статистических данных по цифровым государственным услугам, уровню цифровой инфраструктуры, развитию IT-сектора и готовности предприятий к цифровой трансформации. Показано, что синергия между развитием лидерских компетенций и применением цифровых технологий обеспечивает устойчивый рост эффективности управления, повышение конкурентоспособности и улучшение качества услуг. Результаты исследования полезны для исследователей, управленцев и представителей государственных органов.

**Ключевые слова:** Лидерские компетенции, цифровые технологии, цифровизация, организационная эффективность, менеджмент, цифровая трансформация.