https://doi.org/10.5281/zenodo.18012393
XV Skup privrednika i naučnika

PROJEKTI DIGITALNE TRANSFORMACIJE KROZ PRIZMU JAVNOG I PRIVATNOG SEKTORA

DIGITAL TRANSFORMATION PROJECTS THROUGH THE LENS OF PUBLIC AND PRIVATE SECTORS

Katarina Petrović[1], Dragan Bjelica[2]
[1,2] Faculty of Organizational Sciences - University of Belgrade,
[1]katarina.petrovic@fon.bg.ac.rs, ORCID: 0009-0002-4341-3940
[2]dragan.bjelica@fon.bg.ac.rs, ORCID: 0000-0003-0203-2877

Apstrakt: *Digitalna transformacija je postala izuzetno popularan termin kada se govori o unapređenju poslovanja organizacija kako u privatnom tako i u javnom sektoru. Međutim, sprovođenje projekata digitalne transofrmacije pokazalo se kao izuzetno kompleksno i izazovno za organizacije u svim sektorima. U skaldu sa time, tretiranje projekata digitalne transformacije na uniforman način, bez uzimanja u obzir specifičnih karakteristika industrije i datih okolnosti, često dovodi do njihovog neuspeha. Cilj ovog rada je da na osnovu postojećih istraživanja identifikuje određene karakteristike projekata digitalne transofrmacije, iz perspektive javnog i privatnog sektora, koje je neophodno uzeti u obzir prilikom njihovog vođenja. Kroz pregled relevantne literature pokazalo se da, iako se inicijative kao takve nazivaju projektima digitalne trasnformacije i podvode pod istu kategoriju u privatnom i javnom sektoru, njihove fundamentalne razlike zahtevaju pristupe upravljanju projektima koji mogu da odgovore na izvesne karaktersitke i okolnosti u kojima se projekti sprovode.*
Ključne reči: *projekat, digitalna transformacija, javni sktor, privatni sektor*

Abstract: *Digital transformation has emerged as a widely used term when discussing the improvement of organizational performance in both the private and public sectors. However, carrying out digital transformation projects has proven to be highly complex and challenging for organizations across all sectors. Hence, treating digital transformation projects uniformly, without considering industry-specific or contextual factors, often leads to their failure. The objective of this paper is to outline, based on existing research, the distinct characteristics of digital transformation projects in the public and private sectors that need to be considered when managing them. The review of relevant literature demonstrates that, although digital transformation projects share a common label in public and private sectors, their fundamental differences necessitate project management approaches that are adapted to their unique characteristics and circumstances.*
Keywords: *project, digital transformation, public sector, private sector*

1. INTRODUCTION

The incorporation of digital technology solutions into business activities has become an unavoidable necessity for organizations across all sectors. According to data, around 90% of organizations are undergoing some type of digital transformation (McKinsey & Company, 2024). Industry 4.0, along with the solutions it provides, represents the foundation of successful digital transformation (Dolla et al., 2023). Among the technological solutions encompassed by Industry 4.0 are Internet of Things (IoT), Artificial Intelligence (AI) and Machine Learning (ML), Big Data, Blockchain, Cloud Computing and many others. While implementation of technological solutions is part of digital transformation, equal emphasis must be placed on cultivating cultural changes that enable technology acceptance (Murdha Anggara et al., 2024)

Digital transformation is undeniably beneficial, but the approaches applied in executing such projects are critical, considering the notable number of initiatives that fail (Baghizadeh et al., 2020). Findings reveal that less than 30% of transformations are considered successful (McKinsey & Company, 2018). The prevalence of digital transformation projects is growing in the private and public sectors, as demonstrated by the expanding number of publications in this area. Given the complexity and challenges involved in digital transformation projects (Hafseld et al., 2021), it is crucial to account for the particularities of the environments in which they take place. Ultimately, the effectiveness of project management and successful implementation determine the degree to which digital transformation objectives are met. Therefore, the purpose of this paper is to examine the characteristics of digital transformation projects from private and public sector perspectives, with the goal of identifying potential differences.

2. DIGITAL TRANSFORMATION

The concept of digital transformation is prevalent across both practice and scholarly work, yet research shows that no consensus on a unified definition of this term has been reached (Hoessler & Carbon, 2024). Moreover, the literature frequently conflates the terms digitization, digital technologies and digital transformation, despite the significant distinctions among them. While digitization and digital technologies provide the foundational steps for digital transformation, the transformation phase introduces the most significant organizational change (Hoessler & Carbon, 2022) and represents a level of development that is challenging to achieve.

Digital transformation refers to the adoption and deployment of the latest technological solutions, allowing organizations to substantially enhance their performance (Bresciani et al., 2021; Westerman et al., 2014). Some experts view digital transformation as a continuous process encompassing a sequence of changes and adaptations directed towards different areas (Mergel et al., 2019). According to Kane et al. (2015) it is

important to understand that digital disruption and digital transformation are distinct concepts, whereas disruption describes industry-wide technological shifts, while transformation describes adjustments made in response to these shifts.

Far from being a passing trend, digital transformation introduces a new paradigm affecting all indsutries. While digital transformation is widely recognized in literature, one should acknowledge that it does not resolve every issue (Fischer et al., 2021), but yet provides organizations considerable opportunities for improvement at multiple levels.

3. DIGITAL TRANSFORMATION PROJECTS

Digital transformation projects are a key instrument for executing digital transformation and realizing its intended outcomes (Hafseld et al., 2021). These projects extend beyond technological implementation, requiring careful attention to human-technology dynamics, which demonstrates that technology alone is insufficient (Dehnert & Santelmann, 2021). Digital transformation projects, described by Dehnert & Santelmann (2021) as “multi-dimensional, complex, and unique endeavors,” reflect the demanding and intricate nature of their execution. Complexity in digital transformation projects stems from the interconnected relationships and influences between technology, organizational processes and innovation, resulting in particularly demanding management requirements (Hafseld et al., 2021). Many projects are classified as ambidextrous, combining explorative and exploitative dimensions, which highlights that digital transformation projects can embody both types, which further underscores their complexity (Dehnert & Santelmann, 2021).

The management of these projects requires, as noted by Dehnert & Santelmann (2021), “meta-planning” which involves strategic foresight and careful evaluation to define the most suitable project management methodologies and tools. Maintaining attention on the core approach to managing digital projects is essential, instead of blindly following methods and tools that, at certain times, may be more or less prevalent as trends (Dehnert & Santelmann, 2021). While there is a clear intention to carry out digital transformation projects successfully, their high failure rate is largely due to the lack of strategic oversight and understanding of such complex initiatives (Baghizadeh et al., 2020; Dehnert & Santelmann, 2021). In this context, it is essential that the chosen project management approach corresponds to the specific features and particularities of the projects being implemented.

3.1. Digital transformation projects in the public sector

Digital transformation projects in the public sector are primarily aimed at fostering relationships with citizens, businesses and other stakeholders, ensuring that societal needs are met (Mergel et al., 2019). Murdha Anggara et al. (2024) emphasize that public

sector projects of this type are designed to enhance public value, thereby ensuring that citizens benefit from improved conditions. Research has found that external factors, notably pressures from society or certain social groups, have the greatest influence on digital transformation initiatives (Mergel et al., 2019). Internal factors are not disregarded, however, external are usually viewed as more dominant. Mergel et al. (2019) point out that external pressures lead digital transformation to process and service optimization, while internal pressures stimulate cultural adjustments. In alignment with this, such projects prioritize process efficiency, service quality and enhance connections with end users (Mergel et al., 2019). It should be noted that public sector organizations treat users as partners, encouraging them to actively participate as contributors to transformation (Mergel et al., 2019).

Public sector digital transformation initiatives are generally included in long-term plans and strategies established by the country (Haug et al., 2024). Consequently, the pre-established budgets and strategic plans limit flexibility and may result in overlooking opportunities that arise in the meantime (Frennert, 2019). Digital transformation projects are expected to enhance quality and operational efficiency (Murdha Anggara et al., 2024), with a focus on long-term outcomes (Mergel et al., 2019). Accordingly, digital transformation projects in the public sector aim to strengthen transparency and trust between citizens and public sector organizations (Murdha Anggara et al., 2024).

Management of public sector digital transformation projects is conditioned by bureaucratic structures (Hafseld et al., 2021) and many procedures (Ly, 2024) which further limit flexibility. These projects are based on an incremental approach, aiming to cumulate efforts that generate broader societal effects (Haug et al., 2024). Some authors observe that the public sector tends to maintain the status quo due to a lack of appropriate skills (Tangi et al., 2021). However public sector organizations often collaborate with other sectors and organizations to achieve more successful project implementation and better outcomes (Machljankin et al., 2024; Tanveer et al., 2025).

3.2. Digital transformation projects in the private sector

In the private sector, organizations implement digital transformation initiatives to respond effectively to the rapidly changing market environment (Chen et al., 2024; Zhang et al., 2022). Through projects focused on adopting new technological solutions, private sector organizations strive to stay ahead of competitors (Chen et al., 2024) and secure profit (Rose et al., 2018). These projects are initiated and shaped by influences arising from both the external environment and internal factors (Picazo Rodríguez et al., 2024). They allow private sector companies to advance organizational processes (Fountain, 2001; Haug et al., 2024), create novel business models (Haug et al., 2024) and enhance organizational culture (Fountain, 2001).

The digital transformation initiative follows the digital strategy defined by the company itself (Correani et al., 2020), which also retain flexibility in deciding on project funding (Jonathan, 2020). Research (Correani et al., 2020) indicates that digital transformation projects in the private sector view customers as recipients of the desired value, with the aim of enhancing the customer experience. The pressure and emphasis on achieving higher productivity is more pronounced within private sector organizations than within public sector ones (Picazo Rodríguez et al., 2024). By applying appropriate technologies organizations can mitigate information asymmetry (Niu et al., 2023) that occurs when certain information is not accessible to everyone. As a result, leveraging data allows for more informed and reliable decision-making. Besides these impacts, Liu et al. (2023) points out that private sector digital transformation projects can lead to the acceleration of new research and development projects.

One distinctive aspect of managing digital transformation projects in the private sector is the application of agile approaches, supporting flexibility and adaptation to environmental changes (Ly, 2024). Agility in these projects is enhanced by the relatively unrestrictive environments in which they are implemented, with fewer procedural requirements and steps (Ly, 2024). The management of such projects, in the private sector, relies on iterative, experimental approaches (Correani et al., 2020) which allow the discovery of suitable solutions.

4. COMPARATIVE ANALYSIS OF DIGITAL TRANSFORMATION PROJECTS

Drawing on the previous analysis, the table below illustrates and summarizes the principal characteristics of digital transformation projects in the public and private sectors, as defined by the chosen criteria.

Table 1: Comparative analysis of characteristics of digital transformation projects in the public and private sectors

	Public sector	Private sector
Objectives	• Response to changes and needs of the broader society (Mergel et al., 2019) and ensuring public value (Murdha Anggara et al., 2024) • Establishing appropriate relationships with citizens and other stakeholders (Mergel et al., 2019)	• Adaptation to dynamic market changes and needs (Chen et al., 2024; Zhang et al., 2022) • Ensuring competitive advantage in a dynamic environment (Chen et al., 2024) • Ensuring profit (Rose et al., 2018)
Type of driving forces	• Dominated by external factors and influences (Mergel et al., 2019)	• Presence of both external and internal influences (Picazo Rodríguez et al., 2024)
View on end users	• Customers are seen as partners - collaboration and active participation (Mergel et al., 2019)	• Customers are seen as recipients of the desired value - customer experience improvement (Correani et al., 2020)

Applied approach	• Approach conditioned by bureaucratic structures (Hafseld et al., 2021) and procedures (Ly, 2024) • Incremental changes (Haug et al., 2024) • Collaboration with other sectors and organizations (Machljankini et al., 2024; Tanveer et al., 2025)	• Flexibility and agility (Ly, 2024) • Streamlined procedures (Ly, 2024) • Experimental and iterative approaches (Correani et al., 2020)
Areas of change	• Processes (Mergel et al., 2019) • Services (Mergel et al., 2019) • Relationships with end users (Mergel et al., 2019)	• Service process delivery changes (Fountain, 2001) • Culture modifications and shifts (Fountain, 2001) • Creation of new business models (Haug et al., 2024) • Process improvement (Haug et al., 2024)
Results and impacts	• Long-term impact effects (Mergel et al., 2019) • Improvement of quality and operational efficiency (Murdha Anggara et al., 2024) • Trust and transparency (Murdha Anggara et al., 2024)	• Productivity improvements (Zhang et al., 2022) • Encouragement of new R&D projects (Liu et al., 2023) • Informed decision-making and reduced information asymmetry (Niu et al., 2023)
Financial aspects	• Definition of budget and strategic plans in advance for several years (Frennert, 2019)	• Flexibility in financial decision-making (Jonathan, 2020)
Project foundation	• Long-term plans and broader strategies defined by government bodies (Haug et al., 2024)	• Company's established digital strategy (Correani et al., 2020)

From the table, it is evident that digital transformation initiatives in the private and public sectors differ fundamentally.

5. CONCLUSION

This paper enabled an assessment of the main characteristics of digital transformation projects from private and public sector perspectives to determine their similarities and differences. The analysis indicates that, although digital transformation projects are becoming more widespread, they differ between the two sectors. The focus on competitiveness and profit in the private sector contrasts with the public sector's emphasis on public interest and citizen needs, resulting in environments that differ substantially.

For the public sector, maintaining a certain level of agility and engaging relevant public organizations throughout strategy development is crucial to achieving the intended outcomes of digital transformation. On the other hand, in the private sector, digital transformation is often focused only on technology, but achieving full potential of such transformation requires a multidimensional, systematic approach.

As shown in this paper, digital transformation projects considerably vary between the public and private sectors, and therefore, transferring solutions from one sector to the other, without previous analysis, risks overlooking critical aspects. Therefore, it is necessary to tailor project management approaches to the specific characteristics of digital transformation projects, considering the sector in which they are being executed.

LITERATURE

[1] Baghizadeh, Z., Cecez-Kecmanovic, D., & Schlagwein, D. (2020). Review and critique of the information systems development project failure literature: An argument for exploring information systems development project distress. *Journal of Information Technology*, *35*(2), 123–142.

[2] Bresciani, S., Ferraris, A., Romano, M., & Santoro, G. (2021). *Digital Transformation Management for Agile Organizations: A Compass to Sail the Digital World*. Emerald Publishing Limited.

[3] Chen, L., Tu, R., Huang, B., Zhou, H., & Wu, Y. (2024). Digital transformation's impact on innovation in private enterprises: Evidence from China. *Journal of Innovation & Knowledge*, *9*(2), 100491.

[4] Correani, A., De Massis, A., Frattini, F., Petruzzelli, A. M., & Natalicchio, A. (2020). Implementing a Digital Strategy: Learning from the Experience of Three Digital Transformation Projects. *California Management Review*, *62*(4), 37–56.

[5] Dehnert, M., & Santelmann, B. (2021). Are individual mindfulness and stewardship climate success factors for digital transformation projects? *2021 IEEE 23rd Conference on Business Informatics (CBI)*, 21–30.

[6] Dolla, T., Jain, K., & Kumar Delhi, V. S. (2023). Strategies for digital transformation in construction projects: stakeholders' perceptions and actor dynamics for Industry 4.0. *Journal of Information Technology in Construction*, *28*, 151–175.

[7] Fischer, C., Heuberger, M., & Heine, M. (2021). The impact of digitalization in the public sector: a systematic literature review. *Der Moderne Staat – Zeitschrift Für Public Policy, Recht Und Management*, *14*(1–2021), 3–23.

[8] Fountain, J. E. (2001). *Building the virtual state: Information technology and institutional change*. Brookings Institution Press.

[9] Frennert, S. (2019). Lost in digitalization? Municipality employment of welfare technologies. *Disability and Rehabilitation: Assistive Technology*, *14*(6), 635–642.

[10] Hafseld, K. H. J., Hussein, B., & Rauzy, A. B. (2021). An attempt to understand complexity in a government digital transformation project. *International Journal of Information Systems and Project Management*, *9*(3), 70–91.

[11] Hoessler, S., & Carbon, C. C. (2022). Digital transformation and ambidexterity: A literature review on exploration and exploitation activities in companies' digital transformation. *International Journal of Innovation Management*, *26*(08).

[12] Hoessler, S., & Carbon, C.-C. (2024). Digital transformation in incumbent companies: a qualitative study on exploration and exploitation activities in innovation. *Journal of Innovation and Entrepreneurship*, *13*(1), 46.

[13] Jonathan, G. M. (2020). *Digital Transformation in the Public Sector: Identifying Critical Success Factors* (pp. 223–235).

[14] Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., Buckley, N., & others. (2015). Strategy, not technology, drives digital transformation. *MIT Sloan Management Review*, 14, 1–25.
[15] Liu, M., Li, C., Wang, S., & Li, Q. (2023). Digital transformation, risk-taking, and innovation: Evidence from data on listed enterprises in China. *Journal of Innovation & Knowledge*, *8*(1), 100332.
[16] Ly, B. (2024). The Interplay of Digital Transformational Leadership, Organizational Agility, and Digital Transformation. *Journal of the Knowledge Economy*, *15*(1), 4408–4427.
[17] Machljankin, J., Neumann, O., Steiner, R., & Ege, J. (2024). Exploring the role of consulting in local government digital transformation. *Public Money & Management*, 1–10.
[18] McKinsey & Company. (2018). *Unlocking success in digital transformations.*
[19] McKinsey & Company. (2024). *What is digital transformation?*
[20] Mergel, I., Edelmann, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, *36*(4), 101385.
[21] Murdha Anggara, S., Hariyanto, A., Suhardi, Akhmad Arman, A., & Budi Kurniawan, N. (2024). The Development of Digital Service Transformation Framework for the Public Sector. *IEEE Access*, *12*, 146160–146189.
[22] Niu, Y., Wang, S., Wen, W., & Li, S. (2023). Does digital transformation speed up dynamic capital structure adjustment? Evidence from China. *Pacific-Basin Finance Journal*, *79*, 102016.
[23] Picazo Rodríguez, B., Verdú-Jover, A. J., Estrada-Cruz, M., & Gomez-Gras, J. M. (2024). Does digital transformation increase firms' productivity perception? The role of technostress and work engagement. *European Journal of Management and Business Economics*, *33*(2), 137–156.
[24] Rose, J., Flak, L. S., & Sæbø, Ø. (2018). Stakeholder theory for the E -government context: Framing a value-oriented normative core. *Government Information Quarterly*, *35*(3), 362–374.
[25] Tangi, L., Janssen, M., Benedetti, M., & Noci, G. (2021). Digital government transformation: A structural equation modelling analysis of driving and impeding factors. *International Journal of Information Management*, *60*, 102356.
[26] Tanveer, U., Hoang, T. G., Ishaq, S., & Khalid, R. U. (2025). Public-private partnerships as catalysts for digital transformation and circular economy: Insights from developing countries. *Technological Forecasting and Social Change*, *219*, 124270.
[27] Westerman, G., Bonnet, D., & McAfee, A. (2014). The nine elements of digital transformation. *MIT Sloan Management Review, 55*(3), 1–6.
[28] Zhang, T., Shi, Z.-Z., Shi, Y.-R., & Chen, N.-J. (2022). Enterprise digital transformation and production efficiency: mechanism analysis and empirical research. *Economic Research-Ekonomska Istraživanja*, *35*(1), 2781–2792.