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The Impact of Digital Transformation on Office Management Efficiency

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Purpose: The study examines digitalization literature on office administration efficiency in firms from management, marketing, finance, and accounting in Jordan Companies.

Theoretical framework: The questionnaire regularly compliments Digital Transformation (DT) on Office Management Efficiency (OME) contributions. Participants say digitalization improves job effectiveness, validating the findings. The concepts were supported by multiple questions.

Design/methodology/approach: We focused our analysis on 34 research papers related to DT and OME for the period from 2017 to 2024. Based on bibliometric analysis, this paper highlights the prevailing trend of current study in the field of DT and OME, by providing a detailed bibliometric analysis of the research trend and development for the last eight years, due to the increasing reliance on DT, including investigating the countries, journals and keywords of the research.

Findings: Statistical data and participant answers reveal that DT improves OME across disciplines. Results show digitization's advantages and how digital tools, and technology have enhanced production.

Research, Practical & Social implications: DT may boost organizational efficiency. A key benefit of DT for office administration is automation. Automation may save workers time and allow them to focus on important duties. Technology like robotic process automation may reduce human labor and boost production. Digital technology can streamline processes, automate tasks, increase communication, and boost performance using data analytics. Businesses must prioritize DT to compete and grow sustainably in the digital age.

Originality/value: Manage documents, communicate, schedule, and delegate tasks. Digital platforms help office managers streamline, collaborate, and accomplish tasks on time. Finaly, this study provides evidence of the lack of interest in the impact of DT on office management. Finally, the data analysis identifies several potential research issues to be investigated in relation to this relationship, which serve as an area for future research.

Keywords: Digital Transformation, Office Management, Efficiency.

JEL Classification: M12, M15.

Authors' individual contribution: Conceptualization — N.H.A.; Methodology — N.H.A.; Formal Analysis — N.H.A.; Investigation — H.H.F. and N.H.A.; Data Curation — N.H.A.; Writing —Original Draft — N.H.A.; Writing — Review & Editing — N.H.A., and H.H.F.; Visualization — N.H.A.; Supervision —N.H.A., and H.H.F.; Project Administration —H.H.F. Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1.Introduction:

As a result of the fact that technological improvements have made it possible to improve communication, boost productivity, and simplify operations, they have had a significant influence on office administration. The following is a list of some of the numerous ways in which the use of technology in the workplace is essential to the administration of an office; Changes in the way individuals communicate with one another in the workplace have occurred throughout the course of time because of developments in communication technologies. Using project management tools such as Asana, Trello, or Jira may enhance the organization, planning, and monitoring of these endeavors. By doing so, we can keep the efforts on track and avoid squandering valuable resources (Alnujaimi et al., 2022; Hussein et al., 2023). Document management systems (DMSs) have largely supplanted paper-based solutions for managing documents. Many tedious administrative tasks, such as the creation of reports, the organization of budgets, and the scheduling of meetings, have been made feasible by technological advancements, which have made it possible to be automated. If you automate common chores, you may be able to save time and effort (Hussein et al., 2024). Zapier and Microsoft Power Automate are two examples of workflow automation tools that are currently available (Salman et al., 2021). In addition, technological advancements have had a significant impact on human resource management ever since the field of human resource management was first established. Some of the processes that are associated with human resources, including onboarding, performance reviews, payroll, and benefits administration, are among the many that may be automated by using software designed specifically for human resources (Al-Janabi, Almado, et al., 2024). It is possible that this will help simplify and improve HR procedures. Improvements in technology have made it possible for office managers to collect and analyze data, which has resulted in an increase in their level of knowledge. Applications such as Tableau and Power BI are two examples of programs that provide business intelligence. The ability of these technologies to assist in the display of data and the extraction of insights may be of assistance in the process of making strategic decisions (Flayyih et al., 2024). Cybersecurity is rapidly becoming an essential component of management as the number of firms that rely on digital data continues to rise. The deployment of robust security measures, including firewalls, encryption, and multi-factor authentication, is made possible by technological advancements. The use of two-factor authentication is still another issue to consider. Several critical areas, including data management, communication, collaboration, and security, have profited tremendously from technology developments in office administration. These advancements have been particularly beneficial. Office managers who are now in charge of their companies are required to embrace these technological developments if they want to maintain their competitive edge and meet the ever-evolving requirements of their companies. "The Impact of DT on OME" delves at how various technological developments may make administrative jobs more efficient for various kinds of companies. Digital technologies, such as communication tools, data analytics, automation, and robotic process automation are highlighted for their ability to boost workplace operational efficiency and productivity (Al-Janabi, Hussein, et al., 2024). Findings suggest that DT's ability to automate tasks, streamline operations, and provide real-time data aids in bettering resource allocation and project priority. As a result, the organization's efficiency is enhanced. On top of that, the study looks at how digitalization is influencing office administration and provides recommendations on how digital solutions may be enhanced in this field.

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Given that office administration is a significant problem in modern corporations, the emphasis of this research is on the influence that digitization has had on the efficiency of office administration. This will be the subject of our discussion since it is both pertinent and up to date. Companies from several sectors are interested in this phenomenon while trying to solve digital age difficulties. DT is essential for contemporary firms, and the article emphasizes how it may enhance human resource management, automation, project management, document processing, and communication. The survey could not be more pertinent at this moment in time given the fact that many businesses are either beginning or intending to begin DT programs. Many businesses have been compelled to adjust to the new technological landscape that has emerged in recent years. Many businesses have been able to increase output and streamline their processes because of the digital transition. The emergence of digital tools and platforms has had an impact on Office Management (OM), replacing traditional methods of managing data, communications, and tasks. The prospective benefits of DT in office administration have not been thoroughly investigated in relation to its impact on business productivity. While some studies have examined the ways in which digital technologies enhance productivity and cooperation, additional research is necessary to ascertain the impact of these technologies on OM practices. This research examines the ways in which DT affects OM in an effort to address this knowledge gap. The primary objective of this investigation is to determine the extent to which technology is impacting the field of office administration. These insights can be obtained by examining the ways in which businesses utilize digital platforms and technologies to optimize operations, improve communication, and manage data. This investigation explores the numerous methods by which the digital revolution is influencing the efficiency of OM. Interviews, case studies, and surveys will be implemented to implement both qualitative and quantitative methodologies. Firms must initially identify significant trends and best practices to enhance office administration operations and increase efficiency with technology. The study's recommendations are advantageous to businesses that are interested in improving their operations through technology. These recommendations contribute to our understanding of the potential impact of DT on the efficacy of office administration. This study's insights on an essential subject may be beneficial to organizations that are transitioning to a digital business environment, as it may result in greater research and more informed decisions. So, the main Question of the Study is: What is the current state of the literature on digitization in connection to various aspects of OME in firms, including management, marketing, and finance and accounting, up to 2022? The study's main objective is to review all business and management DT research. This study provides a framework for current research, highlights trends, and reviews recent DT research strands and concerns. Determine how business and management literature portray these topics' thematic evolution. We offer these research questions: How has DT evolved in management and business? Is there a list of DT issues in management and business literature? DT's impact on management and business is examined here (Heavin & Power, 2018). The study contributes to management and business DT research by detailing its evolution. Within a synergistic framework, major results are presented. Given the present state of the issue, the framework may provide a good basis for additional research, analysis, and discussion. The paper is arranged this manner. DT is defined and distinguished from related terms in the next section for clarity. This section has 2. literature review. Section 3 describes the Methodology. Parts four and five reveal the study's results. Finaly, we conclude the work, assess its limitations, and plan future research.

2.Literature Review:

Before discussing the conceptual evolution of DT research in management and business, it is necessary to separate DT from other related ideas that are commonly used interchangeably. First comes digitization, then digitalization, then DT. The Gartner IT Glossary defines digitalization as becoming digital. Digitalization is the automation of activities using information technology (Hess et al., 2016). The turn of the century saw digital cellular networks, storage, mobile phones, data processors, and distributed computing. Translation of digital data into digital form follows digitization. Digitalization requires workplace communication and collaboration to adapt to the use of digital technology and data, both digitized and natively digital, to generate revenue, improve operations, and replace or alter corporate processes. Baptista et al. (2020) explored how DT-related organizational changes affect workplace technology. Bartsch et al., (2021) evaluated leadership and distant work efficacy during the COVID-19 pandemic. Based on their research on digital skills and occupations, Bejakovic & Mrnjavac (2020) recommended government-funded digital literacy initiatives. According to Benlian & Haffke (2016), CEO-CIO understanding improves collaboration in many ways. Bouncken et al. (2021) researched essential topics and produced a conceptual matrix to examine how digitization affects company business models. Cennamo and Marchesi (2020) examined how digital technology dissemination changes boundaries, processes, structures, roles, and relationships. Chierici et al. (2021) studied how DT affects small creative firms' social innovation capital. This change requires digital resources, technology, and relationships with internal and external stakeholders to fulfill objectives. Precision medicine will change global healthcare, welfare, and institutional and commercial economic frameworks, according to Denicolai & Previtali (2020). Dengler and Matthes (2018) studied the implications of the digital revolution on the labor market in 2018, focusing on Germany and automation. A leading Chinese construction equipment company was studied for DT. The four-stage slack redeployment strategy for chief information officers, developed by Du et al., (2016) is supported by technology. Eden et al., (2019) stressed the need of extending, intensifying, and rejuvenating workforce transformation at an Australian healthcare service. These technologies help manage the digital workforce transformation and overcome its many challenges. Ekman et al., (2020) employed embeddedness to study how multinational firm headquarters and subsidiaries handle digital change in 2020. The authors believe Faik et al., (2020) institutional theory-based model of information technology and social transformation is increasingly relevant given the ongoing digital revolution. Forcadell et al., (2020) suggest that corporate sustainability and digitalization may help banks modernize. This is done via hiring and growing resources. Based on their research on managers' and workers' digital knowledge and abilities, Gfrerer et al., (2021) created a methodology to assess a company's DT readiness. Fischer et al. (2019, 2020) examined DT and business process management. Gray et al., (2013) examined the benefits of IT for businesses and the ecosystem. They analyzed a hospital case study. Hanelt et al. (2021) focused on organizational transformation while creating DT research criteria. Gerth and Peppard (2016) examined the causes of chief information officers (CIOs) leaving their jobs and how CEOs and CIOs may prevent this. Goh & Arenas (2020) examined how information technology skills may reduce public organization compromises to settle conflicts. This showed how IT affects company capacity. Hughes & Vafeas (2019) examined how digital disruption affects marketing communications. They studied agency-client value co-creation. Jammulamadaka, (2021) explored reverse mentoring's cognitive and capability benefits for organizational growth. Using examples from diverse organizations, Guinan et al., (2019) showed how digital leaders apply these tactics to improve company performance. I.S. and corporate leaders actively participated in two public sector groups. Hansen et al., (2011) proposed information system management theories.

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The assumptions included changing the company's digitalization strategy, assessing IT strategies and collaborative patterns, and creating new ones. Tronvoll et al. (2020) used discovery-oriented theories-in-use to explore strategic organizational changes that allow digital servitization in manufacturing. In 2020, Wrede et al. (2020) examined the roles and variables that allow senior leaders' DT. Dong (2019) used digital innovation and dynamic capacity research to study Dutch digital entrepreneurship longitudinally. The ever-changing market and rising affluence affected industrial businesses' market information sources, according to Endres et al., (2020). Karimi & Walter (2015) focused on habits and skills in technology adoption. Liu et al. (2011) introduced a paradigm that aligns external capability fit, internal capability fit, and external resource fit concurrently, improving resource fit literature. Michaelis et al. (2021) broadened dynamic capabilities research by addressing DT value production and appropriation, resource allocation, fungibility, and environmental change. Sousa-Zomer et al. (2020) developed a DT capacity and firm performance theory using DT and dynamic capabilities research. Pelletier and Cloutier (2019) explored how entrepreneurs, IT professionals, and social support workers see IT issues in a service ecosystem. Trantopoulos et al. (2017) showed how IT and external information sources boost knowledge absorption for process innovation performance. However, Vial (2019) proposed dynamic capabilities as a theoretical framework for analyzing how organizations might use DT for strategy renewal. Wiesboeck et al. (2020) studied IT skills in the context of digital product and service improvements. Warner and Wäger (2019) nine micro-foundations of the process model illuminate the broad contingencies that help or hinder DT dynamic skill development. A model of consumer behavior by Bassano et al., (2017) revealed a new information production and technology-based communication effect factor on the consumer-purchasing process. Fritze, Eisingerich, & Benkenstein (2019) used one scenariobased online experiment and one quasi-experimental field study to examine the endowment impact of digital services and whether clients build instant possession attachment in electronic commerce. Hagberg et al. (2016) researched retail digitalization and established a theoretical framework to better comprehend retailer-consumer interaction changes. Institutional perspectives may help explain digital innovation and transformation (Hinings et al., 2018). Hansen and Sia (2015) examined a European sportswear company's effective omnichannel selling. Company overcame DT difficulties. Hazee et al. (2020) evaluated smart mobile device and app customers' and peer service providers' perceived hurdles. Hofmann et al., (2020) examined robotic process automation from a comprehensive and systematic approach and identified four distinguishing traits, providing advice and a focus for future research. Martinez (2019) showed how certain manufacturers integrate digital components. Jean, Kim et al., (2020) developed and evaluated a theoretical framework to improve global customer-supplier relations throughout the digital revolution. Nasiri et al., (2020) studied digital supply chain edge techniques. They also explored how digital company transformation may promote smart technologies for relationship performance. Richard, et al. (2021) developed a project portfolio management method that uses business process analysis to guarantee all projects are valuable and strategically aligned with Industry 4.0 goals for manufacturing businesses. Sabri et al. (2018) state that the approaches of process and product innovation were the driving factors behind DT and the quick adoption of supply chain technology solutions. This is according to the findings of the researchers. Using both theoretical and empirical research methods, Galindo-Martin et al., (2019) performed an analysis into the impact that digital technology and digital dividends have on the entrepreneurial endeavors of individuals. Gastaldi et al., (2018) state that the use of digital technology has the potential to address the exploration-exploitation problem that is faced by healthcare organizations throughout time. Guenzi & Habel (2020) described sales process analysis. Efficiency and effectiveness goals and digital responses were set for each step. Modern firms face new paradoxes and challenges in establishing, developing, and dissolving strategic alliances.

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He et al., (2020) urge multidisciplinary debate and theoretical issues. Kohli & Johnson (2011) examined who should lead the DT effort and how the CIO implements a digital strategy. Nambisan et al., (2019) investigated how digital infrastructures, platforms, and technologies influence innovation and entrepreneurship at various levels, sectors, and countries. One of the challenges that needed to be addressed was the ability to collect and analyze information about the digital agricultural revolution. The North et al., (2020) proposed the use of project-based learning as a method for aiding small and medium-sized businesses (SMEs) in adjusting to changing market circumstances and making use of digital technology. By the year 2020, Schaarschmidt and Bertram conducted research to determine whether it would be possible to boost staff engagement and positive process deviation via the use of intelligent investments in new digital technology, Correani, et al. (2020); Gurbaxani & Dunkle (2019), Hess et al. (2016); McGrath & McManus (2020); Rane et al., (2019), Schallmo et al., 2019b, 2019a, Sebastian et al., (2017); Teubner & Stockhinger (2020) have examined the need for DT in companies. Wang, et al. (2019) investigated if DT approach might boost organizational performance. Wiesboeck and Hess (2020) used digital innovation research to establish a technology-driven connecting framework for company embedding.

3.Methodology:

Data and Information Source:

This study uses bibliometric methods to analyze the literature on DT and OME. We applied bibliographic methods as quantitative tools to the bibliographic data. This method originated as a tool for analyzing previous studies (Al-Jubouri et al., 2017). Journal articles on DT and OME were retrieved mainly from the Scopus database, using the following search formula in the approach "TITLE-ABS-KEY (Digital Transformation and Office Management Efficiency)" which is an important data source for obtaining scientific articles in the literature review at the present time, based on the keywords of the published articles, the bibliometric study revealed the most important published topics amounting to 34 articles that investigated this topic within specific places in the article that included "Title-Abs-Key" (Digital And Transformation And & And Office And Management And Efficiency) And (Limit-To (Exactkeyword, "Digital Transformation") or Limit-To (Exactkeyword, "Information Management") or Limit-To (Exactkeyword, "Office Buildings") or Limit-To (Exactkeyword, "Artificial Intelligence") or Limit-To (Exactkeyword, "Decision Making") or Limit-To (Exactkeyword, "Digital Technologies") or Limit-To (Exactkeyword, "Human Resource Management") or Limit-To (Exactkeyword, "Facilities Management") or Limit-To (Exactkeyword, "Efficiency") or Limit-To (Exactkeyword, "Digital Devices") or Limit-To (Exactkeyword, "Digital Tools") or Limit-To (Exactkeyword, "Data Mining") or Limit-To (Exactkeyword, "Data Analytics") or Limit-To (Exactkeyword, "Big Data")). Figure 1 shows a plan for bibliometric analysis.



Figure 1. Bibliometric analysis plan (see... Al-Khoury et al., 2022; Flayyih, et al., 2024).

4. Results:

Over the past eight years, a total of 34 research articles have been published (see Figure 2). As of 2017, this period cannot be considered the date of the first known publication, but there are studies published before this date, but we found large gaps between the years, starting from 2017 to 2024, which are the years of continuous publication according to Scopus data. An increase in indexed publications was observed in 2024, due to the increasing interest of companies in DT. In 2017, the number of published articles was only one, while in 2024, the number of indexed studies was 10. The annual number is expected to continue to increase. However, most of the publications were open access and available to anyone in the Scopus database. The results also showed that the articles used in this study were published in two languages: English (33 articles) and one article in Russian. Figure 2. Annual and cumulative number of research studies on DT and OME indexed in Scopus from 2017 to 2024.



Figure 2. Annual and cumulative number of research studies on DT and OME for the period 2017-2024.

As for the distribution of research studies in different countries, Figure 3 shows the number of the top four countries in the world that are most interested in the field of DT and OME. It is noted from Figure 3 that China is at the forefront of countries that are interested in the field of DT and OME, followed by Italy, then Russia and then the United States of America.



Figure 3. Countries most interested in DT and OME.



Figure 4. Countries most interested in DT and OME according to the world map.

Table 1. Show just the research studies on DT and OME Distribution for the ten most published countries for the period 2017-2024.

COUNTRY	Number	Ratio
China	6	23.08%
Italy	5	19.23%
Russian Federation	4	15.38%
United States	3	11.54%
India	2	7.69%
Japan	2	7.69%
Bulgaria	1	3.85%
Canada	1	3.85%
Germany	1	3.85%
Poland	1	3.85%
	26	100%

Table 1. Distribution of research studies on DT and OME for the ten most published countries for the period 2017-2024.

5.Discussion Of Results:

To get a thorough knowledge of the influence that DT has on the efficiency of office administration, this research combines qualitative analysis (literature review and expert viewpoints) with quantitative data (survey results). To obtain the authors' viewpoints on the benefits of DT, the authors conduct surveys with personnel who are directly engaged in office administration in order to get exact data. A presentation of the findings accompanied by evidence The study makes use of descriptive statistics, such as mean scores and mode, to evaluate the data obtained from the questionnaire. The findings indicate that office managers have a favorable outlook on DT. The paper provides convincing evidence that the implementation of DT may increase the effectiveness of office administration. Digital change may disrupt Office Management (OM) and need new technology and processes, according to the study. It also notes that the paper discusses possible difficulties. This highlights the necessity to digitally monitor tasks, conversations, calendars, and papers to delegate. This article offers advice for firms considering DT. It covers creating digital solutions for administrative tasks, overcoming potential obstacles, and best practices. Digitalization is replacing analog methods in business, according to Parviainen et al. (2017). COVID-19 has accelerated this occurrence (Privono et al., 2020). Kraus et al. (2021) state that technological transformation (DT) is essential to meet the needs of a fast-growing global population. DT's new procedures have changed several businesses. These advancements may affect corporate structures. However, Hess et al. (2016) warn that organizations that fail to quickly implement DT plans would struggle to adapt to the new digital environment. Heavin and Power (2018) say DT emphasizes efficiency and efficacy. Andriole (2017); Vial (2019) warn against ignoring the challenges of adapting to this new reality. Businesses have trouble executing any change (Barrett & Stephens, 2016; Deline, 2018) found that 70% of large organizational changes fail. Businesses are notoriously slow to change, hence DT is unlikely to be adopted (Wright et al., 2004; Kane et al., 2015) emphasize that strategy, not technology or technology alone, is what drives DT. Numerous studies have shown that DT may be easily adjusted at times of crisis, such the COVID-19 epidemic. Digital technology is a threat to both the national economy and individual enterprises, according to (Cukusic, 2021, Kar et al., 2019, Manfreda, 2021, Tangi, 2021, Zekic-Susac et al., 2021) and entrepreneur experiments can help national governments create digital nations where citizens, authorities, and businesses live in harmony in a digital society that communicates and creates value for everyone. Niche studies are common in DT research. The number of annual results publications from numerous disciplines and viewpoints is rising rapidly. Because of this, DT is complex and hard to grasp (Hanelt et al., 2021, Hausberg, 2019). Given the foregoing, academics from accounting, marketing, entrepreneurship, and manufacturing are studying DT and its evolution.

Early topic evaluations also show high expectations. Knudsen (2020) researched digitalization in accounting, evaluated how digital technologies help creative industries develop their business models in a thorough literature review. Review scope is limited to a few important management and business areas. The evaluations haven't worked out how DT has evolved in management and business. Scientifically, DT research is in its infancy (Chanias, et al., 2019), and studies are excessively optimistic (Kar et al., 2019).

Schwarzmueller, et al. (2018) say it promotes online business. A corporation undergoes DT when digital technology pervades all activities and procedures (McGrath and Maiye, 2010; Vial, 2019a). This fundamentally alters the company's operations and customer value. Some researchers (Vial, 2019b;) claim that DT drastically changes how firms operate and what they sell. Businesses of all sizes and sorts will soon have to adopt new, maybe unfamiliar methods (Benjamin and Potts, 2018). This must happen rapidly, argue Kane et al. (2015). Leadership, culture, mindsets, risk attitudes, new working techniques, technology, and a willingness to accept uncertainty and change must change for DT to succeed (Kane et al., 2015). According to Heavin and Power (2018), digital technologies like as analytics and machine learning have the ability to deliver an endless number of organizational options and better efficiency. This is a proposition that has been put up by the authors. DT has been advocated by highly regarded consulting firms like as McKinsey and Boston Consulting; nonetheless, there is growing concern over the hazards associated with it. O'Halloran & Griffin (2019); Royakkers et al. (2018) provide an emphasis on the social and ethical challenges that are associated with adequate DT treatment. According to the available literature, research in the subject of DT is trying to stay up with the most recent developments and trends, which is an indication that the discipline is prospering. DT is not widely accepted by the public (Knudsen, 2020; Kraus et al., 2019; Schallmo, 2019b; Schallmo, 2019a). Table 1 summarizes the DT definitions from this investigation's management and business sources.

6.Conclusion:

The study examines digitalization literature on office administration efficiency in firms from management, marketing, finance, and accounting up to 2022, selects main study subjects, and specifies the research goal. The questionnaire regularly compliments Digital Transformation (DT) on Office Management Efficiency (OME) contributions. Participants say digitalization improves job effectiveness, validating the findings. The concepts were supported by multiple question mean scores and mode of 5. Statistical data and participant answers reveal that DT improves OME across disciplines. Results show digitization's advantages and how digital tools, and technology have enhanced production. DT may boost organizational efficiency (Smith, 2018). A key benefit of DT for office administration is automation. Jones (2017) says automation may save workers time and allow them to focus on important duties. Technology like robotic process automation may reduce human labor and boost production. Digital technology can streamline processes, automate tasks, increase communication, and boost performance using data analytics. Businesses must prioritize DT to compete and grow sustainably in the digital age. Digitalization may disturb Office Management (OM). Manage documents, communicate, schedule, and delegate tasks. Digital platforms help office managers streamline, collaborate, and accomplish tasks on time. Better still, DT may provide office managers with real-time data to allocate resources, prioritize projects, and evaluate effectiveness. Data analytics helps office managers identify and address operational inefficiencies. Organizations must evaluate how DT affects office administrative efficiency to compete in today's fast-paced business climate. Understanding how digital technology may improve workplace productivity and simplify operations can help firms grow. This report may help organizations start their DT by outlining office administration digital solution adoption best practices and problems.

References:

1.Ali, M. A., Hussin, N., Flayyih, H. H., Haddad, H., Al-Ramahi, N. M., Almubaydeen, T. H.,... & Hasan Abunaila, A. S. (2023). A multidimensional view of intellectual capital and dynamic innovative performance. *Journal of Risk and Financial Management*, *16*(3), 139. https://doi.org/10.3390/jrfm16030139

2.Al-Janabi, A. S. H., Almado, A. A. G., Mhaibes, H. A., & Flayyih H. H. (2024). The role of strategic agility in promoting organizational excellence: A descriptive analytical study. Corporate & Business Strategy Review, 5(2), 129–138. <u>https://doi.org/10.22495/cbsrv5i2art11</u>
3.Al-Janabi, A. S., Hussein, S. A., Mhaibes, H. A., & Flayyih, H. H. (2024). The role of entrepreneurial leadership strategy in promoting organizational sustainability: A descriptive and analytical study. Corporate & Business Strategy Review, 5(3), 62–71. https://doi.org/10.22495/cbsrv5i3art6

4.Al-Jubouri, N., Al-Tamimi, A. H., & Flayyih, H. H. (2017). Methods of Scientific Research.

5.Al-Khoury, A., Hussein, S. A., Abdulwhab, M., Aljuboori, Z. M., Haddad, H., Ali, M. A.,... & Flayyih, H. H. (2022). Intellectual capital history and trends: A bibliometric analysis using scopus database. *Sustainability*, *14*(18), 11615. <u>https://doi.org/10.3390/su141811615</u>

6. Alnujaimi, A. W., Almageed, M. K. A., Flayyih, H. H., & Murad, A. H. (2022). USING The Concept Of Strategic Focus And Future Orientation To Create An Integrated Framework Between The Conceptual Framework Of Financial Accounting And Integrated Reports. In *The 1st International Scientific And Practical Internet Conference*.

7.Andriole, S. J. (2017). Five myths about digital transformation. *MIT Sloan Management Review*, 58(3), 20–22. Article 119767. <u>https://doi.org/10.1016/j.techfore.2019.119767</u>

8.Baptista, J., Stein, M.-K., Klein, S., Watson-Manheim, M. B., & Lee, J. (2020). Digital work and organisational transformation: Emergent Digital/Human work configurations in modern organisations. *Journal of Strategic Information Systems*, 29 (2), Article 101618. https://doi.org/10.1016/j.jsis.2020.101618

9.Barrett, A. K., & Stephens, K. K. (2016). The pivotal role of change appropriation in the implementation of health care *technology*. *Management Communication Quarterly*, 31 (2), 163–193. <u>https://doi.org/10.1177/0893318916682872</u>

10. Bartsch, S., Weber, E., Buettgen, M., & Huber, A. (2021). Leadership matters in crisisinduced digital transformation: how to lead service employees effectively during the COVID-19 pandemic. *Journal of Service Management*, 32(1), 71–85. https://doi.org/10.1108/JOSM-05-2020-0160

11. Bassano, C., Gaeta, M., Piciocchi, P., & Spohrer, J. C. (2017). Learning the models of customer behavior: from television advertising to online marketing. *International Journal of Electronic Commerce*, 21(4), 572–604. <u>https://doi.org/10.1080/10864415.2016.1355654</u>

12. Bejakovic, P., & Mrnjavac, Z. (2020). The importance of digital literacy on the labour market. *Employee Relations*, 42(4), 921–932. <u>https://doi.org/10.1108/ER-07-2019-0274</u>

13. Benjamin, K., & Potts, H. W. W. (2018). Digital transformation in government: Lessons for digital health? *Digital Health*, 4. <u>https://doi.org/10.1177/2055207618759168</u>

14. Benlian, A., & Haffke, I. (2016). Does mutuality matter? Examining the bilateral nature and effects of CEO-CIO mutual understanding. *Journal of Strategic Information Systems*, 25(2), 104–126. <u>https://doi.org/10.1016/j.jsis.2016.01.001</u>

15. Bouncken, R. B., Kraus, S., & Roig-Tierno, N. (2021). Knowledge- and innovation-based business models for future growth: digitalized business models and portfolio considerations. *Review of Managerial Science*, 15(1), 1–14. <u>https://doi.org/10.1007/s11846-019-00366-z</u>

16. Cennamo, C., Marchesi, C., & Meyer, T. (2020). Two sides of the same coin? Decentralized versus proprietary blockchains and the performance of digital currencies. *Academy of Management Discoveries*, 6(3), 382–405. <u>https://doi.org/10.5465/amd.2019.0044</u>

17. Chanias, S., Myers, M. D., & Hess, T. (2019). Digital transformation strategy making in predigital organizations: The case of a financial services provider. *Journal of Strategic Information Systems*, 28(1), 17–33. <u>https://doi.org/10.1016/j.jsis.2018.11.003</u>

18. Chierici, R., Tortora, D., Del Giudice, M., & Quacquarelli, B. (2021). Strengthening digital collaboration to enhance social innovation capital: an analysis of Italian small innovative enterprises. *Journal of Intellectual Capital*, 22(3), 610–632. <u>https://doi.org/10.1108/JIC-02-2020-0058</u>

19. 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. https://doi.org/10.1177/0008125620934864

20. Cukusic, M. (2021). Contributing to the current research agenda in digital transformation in the context of smart cities. *International Journal of Information Management*, 58, Article 102330. <u>https://doi.org/10.1016/j.ijinfomgt.2021.102330</u>

21. Deline, M. B. (2018). Framing resistance: identifying frames that guide resistance interpretations at work. *Management Communication Quarterly*, 33(1), 39–67. https://doi.org/10.1177/0893318918793731

22. Dengler, K., & Matthes, B. (2018). The impacts of digital transformation on the labour market: Substitution potentials of occupations in Germany. *Technological Forecasting and Social Change*, 137, 304–316. <u>https://doi.org/10.1016/j.techfore.2018.09.024</u>

23. Denicolai, S., & Previtali, P. (2020). Precision Medicine: Implications for value chains and business models in life sciences. *Technological Forecasting and Social Change*, 151,

24. Dong, J. Q. (2019). Moving a mountain with a teaspoon: Toward a theory of digital entrepreneurship in the regulatory environment. *Technological Forecasting and Social Change*, 146, 923–930. <u>https://doi.org/10.1016/j.techfore.2018.07.050</u>

25. Eden, R., Burton-Jones, A., Casey, V., & Draheim, M. (2019). Digital transformation requires workforce transformation. *MIS Quarterly Executive*, 18(1), 1–17. https://doi.org/10.17705/2msqe.00005

26. Ekman, P., Thilenius, P., Thompson, S., & Whitaker, J. (2020). Digital transformation of global business processes: the role of dual embeddedness. *Business Process Management Journal*, 26(2), 570–592. <u>https://doi.org/10.1108/BPMJ-02-2019-0080</u>

27. Endres, H., Helm, R., & Dowling, M. (2020). Linking the types of market knowledge sourcing with sensing capability and revenue growth: Evidence from industrial firms. *Industrial Marketing Management*, 90, 30–43. <u>https://doi.org/10.1016/j.indmarman.2020.06.004</u>

28. Faik, I., Barrett, M., & Oborn, E. (2020). How information technology matters in societal change: an affordance-based institutional logics perspective. *MIS Quarterly*, 44(3), 1359–1390. https://doi.org/10.25300/MISQ/2020/14193

29. Fischer, M., Imgrund, F., Janiesch, C., & Winkelmann, A. (2019). Directions for future research on the integration of SOA, BPM, *and BRM. Business Process Management Journal*, 25(7), 1491–1519. <u>https://doi.org/10.1108/BPMJ-05-2018-0130</u>

30. Flayyih, H. H., Jawad, K. K., & Al-Abedi, T. K. (2024). The Role of Environmental Auditing in Achieving Sustainable Development: Management Systems as a Mediator. *International Journal of Sustainable Development and Planning*, *19*(4), 1253–1260. https://doi.org/10.18280/ijsdp.190403

31. Flayyih, H. H., Jawad, K. K., & Al-Abedi, T. K. (2024). The Role of Environmental Auditing in Achieving Sustainable Development: Management Systems as a Mediator. International Journal of Sustainable Development and Planning, 19(4), 1253–1260. https://doi.org/10.18280/ijsdp.190403

32. Forcadell, F. J., Aracil, E., & Ubeda, F. (2020). Using reputation for corporate sustainability to tackle banks digitalization challenges. *Business Strategy and the Environment*, 29(6), 2181–2193. <u>https://doi.org/10.1002/bse.2494</u>

33. Fritze, M. P., Eisingerich, A. B., & Benkenstein, M. (2019). Digital transformation and possession attachment: examining the endowment effect for consumers' relationships with hedonic and utilitarian digital service technologies. *Electronic Commerce Research*, 19(2), 311–337. <u>https://doi.org/10.1007/s10660-018-9309-8</u>

34. Galindo-Martin, M.-A., Castano-Martinez, M.-S., & Mendez-Picazo, M.-T. (2019). Digital transformation, digital dividends and entrepreneurship: A quantitative analysis. *Journal of Business Research*, 101, 522–527. https://doi.org/10.1016/j.jbusres.2018.12.014

35. Gastaldi, L., Appio, F. P., Corso, M., & Pistorio, A. (2018). Managing the exploration paradox in healthcare: Three complementary paths to leverage on the digital transformation. *Business Process Management Journal*, 24(5), 1200–1234. https://doi.org/10.1108/BPMJ-04-2017-0092

36. Gfrerer, A., Hutter, K., Fuller, J., & Strohle, T. (2021). Ready or not: managers' and employees' different perceptions of digital readiness. *California Management Review*, 63(2), 23–48. <u>https://doi.org/10.1177/0008125620977487</u>

37. Goh, J. M., & Arenas, A. E. (2020). IT value creation in public sector: how IT-enabled apabilities mitigate tradeoffs in public organisations. *European Journal of Information Systems*, 29(1), 25–43. <u>https://doi.org/10.1080/0960085X.2019.1708821</u>

38. Gray, P., El Sawy, O. A., Asper, G., & Thordarson, M. (2013). Realizing strategic value through center-edge digital transformation in consumer-centric industries. *MIS Quarterly Executive*, 12(1), 1–17.

39. Guenzi, P., & Habel, J. (2020). Mastering the digital transformation of sales. *California Management Review*, 62(4), 57–85. <u>https://doi.org/10.1177/0008125620931857</u>

40. Guinan, P. J., Parise, S., & Langowitz, N. (2019). Creating an innovative digital project team: Levers to enable digital transformation. *Business Horizons*, 62(6), 717–727. https://doi.org/10.1016/j.bushor.2019.07.005

41. Gurbaxani, V., & Dunkle, D. (2019). Gearing up for successful digital transformation. *MIS Quarterly Executive*, 18(3), 209–220. <u>https://doi.org/10.17705/2msqe.00017</u>

42. Hagberg, J., Sundstrom, M., & Egels-Zand´en, N. (2016). The digitalization of retailing: an exploratory framework. *International Journal of Retail and Distribution Management*, 44(7), 694–712. <u>https://doi.org/10.1108/IJRDM-09-2015-0140</u>

43. Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2021). A Systematic Review of the Literature on Digital Transformation: Insights and Implications for Strategy and Organizational Change. *Journal of Management Studies*, 58(5), 1159–1197. https://doi.org/10.1111/joms.12639

44. Hansen, A. M., Kraemmergaard, P., & Mathiassen, L. (2011). Rapid adaptation in digital transformation: A participatory process for engaging is and business leaders. *MIS Quarterly Executive*, 10(4), 175–185.

45. Hansen, R., & Sia, S. K. (2015). Hummel's digital transformation toward omnichannel retailing: Key lessons learned. *MIS Quarterly Executive*, 14(2), 51–66.

46. Hausberg, J. P., Liere-Netheler, K., Packmohr, S., Pakura, S., & Vogelsang, K. (2019). Research streams on digital transformation from a holistic business perspective: a systematic literature review and citation network analysis. *Journal of Business Economics*, 89(8–9), 931–963. <u>https://doi.org/10.1007/s11573-019-00956-z</u>

47. Hazee, S., Zwienenberg, T. J., Van Vaerenbergh, Y., Faseur, T., Vandenberghe, A., & Keutgens, O. (2020). Why customers and peer service providers do not participate in collaborative consumption. *Journal of Service Management*, 31(3), 397–419. https://doi.org/10.1108/JOSM-11-2018-0357

48. He, Q., Meadows, M., Angwin, D., Gomes, E., & Child, J. (2020). Strategic alliance research in the era of digital transformation: perspectives on future research. *British Journal of Management*, 31(3), 589–617. <u>https://doi.org/10.1111/1467-8551.12406</u>

49. Heavin, C., & Power, D. J. (2018). Challenges for digital transformation-towards a conceptual decision support guide for managers. *Journal of Decision Systems*, 27, 38–45. https://doi.org/10.1080/12460125.2018.1468697

50. Hess, T., Benlian, A., Matt, C., & Wiesbock, "F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, 15(2), 123–139.

51. Hinings, B., Gegenhuber, T., & Greenwood, R. (2018). Digital innovation and transformation: An institutional perspective. *Information and Organization*, 28(1), 52–61. https://doi.org/10.1016/j.infoandorg.2018.02.004

52. Hofmann, P., Samp, C., & Urbach, N. (2020). Robotic process automation. *Electronic Markets*, 30(1), 99–106. <u>https://doi.org/10.1007/s12525-019-00365-8</u>

53. Horv´ath, D., & Szabo, ´ R. Z. (2019). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities? *Technological Forecasting and Social Change*, 146, 119–132. <u>https://doi.org/10.1016/j.techfore.2019.05.021</u>

54. Hughes, T., & Vafeas, M. (2019). Marketing agency/client service-for-service provision in an age of digital transformation. *Journal of Business-to-Business Marketing*, 26(3–4), 265–280. https://doi.org/10.1080/1051712X.2019.1611080

55. Hussein, M. K., Al-tekreeti, R. B. N., Hasan, M. F., & Flayyih, H. H. (2023). The Moderate Role of the Perceived Orientation of Information Technology in the Relationship between Human Capital and Organizational Innovation Mediating Orientations to Learning: Literature Review. *Ishtar journal of economics and business studies*, 4(1). https://doi.org/10.55270/ijebs.v4i1.14

56. Hussein, M. K., Krmln, N. Q., Flayyih, H. H., & Noori, R. B. (2024). Harnessing Technological Innovation and Artificial Intelligence in Iraqi Commercial Banks to Achieve Sustainability. In *Lecture Notes in Networks and Systems: Vol. 1033 LNNS*. https://doi.org/10.1007/978-3-031-63717-9_18

57. Jammulamadaka, N. (2021). Enabling processes as routines that facilitate cognitive change. *Management Decision*, 59(3), 653–668. <u>https://doi.org/10.1108/MD-09- 2019-1311</u>

58. Jean, R.-J. B., Kim, D., Lien, Y.-C., & Ro, S. (2020). The moderating effect of virtual integration on intergenerational governance and relationship performance in international customer-supplier relationships. *International Marketing Review*, 37(3), 579–592. https://doi.org/10.1108/IMR-03-2019-0102.

59. Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. *MIT Sloan Management Review*, 14, 1–25.

60. Kar, A. K., Ilavarasan, V., Gupta, M. P., Janssen, M., & Kothari, R. (2019). Moving beyond Smart Cities: Digital Nations for Social Innovation & Sustainability. *Information Systems Frontiers*, 21(3), 495–501. <u>https://doi.org/10.1007/s10796-019-09930-0</u>

61. Karimi, J., & Walter, Z. (2015). The Role of Dynamic Capabilities in Responding to Digital Disruption: A Factor-Based Study of the Newspaper Industry. *Journal of Management Information Systems*, 32(1), 39–81. <u>https://doi.org/10.1080/07421222.2015.1029380</u>

62. Knudsen, D.-R. (2020). Elusive boundaries, power relations, and knowledge production: A systematic review of the literature on digitalization in accounting. *International Journal of Accounting Information Systems*, 36, Article 100441. https://doi.org/10.1016/j.accinf.2019.100441

63. Kohli, R., & Johnson, S. (2011). Digital transformation in latecomer industries: CIO and CEO leadership lessons from Encana Oil & Gas (USA) Inc. *MIS Quarterly Executive*, 10 (4), 141–156.

64. Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal*, 16(3), 1023–1042. <u>https://doi.org/10.1007/s11365-020-00635-4</u>

65. Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital Transformation: An Overview of the Current State of the Art of Research. *SAGE Open*, 11(3). <u>https://doi.org/10.1177/21582440211047576</u>

66. Kraus, S., Richter, C., Papagiannidis, S., & Durst, S. (2015). Innovating and Exploiting Entrepreneurial Opportunities in Smart Cities: Evidence from Germany. *Creativity and Innovation Management*, 24(4), 601–616. <u>https://doi.org/10.1111/caim.12154</u>

67. Kraus, S., Roig-Tierno, N., & Bouncken, R. B. (2019). Digital innovation and venturing: an introduction into the digitalization of entrepreneurship. *Review of Managerial Science*, 13(3), 519–528. <u>https://doi.org/10.1007/s11846-019-00333-8</u>

68. Kumar, S., Kar, A. K., & Ilavarasan, P. V. (2021). Applications of text mining in services management: A systematic literature review. *International Journal of Information Management Data Insights*, 1(1), Article 100008. <u>https://doi.org/10.1016/j.jjimei.2021.100008</u>

69. Manfreda, A., Ljubi, K., & Groznik, A. (2021). Autonomous vehicles in the smart city era: An empirical study of adoption factors important for millennials. *International Journal of Information Management*, 58, Article 102050. <u>https://doi.org/10.1016/j.ijinfomgt.2019.102050</u>

70. Martinez, F. (2019). Process excellence the key for digitalisation. *Business Process Management Journal*, 25(7), 1716–1733. <u>https://doi.org/10.1108/BPMJ-08-2018-0237</u>

71. McGrath, K., & Maiye, A. (2010). The role of institutions in ICT innovation: learning from interventions in a Nigerian e-government initiative. *Information Technology for Development*, 16(4), 260–278. <u>https://doi.org/10.1080/02681102.2010.498408</u>

72. McGrath, R., & McManus, R. (2020). Digital transformation learning your way to a new business model what's your digital strategy? *Harvard Business Review*, 98(3), 125–133.

73. Michaelis, B., Rogbeer, S., Schweizer, L., & Oezleblebici, Z. (2021). Clarifying the boundary conditions of value creation within dynamic capabilities framework: a grafting approach. *Review of Managerial Science*, 15(6), 1797–1820. <u>https://doi.org/10.1007/s11846-020-00403-2</u>

74. Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. Research Policy, 48(8), Article 103773. <u>https://doi.org/10.1016/j.respol.2019.03.018</u>

75. Nasiri, M., Ukko, J., Saunila, M., & Rantala, T. (2020). Managing the digital supply chain: The role of smart technologies. Technovation, 96–97, Article 102121. https://doi.org/10.1016/j.technovation.2020.102121

76. North, K., Aramburu, N., & Jose Lorenzo, O. (2020). Promoting digitally enabled growth in SMEs: a framework proposal. *Journal of Enterprise Information Management*, 33(1), 238–262. https://doi.org/10.1108/JEIM-04-2019-0103

77. Parviainen, P., Tihinen, M., Ka¨ari […]ainen, J., & Teppola, S. (2017). Tackling the digitalization challenge: How to benefit from digitalization in practice. *International Journal of Information Systems and Project Management*, 5(1), 63–77. https://doi.org/10.12821/ijispm050104

78. Pelletier, C., & Cloutier, L. M. (2019). Conceptualising digital transformation in SMEs: an ecosystemic perspective. Journal of Small Business and Enterprise Development, 26(6/7, SI), 855–876. https://doi.org/10.1108/JSBED-05-2019-0144

79. Priyono, A., Moin, A., & Putri, V. N. (2020). Identifying Digital Transformation Paths in the Business Model of SMEs during the COVID-19 Pandemic. In Journal of Open Innovation: Technology, Market, and Complexity (Vol. 6)(Issue 4). <u>https://doi.org/10.3390/joitmc6040104</u>

80. Qiu M, Gai K, Zhao H, Liu M (2018) Privacy-preserving smart data storage or fnancial industry in cloud computing. In: Paper presented at the 2nd IEEE international symposium on security and privacy in social networks and big data (IEEE Social Sec), Fiji. https://doi.org/10.1002/cpe.4278 **81.** Rane, S. B., Narvel, Y. A. M., & Bhandarkar, B. M. (2019). Developing strategies to improve agility in the project procurement management (PPM) process Perspective of business intelligence (BI). Business Process Management Journal, 26(1), 257–286. https://doi.org/10.1108/BPMJ-07-2017-0196

82. Ribeiro-Navarrete S, Saura JR, Palacios-Marqués D (2021) Towards a new era of mass data collection: assessing pandemic surveillance technologies to preserve user privacy. Technol Forecast Soc Change 167:120681

83. Richard, S., Pellerin, R., Bellemare, J., & Perrier, N. (2021). A business process and portfolio management approach for Industry 4.0 transformation. Business Process Management Journal, 27(2), 505–528. <u>https://doi.org/10.1108/BPMJ-05-2020-0216</u>

84. Richter Ch, Kraus S, Brem A, Durst S, Giselbrecht C (2017) Digital entrepreneurship: innovative business models for the sharing economy. *Creat Innov Manag* 26:300–310

85. Ritala P, Baiyere A, Hughes M, Kraus S (2021) Digital strategy implementation: the role of individual entrepreneurial orientation and relational capital. *Technol Forecast Soc Change* 171:120961. <u>https://doi.org/10.1016/j.techfore.2021.120961</u>

86. S. Kraus et al. International Journal of Information Management 63 (2022) 10246618

87. Sabri, Y., Micheli, G. J. L., & Nuur, C. (2018). Exploring the impact of innovation implementation on supply chain configuration. *Journal of Engineering and Technology Management*, 49, 60–75. <u>https://doi.org/10.1016/j.jengtecman.2018.06.001</u>

88. Salman, M. D., Mohammed, A. H., & Flayyih, H. H. (2021). Financial safety indicators under financial crises and their impact on banking finance: An Applied study in Iraqi banks. *Studies of Applied Economics*, *39*(11).

89. Schaarschmidt, M., & Bertram, M. (2020). Digital business intensity and constructive process deviance: a study of reactions to digitisation-focused process innovation. International Journal of Innovation Management, 24(7), Article 2050065. https://doi.org/10.1142/S1363919620500656

90. Schallmo, D., Williams, C. A., & Boardman, L. (2017). Digital transformation of business models - best practice, enablers, and roadmap. International Journal of Innovation Management, 21(8), 1–17. <u>https://doi.org/10.1142/S136391961740014X</u>

91. Schallmo, D., Williams, C. A., & Boardman, L. (2019a). Digital Transformation Of Business Models—Best Practice, Enablers, And Roadmap. In Digital Disruptive Innovation (Vol. Volume 36, pp. 119–138). WORLD SCIENTIFIC (EUROPE),. https://doi.org/10.1142/9781786347602_0005

92. Schallmo, D., Williams, C. A., & Lohse, J. (2019b). Digital strategy - integrated approach and generic options. *International Journal of Innovation Management*, 23(8), Article 1940005. https://doi.org/10.1142/S136391961940005X

93. Schwarzmueller, T., Brosi, P., Duman, D., & Welpe, I. M. (2018). How Does the Digital Transformation Affect Organizations? Key Themes of Change in Work Design and Leadership. *Management Revue*, 29(2), 114–138. <u>https://doi.org/10.5771/0935-9915-2018-2-114</u>

94. Sebastian, I. M., Moloney, K. G., Ross, J. W., Fonstad, N. O., Beath, C., & Mocker, M. (2017). How big old companies navigate digital transformation. *MIS Quarterly Executive*, 16(3), 197–213.

95. Sousa-Zomer, T. T., Neely, A., & Martinez, V. (2020). Digital transforming capability and performance: a microfoundational perspective. *International Journal of Operations and Production Management*, 40(7–8), 1095–1128. <u>https://doi.org/10.1108/IJOPM06-2019-0444</u>

96. 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, Article 102356. https://doi.org/10.1016/j.ijinfomgt.2021.102356 **97.** Teubner, R. A., & Stockhinger, J. (2020). Literature review: Understanding information systems strategy in the digital age. *Journal of Strategic Information Systems*, 29(4), Article 101642. <u>https://doi.org/10.1016/j.jsis.2020.101642</u>

98. Trantopoulos, K., Von Krogh, G., Wallin, M. W., & Woerter, M. (2017). External knowledge and information technology: Implications for process innovation performance. *MIS Quarterly*, 41(1), 287–300. <u>https://doi.org/10.25300/MISQ/2017/41.1.15</u>

99. Tronvoll, B., Sklyar, A., Sorhammar, D., & Kowalkowski, C. (2020). Transformational shifts through digital servitization. *Industrial Marketing Management*, 89, 293–305. https://doi.org/10.1016/j.indmarman.2020.02.005

100. Vial G (2019a) Understanding digital transformation: a review and a research agenda. J Strat Inform Syst 28(2):118–144

101. Vial, G. (2019b). Understanding digital transformation: A review and a research agenda. Journal of Strategic Information Systems, 28(2), 118–144. https://doi.org/10.1016/j. jsis.2019.01.003

102. Wang, W., Mahmood, A., Sismeiro, C., & Vulkan, N. (2019). The evolution of equity crowdfunding: Insights from co-investments of angels and the crowd. Research Policy, 48(8), Article 103727. <u>https://doi.org/10.1016/j.respol.2019.01.003</u>

103. Wiesboeck, F., & Hess, T. (2020). Digital innovations Embedding in organizations. Electronic Markets, 30(1), 75–86. <u>https://doi.org/10.1007/s12525-019-00364-9</u>

104. Wiesboeck, F., Hess, T., & Spanjol, J. (2020). The dual role of IT capabilities in the development of digital products and services. Information & Management, 57(8), Article 103389. <u>https://doi.org/10.1016/j.im.2020.103389</u>

105. Wrede, M., Velamuri, V. K., & Dauth, T. (2020). Top managers in the digital age: Exploring the role and practices of top managers in firms' digital transformation. Managerial and Decision Economics, 41(8), 1549–1567. <u>https://doi.org/10.1002/mde.3202</u>

106. Wright, G., Van Der Heijden, K., Bradfield, R., Burt, G., & Cairns, G. (2004). The psychology of why organizations can be slow to adapt and change. Journal of General Management, 29(4), 21–36.

107. Zekic-Susac, M., Mitrovic, S., & Has, A. (2021). Machine learning based system for managing energy efficiency of public sector as an approach towards smart cities. *International Journal of Information Management*, 58, Article 102074.

https://doi.org/10.1016/j.ijinfomgt.2020.102074