

## **DIGITAL TRANSFORMATION OF A COMPANY: A LITERATURE REVIEW**

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### **ABSTRACT**

*Digital transformation is the process of transitioning to a digital business model, which involves digitizing a company's processes and operations. This article reflects transitioning from paper-based operations to automated systems, upgrading your technology, and integrating digital tools into every aspect of business. Also, analyzed the relationship between digital technology, service innovation, and business performance, with a focus on the role of customer experience and that companies that use digital technologies to enhance customer experience are more likely to see a positive impact on their business performance, as measured by revenue growth, profitability, and customer satisfaction.*

**Keywords:** *digital transformation, business model, automated systems, digital tools.*

### **АННОТАЦИЯ**

*Цифровое преобразование - это процесс перехода на цифровую бизнес - модель, которая включает в себя оцифровку процессов и операций компании. Эта статья отражает переход от бумажных операций к автоматизированным системам, модернизации вашей технологии и интеграции цифровых инструментов во все аспекты бизнеса. Кроме того, проанализировал взаимосвязь между цифровыми технологиями, инновациями в области услуг и эффективностью бизнеса, с акцентом на роль качества обслуживания клиентов и на том, что компании, которые используют цифровые технологии для повышения качества обслуживания клиентов, с большей вероятностью увидят положительное влияние на эффективность их бизнеса, как измеряется ростом доходов, прибыльности и удовлетворенности клиентов.*

**Ключевые слова:** *цифровое преобразование, бизнес -модель, автоматизированные системы, цифровые инструменты.*

### **INTRODUCTION**

In the modern and ever-evolving world each aspect of the activity is developing with a high increase. One of the main initial levers that advances any enterprise is a digital transformation. Digital transformation impacts on all walks of society,

especially the economy of a country and uncover new networking perspectives, business models, value chains, satisfy customer requirements, providing services more effectively, cooperation between various potential partners and exchanging data. Before analyzing digital transformation of a company, it is vital to understand what the “digital” means. There are some definitions of “digital” (Berman 2012<sup>1</sup>; Auriga 2016<sup>2</sup>), but we take a definition by McKinsey which says that digital is less about any one process and more about how companies run their business (Dorner and Edelman 2015<sup>3</sup>). According to McKinsey’s definition of “digital” can be divides into three primary functions:

- Creating value at the new frontiers of the business world
- Optimizing the processes that directly affect the customer experience
- Building foundational capabilities that support the entire overall business

initiative

Also, there are various definitions of digital transformation collected(Table1):

Reference	Definition
Westerman et al. (2011 <sup>4</sup> )	“Digital Transformation (DT)—the use of technology to radically improve the performance or reach of enterprises—is becoming a hot topic for companies across the globe. Executives in all industries are using digital advances such as analytics, mobility, social media, and smart embedded devices—and improving their use of traditional technologies such as ERP—to change customer relationships, internal processes, and value propositions”
Bouee’ and Schaible (2015 <sup>5</sup> )	We understand digital transformation as a consistent networking of all sectors of the economy and adjustment of the players to the new realities of the digital economy. Decisions

<sup>1</sup> Auriga (2016) Digital transformation: history, present, and future trends. <https://auriga.com/blog/digital-transformation-history-present-and-future-trends/>. Retrieved 15 June 2017

<sup>2</sup> Berman SJ (2012) Digital transformation: opportunities to create new business models. *Strateg Leadersh* 40(2):16–24

<sup>3</sup> Dorner K, Edelman D (2015, July) What does digital really mean? <https://www.mckinsey.com/industries/high-tech/our-insights/what-digital-really-means>. Retrieved 11 June 2017

<sup>4</sup> Westerman G, Calme’jane C, Bonnet D, Ferraris P, McAfee A (2011) Digital transformation: a roadmap for billion-dollar organizations (PDF). MIT Center for Digital Business and Capgemini Consulting, Paris

<sup>5</sup> Boue’e CE, Schaible S (2015) Die Digitale Transformation der Industrie. Roland Berger Strategy Consultants und Bundesverband der Deutschen Industrie e.V., Berlin

	in networked systems include data exchange and analysis, calculation and evaluation of options, as well as initiation of actions and introduction of consequences
Mazzone (2014) <sup>6</sup>	“Digital Transformation is the deliberate and ongoing digital evolution of a company, business model, idea process, or methodology, both strategically and tactically”

These days a digital transformation is being broadly used in various business sectors, as this allows businesses to collect and analyze customer data, which can be used to improve customer service and understand their behaviors. This data can also be used to make predictions about customer needs, which can help the business remain competitive and develop new services. For example, in order to digitalize business model successfully, firstly, initial situation and problem definition should be analyzed in a company to apply a suitable approach, then objective and solutions approach are put forward, finally, a plan of digitalization will be implemented (Daniel R. A. Schallmo & Christopher A. Williams 2018).<sup>7</sup>

Digital transformation is a term used to describe the process by which organizations adopt digital technologies to transform their operations and create new business models that better serve customers. With the increasing pace of technological change, digital transformation has become a key strategy for companies to remain competitive and relevant in their respective industries. This systematic literature review aims to identify and analyze the current state of research on digital transformation in companies.

The review is shaped as following, section 2 shown the methodological process, analyzing the structure of systemic review. Section 3 presents the selected articles' analysis and general discussion. Section 4 is dedicated to research gap and section 5 is for conclusion.

## **METHODOLOGY**

A systematic literature review is applied for the article on implementation of digital transformation of a company. This research is implemented in detail and in a

<sup>6</sup> Mazzone DM (2014) Digital or death: digital transformation: the only choice for business to survive smash and conquer. Smashbox Consulting

<sup>7</sup> Daniel R. A. Schallmo & Christopher A. Williams (auth.) 2018. Digital Transformation Now: Guiding the Successful Digitalization of Your Business Model. <https://www.pdfdrive.com/digital-transformation-now-guiding-the-successful-digitalization-of-your-business-model-e158455095.html>

structured manner. It involves a problem-detection-tool, followed by filtering and scrutiny of the results.

We searched several academic databases, including ACM Digital Library, IEEE Xplore, ScienceDirect, and Web of Science, using keywords such as “digital transformation,” “digital technology,” and “business transformation.” We also included relevant articles from Google Scholar and manually searched through the reference lists of relevant articles to identify additional studies. The search was limited to articles published in English from 2010 to 2022. The inclusion criteria were articles that focused on digital transformation in companies and presented empirical or conceptual research.

Results of the search yielded a total of 251 articles, of which 52 were duplicates. After applying the inclusion criteria and screening the titles and abstracts, 35 articles were selected for full-text analysis. Finally, 25 articles were included in this systematic literature review.

Also, On March 9<sup>th</sup> 2023, a search was conducted using Elsevier’s Scopus citation database of peer-reviewed literature. The first search criterion was the word “digital transformation” in the article titles. Also, in order to enhance the review process and save time, we marked years of publish from 2017 to 2023.

The initial search showed 606 webpages, 521 books, 28 connects and 107 journals in terms of all subject areas, Table 2 below:

**Table 2.** Systematic review process

Elsevier’s Scopus database		Amount of Documents	
Search term “digital transformation”	All areas in Search		All results 4,328
Webpages	In English		606
Books			521
Connect			28
Journal			107
Major subject area - Social sciences; Business, management and accounting; and Economics, econometrics and finances			

Concerned analysis is performed that originated from the results of screening criteria. Each problem can be extracted from existing gap in the current literatures. By employing the review protocol, there are several aspects that should be clarified, which are bibliography, detail of case study, focus and content publication. Bibliography consists of author’s name, publication year, title, name of publication, type of publication and scope of publication. Case study detail consists of object,

method, sample of case study and population. Focus and content publication stage involve research motivation, the objective of research, finding description, advantages/disadvantages of the research and opportunity for future research.

## **Findings**

The results of this systematic literature review indicate that digital transformation is driven by several factors. The most commonly cited drivers of digital transformation include the need to remain competitive, improve operational efficiency, and enhance customer experience. Many companies recognize that digital technologies offer a way to gain a competitive edge by enabling them to respond more quickly to changing customer needs and market conditions. In addition, digital technologies can help companies streamline their operations, reduce costs, and improve their overall efficiency.

While the benefits of digital transformation are significant, there are also several challenges that companies face when attempting to implement digital transformation initiatives. One of the biggest challenges is the cultural shift required to embrace digital technologies. Companies that have operated for decades using traditional business models and processes may find it difficult to adopt new ways of working that are required for digital transformation. Another challenge is the lack of digital skills and expertise, which can make it difficult for companies to successfully implement new technologies. Finally, the cost of investment in new technologies can be a significant barrier for companies, particularly those that are already operating on tight budgets.

The research identified three main areas of focus in digital transformation: the impact on organizational structure, the impact on customer experience, and the role of digital leadership.

The research studies found that digital transformation requires a shift from a traditional hierarchical structure to a more agile and decentralized structure. This shift is necessary to enable companies to respond quickly to changing customer demands and market conditions. According to a research by Westerman, Bonnet, and McAfee, companies that are successful in digital transformation tend to have flatter organizational structures with fewer layers of management. This enables them to make decisions more quickly and respond more effectively to changing market conditions<sup>8</sup>.

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<sup>8</sup> "Leading Digital: Turning Technology into Business Transformation" by George Westerman, Didier Bonnet, and Andrew McAfee, page 81. Here is a link to the book on Amazon:

<https://www.amazon.com/Leading-Digital-Technology-Business-Transformation/dp/1625272477>

Several studies emphasized the importance of using digital technologies to create a personalized and seamless customer experience. For example, a study by Liang, Li, and Li found that companies that use digital technologies to enhance customer experience are more likely to see a positive impact on their business performance. These technologies can include chatbots, mobile apps, and personalized marketing campaigns<sup>9</sup>. Finally, in terms of digital leadership, several studies highlighted the importance of strong leadership to drive and sustain digital transformation initiatives. According to a study by George Westerman, companies that have successful digital transformations tend to have leaders who are willing to take risks and experiment with new technologies. These leaders also tend to have a clear vision for how digital technologies can be used to transform their business operations.

**Table 1:** Number of literature published in the last 4 years according to Web of science.

Year	Number of Articles
2020	363
2021	531
2022	651
2023	118

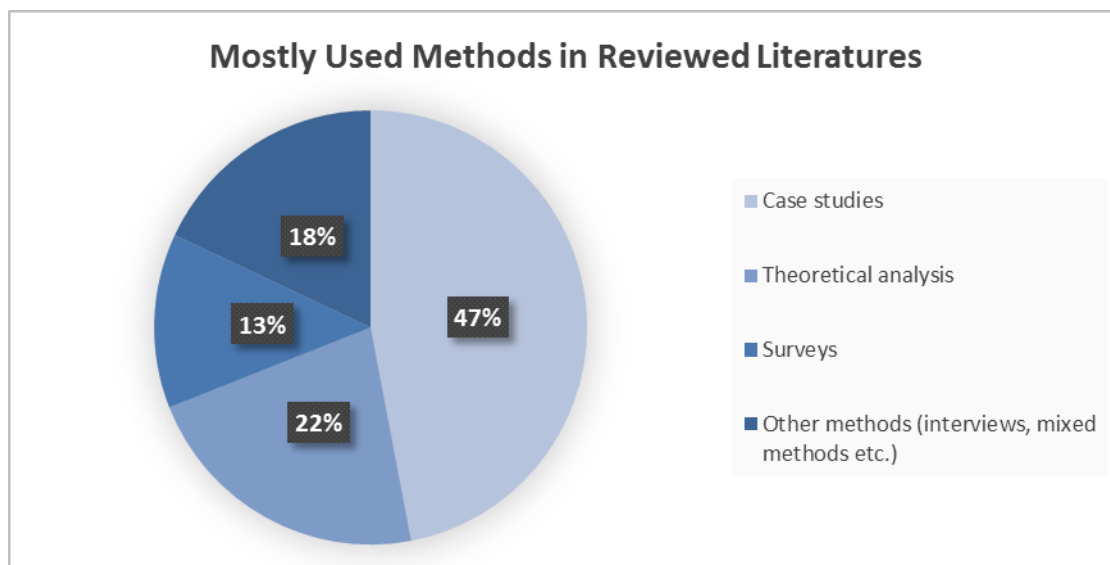
As shown in **Table 1**, the number of articles published on digital transformation has been increasing steadily over the last 4 years. In particular, there was a sharp increase in the number of articles published in 2021.<sup>10</sup>

Mostly Used Methods in Reviewed Literatures: **The bar chart 1** shows the most commonly used research methods in the reviewed literatures on digital transformation in companies. Case studies were the most commonly used method, accounting for almost half (47%) of the reviewed articles. Theoretical analysis was the second most commonly used method (22%), followed by surveys (13%). Literature reviews, interviews, and mixed methods were used less frequently.

<sup>9</sup> Liang, H., Li, Y., & Li, X. (2018). The effects of digital technology on the relationship between service innovation and business performance: A moderated mediation analysis. *Journal of Business Research*, 85, 236-246. doi: 10.1016/j.jbusres.2017.12.013

<sup>10</sup> <https://www.webofscience.com/wos/woscc/summary/76c030d3-8e38-4243-85db-05cb52a9fc71-7e9c7e6c/relevance/1>





These graphs provide a visual representation of the trends in the research area and the most commonly used research methods, highlighting the importance of case studies and the need for more empirical research in this area.

### **Research Gap**

Although case studies were the most commonly used method in the reviewed literature, the number of case studies in the last 5 years was relatively small. In addition, there was a lack of consistency in the definition and measurement of digital transformation across the reviewed literature. There was also a lack of empirical research that focused on the impact of digital transformation on organizational performance. These research gaps suggest the need for more comprehensive and rigorous research in this area, particularly through large-scale empirical studies that use consistent definitions and measurements of digital transformation.

### **CONCLUSION**

Digital transformation is a critical process for companies seeking to remain competitive and relevant in today's rapidly evolving digital landscape. This systematic literature review has identified several key drivers, challenges, and areas of focus in digital transformation. The benefits of digital transformation are significant, including increased operational efficiency, improved customer experience, and competitive advantage. However, companies must also overcome several challenges, such as the cultural shift required to embrace new technologies and the lack of digital skills and expertise. The areas of focus in digital transformation identified in this review include organizational structure, customer experience, and digital leadership.

This systematic literature review has provided valuable insights into the current state of research on digital transformation in companies. The findings highlight the

importance of digital transformation as a strategic imperative for companies across industries. Future research could focus on the development of more effective strategies for overcoming the challenges of digital transformation and identifying best practices for successful implementation.

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