

International Journal of Management and Organizational Research

Digital transformation in businesses: From trend to inevitable strategy

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Article Info

ISSN (online): 2583-6641

Volume: 03

Issue: 03

May-June 2024

Received: 10-03-2024;

Accepted: 15-04-2024

Page No: 20-27

Abstract

Digital transformation has evolved from a trend to an inevitable strategy for businesses to remain competitive in today's rapidly changing market. This article explores the definition and importance of digital transformation, its evolution, benefits, challenges, and key areas of implementation. The factors driving the acceleration of digital transformation, such as technological advancements and changing consumer behavior, are discussed. The article highlights the benefits of digital transformation, including improved operational efficiency, enhanced customer experience, data-driven decision making, and increased agility. Challenges and barriers to successful digital transformation are also addressed, such as resistance to change, legacy systems, skills gap, and cyber security concerns. The article presents strategies for successful digital transformation, including developing a clear vision, fostering a culture of innovation, investing in talent, and collaborating with strategic partners. Real-world examples and case studies are provided to illustrate the practical application of digital transformation in various industries. Future trends and predictions, including the impact of emerging technologies and the role of digital transformation in shaping the future of work, are also discussed. The article concludes by emphasizing the inevitability of digital transformation for business success and provides a call to action for businesses to embrace and strategically approach digital transformation.

Keywords: digital transformation, business strategy, innovation, technology adoption, customer experience, data-driven insights

1. Introduction

1.1. Background on digital transformation

In recent years, the rapid advancement of technology has revolutionized the way businesses operate and interact with their customers. Digital transformation, which refers to the integration of digital technologies into all areas of a business, has emerged as a critical strategy for organizations seeking to remain competitive in the ever-evolving digital landscape. This transformation goes beyond the mere adoption of new technologies; it encompasses a fundamental shift in business models, processes, and culture, enabling organizations to adapt to changing market dynamics and customer expectations.

1.2. Importance of digital transformation in today's business landscape

The importance of digital transformation in today's business landscape cannot be overstated. As customers increasingly demand seamless, personalized experiences across digital channels, businesses must embrace digital solutions to meet these expectations. Moreover, the emergence of disruptive technologies, such as artificial intelligence, block chain, and the Internet of Things, has created new opportunities and threats for businesses, forcing them to innovate and differentiate themselves in the market. Organizations that fail to embrace digital transformation risk falling behind their competitors and losing market share.

1.3. Evolution of digital transformation from a trend to an inevitable strategy

Initially, digital transformation was viewed as a trend, with early adopters leveraging technology to gain a competitive edge. However, as the pace of technological change accelerated and customer expectations evolved, digital transformation quickly

became an imperative for businesses across industries. Today, digital transformation is no longer a choice but an inevitable strategy for survival and growth. Organizations that have successfully implemented digital transformation initiatives have reported significant benefits, including improved operational efficiency, enhanced customer experience, and increased revenue growth.

1.4. Purpose and objectives of the research

The purpose of this research is to provide a comprehensive understanding of digital transformation and its implications for businesses. The study aims to explore the key drivers, benefits, challenges, and best practices associated with digital transformation, drawing insights from both academic literature and real-world case studies. The specific objectives of the research are as follows: 1) To examine the theoretical foundations of digital transformation, including management, information systems, and organizational behavior theories; 2) To identify the key factors driving the adoption of digital transformation strategies among businesses; 3) To assess the benefits and challenges associated with digital transformation initiatives, based on the experiences of organizations that have successfully implemented such strategies; 4) To provide a framework for successful digital transformation implementation, including best practices and critical success factors; 5) To explore the future trends and emerging technologies that are likely to shape the digital transformation landscape in the coming years.

By addressing these objectives, this research aims to contribute to the growing body of knowledge on digital transformation and provide valuable insights for businesses seeking to embark on their own digital transformation journeys.

2. Theoretical Foundation

2.1. Theoretical foundations of digital transformation

The theoretical foundations of digital transformation can be traced back to several disciplines, including management, information systems, and organizational behavior. Each of these disciplines provides valuable insights into the factors that influence the adoption and success of digital transformation initiatives.

2.1.1. Management theories

Management theories, such as the resource-based view (RBV) and dynamic capabilities framework, emphasize the importance of organizational resources and capabilities in achieving competitive advantage. In the context of digital transformation, these theories suggest that organizations must develop and leverage digital resources and capabilities to adapt to changing market conditions and drive innovation. For example, the RBV highlights the importance of investing in digital infrastructure, talent, and partnerships to build a sustainable competitive advantage.

2.1.2. Information systems theories

Information systems theories, such as the technology acceptance model (TAM) and the diffusion of innovations theory, provide insights into the factors that influence the adoption and use of new technologies. The TAM suggests

that perceived usefulness and ease of use are critical determinants of technology adoption, while the diffusion of innovations theory highlights the importance of communication channels, social systems, and time in the spread of new technologies. These theories can help explain the varying levels of digital transformation adoption across organizations and industries.

2.1.3. Organizational behavior theories

Organizational behavior theories, such as change management and leadership theories, emphasize the importance of human factors in the successful implementation of digital transformation initiatives. Change management theories, such as Kotter's eight-step model, provide a framework for managing the people side of change, including communication, empowerment, and resistance management. Leadership theories, such as transformational leadership, highlight the role of leaders in inspiring and guiding their organizations through the digital transformation journey.

2.2. Previous research on technology adoption and innovation in business

Previous research on technology adoption and innovation in business provides valuable insights into the factors that influence the success of digital transformation initiatives. Studies have identified several key factors, including top management support, organizational culture, IT infrastructure, and digital skills, as critical determinants of digital transformation success. For example, a study by Kane et al. (2015) found that organizations with a strong digital culture, characterized by risk-taking, collaboration, and experimentation, were more likely to achieve successful digital transformation outcomes.

2.3. Digital transformation beyond technology adoption

While technology adoption is a critical component of digital transformation, it is only one piece of the puzzle. Digital transformation requires a fundamental shift in business models, processes, and culture.

2.3.1. Fundamental shift in business models, processes, and culture

Digital transformation often involves the redesign of business models to leverage digital technologies and data to create new value propositions for customers. This may involve the development of new digital products and services, the use of digital channels to reach new markets, or the integration of digital technologies into existing offerings. Digital transformation also requires the optimization of business processes to improve efficiency, agility, and decision-making. This may involve the automation of routine tasks, the use of data analytics to inform decision-making, or the adoption of agile development methodologies. Finally, digital transformation requires a shift in organizational culture towards more collaborative, customer-centric, and data-driven ways of working.

2.4. Problem addressed by digital transformation

Digital transformation seeks to address several key problems faced by businesses in today's rapidly evolving digital landscape.

2.4.1. Need for businesses to adapt to the rapidly changing digital landscape

The digital landscape is characterized by rapid technological change, disruptive innovation, and shifting customer expectations. To remain competitive, businesses must be able to adapt quickly to these changes and leverage new technologies to drive innovation and growth. Digital transformation provides a framework for businesses to build the necessary capabilities and agility to thrive in this dynamic environment.

2.4.2. Changing customer expectations and demands

Today's customers expect seamless, personalized, and engaging experiences across all touch points, including digital channels. They also expect businesses to be responsive, transparent, and socially responsible. Digital transformation enables businesses to meet these changing customer expectations by leveraging digital technologies to deliver superior customer experiences, gather customer insights, and build stronger relationships.

2.4.3. Emergence of disruptive technologies and their impact on businesses

Disruptive technologies, such as artificial intelligence, block chain, and the Internet of Things, are fundamentally changing the way businesses operate and compete. These technologies are creating new business models, products, and services, and are disrupting traditional industries. Digital transformation enables businesses to harness the power of these disruptive technologies to drive innovation, improve efficiency, and create new sources of value. However, the adoption of these technologies also poses significant challenges, including the need for new skills, the management of complex data streams, and the ensure of data privacy and security.

3. Methodology

3.1. Mixed-methods approach

This research employs a mixed-methods approach, combining qualitative and quantitative methods to provide a comprehensive understanding of digital transformation in businesses. The mixed-methods approach allows for the triangulation of data from multiple sources, enhancing the validity and reliability of the findings.

3.2. Systematic literature review

3.2.1. Identification of key themes, frameworks, and best practices

A systematic literature review was conducted to identify key themes, frameworks, and best practices related to digital transformation in businesses. The review followed a rigorous protocol, including the development of search strings, inclusion and exclusion criteria, and quality assessment of the selected studies.

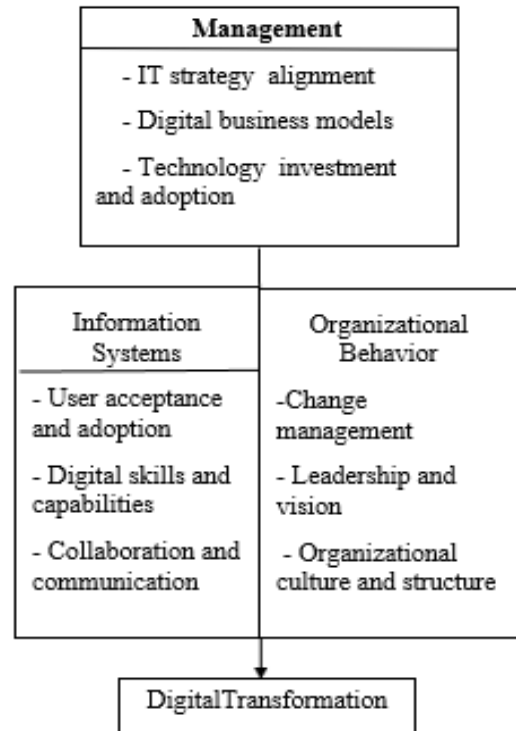
3.2.2. Sources: academic journals, industry reports, and case studies

The literature review drew from a wide range of sources, including peer-reviewed academic journals, industry reports, and case studies. The inclusion of both academic and practitioner literature ensures a comprehensive understanding of digital transformation from both theoretical and practical perspectives.

3.3. Qualitative study

3.3.1. Semi-structured interviews with executives and experts

Semi-structured interviews were conducted with executives and experts involved in digital transformation initiatives across various industries. The interviews aimed to gather in-depth insights into the challenges, success factors, and lessons learned from real-world digital transformation projects.



*Source: Recommended by the author

Fig 1: Conceptual Framework - The Multidisciplinary Nature of Digital Transformation.

3.3.2. Insights into challenges, success factors, and lessons learned from real-world projects

The qualitative study provided valuable insights into the challenges faced by organizations during digital transformation, such as resistance to change, legacy systems, and skills gaps. It also identified key success factors, including strong leadership, a culture of innovation, and the ability to attract and retain digital talent.

3.4. Quantitative Survey

3.4.1. Assessment of adoption and maturity of digital transformation among organizations

A quantitative survey was conducted to assess the adoption and maturity of digital transformation among organizations. The survey targeted a large sample of businesses across different industries and geographies to provide a representative view of the current state of digital transformation.

3.4.2. Questions related to drivers, benefits, challenges, and outcomes

The survey included questions related to the drivers of digital transformation, such as changing customer expectations and

competitive pressures. It also explored the benefits realized by organizations, including improved customer experience, increased agility, and cost savings. The survey also captured data on the challenges faced by organizations and the outcomes achieved through digital transformation initiatives.

3.4.3. Specific technologies and strategies employed by businesses

The survey gathered information on the specific technologies and strategies employed by businesses in their digital transformation efforts. This included the adoption of technologies such as cloud computing, mobile applications, and data analytics, as well as strategies such as agile development methodologies and customer-centricity.

4. Results

4.1. Systematic literature review findings

4.1.1. Key themes and frameworks

The systematic literature review revealed several key themes and frameworks related to digital transformation in businesses.

4.1.1.1. Customer-centricity

A recurring theme in the literature was the importance of a customer-centric approach in digital transformation. Successful initiatives were found to prioritize customer needs and expectations, leveraging digital technologies to deliver superior customer experiences and build stronger relationships.

4.1.1.2. Data-driven decision making

Another key theme was the role of data-driven decision making in digital transformation. Organizations that effectively leveraged data analytics and insights were found to be more successful in driving innovation, improving efficiency, and creating value.

4.1.1.3. Agile development methodologies

The literature also highlighted the importance of agile development methodologies in digital transformation. Agile approaches, characterized by iterative development, cross-functional collaboration, and rapid experimentation, were found to be more effective in delivering digital solutions and adapting to changing requirements.

4.1.1.4. Cross-functional collaboration

The review also emphasized the importance of cross-functional collaboration in digital transformation. Successful initiatives were found to break down organizational silos and foster collaboration across different functions, such as IT, marketing, and operations.

4.1.2. Common challenges and barriers

The literature review also identified common challenges and barriers to digital transformation.

4.1.2.1. Legacy systems

One of the most frequently cited challenges was the presence of legacy systems and infrastructure. These outdated systems were found to hinder the adoption of new technologies and limit the ability of organizations to innovate and adapt.

4.1.2.2. Organizational silos

Another common barrier was the presence of organizational silos, which impede collaboration and knowledge sharing across different functions and departments. Breaking down these silos was found to be critical for successful digital transformation.

4.1.2.3. Resistance to change

The literature also highlighted resistance to change as a significant challenge in digital transformation. Employees and stakeholders were found to be resistant to new ways of working and the adoption of new technologies, requiring effective change management strategies to overcome.

4.2. Qualitative interview findings

4.2.1. Key success factors

The qualitative interviews with executives and experts revealed several key success factors for digital transformation.

4.2.1.1. Strong leadership and vision

One of the most critical success factors identified was strong leadership and a clear vision for digital transformation. Successful initiatives were found to have leaders who could articulate a compelling vision, inspire and motivate their teams, and drive the necessary changes.

4.2.1.2. Culture of innovation and experimentation

Another key success factor was a culture of innovation and experimentation. Organizations that fostered a culture of risk-taking, learning from failure, and continuous improvement were found to be more successful in their digital transformation efforts.

4.2.1.3. Ability to attract and retain digital talent

The interviews also highlighted the importance of attracting and retaining digital talent. Successful organizations were found to have strong talent management strategies, including the development of digital skills, the creation of attractive work environments, and the provision of opportunities for growth and development.

4.2.2. Importance of aligning digital transformation strategies with business objectives

The interviews also emphasized the importance of aligning digital transformation strategies with overall business objectives. Successful initiatives were found to have clear linkages between digital investments and business outcomes, ensuring that digital transformation efforts were focused on creating value and driving growth.

4.2.3. Measuring the impact of initiatives through key performance indicators

Another key insight from the interviews was the importance of measuring the impact of digital transformation initiatives through key performance indicators (KPIs). Successful organizations were found to have well-defined KPIs that tracked the progress and outcomes of their digital transformation efforts, allowing for continuous optimization and improvement.

4.3. Quantitative survey results

Table 1: Comparing the benefits and challenges of digital transformation (Table 1)

Benefits	% of Respondents	Challenges	% of Respondents
Improved customer experience	75%	Resistance to change	62%
Increased operational efficiency	68%	Legacy systems and infrastructure	57%
Enhanced data-driven decision making	63%	Lack of digital skills and talent	52%
Greater agility and flexibility	59%	Insufficient budget and resources	48%
Increased innovation and competitiveness	54%	Siloed organizational structure	45%
New revenue streams and business models	51%	Cybersecurity and data privacy concerns	42%
Improved collaboration and communication	47%	Unclear vision and strategy	39%
Streamlined processes and workflows	44%	Difficulty integrating new and old systems	36%
Better resource utilization and allocation	41%	Inadequate change management processes	33%
Enhanced employee productivity and engagement	38%	Lack of leadership buy-in and support	30%

4.3.1. High level of adoption and maturity of digital transformation

The quantitative survey results revealed a high level of adoption and maturity of digital transformation among organizations. A significant majority of respondents indicated that their organizations had already embarked on digital transformation initiatives or had plans to do so in the near future.

4.3.2. Digital transformation as a top strategic priority

The survey also confirmed that digital transformation is a top strategic priority for most organizations. Respondents ranked digital transformation among their top three strategic priorities, highlighting its critical importance for business success and competitiveness.

4.3.3. Drivers of digital transformation

The survey identified several key drivers of digital transformation among organizations.

4.3.3.1. Changing customer expectations

The most frequently cited driver was changing customer expectations, with respondents indicating that the need to meet the evolving needs and preferences of customers was a key motivation for their digital transformation efforts.

4.3.3.2. Competitive pressures

Another significant driver was competitive pressures, with respondents indicating that the need to keep pace with competitors and maintain market share was a key factor in their digital transformation decisions.

4.3.3.3. Need for operational efficiency

The survey also identified the need for operational efficiency as a key driver of digital transformation. Respondents indicated that the desire to streamline processes, reduce costs, and improve productivity was a significant motivation for their digital investments.

4.3.4. Most commonly adopted technologies

The survey also captured data on the most commonly adopted technologies in digital transformation initiatives.

4.3.4.1. Cloud computing

Cloud computing emerged as the most widely adopted technology, with a significant majority of respondents indicating that their organizations had already migrated or

planned to migrate their IT infrastructure and applications to the cloud.

4.3.4.2. Mobile applications

Mobile applications were also found to be widely adopted, with respondents indicating that their organizations had developed or planned to develop mobile solutions to enhance customer engagement and employee productivity.

4.3.4.3. Data analytics

Data analytics was another commonly adopted technology, with respondents indicating that their organizations were leveraging data and analytics to drive insights, improve decision making, and create value.

4.3.5. Significant benefits reported

The survey also captured data on the benefits realized by organizations through their digital transformation initiatives.

4.3.5.1. Improved customer experience

The most frequently reported benefit was improved customer experience, with respondents indicating that their digital transformation efforts had led to higher customer satisfaction, loyalty, and advocacy.

4.3.5.2. Increased agility

Another significant benefit was increased agility, with respondents indicating that their organizations had become more responsive and adaptable to changing market conditions and customer needs as a result of their digital transformation initiatives.

4.3.5.3. Cost savings

The survey also identified cost savings as a significant benefit of digital transformation. Respondents indicated that their organizations had achieved significant cost reductions through the automation of processes, the optimization of resources, and the adoption of more efficient technologies.

5. Discussion

5.1. Critical importance of digital transformation for businesses

The findings of this research underscore the critical importance of digital transformation for businesses in today's rapidly evolving digital landscape. The high level of adoption and maturity of digital transformation among organizations, as well as its position as a top strategic priority, demonstrate

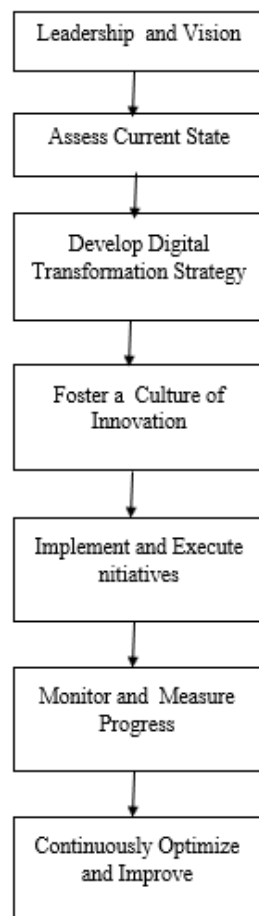
that digital transformation is no longer a choice but an imperative for business success and competitiveness.

5.2. Multidisciplinary nature of digital transformation

The research also highlights the multidisciplinary nature of digital transformation, drawing from various theoretical foundations such as management, information systems, and organizational behavior. This underscores the need for a holistic and integrated approach to digital transformation, one that considers not only the technological aspects but also the organizational, cultural, and human dimensions.

5.3. Success factors and best practices

The research identifies several key success factors and best practices for digital transformation, including:



*Source: Recommended by the author

Fig 2: Process Diagram - Key Steps in a Successful Digital Transformation Journey.

5.3.1. Strong leadership

Strong leadership emerges as a critical success factor, with successful initiatives characterized by leaders who can articulate a clear vision, inspire and motivate their teams, and drive the necessary changes.

5.3.2. Customer-centric approach

A customer-centric approach is also identified as a key success factor, with successful initiatives prioritizing customer needs and leveraging digital technologies to deliver superior customer experiences.

5.3.3. Data-driven decision making

Data-driven decision making is another critical success factor, with successful organizations effectively leveraging data and analytics to drive insights, improve efficiency, and create value.

5.3.4. Culture of innovation and experimentation

A culture of innovation and experimentation is also identified as a key success factor, with successful organizations fostering a culture of risk-taking, learning from failure, and continuous improvement.

5.4. Challenges and barrier

The research also identifies several common challenges and barriers to digital transformation, including:

5.4.1. Legacy systems

Legacy systems and infrastructure emerge as significant challenges, hindering the adoption of new technologies and limiting the ability of organizations to innovate and adapt

5.4.2. Resistance to change

Resistance to change is another significant barrier, with employees and stakeholders often resistant to new ways of working and the adoption of new technologies.

5.4.3. Need for careful planning and change management Strategie

The research highlights the need for careful planning and effective change management strategies to overcome these challenges and ensure successful digital transformation.

5.5. High adoption and maturity levels of digital experimentation

The high adoption and maturity levels of digital transformation revealed by the research demonstrate the increasing recognition of its critical importance among organizations. However, the research also suggests that the success and impact of digital transformation initiatives can vary significantly across organizations.

5.6. Varying levels of success and impact reported

While the research identifies significant benefits of digital transformation, such as improved customer experience, increased agility, and cost savings, it also suggests that the realization of these benefits can vary across organizations.

5.6.1. Need for ongoing evaluation and optimization of initiatives

This highlights the need for ongoing evaluation and optimization of digital transformation initiatives to ensure that they deliver the desired outcomes and create value for the organization.

6. Conclusion

6.1. Recap of the research findings

This research has provided a comprehensive understanding of digital transformation in businesses, drawing from a mixed-methods approach that combined a systematic literature review, qualitative interviews, and a quantitative survey. The findings highlight the critical importance of

digital transformation for business success and competitiveness, as well as the key success factors, best practices, and challenges associated with digital transformation initiatives.

6.2. Critical importance of digital transformation in driving business growth and competitiveness

The research underscores the critical importance of digital transformation in driving business growth and competitiveness in today's rapidly evolving digital landscape. Organizations that successfully embrace digital transformation can realize significant benefits, including improved customer experience, increased agility, and cost savings.

6.3. Key success factors and best practice

The research identifies several key success factors and best practices for digital transformation, including strong leadership, a customer-centric approach, data-driven decision making, and a culture of innovation and experimentation. Organizations that prioritize these factors are more likely to achieve successful outcomes from their digital transformation initiatives.

6.4. Challenges and barriers to be address

The research also highlights common challenges and barriers to digital transformation, such as legacy systems, resistance to change, and the need for careful planning and change management strategies. Addressing these challenges is critical for ensuring the success of digital transformation initiatives.

6.5. Need for businesses to remain vigilant and proactive in their approach to digital transformation

Given the rapidly evolving nature of the digital landscape, businesses need to remain vigilant and proactive in their approach to digital transformation. This requires continuous monitoring of emerging technologies and trends, as well as ongoing evaluation and optimization of digital transformation initiatives to ensure that they continue to deliver value.

6.6. Future research directions

The findings of this research also point to several potential directions for future research, including:

6.6.1. Long-term impact of digital transformation on business performance and competitiveness

Future research could explore the long-term impact of digital transformation on business performance and competitiveness, providing insights into the sustainability of the benefits realized through digital transformation initiatives.

6.6.2. Emerging technologies and trends shaping the future of digital transformation

Future research could also investigate the emerging technologies and trends that are likely to shape the future of digital transformation, such as artificial intelligence, block chain, and the Internet of Things, and their implications for businesses.

6.6.3. Need for more empirical studies on strategies and practices contributing to successful outcomes

Finally, future research could focus on conducting more empirical studies to identify the specific strategies and practices that contribute to successful digital transformation outcomes, providing actionable insights for businesses embarking on their own digital transformation journeys.

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