



## **Digital Transformation: How Information Systems Are Changing Traditional Business Models**

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### **Abstract**

The evolution of information systems has emerged as a pivotal driver in the transition from traditional business models to modern, digitally oriented operations. Previously, companies largely depended on manual processes and direct interactions with customers, which often limited efficiency, scalability, and responsiveness. Today, the integration of information technologies, including e-commerce platforms, data management systems, and digital communication tools, enables businesses to operate more efficiently, make faster decisions, and maintain seamless interactions with a broader audience. This digital transformation empowers companies not only to expand their market reach but also to enhance operational effectiveness and strengthen customer relationships in meaningful ways. Moreover, the adoption of information systems influences the ways organizations create value, innovate, and maintain competitiveness in an increasingly globalized marketplace. This study explores the essential role of information systems in facilitating organizational change, highlighting their impact on business performance, strategic decision-making, and long-term sustainability. Understanding this dynamic is crucial for businesses seeking to thrive in the modern era, where technological integration is no longer optional but a fundamental component of growth and resilience.

**Keywords:** *Information Systems; Traditional Business Models; Modern Business Models*

**Abstrak:** Evolusi sistem informasi telah muncul sebagai pendorong penting dalam transisi dari model bisnis tradisional ke operasi modern yang berorientasi digital. Sebelumnya, perusahaan sangat bergantung pada proses manual dan interaksi langsung dengan pelanggan, yang seringkali membatasi efisiensi, skalabilitas, dan responsif. Saat ini, integrasi teknologi informasi, termasuk platform e-commerce, sistem manajemen data, dan alat komunikasi digital, memungkinkan bisnis untuk beroperasi lebih efisien, membuat keputusan lebih cepat, dan mempertahankan interaksi yang mulus dengan audiens yang lebih luas. Transformasi digital ini memberdayakan perusahaan tidak hanya untuk memperluas jangkauan pasar mereka tetapi juga untuk meningkatkan efektivitas operasional dan memperkuat hubungan pelanggan dengan cara yang bermakna. Selain itu, adopsi sistem informasi memengaruhi cara organisasi menciptakan nilai, berinovasi, dan mempertahankan daya saing di pasar yang semakin mengglobal. Studi ini mengeksplorasi peran penting sistem informasi dalam memfasilitasi perubahan organisasi, menyoroti dampaknya terhadap kinerja bisnis, pengambilan keputusan strategis, dan keberlanjutan jangka panjang. Memahami dinamika ini sangat penting bagi bisnis yang ingin berkembang.



di era modern, di mana integrasi teknologi tidak lagi opsional tetapi merupakan komponen mendasar dari pertumbuhan dan ketahanan.

**Kata Kunci:** *Sistem Informasi; Model Bisnis Tradisional; Model Bisnis Modern*

## INTRODUCTION

A business model is a model that explains and describes how a company can operate and develop to achieve substantial profits in accordance with its business objectives. According to experts, a business model or description must have three main characteristics: alignment with the company's objectives, resilience and reliability, and the ability to strengthen the model itself. Replicability, substitution, market adequacy, and understanding the strengths of the business model used by the company can be determining factors for a company's success. By compiling and designing a model, there are several benefits to be gained, namely: 1. Companies are able to identify competitors' weaknesses, so they can exploit opportunities and close those gaps. 2. Able to transform competitors into allies (partners). 3. Helping companies obtain information, thus facilitating the evaluation of the designed model and being able to compete with other companies. However, the above advantages only serve to enhance the company's reputation and competitiveness. Meanwhile, to win the competition in the market, you must maintain motivation to drive the company to progress and continue to grow. In addition, companies must always innovate in accordance with current developments, as market targets are greatly influenced by existing technological sophistication.(Zeng, 2022)

The development of information technology has fundamentally changed the business paradigm. The success of companies in today's digital era depends heavily on their ability to transform and intelligently utilize information technology. Continuously evolving technology has impacted the way businesses operate, communicate, interact with customers, and even create new business models. In this evolving digital era, companies worldwide are focused on business transformation. Advances in information technology and shifting consumer behavior patterns have dramatically altered the business landscape. To remain relevant and competitive in an increasingly digital marketplace, companies must be able to efficiently adopt information technology. This digital transformation impacts every segment, from small businesses to large corporations, as well as government agencies and society as a whole. Continuous and rapid technological advancements have had a significant impact on various areas of human life, including the economy and the business world. The digital era we now live in has opened the door to a variety of new opportunities and challenges for business and economic actors worldwide.(Wiśniewska-Paluszak et al., 2023)

According to [the original text], technological advances have facilitated access to information and enabled individuals to communicate and interact

more easily. This provides opportunities for businesses to reach larger markets and enhance customer interactions. Changes in consumer behavior have also occurred, with many now preferring to shop online rather than in brick-and-mortar stores. This is the impact of business transformation that adopts and integrates information technologies such as the internet, big data, mobile phones, and other technologies. Other business changes due to this transformation include changes in marketing strategies, customer service practices, operational systems, product and service development, and decision-making systems based on statistical analysis.(DEHBASTEHE et al., 2023)

According to the digital era, it brings changes in various aspects of life, both human life and organizational life . The company starting from mindset, way work, how to socialize, policy implementation government, system operations and organizational management, systems public service to organizational systems. Several world economic experts had predicted these changes long before the 1990s, where they said that the world only will be moved or be in the palm of your hand human finger .(Dang-Pham et al., 2022) The estimates from various economic experts are correct and supported by strong evidence of the previously unimaginable disruption phenomenon in the 2000s, which was further accelerated by the COVID-19 pandemic that hit the world. When the COVID-19 pandemic began to enter Indonesia, this disruption became increasingly apparent. among the people . Generational shift this is what This requires an organization to be able to adapt to the digital era. If organizations or businesses fail to master this, they may be disrupted by change. Digital innovation has become widespread in the world. all corners the world, has create a lot changes to community activities starting from shopping system, transactions, communication, learning, playing even doing business Activities that previously had to drain a lot What used to be labor-intensive and quite time-consuming can now be done easily and practically thanks to the help of digital technology. In today's digital era, information technology has successfully transformed many aspects of people's lives, including economic sector and business . Information technology has penetrated all aspects of business planning and development. Various innovations in information technology have successfully transformed business operational systems, such as the use of the internet, mobile phones, artificial intelligence (AI), electric vehicles, and so on . The concept of "business transformation in the digital era" refers to the process of changing a company's business model, strategy, operations, and interactions with customers and other stakeholders through the use of digital technology and innovation.(Shurygin et al., 2021)

The implementation of information systems plays a crucial role in transforming traditional business models into more modern ones, as this technology can drive significant changes in the way companies operate.

Information systems not only improve the efficiency and effectiveness of work processes but also strengthen company competitiveness through automation, data integration, and more accurate, information-based decision-making. Furthermore, the implementation of information systems also impacts organizational structures and work patterns, with many previously manual activities now being digitized, creating more flexible, faster, and more scalable workflows. These changes collectively demonstrate that information systems are a crucial foundation for renewing business strategies in the digital era.(Saad et al., 2023)

## **METHOD**

This study uses a descriptive qualitative approach to provide a deeper understanding of the role of information systems in the transformation of business models from traditional to modern. This approach was chosen because the focus of the research is not on hypothesis testing or measuring numerical variables, but rather on describing real-world phenomena that occur in everyday business practices. Through descriptive qualitative methods, researchers can explore each stage of information systems implementation in detail, from planning and implementation to evaluating its impact on company operations.

Furthermore, this approach allows researchers to more clearly see how information systems influence changes in employee work patterns, organizational structure adaptation, and faster and more accurate decision-making. The resulting digital transformation not only impacts efficiency and productivity but also encourages new innovations, strengthens company competitiveness, and provides flexibility in facing dynamic market challenges. This research also emphasizes the human aspect of the transformation process, as the success of information systems implementation depends heavily on employees' ability to adapt and optimally utilize technology.(Suzianti & Paramadini, 2021)

Thus, this study provides a comprehensive and contextual overview of the strategic role of information systems as a driver of business modernization. More than just a technological tool, information systems serve as a medium connecting innovation, operational efficiency, and human capacity development within an organization. The results of this study are expected to serve as a reference for companies seeking to understand how information technology can be effectively applied to support sustainable business growth and adapt to changing times.(Lin & Wang, 2023)

## **RESULTS AND DISCUSSION**

### **The Role of Information Systems in Business Model Transformation**

Management information systems (MIS) are now an integral part of business transformation processes across various sectors. In the modern business world, a company's ability to survive and thrive is heavily influenced by how it manages the flow of information. MIS serves as the foundation that connects various operational activities within a company, from data collection and information processing to the presentation of reports that aid management in strategic decision-making. Before the rapid development of technology, most companies relied on manual processes that were time-consuming and error-prone. However, the advent of MIS has transformed the way companies manage data. Through automated systems, companies can monitor inventory in real time, monitor product movement, and process information about customer needs and behavior with greater precision.(Mohamed Hashim, Tlemsani, & Matthews, 2022)

This fundamental change demonstrates a significant shift from traditional business models to digital-based ones. Companies no longer rely solely on face-to-face relationships or conventional transactions, but instead utilize digital platforms that enable fast and flexible interactions. With the support of information systems, many previously complex internal processes can be simplified. For example, logistics management processes that typically require manual coordination can now be monitored simply through a digital dashboard. Similarly, customer service processes can be automated through chatbots or customer management systems (CRM). The accuracy of the information provided by MIS enables companies to increase work efficiency, minimize operational costs, and provide much more responsive service to consumers.(Noel et al., 2022)

### **The Impact of Digital Transformation on Business Structure and Work Patterns**

The digital transformation facilitated by information systems not only impacts operational processes but also organizational structures and employee work patterns. As Dwidienawati (2021) emphasized in Basid (2024), technological change is reshaping the way organizations work, interact, and make decisions. Companies are now required to be more adaptive and open to change. Administrative tasks that previously required significant effort and time can now be completed with the help of automation. This allows employees to shift their focus to activities with higher strategic value, such as innovation, data analysis, and service development.(Fernandez-Vidal et al., 2022)

Furthermore, digital transformation opens up opportunities to create new business models that are more relevant to the needs of the modern market. Through more comprehensive data analysis, companies can identify market trends, predict consumer behavior, and design more targeted

marketing strategies. What was previously difficult to map manually can now be quickly identified through technology-based analytics systems. This speed provides a distinct competitive advantage for companies that can capitalize on it.

Ultimately, information systems are not merely technical tools, but rather bridges that enable companies to transform from rigid legacy structures to more agile and sustainable digital business ecosystems. By maximizing the functionality of MIS, companies can increase productivity, expand innovation opportunities, and strengthen competitiveness in a constantly changing market. This digital transformation demonstrates that mastery of information technology is key to survival and excellence in today's digital economy.(Müller et al., 2024)

### **The Influence of Technology on Consumer Behavior and Business Strategy**

The development of information technology over the past two decades has brought about significant changes in nearly every aspect of life, including the business world and consumer behavior. While previously, people relied heavily on brick-and-mortar stores as their primary source of daily necessities, this pattern has shifted dramatically. The advent of the internet, smartphones, and various e-commerce applications has made online shopping a more practical, efficient option, and is considered to provide a more convenient shopping experience. Consumers no longer need to spend time visiting stores, as the entire process of product selection, payment, and after-sales service can be conducted digitally. This shift in preferences not only impacts shopping patterns but also requires companies to rethink their business strategies to remain relevant amidst market dynamics.(J. Zhang & Chen, 2024)

In the face of these changes, companies that are able to integrate information systems with marketing strategies, operations management, and customer service have a greater opportunity to expand market reach and improve the quality of interactions with consumers. Information systems enable companies to collect more accurate customer behavior data, such as the types of products most frequently searched for, consumer active hours, repeat purchase patterns, and payment method preferences. This information can then be used to develop more targeted marketing strategies. For example, personalizing promotions based on shopping history, offering relevant product recommendations, or providing 24/7 chatbot-based customer service. Thus, information system integration not only simplifies data management for companies but also improves the overall customer experience.(Zeng, 2022)

Digital transformation has also had a significant impact on marketing strategies. Traditional promotional methods relying on print media or television advertising are no longer effective enough to reach modern

consumers, especially the younger generation who are more active on social media. Through digital technology, companies can leverage various platforms like Instagram, TikTok, and marketplaces to build brand image, conduct interactive campaigns, and establish two-way communication with customers. Digital marketing offers greater flexibility because companies can measure campaign success in real-time through statistical data, such as click-through rates, number of interactions, or increased website traffic. This allows for faster and more efficient strategy evaluation than conventional methods.(Konopik et al., 2022)

Beyond marketing, digital technology also impacts the product development process. Through in-depth data analysis, companies can identify market trends, formulate product innovations, and improve ineffective services. For example, consumer review data can provide insights into product areas that need improvement, while sales trend data helps companies develop inventory strategies to avoid overstocking or understocking. The ability to quickly understand market needs gives companies a competitive advantage that is difficult for competitors who have not yet adopted similar systems to match.(X. Zhang et al., 2023)

More broadly, digital transformation also enhances companies' ability to make data-driven decisions. Modern information systems enable managers to analyze situations more objectively through dashboards that present real-time data on the company's operational conditions. Supported by accurate information, the decision-making process becomes more focused, reduces the risk of errors, and helps companies anticipate market changes more proactively. Ultimately, digital technology plays a crucial role in creating sustainable competitive advantage by increasing efficiency, effectiveness, and adaptability.(Tijan et al., 2021)

However, successful digital transformation does not come without challenges. Many companies, especially medium- and small-scale companies, face challenges adapting to technological change. One major challenge is human resource readiness. Not all employees have the skills or knowledge to operate sophisticated information systems. This requires companies to organize training, workshops, or competency-building programs to help employees adapt to new technologies. This investment requires significant costs, time, and a strong commitment from management.

Another challenge is the high cost of technology investment. Implementing an information system involves not only hardware and software procurement but also long-term maintenance, consulting fees, and the risk of system disruption. Without a well-thought-out implementation strategy, technology that should improve efficiency can actually create new problems, such as incompatible systems, disrupted work processes, or confusion at the operational level.(Mohamed Hashim, Tlemsani, & Duncan Matthews, 2022)

Failure to adopt technology can even leave a company behind its competitors. This phenomenon was particularly evident during the COVID-19 pandemic, when many companies lacking digital preparedness struggled to maintain their operations. Conversely, companies that had integrated information systems with their business processes were able to adapt more quickly through online work, digital services, or online marketing. In this context, Dwidienawati emphasized that the success of digital transformation depends not only on the technology itself, but also on the organization's readiness to manage change, its ability to innovate continuously, and its motivation to evolve with market dynamics.(Holmström, 2022)

Amid these demands, the role of Management Information Systems (MIS) is becoming increasingly important. A MIS is a structured system tasked with processing, storing, and presenting data so that it can be used to support the implementation of tasks within an organization. MIS goes beyond simply collecting data; it also ensures that it can be accessed and interpreted appropriately by those who need it. In a business context, MIS is part of internal control, assisting companies in planning, organizing, and evaluating operational activities.

Some experts explain that MIS combines human elements, documents, technology, and procedures to solve various business problems, such as cost control, service development, and long-term strategy development. The main difference between MIS and conventional information systems lies in its primary focus. While conventional information systems focus more on processing operational data, MIS analyzes these systems to assist managerial decision-making. In academia, the term MIS is also often associated with information management methods that support automation and human decision-making, such as decision support systems (DSS), expert systems, and executive information systems. Through MIS, companies can compile reports, identify trends, project demand, and formulate more accurate strategic moves. MIS can also be used to monitor employee performance, control financial flows, and facilitate coordination between divisions. Thus, MIS serves as a critical foundation that helps companies navigate the complexities of the modern business environment.(Nadkarni & Prügl, 2021)

Overall, digital transformation through the use of information systems is no longer an option, but rather an urgent necessity for companies seeking to survive and thrive. Companies must not only be able to adopt technology but also ensure that their business strategy, human resources, and organizational culture align with these changes. With proper management, digital technology can be a driving force that helps companies achieve efficiency, improve service quality, and strengthen competitiveness in an increasingly competitive global marketplace.(Wiśniewska-Paluszak et al., 2023)

## **Traditional Business**



The term "*traditional*" in the Big Indonesian Dictionary refers to something rooted in the word "*tradition*," namely, customs passed down from generation to generation and still practiced by society today. Traditional also describes attitudes, ways of thinking, and actions that adhere to norms, customs, and habits long rooted in social life. In an economic context, traditional business can be understood as a form of business that emerges, grows, and persists over the course of a community or social group.(Montero Guerra et al., 2023)

These types of businesses generally arise from the basic needs of local communities and are passed down through generations, thus becoming an important part of cultural identity. Examples include trading activities in traditional markets, handicraft businesses, regional culinary specialties, or long-established and trusted services. The hallmarks of traditional businesses are typically seen in the use of simple production methods, direct interaction between sellers and buyers, and strong social values such as honesty, trust, and togetherness.

Despite the constant advancement of technology and modernization, traditional businesses remain vital. Besides providing a livelihood, these businesses also play a role in preserving culture and strengthening social ties within communities.(Saad et al., 2023)

### **Business Change**

Business is an activity aimed at providing goods or services needed or desired by consumers. In general, business transformation can be understood as a structural change in the process of providing goods or services, influenced by fundamental internal and external factors, and occurring over a relatively long period of time. Business transformation has undergone significant development thanks to advances in automated management information systems (MIS).(Kraus et al., 2021)

The advent of automated MIS has fundamentally changed the way businesses operate. Companies can now optimize every aspect of their operations, from inventory management to shipment tracking, with greater efficiency than ever before. This has resulted in significant productivity gains, with previously time-consuming tasks now being completed quickly and accurately. Furthermore, this transformation also presents an opportunity for companies to improve the quality of service they provide to customers. By adopting automated MIS, organizations can more effectively tailor their services to customer needs. The real-time information available allows companies to respond quickly to customer requests and provide timely solutions.(Van Veldhoven & Vanthienen, 2022)

As a result, the overall customer experience becomes more satisfying, which in turn increases loyalty and strengthens long-term relationships between companies and customers. Furthermore, the implementation of

automated MIS opens up opportunities for innovation and reinvention in the way businesses operate. With advanced data analytics and predictive capabilities, organizations can identify new market trends and unprecedented growth opportunities. This provides companies with a significant competitive advantage, enabling them to remain relevant and adaptive in an ever-changing business environment. Thus, business transformation through automated MIS not only transforms the way businesses operate today but also creates opportunities for a more innovative and sustainable future.(Suzianti & Paramadini, 2021)

## CONCLUSIONS

Based on the discussion, it can be concluded that information systems play a central role in the transformation of business models from traditional to modern. By utilizing information technology, companies can improve operational efficiency, decision-making accuracy, and customer service quality. Digital transformation also impacts changes in business structures and work patterns, making organizations more adaptive, responsive, and data-driven. The shift in consumer behavior, which is increasingly moving toward digital, requires companies to adopt information systems intelligently. Companies that are able to utilize digital technology appropriately can expand market reach, improve customer interactions, and create a competitive advantage. However, the success of digital transformation depends not only on technology but also on organizational readiness, human resource capabilities, innovation strategies, and the company's motivation to continue growing. Overall, the implementation of information systems in the digital era not only changes the way businesses operate but also forms new, more innovative, adaptive, and sustainable business models, enabling companies to compete effectively in the modern marketplace.

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