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The impact of business process modeling on company efficiency

Ida Hindarsah
Pasundan University, Bandung, Indonesia

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ABSTRACT
Business process modeling is a strategic approach that companies use to understand, document and manage their operational processes. This research aims to investigate and analyze the impact of implementing business process modeling on the company's level of efficiency. This research uses a qualitative approach with descriptive methods. The research results show that the application of business process modeling has a positive impact on company efficiency and adaptability. A deep understanding of each step in operations allows identification of inefficiencies, optimization of repetitive tasks, and more effective risk management. Additionally, process modeling helps create better team coordination, improve product and service quality, and support faster and more informed decision making. The research results confirm that investment in business process modeling makes a positive contribution to a company's competitiveness and overall performance in the face of continuously changing business dynamics.

Corresponding Author:
Ida Hindarsah
Pasundan University, Bandung, Indonesia
ida.hindarsah@unpas.ac.id

INTRODUCTION

Modern companies encounter increasingly complex challenges in maintaining their efficiency and competitiveness in rapidly changing markets (Shocker et al., 1994). Business processes that are not managed properly can result in serious consequences, such as increased operational costs, decreased revenue, decreased employee motivation, and can even reduce customer satisfaction. In response to these demands, business process management is becoming increasingly important as a strategic tool that can help companies achieve success across sectors (Hameed et al., 2022).

Along with the progress of civilization, there is an increase in complexity in business processes, especially in the context of a connected global economy. Increasingly sophisticated business processes require a deep diagnostic and economic analysis approach to the business environment (Harmon, 2010). Research conducted by Chatterjee et al. (2020) highlights the importance of understanding the impact of changes in the business environment on business processes, and the need for the definition of appropriate business process models. This analysis is not only static, but also requires a holistic time perspective, which takes into account the dynamics of business process evolution in the long term. Business process management is not only the key to achieving operational efficiency, but is also an important element in responding to change and creating competitive advantage in an ever-evolving global economy (Ashogbon, 2012).

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Although a company may have developed an effective business model, there is a deep understanding that success does not depend on effectiveness alone. Zamarreño-Aramendia et al. (2021) highlights the importance of considering spatial and temporal dimensions in designing business models. In this context, it is not only enough to have a conceptually correct business model, but it is also necessary to understand and place business processes, phenomena and objects in the context of real geographic space (Al-Debei & Avison, 2010).

The importance of this spatial-temporal aspect is not only limited to creating more realistic models, but also has a significant impact on company performance (Ludeke-Freund et al., 2018). By building a spatial-temporal dynamic model, companies can carry out effective diagnosis of their business environment. This approach enables closer interaction with operational reality, enabling a better understanding of geographic and temporal variability that can impact business processes (Baghiu, 2020).

Furthermore, the creation of spatial-temporal dynamic models is not only a descriptive tool, but can also be integrated interactively with existing databases. Thus, companies can utilize real-time information to monitor and evaluate the performance of their business processes (Engel et al., 2016). Furthermore, the findings from this spatial-temporal analysis can guide companies in making more informed decisions, enabling more effective improvements and re-engineering of business processes in line with changing environmental demands (Sahay & Ranjan, 2008).

Business process modeling provides a strong foundation for comprehensive understanding and analysis of various aspects of business processes. Lamine et al. (2020) highlights that by using process modeling, a business can be decomposed in detail, enabling the identification of key elements, relationships and interactions between various stages. This analysis can include performance evaluation, identification of potential improvements, and integration of business processes to achieve company goals. Process modeling also supports relative simplification efforts, highlighting crucial data and processes for further evaluation.

It is important to note that the purpose of creating a business model plays a central role in the success of its implementation. Fischer et al. (2020) emphasizes that a business model is not only a static representation, but also a dynamic tool for detailing current conditions, detecting deviations from targets, and providing a basis for adjustment or further development. By having a solid business model, companies can more effectively plan changes, identify fundamental modifications, or even create new concepts in an effort to increase company efficiency and responsibility.

To achieve corporate prosperity, optimizing cost efficiency and profitability is imperative. In this case, business process modeling becomes a strategic foundation that allows the company to achieve these goals. As stated by Brazier et al. (2017), business process modeling not only includes strategy development, but also involves concrete steps to maximize cost efficiency. This includes optimizing business operations and interactions, automating repetitive tasks, improving product quality, and reducing enterprise risk.

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However, to implement this strategy effectively, companies need to digitize their business processes. A clear depiction and understanding of business processes by a digital workflow engine is a crucial first step. Business process modeling tools play a central role in digitalizing these processes. With good modeling, companies can produce machine-understandable representations, enabling automated process launches. The benefits of digitalization include the ability to automate tasks, increase operational efficiency, and obtain real-time results.

Business process automation not only reduces manual workload, but also opens the door to deeper analysis and faster response to changing business conditions. With good modeling and digitalization, companies can achieve higher adaptability, increase competitiveness, and achieve sustainability through the use of technology to achieve their economic goals. Thus, business process modeling and digitalization become key elements in a company's journey towards optimal efficiency and profitability.

METHOD

This research adopts a qualitative approach, in accordance with the Bogdan and Biklen concept explained by Gerring (2017) that qualitative research is descriptive. In this framework, the data collected is in the form of words or images, avoiding emphasis on numbers. The qualitative approach, as described by Seaman (2008), refers to the philosophy of postpositivism, and is used to examine the condition of natural objects. In contrast to experiments, qualitative methods utilize the researcher as the key instrument, involve triangulation data collection techniques, and analyze data inductively and qualitatively. In the context of descriptive research, the data collected will be analyzed using qualitative methods, by describing research findings in the form of words or sentences. In this way, the author will explain in depth the research results according to the reality that occurs in the field. This approach allows researchers to absorb the underlying meaning of findings rather than simply producing generalizations

RESULTS AND DISCUSSION

Business process modeling under the COVID-19 pandemic, which makes it possible to diagnose the impact of business modeling results on company performance and make informed management decisions. in the context of integrated development of the most relevant and significant business model components. Meanwhile, it is proposed to evaluate the efficiency of modeling based on key parameters such as quality, cost and speed of business processes. The following are some of the impacts of business process modeling on company efficiency.

Optimizing Operational Efficiency

Business process modeling is a strategic basis for companies in evaluating and improving their operational efficiency. By detailing each step in a process, companies can systematically identify areas that have potential for optimization. For example, it may be revealed that some stages of the process take longer than they should, or that there are activities that do not provide significant added value. Modeling provides a clear visual

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representation of internal workflows, allowing companies to focus on critical points that can be improved to achieve greater efficiency.

In-depth analysis of business processes is the next stage obtained through modeling. Companies not only identify inefficiencies, but also analyze their underlying causes. By understanding the factors that influence process performance, whether they relate to internal policies, training deficiencies, or outdated technology, companies can design more sustainable solutions. This analysis provides deeper insights, allowing companies to achieve systemic improvements that can result in increased overall efficiency.

The importance of business process modeling also lies in its ability to uncover inefficiencies that may be hidden in daily operational routines. Visualization of these processes allows companies to see the whole picture and identify potential bottlenecks or bottlenecks that were not visible before. By addressing these areas, companies can remove hidden obstacles that can slow down operational efficiency. Overall, business process modeling paves the way for companies to optimize their operations, increase productivity, and achieve higher levels of efficiency.

Improved Product and Service Quality

A deep understanding of each step in the business process provides companies with a solid foundation for improving the quality of products and services. Business process modeling allows companies to analyze in detail how each process element interacts with each other and influences the final result. By detailing these product processes, companies can identify critical elements that contribute to the overall quality of the product or service. For example, aspects such as quality standards, quality control or operational procedures can be identified that can be optimized to ensure better results.

Business process modeling is not just about understanding operational structures, it is also a tool for identifying improvement points that can directly impact customer satisfaction. By identifying processes or stages that are crucial to customer satisfaction, companies can focus on deep improvements. For example, it may be revealed that improvements in product availability, response times to customer inquiries, or increased personalization of service can have a significant positive impact on customer satisfaction.

Increased customer satisfaction, in turn, has a direct impact on a company's reputation. When customers perceive improvements in product and service quality, they are more likely to provide positive feedback and recommend the company to others. This can help build a positive image and trust among consumers and in the wider market. Therefore, business process modeling not only helps companies improve their operations, but is also a strategic key to building a strong reputation and achieving sustainable customer satisfaction.

Automate Repetitive Tasks

Business process modeling gives companies the ability to identify tasks that are repetitive and can be automated. Through modeling, each stage of a process can be represented clearly, allowing companies to recognize tasks that are performed repeatedly in daily operations. These tasks often consist of routine activities that require a high degree

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of consistency and accuracy, such as processing forms, sending notifications, or other administrative tasks.

Process automation is the next logical step after identifying these repetitive tasks. By leveraging technology and information systems, companies can automate the execution of these tasks. Automation brings significant benefits, one of which is reducing the manual workload. Repetitive and routine tasks can be performed by the system, allowing employees to focus on activities that require creative thinking, analysis, or strategic decisions.

Another advantage of process automation is increased accuracy. Machines and automated systems tend to have lower error rates than human work that requires a high level of consistency. This helps reduce the risk of human error that can arise in repetitive tasks. In addition, automation can speed up operations, ensuring that business processes can be completed more quickly and efficiently. Overall, business process modeling and automation are a powerful tandem for increasing company efficiency. Modeling paves the way for the identification of tasks that can be automated, while automation provides practical solutions to reduce manual workload, increase accuracy, and speed up the running of operations, all of which together contribute to greater company efficiency and productivity.

Better Risk Management

Business process modeling is an important tool for companies in identifying and evaluating potential risks that may arise in their operations. By detailing each step in a process, companies can identify potential pain points and threats that may arise during implementation. These risks can cover various aspects, such as delays in production, system failures, or information security issues. Modeling provides a clearer picture of the interconnections between processes and the areas that may be the focus of risk.

With a better understanding of the process, companies can take informed preventative steps to reduce the potential negative impact of these risks. These steps may include the introduction of stricter internal controls, implementation of stronger security protocols, or even diversification of processes to reduce the risk of dependency on one operational channel. Business process modeling also allows companies to evaluate the level of risk associated with each process stage, prioritizing risks based on the impact and probability of occurrence, so that companies can develop more targeted and effective risk management strategies.

Furthermore, business process modeling helps companies to identify potential risks that may emerge over time. As part of a risk management strategy, companies can continually update and optimize their modeling to reflect changes in business conditions or the external environment that may affect risk levels. Thus, business process modeling not only serves as a risk identification tool, but also as a foundation for dynamic and proactive risk management. With in-depth understanding and good planning, companies can minimize the negative impact of risks and maintain the resilience of their operations.

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Improved Team Coordination

Business process modeling is not just about the visual representation of workflows, but also creating a clear and shared view of tasks and responsibilities for team members in the context of the company's overall operational processes. With this modeling, each step and link in the process becomes visible, giving team members a deeper understanding of the contribution of each part to achieving a common goal. This creates a holistic and coordinated view, which is essential to avoid ambiguity and uncertainty in the execution of daily tasks.

With a clear understanding of the roles and responsibilities of each team member in the context of the overall process, team coordination can be more effective. Team members can work together more synergistically, because they understand how their individual contributions support overall company goals. Process modeling creates a framework that provides a holistic picture, allowing each team member to see the relationships between parts, the time required for each stage, and how their work contributes to the end result.

Business process modeling also increases the effective involvement of team members in achieving company goals. With a better understanding of the impact of their work on the overall process, team members can feel more connected to the organization's goals. This not only motivates them to work more effectively, but also creates a sense of ownership of the process and end result. Thus, process modeling is not only a communication tool, but also a catalyst for creating a work culture focused on collaboration, common goals and achieving company success.

Quick Adaptation to Change

A deep understanding of business processes is the key to increasing a company's readiness and adaptability to changing business conditions and market needs. By breaking down each step in operations, companies gain a more detailed view of how each element interacts. This creates a strong foundation for identifying areas that require adjustments or strategic changes in response to evolving market dynamics.

A better understanding of business processes allows companies to respond more quickly to change. Companies that have high visibility into their operations can quickly identify emerging opportunities or risks. This deep understanding allows management to make faster and more timely decisions, because they have a better understanding of the impact of each decision on the entire business process. For example, when there is a change in market demand or a new technological breakthrough, a company that understands its business processes well can design and implement adaptation strategies more quickly and more effectively.

Business process modeling also creates a framework that allows a company to continuously monitor and evaluate its operational performance. With a better understanding of how processes can be optimized or adjusted, companies can proactively respond to changing market needs or emerging business dynamics. This understanding provides a competitive advantage because a company can adapt more quickly than its competitors, maintaining competitiveness and relevance in an ever-changing business environment.

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Overall, a better understanding of business processes not only provides an advantage in responding to changing business conditions and market needs, but also creates the foundation for innovation, efficiency and better employee engagement. By having a clear picture of their operations, companies can move faster, make better decisions, and remain relevant players in a dynamic marketplace.

CONCLUSION

Business process modeling plays a crucial role in increasing a company's efficiency and adaptability to changing business conditions and market needs. A deep understanding of business processes provides the foundation for identifying inefficiencies, operational optimization and more effective risk management. By analyzing and documenting each step in a process, companies can identify and address potential problems and adjust strategies more quickly and accurately. Business process modeling also creates clear visibility into the duties and responsibilities of each team member, facilitating better coordination and more effective engagement. Additionally, a better understanding of processes allows companies to identify and automate repetitive tasks, reducing manual workload, increasing accuracy, and speeding up overall operations. A better understanding of business processes also provides an advantage in improving the quality of products and services, as well as creating more informed and responsive decisions. By looking at processes holistically, companies can identify points of improvement that can increase customer satisfaction and company reputation. Business process modeling is not only a tool for operational documentation, but also a catalyst for continuous improvement, innovation and adaptation. With a better understanding of business processes, companies can position themselves to be more responsive, efficient, and competitive in an ever-changing business environment.

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