

The Role of Digital Solutions in Enhancing Organizational Efficiency

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Abstract

As businesses experience a substantial growth in data volumes, effectively managing this information while maintaining operational efficiency has become increasingly challenging. A direct consequence of this is the excessive time spent on automating repetitive processes, which, if left unaddressed, can lead to inefficiencies, errors, and wasted resources. To address these concerns, organizations are turning to advanced digital solutions that not only improve data management but also streamline operations and reduce the burden of manual, repetitive tasks. This paper, through a review of existing literature, focuses on identifying and analyzing the most effective information systems designed to enhance organizational efficiency. Specifically, this research will center around three key digital solutions: Customer Relationship Management (CRM) systems, Enterprise Resource Planning (ERP) systems, and Project Management platforms. These systems have been selected due to their distinct yet complementary roles in enhancing various operational facets within an organization.

Keywords: Operational efficiency, Business processes, Automation, Data management, Resource optimization

JEL Classification: M15, O32, L86

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1. Introduction

Process optimization has long been a cornerstone of organizational efficiency, focusing on refining workflows to reduce waste, improve resource allocation, and streamline operations. In the digital age, this optimization takes on

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new dimensions, driven by the ability of digital tools to integrate and automate processes across an organization. Digital solutions transform the way tasks are managed by centralizing data, facilitating real-time communication, and creating more efficient workflows that reduce manual intervention and errors. This shift from isolated, manual processes to interconnected, automated systems creates a more cohesive operational structure, where inefficiencies are rapidly identified and corrected. As organizations navigate increasingly complex environments, digital solutions have become essential tools for enhancing operational efficiency and achieving strategic goals. These technologies are not merely aimed at automating tasks or reducing manual errors, but at transforming how organizations manage resources, coordinate activities, and respond to market demands. Digital systems integrate diverse business functions, creating a unified framework that allows for better decision-making, real-time process optimization, and improved alignment between operations and broader organizational objectives.

By leveraging these digital tools, companies can move beyond traditional efficiency models that focus on cost reduction and output maximization, towards more dynamic capabilities that enable adaptability, resilience, and sustained growth. These solutions provide the infrastructure for streamlining workflows, centralizing data, and fostering a more collaborative, responsive organizational environment. In doing so, they lay the groundwork for the adoption of more specialized tools that can further refine operations and strengthen competitive advantage. As we delve deeper into these technologies, we will explore how specific systems are designed to address key organizational challenges, setting the stage for long-term strategic success.

Furthermore, as organizations adopt digital solutions, the integration of systems such as CRM, ERP, and project management tools has become a key factor in effectively managing complex, cross-functional processes. These tools enhance real-time communication and decision-making, while also aligning various departments with common strategic objectives, ensuring smoother operations and greater adaptability to market fluctuations. For example, ERP systems improve resource management and supply chain transparency, while CRM platforms enable businesses to gain deeper insights into customer needs and behaviors (Lavanya et al., 2024). As these technologies evolve, they not only enhance operational efficiency but also provide the foundation for innovation and long-term competitiveness.

2. Literature review

Organizational efficiency is a fundamental concept in management studies, referring to the optimal use of resources to achieve maximum output. However, it is often conflated with related terms such as effectiveness and efficaciousness. A precise understanding of these distinctions is essential for analyzing how digital solutions enhance organizational performance, particularly in balancing resource optimization with strategic goal achievement.

Zidane and Olsson (2017) provide a nuanced distinction between the three concepts. Efficaciousness refers to possessing the potential or capacity to achieve

desired outcomes, but without the certainty of success. Effectiveness is the actual realization of those outcomes, where objectives are met. In contrast, efficiency pertains to the minimization of waste in resource utilization, focusing on the execution of tasks in the most competent manner. This framing highlights that while effectiveness evaluates the end results, efficiency is concerned with the optimization of processes leading to those results.

This distinction is further reinforced by Bartuševičienė and Šakalytė (2013), who argue that efficiency and effectiveness, while both integral to organizational performance, are distinct in their scope. Efficiency focuses on the transformation of inputs into outputs, emphasizing resource conversion and operational productivity. Conversely, effectiveness evaluates the broader alignment of outputs with strategic organizational goals, considering how these outputs interact with external social and economic factors. This highlights the critical point that an organization may operate efficiently without necessarily being effective, particularly if its processes do not align with its long-term objectives. Building on this, Najjar (2020) adds that while efficiency often emphasizes short-term gains through cost and resource reduction, effectiveness entails selecting the appropriate methods to ensure sustainable and impactful outcomes. This perspective shifts the conversation towards the long-term implications of organizational strategies, suggesting that efficiency-driven approaches can lead to suboptimal results if not paired with an equal focus on effectiveness. Thus, while digital solutions primarily aim to enhance efficiency by streamlining processes and reducing costs, their broader value lies in their potential to contribute to organizational effectiveness by enabling strategic agility and adaptability.

Organizational efficiency is a multidimensional concept, shaped by the interplay of context, values, and strategic priorities. Georgopoulos and Tannenbaum (1957) argue that the criteria for defining efficiency can vary significantly depending on the perspectives of stakeholders, such as management and labor. This suggests that efficiency is not merely a technical or operational measure but one influenced by the political and social dynamics within organizations. When efficiency is defined solely from a management perspective, it may prioritize cost reduction and productivity. However, from a labor viewpoint, efficiency might be seen through the lens of fair resource allocation or the quality of work conditions. This highlights that efficiency is contextually bound and often shaped by competing interests within the organization, complicating attempts to define it universally. Ghemawat and Ricart (1993) extend this complexity by differentiating between two forms of efficiency: *static* and *dynamic*. Static efficiency focuses on refining existing processes and resources, aligning with a traditional understanding of maximizing productivity while minimizing waste. In contrast, dynamic efficiency emphasizes innovation and adaptability, crucial for long-term organizational growth and competitiveness. The challenge for organizations is to strike a balance between these two forms of efficiency—maintaining high performance in current operations while investing in future capabilities. This tension reflects a broader strategic dilemma, where focusing too narrowly on static efficiency may limit the organization's ability to respond to

market changes or innovate effectively. The role of digital transformation is particularly relevant in this context. Zhang et al. (2022) discuss how advancements in technology, such as 5G and artificial intelligence, are reshaping organizational efficiency by enabling both operational improvements and fostering innovation. These technologies allow firms to automate routine tasks and streamline processes, directly enhancing static efficiency. Simultaneously, they create new possibilities for dynamic efficiency, allowing organizations to innovate, adapt to market shifts, and develop new business models. The digital transformation, therefore, serves as a bridge between static and dynamic efficiency, allowing organizations to optimize their current operations while building the flexibility and agility required for future challenges.

3. Digital solutions in business processes

Digital management systems have the capacity to enhance business efficiency by integrating various functional areas into a unified framework. These systems typically include multiple modules—such as finance, human resources, sales, inventory, and customer relationship management—that, when combined, form what is known as a "solution" (Lavanya et al., 2024). This collective system fosters improved coordination across departments, enabling seamless data flow and real-time communication between traditionally separate business functions. By integrating these processes, organizations can reduce operational inefficiencies, minimize redundancies, and enable faster, more precise decision-making. For instance, linking sales data with inventory management ensures that stock levels are dynamically adjusted based on actual demand, while the integration of human resources and supply chain operations allows for better workforce planning in alignment with operational needs. Such digital solutions not only reduce the need for manual data entry and mitigate the risk of errors but also create an interconnected business environment that aligns day-to-day activities with long-term strategic objectives.

For instance, the implementation of Customer Relationship Management (CRM) systems significantly enhances the efficiency of internal capital allocation by providing a structured, data-driven approach to managing customer interactions and financial decisions. CRM systems consolidate customer data, offering managers detailed insights into sales patterns, customer preferences, and long-term value. This granular level of information allows organizations to make more informed decisions about where to allocate financial resources, ensuring that capital is directed toward the most profitable customer segments and strategic opportunities. Cheng et al. (2024) argue that CRM implementation is positively related to internal capital market efficiency, as it enables companies to better align their financial investments with customer needs and market trends. This alignment not only optimizes resource distribution but also mitigates the risk of misallocating capital, thus ensuring that the organization's financial and operational strategies are in sync, ultimately contributing to improved overall business performance.

The concept of Customer Relationship Management (CRM) originated within the information technology (IT) and practitioner communities during the mid-1990s, primarily in response to the growing need for more efficient, technology-driven customer engagement strategies. Initially, CRM was closely associated with technology solutions like Sales Force Automation (SFA), which helped businesses streamline sales processes and improve customer interactions. However, CRM has evolved beyond its early technological focus to encompass a broader approach, often referred to as “information-enabled relationship marketing” (Payne & Frow, 2005). This definition highlights CRM’s strategic role in leveraging data to build and sustain meaningful relationships with customers. By utilizing technology to gather, analyze, and apply customer information, organizations are able to enhance customer loyalty, optimize marketing efforts, and align their business strategies more closely with customer needs. CRM, therefore, acts as both a technological and strategic tool, enabling companies to deepen customer relationships while simultaneously driving organizational efficiency and competitive advantage. CRM has evolved into a comprehensive enterprise approach aimed at understanding and influencing customer behavior through meaningful, data-driven communication strategies. According to Swift (2000), the goal of CRM is to improve key customer-related outcomes such as acquisition, retention, loyalty, and profitability. By leveraging insights gained from customer interactions, businesses are able to craft more personalized and relevant communication, enhancing the overall customer experience. This approach enables firms not only to attract new customers but also to foster long-term relationships with existing ones, thereby increasing customer lifetime value. Through CRM systems, organizations can continuously adapt their strategies to customer needs and preferences, ensuring sustained engagement and profitability across various customer segments.

CRM has established itself as a pivotal technological tool in modern business management, gaining rapid adoption due to its ability to significantly improve return on investment (ROI). Its implementation allows businesses to optimize customer interactions, streamline processes, and leverage data for better decision-making. Guerola-Navarro et al. (2021) emphasize that CRM’s effectiveness in aligning customer strategies with organizational goals has contributed to its status as one of the fastest-growing solutions in the technological space.

By adopting an integrated approach, businesses can significantly enhance their internal processes, improving coordination between teams, fostering better communication, and minimizing unnecessary duplication of tasks. This results in notable time savings and boosts overall efficiency. Nguyen (2024) points out that systems like CRM, when used as a centralized tool, enable more effective tracking of project progress and streamline operations, allowing for smoother management of tasks and resources.

Robert (2024) emphasizes that modern CRM systems are more than just operational tools and they integrate critical business functions such as sales automation, marketing, customer service, and analytics into a unified platform, driving both efficiency and strategic decision-making. Sales automation enhances

forecasting and aligns efforts with market demand, while marketing automation allows for personalized, data-driven customer engagement. The customer service features streamline support and problem resolution, improving customer satisfaction. Additionally, analytics provide actionable insights, enabling continuous optimization of business strategies. The integration of social CRM further modernizes these systems by connecting customer engagement with real-time brand monitoring, making CRM essential for both operational efficiency and long-term business success.

Extending beyond the customer-centric focus of CRM, the integration of Enterprise Resource Planning (ERP) systems shifts the focus toward optimizing internal resources and operational processes within an organization. While CRM enhances customer interactions and drives external engagement, ERP systems tackle the internal complexities of managing cross-departmental functions, such as finance, production, and supply chain management. This transition from external to internal optimization highlights how businesses can achieve holistic efficiency by aligning both customer relationships and core operational systems through digital solutions. ERP systems, first conceptualized by Wylie in 1990, emerged as a natural evolution of earlier planning systems like MRP, offering integrated modular applications that improve process transparency and resource utilization (Jacobs & Weston, 2006). By providing real-time data visibility across functions, ERP enables businesses to streamline inventory management, reduce lead times, and improve coordination across the supply chain (Weerasekera & Gooneratne, 2023). The ability to monitor and optimize internal operations ensures that organizational workflows are not only efficient but also highly adaptable, thus allowing businesses to respond quickly to fluctuations in demand and supply.

Moreover, the impact of ERP systems extends beyond operational improvements, fostering collaboration and enhancing data accuracy across the organization. Vukman et al. (2024) emphasize that the accessibility of critical information through ERP systems promotes interdepartmental collaboration, as teams can work from a unified data source, ensuring consistency and reducing errors. This enhanced collaboration, combined with remote access to real-time information, accelerates decision-making and allows businesses to meet customer needs more efficiently. By aligning internal processes with broader strategic goals, ERP systems play a crucial role in driving long-term competitiveness and operational excellence.

As organizations streamline customer relationships through CRM and optimize internal processes with ERP systems, the need for precise coordination and execution of specific initiatives becomes increasingly vital. This is where project management tools come into play, ensuring that the strategic insights and efficiencies gained from CRM and ERP are effectively translated into actionable, well-coordinated projects. By managing timelines, resources, and team collaboration, project management tools ensure that the operational and strategic gains achieved through these broader systems are fully realized within the specific tasks and objectives of day-to-day operations.

Project management, as outlined in the PMBOK Guide (2021), involves the application of knowledge, skills, tools, and techniques to achieve specific project objectives within defined time, cost, and quality constraints. A project is inherently temporary, with a clear beginning and end, and aims to deliver a unique product or service. Given the complexity and uniqueness of each project, particularly in large-scale initiatives, selecting the right project management software becomes essential. These tools enable efficient handling of vast amounts of data, supporting critical functions such as decision-making, procurement, and stakeholder management (Jara, 2024). Additionally, project management tools foster effective collaboration, whether in remote or face-to-face settings, ensuring that tasks are coordinated seamlessly across teams (Chasanidou et al., 2016).

The evaluation of project teams hinges on three key dimensions: performance, effectiveness, and satisfaction. Performance is frequently assessed based on the customer's acceptance of the project deliverables, though it can also be measured by the team's own perception of their success, reflecting the mediating processes that shape internal assessments (Weimann et al., 2013). Effectiveness, closely tied to performance, is defined as the extent to which the team achieves its defined goals and objectives. This dual focus on external validation (customer acceptance) and internal reflection (team perception) highlights the complex interplay between objective results and subjective team dynamics. The integration of appropriate technological tools further enhances this performance, especially in virtual teams, by improving communication and collaboration, thus facilitating both the achievement of project goals and the overall satisfaction of team members.

The shift to geographically distributed teams, enabled by the rise of the Internet and collaborative software, has transformed project management by introducing complex dynamics tied to diversity in skills, knowledge, and culture. This diversity can enhance innovation but also poses challenges in maintaining clear communication, ensuring visibility of work progress, and fostering effective cooperation across locations (Seerat et al. 2013). The essence of project management software lies in its ability to foster collaboration, which is fundamental to driving innovation. As Conaldi et al. (2024) suggest, while geographical proximity has traditionally been seen as vital for collaboration, modern virtual spaces reveal a different reality. The key factors that truly enable collaboration are not physical closeness but rather organizational structures and institutional alignment. In this context, project management tools become essential for creating a framework that transcends distance, ensuring that teams can work cohesively regardless of location.

4. Future trends in digital solutions

As organizations continue to adopt digital solutions, emerging trends indicate a deeper integration of AI and automation across both customer-facing systems and internal operations. AI-driven innovations are poised to play a significant role in the future of digital systems, with advancements in areas such as predictive analytics, machine learning, and automated decision-making already

setting the stage. These trends are increasingly apparent in systems like CRM, where AI-driven features such as sentiment analysis, predictive customer behavior models, and chatbots will evolve further, offering deeper personalization and more autonomous customer interactions (Robert, 2024). The future points toward more seamless omnichannel experiences, integrating social media and real-time engagement platforms, enabling businesses to anticipate customer needs and respond instantly. Additionally, mobile and cloud-based CRM solutions are expected to expand, offering greater flexibility and real-time access to critical data from any location, further supporting remote and hybrid work environments.

In the realm of collaborative workspaces, AI-driven bots are forecasted to become even more sophisticated, moving beyond simple task automation to advanced recommendation systems that can guide project development and decision-making processes (Zhang et al., 2024). As AI algorithms continue to advance, these bots will likely evolve to provide real-time solutions to complex problems, enhancing the productivity of virtual and distributed teams. The future of digital solutions is heading towards more intelligent, self-optimizing systems, where AI not only streamlines workflows but also enables predictive and adaptive decision-making.

Trends in CRM, ERP, and Project Management systems

Table 1

Digital Solution	Key Trends	Impact/Opportunities
CRM (Customer Relationship Management)	AI-Driven Personalization Omnichannel Integration Mobile & Cloud-Based Solutions	<ul style="list-style-type: none"> - Improved customer retention through deeper, real-time personalization. - Unified customer experience across multiple channels. - Increased flexibility and access for remote and hybrid workforces, enhancing productivity.
ERP (Enterprise Resource Planning)	AI-Enhanced Decision Making Predictive Analytics IoT Integration	<ul style="list-style-type: none"> - More accurate resource allocation and demand forecasting. - Reduced operational inefficiencies through predictive insights into supply chain and financial trends. - Real-time data integration for more responsive business operations.
Project Management	AI-Powered Automation Advanced Bot Integration Collaborative Platforms with Predictive Insights	<ul style="list-style-type: none"> - Enhanced project execution efficiency through automated task scheduling and resource management. - Improved decision-making with AI-driven recommendations and risk assessments. - Greater collaboration and coordination in remote teams, boosting overall project success rates.

Source: Created by the co-authors based on the analysis of relevant literature.

5. Methodology

The study employed a literature review approach to examine the impact of digital solutions on organizational efficiency and effectiveness, with a focus on Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), and Project Management tools. The literature review aimed to synthesize existing research on these topics, drawing connections between theoretical insights and practical applications in business environments.

To ensure comprehensive coverage of relevant studies, we used several key terms in our search strategy, including "Organizational Effectiveness and Efficiency," "CRM," "ERP," "Project Management," "Digital Solutions," "Collaborative Software," "Process Optimization," and "Business Processes." Additionally, we incorporated related terms such as "Operational Performance," "Technology Integration," "AI in Business Processes," and "Automation in Management" to capture a wider range of studies on digital transformation and its impact on organizational outcomes. These keywords were applied across multiple academic databases, including but not limited to Google Scholar, Scopus, SpringerLink Journals and Emerald Management EJournals.

We prioritized papers that explored both theoretical frameworks and empirical evidence, aiming to capture a balanced perspective on how digital solutions are being implemented across various industries.

Conclusions

Digital solutions, such as CRM, ERP, and project management tools, have become indispensable in enhancing organizational efficiency by automating processes, improving decision-making, and fostering collaboration. These technologies offer numerous benefits, including increased resource optimization, real-time data access, and strategic alignment across business functions. However, while digital tools drive efficiency, their effectiveness largely depends on the integration of organizational strategy and adaptability to dynamic market conditions. It is clear that CRM systems, while improving customer relations, also play a significant role in internal capital allocation. Similarly, ERP systems offer comprehensive resource management capabilities, but their success hinges on seamless integration with operational workflows. Project management tools, which enable coordination and task execution, are essential for ensuring that strategic goals translate into actionable tasks.

However, a critical challenge lies in balancing efficiency with innovation. While digital solutions can streamline current operations, organizations must not lose sight of the need for flexibility and dynamic adaptation to new market realities. The overemphasis on static efficiency risks stagnation and limits the potential for long-term growth. Thus, future implementations of digital tools must focus on integrating flexibility, enabling organizations to respond to evolving business environments while maintaining operational excellence.

Ultimately, the future of digital solutions lies in the further integration of AI and predictive analytics, which will enable more autonomous decision-making and greater adaptability. Organizations that embrace these technologies will be better positioned to not only achieve operational efficiency but also sustain competitive advantage in an increasingly digital world.

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