International Journal of Engineering Applied Science and Management
ISSN (Online): 2582-6948
Vol. 7 Issue 11, November 2026

The Impact of Agentic AI on ERP and CRM Systems: A Theoretical Framework for Enhancing Intelligent Automation, Decision-Making, and Enterprise Agility

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Abstract:

The emergence of Agentic Artificial Intelligence (Agentic AI) is transforming enterprise information systems by enabling AI agents to autonomously perceive business environments, reason over complex information, make decisions, and execute actions with limited human intervention. This research examines the potential impact of Agentic AI on Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems and proposes a theoretical framework for enhancing intelligent automation, organizational decision-making, and enterprise agility. Unlike conventional automation and predictive AI, agentic systems can coordinate multi-step tasks across business processes, dynamically respond to changing conditions, and interact with enterprise data and applications to achieve defined business objectives. The study adopts a qualitative research approach based on a literature review and analysis of relevant industry and organizational cases. The proposed framework integrates Agentic AI capabilities with ERP and CRM processes across key dimensions, including autonomous process execution, intelligent decision support, cross-functional coordination, real-time adaptation, and continuous learning. The framework further emphasizes governance, human oversight, data security, interoperability, and accountability to address the operational and organizational risks associated with autonomous AI adoption. The study argues that the integration of Agentic AI with ERP and CRM platforms can reduce manual effort, improve decision responsiveness, enhance customer engagement, and strengthen enterprise agility. However, realizing these benefits requires organizations to establish appropriate governance mechanisms, reliable data foundations, clear human-AI accountability, and controlled levels of autonomy. The research contributes a conceptual foundation for understanding how Agentic AI can evolve ERP and CRM systems from primarily transactional platforms into adaptive, intelligent, and action-oriented

enterprise environments.

Keywords: Agentic AI; Enterprise Resource Planning (ERP); Customer Relationship Management (CRM); Intelligent Automation; Enterprise Agility

1. Introduction

The rapid advancement of Artificial Intelligence (AI) is reshaping the way organizations manage business processes, information, and decision-making. Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems have traditionally served as the technological foundation for integrating organizational data and coordinating core business activities. ERP platforms support functions such as finance, procurement, supply chain, manufacturing, human resources, and operations, while CRM platforms manage customer interactions, sales, marketing, and service activities. Although these systems have significantly improved data visibility and process standardization, many enterprise processes still depend on predefined workflows, rule-based automation, manual intervention, and human interpretation. The emergence of Agentic AI introduces the possibility of moving beyond conventional automation toward systems capable of reasoning, planning, coordinating tasks, and autonomously executing actions across enterprise environments.

Agentic AI refers to AI systems that can pursue defined objectives by perceiving their environment, reasoning about available information, planning multi-step activities, using digital tools, and adapting their actions based on changing circumstances. This capability distinguishes agentic systems from traditional software automation, which generally executes predefined instructions, and from conventional AI applications that primarily generate predictions, classifications, or recommendations. In an enterprise context, AI agents can potentially interact with ERP and CRM applications, retrieve and interpret organizational data, identify exceptions, initiate workflows, communicate with users or other systems, and take appropriate actions within predefined boundaries. Consequently, Agentic AI has the potential to transform ERP and CRM platforms from primarily transactional and information-management systems into more adaptive, intelligent, and action-oriented enterprise environments.

The significance of this transformation is particularly evident in the increasing complexity and speed of modern business operations. Organizations operate across interconnected markets, distributed supply chains, digital customer channels, and rapidly changing regulatory and technological environments. Decision-makers are therefore required to process large volumes of structured and unstructured information while responding quickly to operational disruptions, customer requirements, market changes, and emerging risks. Traditional ERP and CRM environments can provide extensive data and analytical capabilities, but the responsibility for interpreting information and initiating many subsequent actions often remains with employees. Agentic AI could reduce this gap by connecting information, reasoning, and action within a unified intelligent workflow. For example, an AI agent could identify a significant change in customer demand, analyze inventory and sales information through an ERP system, assess customer priorities through a CRM platform, and recommend or initiate appropriate actions subject to organizational controls.

The integration of Agentic AI with ERP systems may particularly influence enterprise resource allocation, financial management, procurement, supply chain coordination, and operational planning. Rather than simply reporting that inventory levels have fallen below a predefined threshold, an intelligent agent could evaluate demand patterns, supplier performance, current purchase orders, lead times, and business priorities before determining whether replenishment is required. Similarly, within financial processes, an agent could identify unusual transactions, gather relevant information, initiate verification procedures, and escalate exceptions to authorized personnel. Such capabilities could enable ERP environments to become more responsive and context-aware while reducing repetitive administrative activities. However, the degree of autonomy assigned to AI agents remains a critical consideration because enterprise actions can have financial, operational, legal, and reputational consequences.

CRM systems present another important area for Agentic AI adoption. Customer interactions increasingly occur across multiple channels, generating substantial amounts of behavioral, transactional, and conversational data. Conventional CRM systems consolidate this information and provide tools for customer segmentation, sales management, marketing automation, and service operations. Agentic AI can potentially extend these capabilities by allowing AI agents to interpret customer context, coordinate activities across sales and service processes, personalize interactions, identify opportunities, and execute routine customer-related actions. For instance, an agent may recognize that a customer has experienced repeated service issues, review the customer's history, coordinate with relevant internal teams, and initiate an appropriate response within established organizational policies. This creates the possibility of more continuous and proactive customer relationship management rather than interactions that are primarily triggered by predefined events or manual decisions.

A major implication of Agentic AI integration is its potential effect on organizational decision-making. ERP and CRM systems contain valuable enterprise data, but data availability alone does not guarantee effective decisions. Organizations must transform information into meaningful insights and then translate those insights into timely actions. Agentic AI can potentially bridge these stages by combining data retrieval, reasoning, planning, recommendation, and execution. This creates a progression from data → insight → decision → action, in which AI agents may participate across multiple stages. Such a model could improve decision responsiveness and reduce delays associated with transferring information between departments. At the same time, autonomous decision-making introduces questions regarding transparency, explainability, accountability, and the appropriate role of human judgment. Enterprise leaders must therefore determine which decisions can safely be delegated to AI agents and which require human authorization.

Enterprise agility is another important dimension of this transformation. Agility refers to an organization's ability to respond rapidly and effectively to changes in its internal and external environment. Conventional ERP implementations have often emphasized process consistency, standardization, and centralized control, while CRM platforms have focused on structured management of customer-related activities. These characteristics remain important, but highly dynamic business

environments increasingly require organizations to adapt processes in real time. Agentic AI could contribute to this capability by continuously monitoring business conditions, identifying emerging changes, adjusting plans, and coordinating responses across functional boundaries. Consequently, ERP and CRM systems integrated with agentic capabilities may support a more adaptive operating model in which organizations can respond to disruptions and opportunities without relying entirely on lengthy manual decision chains.

Despite these potential benefits, Agentic AI also introduces significant technological, organizational, and governance challenges. Autonomous agents require access to enterprise data, applications, APIs, workflows, and potentially sensitive customer and financial information. Poorly governed access could result in unauthorized actions, privacy violations, inaccurate decisions, or cascading operational errors. The probabilistic nature of advanced AI systems also creates challenges related to reliability and consistency. Furthermore, organizations must address issues of data quality, system interoperability, cybersecurity, model oversight, auditability, and human accountability. The central challenge is therefore not simply whether AI agents can perform enterprise tasks, but how organizations can establish appropriate boundaries within which agents can operate safely and effectively.

These considerations demonstrate the need for a structured conceptual approach to integrating Agentic AI with ERP and CRM systems. Existing enterprise AI research has extensively examined intelligent automation, predictive analytics, robotic process automation, machine learning, and generative AI. However, Agentic AI introduces a distinct emphasis on autonomous goal-oriented action and multi-step coordination. This creates a need to examine how agentic capabilities can be incorporated into enterprise systems while maintaining appropriate governance and human oversight. A theoretical framework can help organizations understand the relationship between agent autonomy, intelligent automation, decision support, cross-functional coordination, and enterprise agility while also recognizing the risks associated with autonomous execution.

Accordingly, this research investigates the impact of Agentic AI on ERP and CRM systems, with particular emphasis on its role in enhancing intelligent automation, decision-making, and enterprise agility. The study adopts a qualitative approach based on a review of relevant academic literature and analysis of applicable industry and organizational cases. It develops a theoretical framework that conceptualizes Agentic AI as an intelligent layer capable of interacting with ERP and CRM systems, enterprise data, business workflows, and human decision-makers. The framework emphasizes five interconnected dimensions: autonomous process execution, intelligent decision support, cross-functional coordination, adaptive responsiveness, and governance with human oversight. Through these dimensions, the study seeks to explain how agentic capabilities can extend the strategic value of ERP and CRM systems beyond conventional automation.

The research contributes to the emerging discussion on AI-enabled enterprise transformation by positioning Agentic AI not merely as an additional automation technology, but as a potential mechanism for creating more adaptive and intelligent organizational processes. It highlights the opportunities for reducing repetitive work, accelerating decisions,

improving coordination, and strengthening customer and operational responsiveness, while recognizing that autonomy must be balanced with governance, accountability, security, and human control. The proposed framework therefore provides a theoretical foundation for organizations, researchers, and technology leaders seeking to understand how Agentic AI can be integrated responsibly into ERP and CRM environments and how such integration may contribute to the development of more intelligent, responsive, and agile enterprises.

2. Background of Research Study

The evolution of enterprise information systems has been closely associated with organizations' efforts to integrate business processes, improve information visibility, and support effective decision-making. Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems have become central components of this transformation. ERP systems integrate core organizational functions such as finance, procurement, inventory, supply chain, manufacturing, human resources, and operations, while CRM systems focus primarily on managing customer information, sales activities, marketing processes, and service interactions. Together, these systems provide organizations with structured repositories of operational and customer data and enable coordination across multiple business functions.

The development of ERP systems represented a significant transition from fragmented departmental applications toward integrated enterprise-wide platforms. Earlier business systems typically operated within functional silos, requiring organizations to transfer information manually between departments. ERP platforms addressed this limitation by integrating business processes and maintaining shared data across organizational functions. This integration improved process standardization, reporting, transaction processing, and organizational visibility. However, traditional ERP environments generally depend on predefined workflows, business rules, and user-initiated actions. Although modern ERP platforms increasingly incorporate analytics, cloud technologies, machine learning, and automation, many decisions and exceptions continue to require human involvement.

CRM systems developed alongside the increasing recognition that customer information should be treated as a strategic organizational resource. Modern CRM platforms enable organizations to consolidate customer records, monitor interactions, manage sales pipelines, support marketing activities, and coordinate customer service. The integration of CRM data with other enterprise systems has further improved organizations' ability to understand customer behavior and coordinate customer-facing processes. Nevertheless, conventional CRM automation frequently remains event-driven or rule-based. Automated notifications, lead assignments, customer segmentation, and workflow triggers can execute predefined activities, but they generally lack the ability to independently reason about complex situations and determine an appropriate sequence of actions.

The emergence of Artificial Intelligence has gradually changed these limitations. AI technologies have been incorporated into ERP and CRM environments to support forecasting, anomaly detection, recommendation systems, natural language interaction, predictive analytics,

and intelligent process automation. Machine learning can identify patterns in historical data, while natural language processing can enable systems to interpret text and conversational inputs. Generative AI has further expanded enterprise capabilities by enabling systems to produce natural-language content, summarize information, answer questions, and assist employees with knowledge-intensive tasks. These developments represent a progression from traditional rule-based automation toward increasingly intelligent forms of enterprise assistance.

However, generative and conventional AI systems do not necessarily provide autonomous end-to-end execution. In many applications, AI generates an insight, recommendation, or response, after which a human employee determines whether and how to act. Agentic AI introduces a further development by combining AI reasoning capabilities with planning, tool use, memory or contextual information, and the ability to execute actions toward defined objectives. An agent can potentially interpret a business goal, break it into multiple tasks, interact with enterprise applications, evaluate intermediate results, and modify its approach when circumstances change. This creates an important distinction between AI-assisted work and AI-enabled autonomous work.

Within ERP environments, this distinction has potentially significant implications. A conventional system may identify that a supplier delivery is delayed and display the relevant information to a procurement employee. An AI-enabled system may predict the likelihood of a supply disruption and recommend alternative suppliers. An agentic system could potentially go further by evaluating available suppliers, checking contractual conditions, communicating with relevant systems, preparing a revised purchase order, and submitting the transaction for approval according to predefined authorization policies. The objective is not simply to automate one task but to coordinate a sequence of related activities based on a business objective.

A similar transformation can occur within CRM systems. Traditional CRM automation may assign a new lead to a salesperson or send a predefined follow-up message. AI-powered CRM capabilities may score the lead, predict conversion probability, or generate personalized communication. Agentic AI could potentially coordinate a broader customer-management process by interpreting customer history, identifying an appropriate engagement strategy, preparing communications, scheduling follow-ups, updating CRM records, and escalating complex cases to human employees. Such capabilities could make CRM systems more proactive and context-sensitive while reducing the administrative burden placed on sales and service teams.

The growing complexity of enterprise environments provides an important background for examining these developments. Organizations increasingly operate through interconnected digital platforms, cloud services, application programming interfaces (APIs), external partners, digital customer channels, and data ecosystems. Business processes therefore extend beyond the boundaries of individual applications. A procurement decision, for example, may require information from an ERP system, supplier databases, financial systems, inventory platforms, and external market information. Similarly, customer service decisions may require information from CRM systems, order-management applications, billing platforms, logistics systems, and communication channels. Agentic AI has the potential to operate across these

interconnected environments by coordinating information and actions among different systems.

This development also creates new possibilities for enterprise decision-making. ERP and CRM systems contain substantial amounts of organizational data, but the value of that data depends on the organization's ability to interpret it and respond appropriately. Traditional reporting mechanisms generally provide information after an event has occurred, while predictive systems attempt to anticipate future conditions. Agentic AI introduces the possibility of combining observation, reasoning, prediction, planning, and action within a continuous decision process. In such an environment, AI agents could monitor enterprise conditions, identify relevant changes, evaluate possible responses, and initiate authorized actions. This could shorten the time between the identification of a business issue and the implementation of a response.

Enterprise agility provides another important dimension of the research background. In rapidly changing markets, organizations must adapt their operations to changes in customer expectations, supply conditions, competition, regulations, and technological developments. Highly rigid processes can create delays because changes often require manual intervention or modifications to predefined workflows. Agentic AI could potentially support greater agility by enabling enterprise systems to respond dynamically to changing conditions. Instead of relying exclusively on static rules, agents may evaluate context and determine which actions are appropriate within established organizational boundaries.

At the same time, increasing autonomy creates challenges that are different from those associated with conventional automation. ERP and CRM systems manage sensitive information and execute processes that can have significant financial, operational, and customer consequences. Giving AI agents access to these environments raises questions concerning authorization, data privacy, cybersecurity, accountability, transparency, auditability, and error management. An incorrectly generated recommendation may be reviewed by an employee before implementation, whereas an incorrectly executed autonomous action could immediately affect an order, financial transaction, customer record, or operational process. Consequently, the transition toward agentic enterprise systems requires careful consideration of the appropriate level of autonomy.

Human oversight therefore remains an important component of Agentic AI adoption. Full autonomy may not be appropriate for every enterprise activity. Low-risk and repetitive tasks may potentially be delegated to AI agents, whereas high-impact decisions may require human approval. This suggests the need for a risk-based autonomy model in which the degree of AI independence corresponds to the potential consequences of an action. Such an approach can allow organizations to obtain the efficiency benefits of autonomous systems while retaining human control over sensitive or strategically important decisions.

Another important background consideration is interoperability. ERP and CRM platforms frequently contain complex architectures, legacy applications, customized workflows, third-party integrations, and organization-specific data structures. Agentic AI therefore cannot be considered independently of the technological environment in which it operates. Effective implementation requires reliable data access, appropriate APIs, identity and access controls,

integration mechanisms, monitoring capabilities, and clearly defined permissions. The quality of the underlying enterprise data is equally important because autonomous reasoning based on incomplete, inconsistent, or inaccurate information can produce inappropriate outcomes.

From an organizational perspective, Agentic AI may also alter the nature of work and managerial responsibilities. Employees may increasingly shift from performing repetitive transactional activities toward supervising AI agents, validating complex decisions, managing exceptions, and defining business objectives. Managers may need to establish policies governing what agents are permitted to do, under which circumstances they must request approval, and how their actions should be monitored and audited. This represents a shift from managing only human workflows toward managing human-AI collaborative workflows.

The background of this research therefore reflects a broader technological progression: from integrated enterprise systems, to rule-based automation, to predictive and generative AI, and increasingly toward autonomous agentic systems. ERP and CRM platforms provide the foundational data and process infrastructure upon which this progression can occur. Agentic AI potentially adds an intelligent action layer capable of connecting enterprise information with reasoning and execution. The resulting model could transform ERP and CRM systems from passive repositories and workflow platforms into adaptive environments that actively participate in organizational processes.

Despite the growing interest in Agentic AI, its theoretical implications for ERP and CRM systems remain insufficiently established. Much of the existing discussion focuses on individual AI applications, productivity improvements, or technological capabilities, while less attention is given to how autonomous agents may reshape the relationship between enterprise systems, decision-making, human oversight, and organizational agility. A systematic theoretical framework is therefore required to explain how Agentic AI can be integrated into ERP and CRM environments and how its capabilities may contribute to intelligent automation and enterprise responsiveness.

Against this background, the present research examines the potential role of Agentic AI in transforming ERP and CRM systems. The study focuses on the relationship between autonomous process execution, intelligent decision-making, cross-functional coordination, adaptive responsiveness, governance, and enterprise agility. By developing a theoretical framework around these dimensions, the research seeks to provide a conceptual basis for understanding both the opportunities and organizational requirements associated with the transition from conventional enterprise automation toward intelligent, agent-driven enterprise systems.

3. Problem Statement and Research Objectives

3.1 Problem Statement

Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems have become fundamental components of modern digital enterprises. These systems integrate critical organizational information, standardize business processes, support operational activities, and provide decision-makers with access to data across different functional areas. ERP platforms facilitate activities such as financial management,

procurement, inventory management, supply chain coordination, human resources, and operations, while CRM platforms support sales, marketing, customer service, and relationship management. Despite their extensive capabilities, many ERP and CRM environments continue to depend heavily on predefined workflows, rule-based automation, structured processes, and human intervention. As organizations increasingly operate in complex, rapidly changing, and highly interconnected business environments, these limitations can affect their ability to respond quickly and intelligently to emerging situations.

The development of Artificial Intelligence (AI) has introduced new opportunities for addressing some of these limitations. Predictive analytics, machine learning, natural language processing, intelligent recommendations, and generative AI have increasingly been incorporated into enterprise applications. These technologies can improve forecasting, identify patterns, generate content, provide recommendations, and assist employees in performing knowledge-intensive tasks. However, most conventional AI applications remain primarily assistive or analytical. They may provide a prediction or recommendation, but the responsibility for interpreting the output and executing subsequent actions generally remains with human users. Consequently, a gap continues to exist between AI-generated insight and autonomous enterprise action.

The emergence of Agentic AI introduces a potentially significant change in this relationship. Agentic AI systems are designed to pursue objectives through capabilities such as contextual perception, reasoning, planning, tool utilization, interaction with digital systems, and autonomous or semi-autonomous execution. Within ERP and CRM environments, such systems could potentially move beyond recommending actions toward coordinating and executing multi-step business processes within predefined organizational boundaries. For example, an AI agent could identify an inventory shortage, analyze demand and supplier information, evaluate available procurement options, initiate an appropriate workflow, and request human approval where required. Similarly, within CRM, an agent could analyze customer interactions, identify a service or sales opportunity, coordinate relevant activities, update customer records, and initiate personalized communication.

However, the integration of Agentic AI into ERP and CRM systems creates a complex research problem. The potential value of autonomous agents cannot be evaluated solely in terms of automation or productivity. ERP and CRM systems operate at the center of organizational processes and contain sensitive financial, operational, employee, supplier, and customer information. An AI agent with the ability to access and modify enterprise systems may therefore have a substantially greater operational impact than a conventional chatbot or recommendation engine. Incorrect reasoning, inappropriate system access, inaccurate data, inadequate monitoring, or uncontrolled autonomy could result in financial losses, process disruptions, privacy concerns, cybersecurity vulnerabilities, compliance problems, or damage to customer relationships.

Another important challenge concerns the relationship between Agentic AI and human decision-making. Increased automation does not necessarily imply that human involvement should be eliminated. Instead, organizations need to determine which activities can be safely delegated to AI agents, which activities should

require human approval, and how decisions made by autonomous systems can be monitored and audited. This creates a need for appropriate human-AI collaboration and accountability mechanisms. Without clearly defined boundaries of autonomy, organizations may face difficulties in determining responsibility when an AI agent produces an inappropriate recommendation or executes an undesirable action.

Interoperability is an additional challenge. Modern ERP and CRM ecosystems rarely operate as isolated platforms. They interact with financial applications, supply chain systems, customer communication channels, data warehouses, cloud services, third-party applications, APIs, and legacy systems. For Agentic AI to create meaningful enterprise value, AI agents must be capable of operating across these interconnected environments while maintaining data consistency, security, authorization, and process integrity. Therefore, the research problem extends beyond the technical capability of individual AI agents and includes the broader organizational and technological conditions required for their effective integration.

The potential impact on enterprise agility also requires further examination. Traditional enterprise systems emphasize process standardization, consistency, and control, whereas organizational agility requires responsiveness, adaptability, and rapid decision-making. Agentic AI may provide a mechanism for combining these requirements by enabling enterprise systems to maintain structured controls while dynamically responding to changing conditions. Nevertheless, the relationship between agent autonomy and enterprise agility is not automatically positive. Excessive autonomy without appropriate governance could introduce new risks, while excessive human intervention could reduce the efficiency advantages of agentic systems. Therefore, organizations require a balanced approach in which autonomy, human oversight, governance, and business objectives are aligned.

The central problem addressed by this research is therefore the lack of a comprehensive theoretical understanding of how Agentic AI can transform ERP and CRM systems from primarily transactional and workflow-oriented platforms into intelligent, adaptive, and action-oriented enterprise environments while maintaining appropriate governance and human accountability. Although AI capabilities are increasingly being incorporated into enterprise applications, there remains a need for a conceptual framework explaining how agentic capabilities can enhance intelligent automation, decision-making, cross-functional coordination, and enterprise agility. Addressing this gap is important for both researchers and organizations seeking to understand the strategic implications of Agentic AI adoption.

This study consequently focuses on three interconnected research objectives. The first examines how Agentic AI can enhance automation within ERP and CRM processes. The second investigates its potential contribution to enterprise decision-making and cross-functional coordination. The third examines how Agentic AI can contribute to enterprise agility while maintaining governance, security, accountability, and appropriate human oversight. Together, these objectives provide a structured basis for developing a theoretical framework for responsible and effective integration of Agentic AI into enterprise systems.

3.2 Research Objectives

1. To examine how Agentic AI can enhance intelligent automation within ERP and CRM systems.

The first objective is to examine the potential of Agentic AI to transform conventional automation within ERP and CRM environments. Traditional enterprise automation generally operates according to predefined rules, workflows, triggers, and decision conditions. While such automation is effective for repetitive and predictable activities, it may have limited flexibility when processes involve exceptions, changing circumstances, multiple systems, or contextual judgment. Agentic AI provides the possibility of introducing greater autonomy by enabling AI agents to interpret objectives, reason about available information, plan sequences of activities, interact with enterprise applications, and execute authorized actions.

Within ERP systems, this capability could support activities such as procurement, inventory management, financial reconciliation, order processing, supply chain coordination, and exception management. Rather than simply triggering an automated workflow, an agent could potentially evaluate the context surrounding a business event and determine an appropriate sequence of actions. In CRM environments, similar capabilities could support lead management, customer service, sales follow-up, customer engagement, case resolution, and personalized communication.

The objective therefore examines the transition from rule-based automation toward goal-oriented and context-aware automation. Particular attention is given to how AI agents can coordinate multiple tasks rather than automating isolated activities. The study also considers the importance of organizational controls, data quality, system interoperability, and authorization mechanisms in determining whether autonomous automation can operate reliably. The intended outcome is a conceptual understanding of how Agentic AI can extend the automation capabilities of ERP and CRM systems while maintaining appropriate operational boundaries.

2. To investigate the role of Agentic AI in improving enterprise decision-making and cross-functional coordination.

The second objective focuses on the decision-making capabilities associated with Agentic AI. ERP and CRM systems contain extensive information about organizational operations, financial performance, customers, suppliers, inventory, transactions, and business activities. However, the availability of information does not necessarily guarantee timely or effective decisions. Employees and managers may need to collect information from different systems, interpret it, evaluate alternatives, and coordinate actions across departments before a decision can be implemented. These processes can create delays and information gaps, particularly when organizations operate in highly dynamic environments.

Agentic AI could potentially reduce these limitations by connecting enterprise data with reasoning, planning, and action. An AI agent may be capable of gathering relevant information from multiple sources, identifying relationships between business events, evaluating potential courses of action, and presenting or executing an appropriate response according to established policies. This creates a potential progression from data collection to analysis, reasoning,

decision support, and action within a more integrated process.

Cross-functional coordination is particularly important because many enterprise decisions involve multiple departments. For example, a supply chain issue may require coordination between procurement, inventory, finance, logistics, and sales, while a customer-related issue may involve sales, service, finance, and operations. Agentic AI could potentially act as a coordination layer connecting these processes and reducing delays caused by organizational silos.

However, this objective does not assume that AI should replace managerial judgment. Instead, it examines how Agentic AI can support and augment human decision-making while establishing appropriate levels of autonomy. The research therefore considers human approval, explainability, auditability, accountability, and escalation mechanisms as important components of agent-enabled decision-making. The objective is to determine how Agentic AI can contribute to faster and more context-aware decisions without weakening organizational control.

3. To develop a theoretical framework explaining how Agentic AI can strengthen enterprise agility through adaptive processes, governance, and human-AI collaboration.

The third objective is to develop a theoretical framework connecting Agentic AI capabilities with enterprise agility. Enterprise agility refers to an organization's ability to recognize changes, make timely decisions, adapt processes, and respond effectively to opportunities and disruptions. Traditional ERP and CRM systems provide stability and process consistency, but their dependence on structured workflows and predefined rules may create challenges when organizations face unexpected or rapidly changing conditions. Agentic AI may provide an additional layer of adaptability by continuously interpreting business conditions and coordinating appropriate responses.

The proposed framework will examine how Agentic AI can contribute to agility through interconnected capabilities including autonomous task execution, real-time contextual reasoning, dynamic workflow adaptation, cross-functional coordination, and continuous interaction with enterprise systems. The framework will also recognize that agility must be balanced with governance. Autonomous systems operating within ERP and CRM environments require clearly defined permissions, monitoring mechanisms, data-security controls, human oversight, and accountability structures.

A key component of this objective is therefore the development of a governance-first approach to enterprise agentic AI. The framework will distinguish between activities that may be fully automated, activities requiring human approval, and high-impact decisions that should remain under direct human control. Such a risk-based approach can help organizations capture the benefits of Agentic AI while reducing the possibility of uncontrolled or inappropriate actions.

The framework will ultimately position Agentic AI as an intelligent layer connecting enterprise data, business processes, AI reasoning, autonomous action, and human oversight. It will demonstrate how these elements can work together to improve responsiveness without compromising organizational accountability. By integrating intelligent automation, decision-

making, adaptability, governance, and human-AI collaboration into a single conceptual structure, the study aims to provide researchers and enterprise decision-makers with a foundation for understanding the strategic implications of Agentic AI adoption in ERP and CRM environments.

Collectively, the three objectives establish a progression from intelligent automation → enhanced decision-making and coordination → enterprise agility and governed autonomy. This progression forms the conceptual basis of the research and supports the development of a theoretical framework for understanding how Agentic AI can transform ERP and CRM systems while ensuring that technological autonomy remains aligned with organizational objectives, risk management, security, and human accountability.

4. Research Design and Methodology

The research design for this study employs a qualitative approach to explore the impact of Agentic Artificial Intelligence (Agentic AI) on Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems, with a specific focus on enhancing intelligent automation, decision-making, and enterprise agility. This approach facilitates an in-depth understanding of the opportunities, challenges, and organizational implications associated with integrating autonomous and semi-autonomous AI capabilities into enterprise systems. The methodology comprises two primary components: a literature review and qualitative case studies.

Qualitative Research

Literature Review

The literature review serves as the foundational element of this research, synthesizing knowledge from a broad range of academic journals, scholarly publications, industry reports, technology research, and authoritative enterprise technology sources. The review aims to examine the evolution of enterprise systems and Artificial Intelligence and to identify how emerging Agentic AI capabilities can influence ERP and CRM processes. Key areas of focus include intelligent automation, autonomous AI agents, AI-enabled decision-making, ERP transformation, CRM transformation, cross-functional process integration, real-time business responsiveness, and enterprise agility.

The literature review also examines the evolution from traditional rule-based automation and conventional AI toward generative and agentic AI capabilities. Particular attention is given to the ability of Agentic AI to perceive business conditions, reason over enterprise information, plan multi-step activities, interact with enterprise applications, and execute authorized actions with varying levels of human intervention. The review further explores how these capabilities can potentially transform ERP and CRM systems from primarily transactional and workflow-oriented platforms into more intelligent, adaptive, and action-oriented enterprise environments.

In addition, the literature review evaluates existing approaches to AI-enabled enterprise transformation, highlighting their strengths, limitations, and applicability to modern business environments. Emphasis is placed on the role of AI in improving operational efficiency, automating repetitive processes, supporting complex decision-making, coordinating activities across business functions, and

responding dynamically to changing organizational conditions. The review also considers critical issues associated with Agentic AI adoption, including data quality, system interoperability, cybersecurity, privacy, accountability, explainability, governance, and human oversight.

By critically evaluating these sources, the study identifies key theoretical themes and gaps in existing research concerning the integration of Agentic AI with ERP and CRM systems. The findings from the literature review provide the conceptual foundation for developing a theoretical framework that connects Agentic AI capabilities with intelligent automation, decision-making, and enterprise agility while incorporating appropriate governance and human-AI collaboration mechanisms.

Qualitative Case Studies

Qualitative case studies complement the literature review by providing real-world insights into the adoption and application of AI-enabled capabilities within enterprise systems and business processes. The case studies focus on organizations and enterprise technology environments that demonstrate relevant applications of AI, intelligent automation, ERP, CRM, or emerging agentic capabilities. Cases are selected based on their relevance to the research objectives and the availability of sufficient documented information concerning their technological implementation and organizational outcomes.

Each case study examines specific instances in which organizations have applied AI capabilities to improve enterprise processes, automate activities, support decision-making, enhance customer interactions, or coordinate business operations. The analysis considers the relationship between AI capabilities and enterprise platforms, including the ways in which AI can interact with ERP, CRM, workflow, data, and other business applications. Particular attention is given to the level of automation achieved, the role of AI in decision-making, the coordination of activities across functional areas, and the organization's ability to respond to changing business conditions.

The case-study analysis also examines the practical challenges associated with implementing intelligent and increasingly autonomous AI capabilities. These include integration with existing enterprise systems, data availability and quality, cybersecurity and privacy considerations, employee involvement, governance mechanisms, authorization controls, and the need for human oversight. The analysis evaluates how organizations balance the benefits of automation and AI-enabled autonomy with the requirement for accountability and control.

Through these case studies, the research evaluates the practical implications, opportunities, effectiveness, and limitations of Agentic AI and related AI-enabled capabilities within enterprise environments. The cases provide contextual insights into how intelligent automation can reduce manual activities, how AI can support faster and more informed decisions, and how adaptive AI-enabled processes can contribute to organizational responsiveness and enterprise agility. Insights derived from these real-world scenarios are used to complement the theoretical findings identified through the literature review.

By integrating findings from the literature review and qualitative case studies, this study aims to provide a comprehensive perspective on how

Agentic AI can transform ERP and CRM systems and contribute to intelligent automation, improved decision-making, and enterprise agility. The combined findings will guide the development of a theoretical framework that connects autonomous AI capabilities with enterprise processes while emphasizing governance, human oversight, security, accountability, and responsible implementation. The results are intended to contribute to academic understanding of Agentic AI-enabled enterprise transformation and provide a conceptual foundation for organizations seeking to adopt intelligent and adaptive ERP and CRM environments effectively and responsibly.

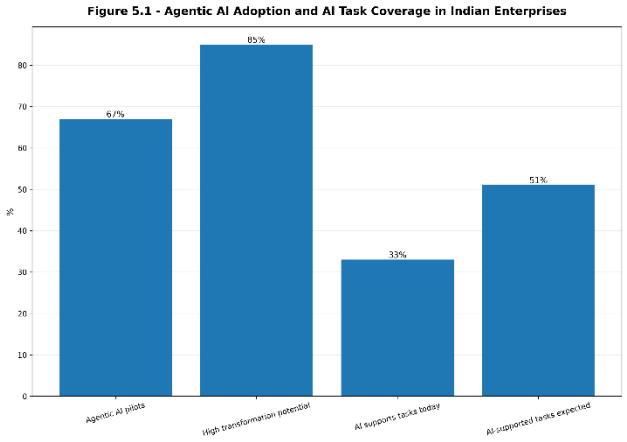
5. Results and Analysis

The findings of this study were derived from a qualitative synthesis of published literature, documented organizational case studies, and secondary industry research concerning Agentic Artificial Intelligence (Agentic AI), Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), intelligent automation, decision-making, and enterprise agility. Since the study does not employ primary quantitative data collection, the numerical values presented in this section are treated as secondary evidence reported by organizations, technology providers, and industry research studies. Accordingly, the findings are interpreted as case-specific or study-specific observations rather than as universally generalizable measures of Agentic AI performance.

Agentic AI Adoption and Enterprise Transformation

The literature indicates that Agentic AI is increasingly being considered as an extension of conventional artificial intelligence and intelligent automation. Unlike traditional rule-based automation, which generally executes predefined instructions, Agentic AI is designed to interpret objectives, reason over available information, coordinate multiple steps, and perform authorized actions with varying degrees of human supervision. This development is particularly relevant to ERP and CRM environments because these systems contain large volumes of interconnected operational, financial, supply-chain, employee, sales, and customer information.

Recent research by SAP, conducted in collaboration with Oxford Economics, provides evidence of increasing interest in Agentic AI among Indian enterprises. The 2026 study examined 2,600 business leaders across 13 countries, including 200 respondents from India. The study reported that 67% of Indian businesses were piloting Agentic AI and that 85% considered Agentic AI to have moderate-to-very-high potential to transform their organizations. The research also indicated that AI currently supports approximately 33% of business tasks in India, with this proportion expected to increase to 51% within two years. These findings suggest that Agentic AI is progressing from experimentation toward broader organizational adoption, although the reported figures represent organizational expectations and adoption status rather than independently measured business outcomes.

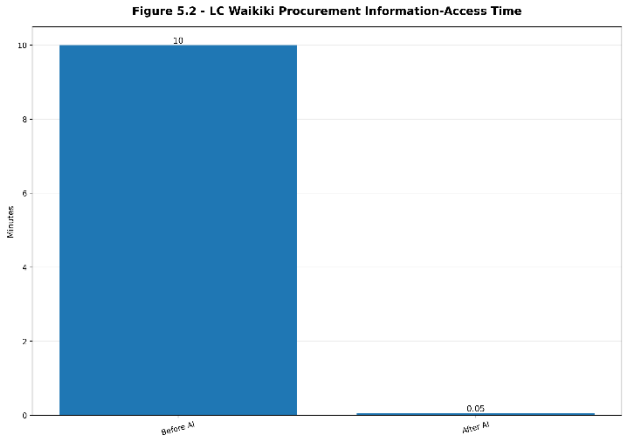


The findings therefore indicate that the impact of Agentic AI should not be evaluated solely in terms of automation. Its broader significance lies in its potential to connect enterprise information, reasoning, decision support, and authorized execution within existing organizational systems.

Agentic AI and Intelligent Automation in ERP Systems

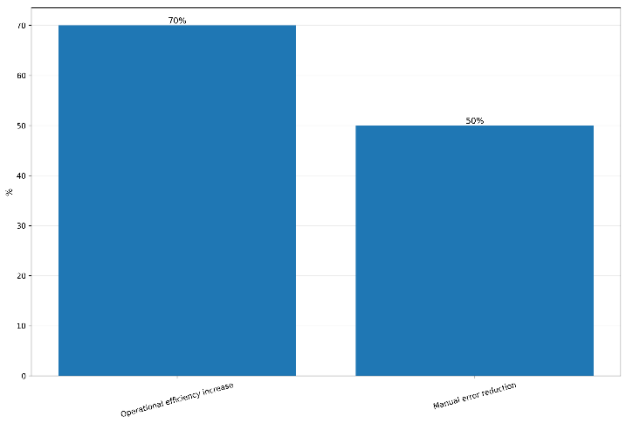
The qualitative case evidence demonstrates that ERP systems represent an important environment for Agentic AI because they contain interconnected processes involving procurement, finance, inventory, supply chain, human resources, and operations. Traditional ERP automation can execute predefined workflows, but employees may still need to search across modules, interpret information, and initiate subsequent actions. Agentic AI can potentially reduce these intermediate steps by providing contextual access to information and coordinating actions across enterprise applications.

The case of LC Waikiki provides a relevant example. The organization implemented an AI-driven SAP Joule experience to simplify access to procurement information. SAP reported that employees previously required up to approximately 10 minutes to answer certain purchase-order-related questions because they had to navigate multiple systems. Following implementation, the same type of information request could be addressed in approximately three seconds. SAP also reported a 70% increase in operational efficiency and a 50% reduction in manual errors associated with the process.



The case provides evidence of how AI-enabled enterprise interfaces can reduce information-access friction and accelerate operational processes. Importantly, the finding should be interpreted as a reported organizational case outcome rather than as evidence that all ERP implementations using Agentic AI will achieve the same level of improvement.

Figure 5.3 - LC Waikiki Reported Operational Improvements



The LC Waikiki case consequently supports the first research objective concerning intelligent automation. It demonstrates that the potential contribution of Agentic AI extends beyond automating isolated tasks and can include contextual information retrieval, cross-system interaction, and support for enterprise processes.

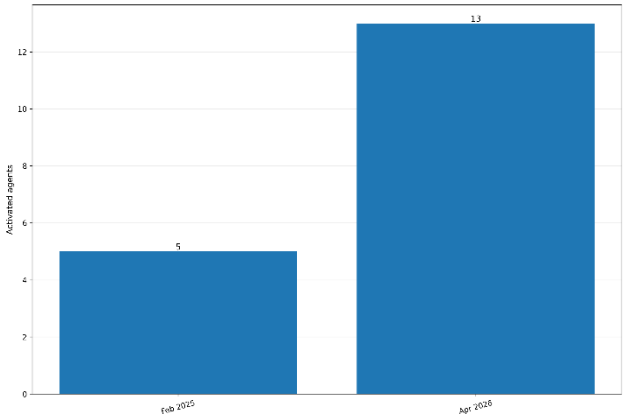
Agentic AI and CRM Transformation

The case-study findings indicate that CRM systems are similarly moving toward more autonomous and context-aware interactions. Conventional CRM systems primarily store customer information, support sales processes, track opportunities, and provide customer-service workflows. Agentic AI introduces the possibility of systems that can interpret customer requests, retrieve relevant information, generate responses, initiate workflows, and resolve selected customer-service activities.

Salesforce's Agentic Enterprise Index provides evidence of increasing organizational use of AI agents. According to Salesforce, the average number of activated agents among organizations represented in the index increased from five in February 2025 to thirteen in April 2026. This represents an increase of approximately 160% in the reported average number of activated agents. The finding suggests that enterprises are moving beyond isolated AI experiments toward the deployment of multiple specialized agents across business processes.

The trend supports the argument that AI agents are increasingly becoming an operational component of enterprise applications rather than remaining exclusively experimental technologies. However, the data should be interpreted as evidence from the Salesforce ecosystem and should not be considered representative of every ERP or CRM organization.

Figure 5.4 - Average Activated Enterprise AI Agents

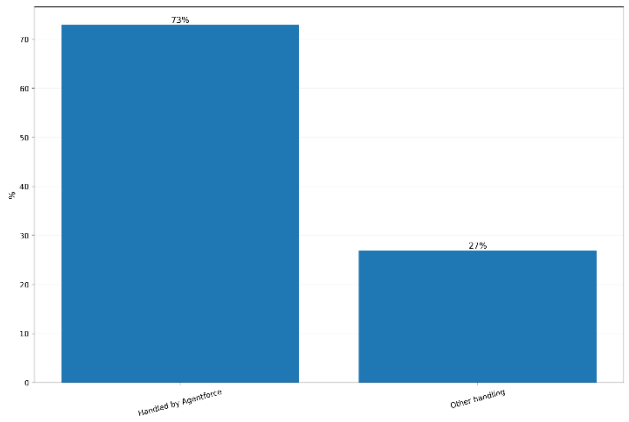


Customer-Service Automation: OpenTable Case

The OpenTable case provides further evidence of Agentic AI application within CRM and customer-service environments. Salesforce reported that its Agentforce restaurant agent handled approximately 73% of restaurant web queries within three weeks of launch. The case illustrates how an AI agent can be positioned directly within the customer-service process to interpret requests and provide responses without

requiring human employees to manage every routine interaction.

Figure 5.5 - OpenTable Restaurant Web Query Resolution



This case supports the proposition that CRM systems can evolve from platforms primarily used for recording customer interactions toward systems capable of actively participating in customer engagement. At the same time, the use of AI agents does not eliminate the need for human service personnel, particularly when customer requests involve ambiguity, exceptional circumstances, sensitive issues, or decisions requiring human judgment.

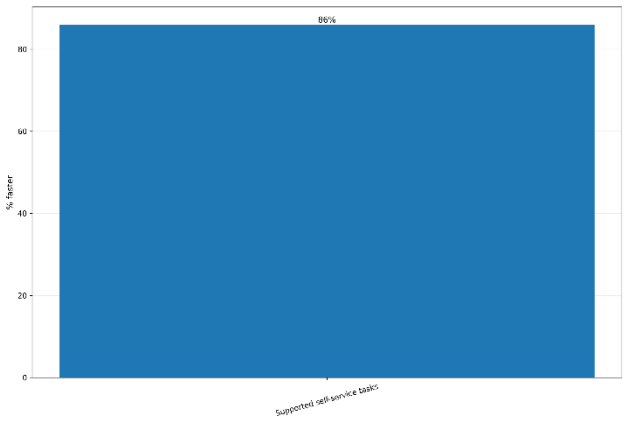
Agentic AI, Decision-Making, and Employee Productivity

The analysis also identified a relationship between Agentic AI and enterprise decision-making. ERP and CRM systems contain substantial amounts of information, but the value of that information depends on an organization's ability to retrieve, interpret, and apply it effectively. Agentic AI can potentially reduce the distance between information retrieval and decision support by interpreting natural-language requests, identifying relevant information, and supporting subsequent actions.

SAP's real-world AI research provides supporting evidence. The study involved 693 employees across multiple industries and examined real-world AI use cases, including SAP Joule. SAP reported that employees completed supported self-service tasks 86% faster. The study therefore provides evidence that AI-supported enterprise interactions can improve the speed with which employees complete certain activities.

The finding supports the second research objective by indicating that AI can improve access to enterprise information and reduce the time employees spend on administrative and self-service activities. Faster information access can contribute to better decision-making when employees are able to use the additional time and information to evaluate alternatives and make appropriate decisions.

Figure 5.6 - SAP Real-World AI Study



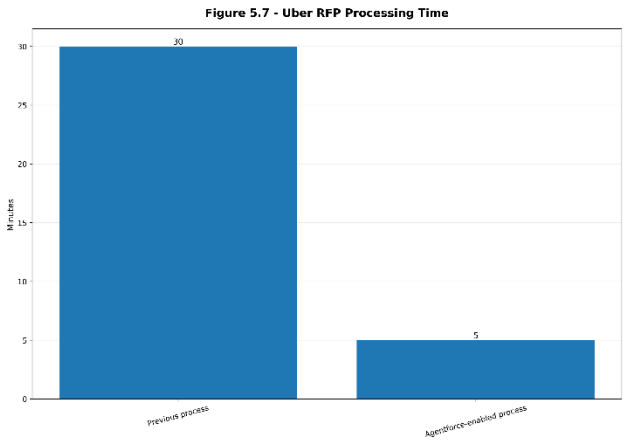
Agentic AI and Enterprise Agility: Uber Case

Enterprise agility is strongly associated with the speed at which organizations can recognize opportunities, process information, make decisions, and respond to changing customer or market requirements. The Uber case provides an

example of Agentic AI being applied to a sales-related process.

Salesforce reported that Uber uses Agentforce to support sales activities and that its agentic RFP workflow can process information from lengthy proposal documents and transform it into structured CRM opportunities and proposed media plans. Salesforce reported that the estimated processing time was reduced from approximately 30 minutes to five minutes, representing an estimated 83% reduction in processing time. Salesforce also reported a 60% increase in email conversion associated with its agentic sales activities.

The Uber case demonstrates that Agentic AI may contribute to enterprise agility by shortening the time between receiving business information and initiating a business response. Rather than merely generating text or summarizing information, the agentic workflow supports multiple connected activities involving document interpretation, CRM data creation, and sales planning.



Cross-Case Analysis

The cases examined in this study reveal several common patterns. First, Agentic AI appears to provide greater value when integrated directly with enterprise systems rather than operating as a standalone conversational tool. LC Waikiki's ERP implementation and Uber's CRM workflow both involve access to enterprise information and interaction with business processes.

Second, the cases indicate that the benefits of Agentic AI extend across multiple dimensions. In ERP environments, the emphasis is primarily on information access, process efficiency, and error reduction. In CRM environments, the emphasis includes customer-service automation, sales engagement, and faster response. Across both environments, the common mechanism is the reduction of manual intervention in repetitive or information-intensive processes.

Third, the evidence suggests that Agentic AI can support enterprise agility by shortening operational response cycles. The LC Waikiki case reduced information-access time, while the Uber case reduced RFP-processing time. OpenTable demonstrates the potential for continuous customer-service responsiveness.

However, the cases also indicate that Agentic AI should not be interpreted as unrestricted autonomous decision-making. Enterprise systems contain sensitive information and support processes with financial, legal, operational, and customer consequences. Therefore, agentic capabilities require appropriate authorization, access controls, monitoring, auditability, data-quality mechanisms, and human escalation.

Analysis of Findings

Intelligent Automation and Process Efficiency

The findings support the view that Agentic AI can extend enterprise automation beyond predefined rules and repetitive workflows. The LC Waikiki case demonstrates that an AI-enabled ERP environment can interpret employee requests, retrieve information, and connect users with relevant enterprise processes. The reported reduction from approximately 10 minutes to three seconds provides a concrete example of the potential efficiency gains associated with contextual enterprise automation.

The Uber case provides similar evidence from CRM and sales operations. The reduction in RFP-processing time demonstrates how an AI agent can coordinate several activities within a single business process rather than simply automate one isolated task.

Consequently, the first research objective is supported: Agentic AI has the potential to enhance intelligent automation by combining natural-language interaction, contextual reasoning, enterprise-data access, and authorized workflow execution.

Decision-Making and Cross-Functional Coordination

The findings also support the second research objective concerning decision-making. ERP and CRM platforms contain interconnected information, but users traditionally need to retrieve and interpret that information themselves. Agentic AI can reduce this burden by serving as an intelligent interface between enterprise information and organizational action.

The LC Waikiki case demonstrates contextual access to procurement information, while the Uber case illustrates the transformation of unstructured RFP information into CRM opportunities and proposed actions. SAP's 693-employee study further indicates that AI-supported self-service activities can be completed substantially faster.

These findings suggest a conceptual progression from:

Enterprise Data → Contextual Interpretation → Decision Support → Authorized Action → Business Outcome

This progression represents an important distinction between conventional information systems and increasingly agentic enterprise environments.

CRM and Customer Engagement

The OpenTable case provides evidence that Agentic AI can directly participate in customer-service activities. The reported 73% query-handling rate indicates that AI agents can manage a substantial portion of routine customer interactions under appropriate conditions.

The broader Salesforce Agentic Enterprise Index also indicates increasing deployment of AI agents across enterprise processes. Together, these findings suggest that CRM platforms may increasingly evolve from systems that primarily record customer interactions toward systems capable of actively participating in customer engagement.

Nevertheless, human employees remain important for complex cases, relationship-sensitive interactions, exceptions, and decisions requiring accountability or empathy. The appropriate model is therefore not complete replacement of human customer-service

personnel but a division of responsibilities between AI agents and human employees.

Enterprise Agility

The case evidence supports a positive relationship between Agentic AI and enterprise agility. Faster information retrieval, automated workflow execution, and reduced processing time can allow organizations to respond more quickly to operational and market requirements.

However, agility should not be equated with unrestricted autonomy. An organization may achieve faster execution but still experience negative outcomes if an AI agent acts on inaccurate data, exceeds its authorization, or makes inappropriate decisions. Consequently, enterprise agility must be accompanied by governance and control.

Governance and Human-AI Collaboration

The final theme emerging from the analysis is the importance of governance. Agentic AI differs from conventional analytical AI because it may be capable of initiating or executing actions. As autonomy increases, so does the importance of defining what the agent is permitted to access, decide, and execute.

The findings therefore support a governance model based on risk-based autonomy. Low-risk and repetitive activities may be delegated to AI agents, while high-impact decisions involving financial commitments, sensitive customer information, regulatory requirements, or strategic consequences should include human review or approval.

Effective implementation should therefore incorporate:

- role-based access and authorization;
- data-quality controls;
- human approval for high-impact actions;
- monitoring and audit trails;
- cybersecurity and privacy controls;
- clear accountability for AI-assisted decisions;
- interoperability between ERP, CRM, and other enterprise systems; and
- continuous evaluation of agent performance.

Overall Synthesis of Findings

The qualitative synthesis demonstrates that Agentic AI can influence ERP and CRM systems across three interconnected dimensions: intelligent automation, decision-making, and enterprise agility. The organizational cases provide evidence that AI agents can reduce information-access time, automate selected customer-service activities, accelerate sales processes, and support employee productivity.

The findings can therefore be summarized through the following conceptual relationship:

Agentic AI Capabilities → Intelligent Automation → Improved Decision Support → Faster Enterprise Response → Greater Enterprise Agility

This relationship is strengthened by a cross-cutting governance layer:

Governance + Human Oversight + Data Quality + Security + Interoperability

The results consequently support all three research objectives. First, Agentic AI can enhance intelligent automation by performing or coordinating increasingly complex enterprise

activities. Second, it can support decision-making by connecting enterprise data with contextual interpretation and authorized action. Third, these capabilities can contribute to enterprise agility by reducing process delays and improving organizational responsiveness.

At the same time, the evidence does not support the assumption that Agentic AI automatically produces superior organizational outcomes in every context. The documented cases represent specific organizational implementations, and several numerical outcomes are reported by technology vendors or organizations themselves. They should therefore be interpreted as empirical case evidence rather than universal performance benchmarks. The overall impact of Agentic AI remains dependent on implementation quality, enterprise-data maturity, system integration, governance, human oversight, and the nature of the business process being automated.

6. Summary and Conclusion

6.1 Summary of the Study

This study examined the impact of Agentic Artificial Intelligence (Agentic AI) on Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems, with particular emphasis on intelligent automation, enterprise decision-making, and organizational agility. The study was motivated by the rapid development of artificial intelligence from conventional rule-based automation and predictive analytics toward increasingly autonomous systems capable of interpreting objectives, reasoning over enterprise information, planning activities, interacting with digital tools, and executing authorized actions.

The research adopted a qualitative design based on a literature review and documented organizational case studies. The literature review examined the development of AI-enabled enterprise systems, intelligent automation, AI-supported decision-making, ERP and CRM transformation, enterprise agility, and the governance requirements associated with increasingly autonomous AI systems. The case-study analysis considered documented implementations involving organizations such as LC Waikiki, Uber, and OpenTable, together with secondary industry evidence concerning enterprise AI adoption and productivity.

The findings indicate that Agentic AI represents a potential shift in the role of ERP and CRM systems. Traditional enterprise applications primarily provide structured data, predefined workflows, reporting capabilities, and rule-based automation. Agentic AI introduces an additional layer in which enterprise systems can potentially interpret user objectives, retrieve relevant information, coordinate multiple activities, and initiate authorized actions. This creates the possibility of moving from automation of individual tasks toward more adaptive and goal-oriented process execution.

The evidence examined in the study suggests that ERP environments can benefit from Agentic AI through faster information retrieval, process coordination, procurement support, employee self-service, and reduction of repetitive manual activities. The LC Waikiki case, for example, demonstrates how an AI-enabled enterprise interface can reduce the time required to obtain procurement-related information and support operational efficiency. Such examples illustrate

the potential of Agentic AI to reduce process friction and allow employees to devote greater attention to activities requiring judgment and expertise.

The analysis also identified significant opportunities within CRM environments. AI agents can support customer-service interactions, sales processes, lead management, information retrieval, and personalized customer engagement. The OpenTable case demonstrates the potential of AI agents to manage a substantial proportion of routine customer-service interactions, while the Uber case illustrates how agentic capabilities can support the processing of complex sales documents and accelerate the transition from information acquisition to CRM-based action.

Another important finding concerns decision-making. ERP and CRM systems contain extensive organizational information, but the value of that information depends on the speed and effectiveness with which employees can access, interpret, and apply it. Agentic AI can serve as an intelligent interface between enterprise data and organizational decision processes. By retrieving relevant information, summarizing context, identifying relationships, and supporting authorized actions, AI agents can reduce the administrative effort associated with information-intensive decisions.

The findings further indicate that Agentic AI can contribute to enterprise agility. Faster information retrieval, reduced process delays, automated workflow execution, and continuous customer interaction can improve an organization's ability to respond to operational and market changes. However, agility should not be understood as unrestricted autonomy. Faster execution without appropriate controls can increase organizational risk. Therefore, the study identifies governance, data quality, cybersecurity, privacy, interoperability, human oversight, and accountability as essential conditions for responsible Agentic AI adoption.

6.2 Major Findings

The study produced several major findings.

First, Agentic AI can extend intelligent automation beyond predefined workflows**.** Traditional automation generally follows predetermined rules and requires human intervention when processes deviate from expected conditions. Agentic AI can potentially interpret context, determine appropriate next steps, and coordinate multiple activities within defined boundaries. This capability creates opportunities for more flexible automation across ERP and CRM processes.

Second, Agentic AI can improve access to enterprise information and support decision-making**.** By interacting with ERP and CRM data through natural-language interfaces and connected enterprise applications, AI agents can reduce the time required to locate and interpret relevant information. This can support employees in making faster and more informed operational decisions.

Third, Agentic AI can strengthen cross-functional coordination**.** ERP and CRM processes frequently span organizational boundaries. Procurement may depend on finance and inventory information, while sales activities may depend on customer, pricing, product, and service data. Agentic AI can potentially coordinate information and activities across these functions, reducing fragmentation between enterprise processes.

Fourth, Agentic AI can contribute to customer-service and CRM transformation**.** The case evidence demonstrates that AI agents can participate in routine customer interactions and sales processes. This may allow organizations to provide faster responses while enabling human employees to focus on complex, sensitive, or relationship-oriented interactions.

Fifth, Agentic AI can contribute to enterprise agility by shortening operational response cycles**.** The documented cases examined in this study demonstrate improvements in information-access and process-processing times. Although these outcomes are specific to individual implementations, they indicate how agentic capabilities can reduce delays between identifying a business requirement and taking an appropriate action.

Sixth, governance is a critical determinant of successful Agentic AI implementation**.** As AI systems move from generating information toward executing actions, organizations must establish clear boundaries concerning what an AI agent can access, recommend, approve, and execute. Human oversight is particularly important for high-impact activities involving financial transactions, sensitive customer information, regulatory obligations, strategic decisions, and significant operational consequences.

6.3 Theoretical Implications

The study contributes to the conceptual understanding of how Agentic AI may influence enterprise information systems. The findings suggest that the relationship between AI and ERP/CRM should not be understood simply as another stage of task automation. Instead, Agentic AI introduces a potential transition from system-assisted activities toward goal-oriented human-AI collaboration.

The theoretical relationship identified through the study can be represented as:

Enterprise Data → Agentic Reasoning → Intelligent Automation → Decision Support → Authorized Action → Enterprise Agility

Governance operates across all stages of this relationship:

Data Governance + Security + Human Oversight + Accountability + Auditability

This conceptualization suggests that the value of Agentic AI is generated not by autonomy alone, but by the combination of autonomy, enterprise context, system integration, and appropriate governance. Agentic AI therefore has the greatest potential when it is embedded within existing enterprise processes and operates within clearly defined authorization boundaries.

6.4 Managerial and Practical Implications

For organizations considering Agentic AI adoption, the findings suggest that implementation should begin with clearly defined business processes rather than with technology deployment alone. Organizations should identify activities that are repetitive, information-intensive, time-sensitive, and sufficiently structured to support controlled AI execution.

ERP and CRM environments should also be evaluated for data quality and interoperability before large-scale agentic deployment. AI agents depend on reliable enterprise information, and poor-quality, incomplete, duplicated, or

inconsistent data can negatively influence AI-supported decisions and actions.

Organizations should further adopt a risk-based approach to autonomy. Low-risk activities, such as information retrieval, routine status updates, basic customer inquiries, and administrative support, may be suitable for higher levels of automation. Activities involving financial commitments, sensitive information, regulatory compliance, or strategic decisions should generally retain appropriate human review and approval.

Finally, organizations should establish continuous monitoring mechanisms to evaluate agent performance, errors, exceptions, security events, and business outcomes. Agentic AI should therefore be treated as an evolving component of enterprise governance rather than as a one-time technology implementation.

6.5 Limitations of the Study

This study has several limitations. First, the research is qualitative and relies on literature and documented secondary case studies rather than primary surveys, interviews, or controlled experiments. Consequently, the findings provide conceptual and contextual insights rather than statistically generalizable conclusions.

Second, several of the documented performance outcomes examined in the study were reported by technology providers or participating organizations. Such sources provide valuable information about real-world implementations but may reflect organizational or vendor perspectives. The reported improvements should therefore be interpreted as case-specific evidence rather than independent proof of universal Agentic AI benefits.

Third, Agentic AI remains a rapidly developing technological field. Enterprise architectures, AI-agent capabilities, governance practices, and adoption patterns are continuing to evolve. Therefore, some of the implementation characteristics discussed in this study may change as technologies and organizational practices mature.

Finally, the impact of Agentic AI is likely to differ according to industry, organizational size, data maturity, enterprise architecture, regulatory environment, process complexity, and workforce capabilities. The findings should consequently be applied with consideration of organizational context.

6.6 Conclusion

The study concludes that Agentic AI has significant potential to transform ERP and CRM systems from primarily information-oriented and workflow-driven platforms into more adaptive, intelligent, and action-oriented enterprise environments. The evidence reviewed indicates that AI agents can support intelligent automation, accelerate access to enterprise information, assist decision-making, improve customer-service processes, and reduce delays in selected business workflows.

However, the transformation should not be understood as a replacement of human decision-making with unrestricted machine autonomy. The findings instead support a governed human-AI collaboration model, in which AI agents perform appropriate tasks within clearly defined boundaries while human employees retain responsibility for complex, high-impact, and judgment-intensive decisions.

The overall conclusion of the study is therefore that the strategic value of Agentic AI depends on the integration of intelligent automation, enterprise data, decision support, cross-functional coordination, adaptive responsiveness, and governance. Organizations that combine these capabilities with strong data management, cybersecurity, human oversight, accountability, and interoperability are more likely to realize sustainable value from Agentic AI.

The proposed theoretical framework consequently positions Agentic AI not simply as an automation technology but as an emerging layer of enterprise intelligence connecting data, reasoning, decision-making, and authorized action. Its successful adoption will depend less on the degree of autonomy achieved and more on the organization's ability to establish the appropriate balance between automation and human control, agility and governance, and innovation and accountability.

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