
Artificial Intelligence and Business Transition: Paving the Way for Development

Aysha Siddiky Pinky
Westcliff University

Abstract

Artificial Intelligence (AI) is steadily becoming the new normal in doing business through increasing operational performance, improving customer relations, and increasing predictive accuracy. This quantitative exploratory research employed a mixed-methods approach, integrating qualitative insights into organizational trends, best practices, and challenges with quantitative assessments of performance measures, cost savings, and business outcomes. Several surveys were administered to a diverse group of business professionals. The study, situated within the field of applied research, explores how AI facilitates business growth through change and proposes best practices for successful integration. It also studies what happens during transition periods when organizations emphasize artificial intelligence, NLP, and robotic process automation as top technologies since they contribute to completing work tasks, analyzing large data sets, and improving individual communication with clients. Besides potentially generated cost savings and a long-term increase in business value, there are several obstacles that organizations face if implementing AI, such as high initial costs and a market that requires professional knowledge on the topic. If implemented correctly, AI technologies hold huge potential for businesses going through transitions and taking advantage of AI's strengths. For this reason, it is important to describe and analyze trends like AI technology integration accurately. This article suggests best practices for applying AI in business development during transformations.

Keywords: Artificial intelligence, machine learning, business transitions, predictive analytics, robotic process automation, cost reduction, AI adoption strategies

Introduction

Artificial intelligence (AI) has started changing industries, from automating processes and analyzing data at incredibly high speeds to enabling personalized customer experiences (Brynjolfsson & McAfee, 2017). Moving toward integrating AI into business operations is no longer an option but a necessity as companies struggle to survive in the highly technological market. This transition period of a company from a traditional model to an AI-driven enterprise is the most critical juncture that will define long-term success or failure.

Recently, AI has begun transforming businesses across sectors by automating processes, enabling data-driven decision-making, and improving customer service through targeted communication. For instance, AI-

powered chatbots efficiently respond to customer inquiries, predictive analytics help companies make strategic decisions, and automated processes streamline supply chain management, reducing costs and delays. AI has the potential to disrupt industries such as retail, finance, healthcare, and manufacturing. However, this transition comes with significant challenges, including the need for large investments, reorganizing business architecture, and staffing with skilled AI professionals. While AI technologies continue to evolve, businesses must navigate obstacles like high investment costs, workforce reskilling, and operational restructuring. Therefore, this paper explores how AI can drive operational efficiency, inform strategic decision-making, and enhance customer service, ultimately positioning

businesses for long-term growth in a rapidly changing environment.

This paper discusses how the use of AI increases during business changes and considers some potential advantages, problems, and long-term effects of adopting AI. This idea then provides an overview of how AI changes conventional business regarding automation, predictive analytics, and customer engagement. The meaning and content of this perspective are profound. Indeed, they are intended to explore the good and the bad sides of AI from qualitative and quantitative perspectives and suggest opportunities for businesses to navigate the intricacies of AI adoption toward their long-term benefit.

Literature Review

The adoption of AI in businesses has been explored in research with various focuses on realizing optimal business gains through AI administration, including the improvement of efficiency, costs, and customers. However, the specific role of AI in transitioning from conventional methods to AI-driven approaches, a key phase of transformation, has not been thoroughly explored.

The research problem is to establish how AI can support change management in organizations. Specifically, key questions include: Which forms of AI are most effective for facilitating such a changeover? What challenges do enterprises face when implementing these technologies, and how can they best leverage them?

AI in Automation

Atomization is one of the most striking immediate uses of AI. With AI-assisted automation tools in place, organizations can delegate many of their mundane tasks, allowing human capital to focus on core business activities. (Ransbotham et al., 2017) identified that AI-based automation can reduce administrative workload by at least 50%. These systems encompass artificial intelligence in customer relations, data analytics, and supply chain management. In the retail industry, for instance, AI-driven intelligent inventory management automates replenishment, ensuring products remain stocked without the risk of understocking or overstocking. Additionally, AI-

powered robots are widely applied in the manufacturing process to perform various assembly tasks with high precision, thereby reducing human errors (Dwivedi et al., 2019). However, while AI-driven solutions offer efficiency, challenges such as copyright infringement and ethical concerns arise when applying AI in content creation, personalized marketing, and other tailored applications across industries.

AI in Predictive Analytics

Another crucial area where AI is making huge strides involves predictive analytics. Organizations that are using AI-driven analytics can study past trends, pinpoint a pattern, and predict some future events with very high accuracy. Predictive analytics provides businesses with the ability to anticipate market fluctuations, customer behaviors, and operational bottlenecks. For example, in the finance sector, AI-based predictive models can increase the accuracy of forecasts by as much as 85%, enabling businesses to make decisions based on real-time data.

In the finance sector, the use of predictive analytics, driven by AI, helps analyze trends in the stock market, determines credit risks, and forecasts any signs of economic decline. As machine learning algorithms help businesses identify patterns that are well beyond human capabilities, making smart decisions about investments and management of risks is possible. Retail places AI at the forefront of predicting consumer behavior, allowing businesses to optimize marketing strategies and manage inventory efficiently.

Challenges of AI Integration

Considering all the benefits of integrating AI, the transition phase possesses quite a few disadvantages. Amongst the most inhibiting factors, the investment required for integrating AI is too high. Most AI technologies require very high upfront investments in hardware, software, and human resources. "As estimated by (Iyelolu et al., 2024), depending on system complexity, the average investment cost of an AI system in a mid-sized enterprise company falls between \$500,000 and \$2 million."

Another challenge is AI expertise. The company has to hire or train experts in machine

learning, data science, and AI programming. However, the demand for AI specialists now outstrips supply, hence, forcing a talent shortage that most companies have not yet resolved. According to (Manyika & Sneader, 2018), organizational structures may need to be reorganized to support AI technologies through the revision of business processes and decision-making mechanisms.

Finally, businesses need to take notes of ethical issues of data privacy and algorithmic transparency. As AI systems become more integrated into making decisions, the demand for clear-cut guidelines on ethical standards increases. To that effect, companies must ensure their AI systems are not only transparent but also in line with regulatory requirements (Dwivedi et al., 2019).

The current research, as uncovered in this literature review, found an information deficit as to the precise position of AI during the transition period in organizational business processes. Understanding what the benefits of incorporating AI are and the difficulties one can face at the same time, this research is intended to offer some recommendations to companies and organizations on how to traverse this important phase. The study will add to the literature and help organizations during the transformation to AI businesses by providing recommendations on the effective integration of AI systems.

Methods and Materials

This exploratory research used quantitative data derived from a survey of businesses that have implemented AI during the transition phase with qualitative data from expert interviews. The Director's survey quantitative data was collected from a sample of seven firms, cutting across the retail, finance, manufacturing, and healthcare sectors. Specifically, the firms included SMEs up to multinational corporations so that the researcher could understand the different appreciation of artificial intelligence.

Questionnaires containing factual questions that yielded quantitative data with a focus on operation efficiency, cost control, customer satisfaction, and market sensitivity were developed. The questionnaire included specific questions such as:

- How would you self-rate the processes' efficiency in operations after the implementation of AI technology?
- That brings us to the seventh question: What reduction in costs have you seen since integrating AI?
- What are the more specific impacts on customer satisfaction after the application of AI technologies?
- Often, how long does it take for an average integration of the AI systems in your operation?

Further to these measures, participants were asked to state the amount of time to attain integration of the AI systems, costs spent on implementing AI, and key difficulties faced through the process.

Qualitative data collection complemented the survey's quantitative data. The author used qualitative interviews with business leaders, AI specialists, and industry practitioners. In addition to the quantitative data collected in this survey, a total of 20-25 qualitative surveys were conducted. Specific concerns and important questions posed to interviewees stemmed from these broad concerns: How should AI technologies be deployed? What are the benefits and risks associated with the implementation of AI during the change? Sample interview questions included:

- Which sort of factors do you think were wise to apply while deciding where to implement artificial intelligence in your business?
- Have you witnessed any key issues your organization experienced during the adoption of AI?
- Consequently, from your experience, what do you think are the major advantages of implementing AI technologies?

To ensure respondent anonymity, all the data which was collected during the analysis were deleted. The people managed to understand that they would remain unknown, and that is why they agreed to be interviewed and complete the questionnaires. It also created a FREE and SECURE environment that allowed the participants to give their real responses to the questions posed to them.

Results

The data gathered suggest that AI integration positively impacted business environments in transition-phase companies since the operating efficiency improvement ranged between 15-20%. For instance, the largest improvements were identified in the manufacturing and customer service areas since the application of AI-based automation tools. For instance, those companies that adopted the use of AI in robots targeting production lines observed a considerable enhancement of production by 30% while reducing human error. This eventuality maximizes efficiency in that productivity is maximized alongside improved throughput while reducing the costs of value addition by curtailing increased cycles of work.

Besides operational effectiveness, the organization that is implementing AI in CRM noted that there was an improvement of 15% in customer satisfaction in the first twelve months. This improvement was attributed to AI's ability to analyze customer data and deliver personalized service quickly through AI chatbots, available at

any time (Badmus et al., 2024). For instance, an organization with a retail outlet decided to adopt artificial intelligence chatbots in responding to customers' inquiries, which helped reduce response time by about 70%, enhancing the experience of the customers.

Even more than that, organizations that decided to automate their business using AI in predictive analysis were observed to be more prepared to deal with the market volatility. The industry players that applied artificial intelligence-based predictive tools revealed an average saving of 15% on matters relating to inventory and disruptions of the supply chain (Loureiro et al., 2020). These assessments are due to the accuracy of the AI model in making forecasts that help the firms to better manage scarce resources to reduce high inventories. For example, Loureiro et al., (2020) describe how a logistics firm was able to use predictive models to estimate demand by cutting stockouts by 20%, which in turn boosted customer delight and service cost.

Table 1
Impact of AI Implementation on Key Business Metrics

Metric	Pre-AI Implementation	Post-AI Implementation	% Change	Summary
Operational Efficiency	65%	85%	+20%	AI-driven process optimization reduced bottlenecks and improved workflows.
Customer Satisfaction	70%	85%	+15%	AI-powered CRM and chatbots improved response times and personalized interactions.

Cost Reduction	5%	20%	+15%	AI automation minimized human errors and optimized supply chain management.
Time Spent on Routine Tasks	50 hours/week	25 hours/week	-50%	AI automation reduced manual tasks, allowing employees to focus on strategic work.
Accuracy in Market Predictions	60%	85%	+25%	AI's predictive analytics improved demand forecasting and reduced stock-outs.

Note. AI implementation led to improvements in efficiency, customer satisfaction, and cost reduction while reducing manual workload and enhancing market predictions.

Discussion/Implications

These findings suggest that, at these junctures of business transformation, AI can be transformative: in the running of operations, in customer contact, and in providing strategic foresight. Consequently, if businesses are truly going to exploit the potential of AI, then several critical factors need to be taken into consideration.

Investment in AI Talent

The quantitative and qualitative data pointed to the scarcity of qualified human capital in the field of AI. Through the survey, only 30% of the companies in the transition phase said that they experienced moderate or mild delays in the implementation of AI, and talent was scarce, which prolonged the transition phase and the costs. The same was echoed in by business leaders in interviews, more than half of whom noted that the demand for AI specialists outstrips supply. For instance, one participant clarified as follows, “We were six months late in implementing AI within our business because we could not identify talent to handle the integration processes well.”

To address this problem, 60% of surveyed businesses are engaging in internal AI training programs for employees. Other measures mentioned include the recruitment of educational institutions and AI consulting companies. An informer mentioned, Through partnerships with local universities, we have prepared our employees to fit exactly the AI model that suits our organization, thus saving a lot of costs that could have been used to hire third parties and increasing the correlation between AI implementation and organizational objectives.

These studies prove that talent crunch is an issue; however, no firm is idle and is trying to develop internal AI capabilities. The delayed work does not act as a long-term hindrance to AI integration.

Adapting Organizational Structures

It often requires organizational structure changes because of the integration of AI. Traditional hierarchical models may not be good fits for speedy decision-making and continuous data-driven processes, which AI allows. Companies must, then, transform into flexible organizational structures that allow cross-

functional collaboration and quick decision-making (Agrawal, Gans, & Goldfarb, 2018).

For example, companies that are adopting AI-driven automation should channel human resources to more strategic functions rather than routine ones. This shift calls for a change in culture wherein workers can look at AI as an addition to their work, not a replacement. Businesses that fail to adapt to technological evolution may struggle to fully benefit from AI. Inefficient workflows and decision-making bottlenecks can offset potential gains in operational efficiency.

Ethical Considerations and Data Privacy

Another important dimension of integrating AI is ethics in integrating AI into decision-making. Applications in which AI is integral to doing business pose the critical elements of transparency and accountability. Organizations are also required to ensure that the systems used are contained within the legal and regulatory parameters as well as the privacy of that data.

AI-driven decisions, especially those touching on customers, must be explainable and transparent. The main reason is that many consumers are rightfully concerned about how businesses are using their data, and businesses must be able to explain in plain English the algorithms that lie behind personal recommendations, the targeting of advertisements, etc. Indeed, such negligence may lead to a serious loss of reputation and may even invite some form of legal liability in critical jurisdictions enacting strict regulations on data privacy, as in the General Data Protection Regulation of the European Union (Kaplan & Haenlein, 2018).

The findings of the study highlight a few major implications businesses may consider when embedding AI during transition. Implications are drawn on organizations of different industries and sizes, from SMEs to MNCs.

Strategic Investment in AI for Long-Term Gains

Though AI usually can be costly when it comes to implementation, the operational efficiencies, cost reduction, and customer satisfaction then are starkly evident (Bhatia, 2024). Business organizations should look at AI adoption as an investment rather than just a

short-term cost. For instance, based on the sample data shown, companies that invested in AI-based automation and predictive analytics reported up to 15% cost reduction within a year of implementation, alongside significant improvement in productivity.

For industries like retail and manufacturing, where AI can further grease the wheels in terms of supply chain management, one would be ceding competitive advantage to nimbler rivals by failing to adopt AI. By investing in AI strategically, businesses can position themselves for long-term growth while gaining a competitive edge.

Importance of Tailored AI Solutions

While out-of-the-box solutions may present certain benefits, the most effective integrations are those crafted to meet your needs. AI solutions must be tailor-made to certain processes and objectives a company has (Davenport & Ronanki, 2018). Companies working with AI vendors, or developing in-house AI capabilities themselves, can better leverage the full potential of AI technologies.

For example, AI-based predictive analytics tools have to be estimated specifically for the financial industry to carry out the market trends for each institution. Thus, there is a need for Artificial Intelligence Customer Relationship Management systems for retail to be specifically equipped with behavior and personal preferences to provide recommendations. Hence, it has been very unrealistic to assume that there is an approach to AI that fits all the requirements.

Addressing the AI Talent Gap

The AI talent gap is the single biggest enabler for businesses seeking to integrate this technology. Where automation will remove some of the need for people to perform mundane tasks, AI requires those skilled at designing, implementing, and monitoring these systems. Investments by businesses should be in building internal AI teams that have ongoing training and development programs that retain key talent. Partnerships with universities and other tech-training programs will also serve to help bridge this gap by enabling access to emerging talent (Kietzmann et al., 2018).

The trainability of the population is critical, especially considering that governments and educational institutions provide STEM education

and training programs in AI. Those companies that are success-orientated with employee upskilling and reskilling initiatives stand ready in better measure to adapt to the rapid technological changes brought about by AI.

Ethical AI and Transparency

The current rise of AI stirs debates about ethics, primarily based on algorithmic bias, transparency, and protection of consumer data (Uzialko, 2024). Companies have to make proactive efforts in evolving ethical AI practices and ensuring that their AI decision-making is transparent. Algorithms used by the companies in driving the decision of customer service, marketing strategies, and operating processes must be carefully vetted to ensure that the inadvertent biases do not harm the brand reputation or bring regulatory penalties.

For example, AI systems that recommend credit approvals or medical treatments must be transparent in their decisions for customer-facing industries such as finance or healthcare. Furthermore, businesses must comply with data privacy regulations, such as the GDPR (Parsons, 2025), to ensure they do not compromise consumer data. Transparency in AI is not strictly a legislative requirement but also part of the trust between businesses and their consumers.

Change Management and Organizational Adoption

AI adoption goes beyond technological consideration to the organizational mindset and culture. Business leaders should realize that the impact of adopting AI will resonate immensely in their workforce, workflows, and decision-making processes (Makridakis, 2017). This eventuality calls for an efficient change management strategy in place so that managers as well as employees can assess how AI fits into their operations.

The shift to AI-powered operations, then, has the potential for resistance among employees who fear that their jobs will be displaced. Companies create a culture of innovation and

learning that helps people reduce their resistance to new phenomena and think of AI as a tool, not a replacement for human work. On the business side, it is necessary to align the organizational structure to the new processes brought about by AI: the cross-functional teams must be capable of working on projects in AI and sharing their insights across departments (Bughin et al., 2018).

Conclusion

After exploring how AI enables business development through, suggests best practices for successful integration, and studies what happens during transition periods when organizations emphasize artificial intelligence, NLP, and robotic process automation, it can be concluded that AI is one of the transformational technologies in today's businesses, revolutionizing entire industries from being capable of better operational efficiencies to better data-driven informed decisions to provide a better customer experience. Those companies that have integrated AI during their transition phases are likely to leverage new opportunities and the changing needs of consumers.

Implementational hurdles like steep costs, scarcity of talent, ethical constraints, and organizational changes are bedeviling challenges businesses have to contend with. The research has shown that with an appropriate investment in AI and its tailored solutions, companies can realize significant gains in efficiency, cost savings, and customer satisfaction.

Focusing on technological and ethical considerations in the future will remain paramount for companies. This will invoke regulatory guidelines and consumer expectations to weigh concerning existing AI systems and to train and recruit AI-savvy employees through internal training programs.

More importantly, AI is not a tool per se; it is a catalyst promising to bring growth and development in the times to come. Companies embracing AI today are sure to be in leading positions in their respective industries tomorrow.

References

Agrawal, A., Gans, J. S., & Goldfarb, A. (2018). Prediction machines: The simple economics of Artificial Intelligence. Harvard Business Review Press.

<https://books.google.com/books?id=wJY4DwAAQBAJ&printsec=frontcover#v=onepage&q&f=false>

Badmus, O., Rajput, S. A., Arogundade, J. B., & Williams, M. (2024). AI-driven business

- analytics and decision making. *World Journal of Advanced Research and Reviews*, 24(1), 616–633. <https://wjarr.com/content/ai-driven-business-analytics-and-decision-making>
- Bhatia, S. (2024, February 21). Council Post: Anticipating the Future: How AI will impact businesses in 2024. *Forbes*. <https://www.forbes.com/councils/forbestechcouncil/2024/02/21/anticipating-the-future-how-ai-will-impact-businesses-in-2024/>
- Brynjolfsson, E., & McAfee, A. (2017, July 18). The business of Artificial Intelligence: What it can — and cannot — Do for your organization. *Harvard Business Review*. <https://hbr.org/2017/07/the-business-of-artificial-intelligence>
- Bughin, J., Seong, J., Manyika, J., Chui, M., & Joshi, R. (2018, September 4). Notes from the AI frontier: Modeling the impact of AI on the world economy. *McKinsey Global Institute*. <https://www.mckinsey.com/featured-insights/artificial-intelligence/notes-from-the-ai-frontier-modeling-the-impact-of-ai-on-the-world-economy>
- Cooper, C. (2024, January 9). The future of content creation: How AI and humans are joining forces for explosive results! *Medium*. <https://medium.com/@colin-cooper/the-future-of-content-creation-how-ai-and-humans-are-joining-forces-for-explosive-results-35904da3e677>
- Davenport, T. H., & Ronanki, R. (2018, January-February). Artificial Intelligence for the Real World. *Harvard Business Review*. <https://hbr.org/2018/01/artificial-intelligence-for-the-real-world>
- Dwivedi, Y.K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P.V., Janssen, M., Jones, P., Kar, A.K., Kizgin, H.; Kronemann, B.; Lal, B.; Lucini, B...Williams, M.D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice, and policy. *International Journal of Information Management*, 57, 101994. <https://doi.org/10.1016/j.ijinfomgt.2019.08.002>
- Iyelolu, T. V., Agu, E. E., Idemudia, C., & Ijomah, T. I. (2024). Driving SME innovation with AI solutions: overcoming adoption barriers and future growth opportunities. *International Journal of Science and Technology Research Archive*, 7(1), 036–054. <https://doi.org/10.53771/ijstra.2024.7.1.0055>
- Kaplan, A., & Haenlein, M. (2019). Siri, Siri in my hand, who's the fairest in the land? On the interpretations, illustrations, and implications of Artificial Intelligence. *Business Horizons*, 62(1), 15-25. <https://doi.org/10.1016/j.bushor.2018.08.004>
- Kietzmann, J., Paschen, J., & Treen, E. R. (2018). Artificial Intelligence in advertising: How marketers can leverage Artificial Intelligence along the consumer journey. *Journal of Advertising Research*, 58(3), 263-267. <https://www.tandfonline.com/doi/full/10.2501/JAR-2018-035>
- Loureiro, Sandra Maria Correia & Guerreiro, João & Tussyadiah, Iis, 2021. "Artificial intelligence in business: State of the art and future research agenda," *Journal of Business Research*, Elsevier, vol. 129(C), pages 911-926. https://ideas.repec.org/a/eee/jbrese/v129y2021icp911-926.html?utm_source=chatgpt.com
- Makridakis, S. (2017). The Forthcoming Artificial Intelligence (AI) Revolution: Its Impact on Society and Firms. *Futures*, 90, 46-60. <https://www.sciencedirect.com/science/article/abs/pii/S0016328717300046?via%3Dihub>
- Manyika, J., & Sneider, K. (2018, June 1). AI, automation, and the future of work: Ten things to solve for. *McKinsey & Company*. <https://www.mckinsey.com/featured-insights/future-of-work/ai-automation-and-the-future-of-work-ten-things-to-solve-for>
- Parsons, L. (2025, February 24). What's the Future of AI in Business? - Professional & Executive Development, *Harvard DCE*. https://professional.dce.harvard.edu/blog/whats-the-future-of-ai-in-business/?utm_source=chatgpt.com
- Ransbotham, S., Kiron, D., Gerbert, P., & Reeves, M. (2017, September 6). Reshaping business with Artificial Intelligence. Closing the gap between ambition and action. *MIT Sloan Management Review*. <https://sloanreview.mit.edu/projects/reshaping-business-with-artificial-intelligence/>
- Uzialko, A. (2024, August 27). How artificial intelligence will transform businesses. *Business News Daily*. <https://www.businessnewsdaily.com/9402-artificial-intelligence-business-trends.html>