



## Role of AI in Commerce and Management

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DOI : <https://doi.org/10.5281/zenodo.20056854>

### ARTICLE DETAILS

**Research Paper**

**Accepted:** 04-04-2026

**Published:** 18-04-2026

### Keywords:

*Customer, workflows, management, businesses*

### ABSTRACT

AI is transforming industries, from optimizing e-commerce. Artificial Intelligence (AI) is crucial for modern business, driving increased efficiency through automation, improving decision-making via data analytics, and reducing costs. It enables personalized customer experiences, enhances fraud detection, and powers predictive analytics for better inventory management and strategic planning, providing a significant competitive advantage

### Introduction:

Modern business management faces more complex challenges than ever before. The speed of market changes, customer expectations, and operational demands create daily hurdles that traditional management approaches struggle to handle. These challenges affect businesses of all sizes, from small teams to large enterprises.

### Major challenges in business management:

- 1. Information Overload** - Business managers receive thousands of data points daily from sales reports, customer feedback, market analysis, and team updates. Processing this information manually takes too much time and often leads to missed opportunities or delayed decisions. Important trends get buried under mountains of routine data.
- 2. Customer Service Scalability** - The demands for 24/7 customer support keep growing. Customers expect instant responses at any time of day, in their preferred language. Managing a support team



across time zones costs too much, while limiting support hours risks losing customers to competitors who offer better service.

- 3. Process Bottlenecks** - Manual approval processes and documentation slow down operations. Simple tasks like expense approvals or inventory updates take days instead of minutes. Teams waste time chasing signatures and updating spreadsheets rather than focusing on growth activities.
- 4. Communication Gaps** - Messages get lost between departments, leading to mistakes and delays. Important updates don't reach the right people at the right time. Teams work with outdated information, causing errors in customer service, product delivery, and strategic planning.

## Evolution of AI

AI in ecommerce started with the basics such as product recommendation engines, triggered emails, and simple chatbots. Today, it has grown into something far more capable and useful for brands that want to compete on customer experience. Early ecommerce AI was largely rules-based, moving customers through a predetermined path with little flexibility. Now, AI agents can handle complex, multi-step customer interactions on their own, answering questions, recommending products, processing returns, and completing purchases on behalf of shoppers. Unlike traditional AI that simply responds to inputs, these systems anticipate needs and act on them in real time. AI integration also used to require a serious technical team and a large budget. That's no longer the case. Today's platforms make it possible for growing ecommerce businesses to build AI-first workflows without dedicated engineers. The result of using both traditional and generative AI is faster decision-making, leaner business operations, and better outcomes across the board. For many brands, modernization and business model efficiency go hand in hand and AI is how they're getting there.

## Importance of AI in Business and Management

The need or importance of AI stems from its varied benefits. Following are the major benefits of using AI in business management

- 1. Operational Efficiency:** AI automates routine, time-consuming tasks like data entry, inventory management, and order processing, reducing human error and freeing employees for strategic work. The profitability of the firm depends on its operational efficiency which enhances ROE and ROC (Returns on Equity and Returns on Capital)



2. **Data-Driven Decision Making:** the decision making process needs to be timely and cost effective AI analyzes vast amounts of data to provide actionable insights, helping business leaders make informed decisions, identify trends, and understand purchasing patterns.
3. **Enhanced Customer Experience:** In the present market structure the customer is King .The satisfaction level of customer is corner stone of success. The AI enables personalized marketing and interaction. AI-driven chatbots provide 24/7 customer support, improving satisfaction and engagement.
4. **Predictive Analytics and Forecasting:** The most important benefit of Ai is its predictive capability AI can predict future trends, demand, and user behavior, helping firms reduce stock outs, optimize inventory, and improve supply chain resilience.
5. **Cost Reduction and Risk Management:** The bottom line of business is its cost. The effective control on cost is needed for its competitive strength AI helps identify fraudulent activities in real-time, reducing financial losses. It also optimizes costs by streamlining operations and optimizing pricing strategies.

## Current Scope of AI application in Business Management

### 1 Predictive Analytics And Decision Support

As the AI is capable to handle Big Data the AI-powered analytics can turn raw business data into clear steps. The technology spots useful patterns in sales records, customer behavior, and market trends. For example, a retail store uses this to predict which products will sell best next season. A manufacturing plant predicts equipment maintenance needs before breakdowns happen. The **important areas where predictive analytics helps business decisions are** Sales forecasting Inventory management Customer behavior Equipment maintenance schedules and Staff scheduling. Beyond analytics, AI brings major improvements to daily operations, too.

### 2. Automated Workflow Management

The workflow management is a complex task. It needs decisions on various fronts. With each new project business operations gets more complex. Manual process tracking leads to missed deadlines, lost documents, and frustrated employees. AI organizes these workflows to keep your business running smoothly. For instance, when a customer calls about an order status, the AI agent can not only provide the information but also trigger relevant workflow updates, keeping all teams in sync.AI-powered workflow systems handle the routine tasks that slow down your teams. When a new sales order comes in,



the system automatically routes it through necessary checks, inventory verification, and shipping preparation. No more lost orders or confusion about who needs to take the next step.

### 3. Quality Assurance Monitoring

The detection of fault and correcting in instantly assures quality. The production processes can receive automatic adjustments when quality metrics start to drift. AI systems can monitor every step of your business processes in real-time, from production lines to customer service interactions. A manufacturing plant can spot defective products before they reach packaging. A call center can flag customer service issues before they turn into complaints. AI monitoring can watch hundreds of quality indicators at once. In a food processing plant for example, it can track temperature, humidity, cooking times, and product appearance simultaneously. The system can alert staff immediately when any measurement moves outside acceptable ranges, preventing entire batches of product from being wasted. It helps to get customer interactions feedback on tone, accuracy, and problem resolution success. The speed of detection can save significant costs

### 4. Supply Chain Optimization

AI acts as a effective tool for Supply chain management. AI systems can monitor entire supply network in real-time, from raw materials to final delivery. For example, a retail business can spot shipping delays before they affect store inventory. A manufacturer can adjust production schedules based on supplier capacity changes. The AI supply chain management helps in reducing the cost by 15 % Modern supply chains can generate big data. AI can process this information to spot patterns human managers might miss **AI can improve supply chain operations by** inventory forecasting cheaper ways to move products between locations and risk assessment to avoid potential problems

### 5. Financial Management

The success of the firm and its growth depends on financial management. AI systems can monitor every financial transaction in real-time, helping businesses spot opportunities and avoid problems. A retail business can track thousands of daily transactions to identify spending patterns. A service company can analyze client payment histories to improve cash flow. AI can process financial data from multiple sources at once. The system can check bank transactions, invoices, expense reports, and payroll records simultaneously. When unusual patterns appear, the AI can alert financial teams immediately. This helps catch potential issues early, before they affect the bottom line. **AI can help in budget tracking can**



automatically match expenses to approved categories. It also predict cash flow and forecast upcoming income and expenses with high accuracy. The revenue analysis can identify the most profitable business areas. AI can also help with long-term financial planning. The system can analyze past performance, market trends, and economic indicators to create more accurate financial forecasts. A manufacturing company can better predict raw material costs.

## 6. Marketing And Customer Insights

In a dynamic world with the spread of technology and its adoption the customer behavior changes faster than ever. AI systems can track these changes across all marketing channels in real-time. A retail business can spot shifting shopping patterns as they happen. An online service can identify which features customers use most often and adjust their marketing focus accordingly. AI can process customer feedback from multiple sources at once. The system can analyze social media comments, customer service calls, online reviews, and website behavior simultaneously. When customers start talking about new needs or concerns, the marketing team can respond quickly with relevant content and offers. **AI can enhance marketing efforts by** customer segmentation can identify specific groups based on actual behavior patterns. It can measure results across all channels in real-time. Of promotional activities. Further it helps in Purchase pattern analysis can predict what customers might want to buy next. by using Social media monitoring

## 7. Project Management And Resource Allocation

The effective project management requires micro planning of resources and avoiding unexpected delays. AI systems can monitor every aspect of project execution in real-time. For example, a construction company can track materials, equipment, and worker availability simultaneously. A software development team can spot potential delays before they affect delivery dates. AI can handle complex resource calculations instantly. The system can check team schedules, equipment availability, and project timelines at once. **AI can improve project management by** resource scheduling can match available staff to project needs based on skills and workload. Further timeline management can predict potential delays and suggest preventive actions. It also makes risk assessment to identify potential problems before they affect project success. Real-time project monitoring can prevent small issues from becoming major problems. AI can also improve long-term project planning. The system can analyze data from past projects to create more accurate estimates for future work. Now, every project needs the right people to succeed. Here's how AI helps with the human-side of the business.



## 8. Managing Human resource With AI

**It is most challenging task to acquire and maintain or retain the talent or human capital.** AI systems can screen applications, track employee performance, and spot potential issues before they affect your team. AI helps in to identify training needs across departments in the organization. AI can process thousands of data points about employee performance and engagement. The system can analyze work output, time management, skill development, and team collaboration patterns simultaneously. Smart talent management can reduce turnover and improve productivity. AI can also help create more effective training programs. The system can track which training methods work best for different roles and learning styles. A sales team can receive personalized training paths based on their specific strengths and challenges. A technical department can get targeted skill updates based on emerging project needs.

### Conclusion

In the era of globalization the adoption of AI in business management is need of the time For this understanding AI's potential is just the first step. The next step is how to implement these ideas effectively and improve business operations. The areas of application and its depth depends on nature of business and the need of investment. Those who adopt at a faster space succeed more and get competitive advantage. The competitive environment is now without border. AI adoption becomes the issue of survival. It is challenge both to the industry and to the worker too as the AI is replacing the human skill with machine skill. The impact on jobs needs to be calibrated as it is not merely issue of cost.

### References

- <https://mailchimp.com/resources/ai-for-ecommerce>
- <https://smallest.ai/blog/roles-of-artificial-intelligence-in-business-management>
- <https://www.mckinsey.com/featured-insights/annual-book-recommendations#>
- Teik Toe Teoh and Yu Jin Goh (2023) Artificial Intelligence in Business Management
- Nosova, S., Norkina, A., Morozov, N., Arakelova, I., Fadeicheva, G. (2024). Integration of Artificial Intelligence into Business Management Strategy.
- Asmar, M., Al-Rob, I.A.A. (2024). Application of Artificial Intelligence in Business Decision Making: Insight from Literature Review
- Christopher DiCarlo Building God The ethics of AI and the Race to control it
- The-optimist-Sam-Altman- Openai-and-the-race-to-invent-the-future