# Analysis of Global Artificial Intelligence Development Situation and Its Impact Path on Management Efficiency of Enterprises and Governments

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**Abstract:** Artificial Intelligence (AI), like an unstoppable force, is reshaping the global economic landscape and social structure at an unprecedented rate in the 21st century. With the continuous refinement of algorithms, the leap in computing power and the increasing abundance of big data resources, AI is gradually moving from science fiction concepts to real-world applications, and has become the core engine for social progress and change. The purpose of this paper is to deeply analyse the current status of AI development at home and abroad, and to explore the far-reaching impact of this technological revolution on the management efficiency of enterprises and governments, in an attempt to draw a picture of the future management driven by AI at the intersection of theory and practice. A blueprint for future management driven by artificial intelligence, with a view to providing ideas for future management innovation.

***Keywords*:** artificial intelligence; developmental trends; business and government; management efficiency; impacts

## 1. Introduction

On the vast stage of artificial intelligence, the sparks of technological innovation are splashing and the boundaries of application scenarios are expanding. From the precision control of intelligent manufacturing to the comprehensive governance of smart cities, from the precise diagnosis of medical and health care to the intelligent risk control of financial services, AI is penetrating into every corner of the social economy with its unique charm. The surge of this force has improved production efficiency and service quality, and more profoundly changed the way of production and life of human beings, leading people into a new era of intelligence and digitalisation. How to effectively respond to the challenges while enjoying the convenience brought by AI has become a major issue for enterprises and the government.

## 2. Current status of the development of artificial intelligence at home and abroad

In recent years, the development of Artificial Intelligence (AI) worldwide has shown a booming trend and become an important force to promote economic and social development. Governments have introduced relevant policies to focus on the cultivation of new quality productivity and support AI as a strategic emerging industry.

In the United States, the government promotes the research, development and application of AI technology through the formulation of strategic planning, the establishment of special funds, the construction of innovation platforms and other measures. For example, U.S. President Joe Biden signed the first executive order on AI in the U.S., aiming to promote technological breakthroughs, attract global investment, and protect the public from the impact of AI's "savage growth". The US President Biden signed the first US executive order on AI, which aims to promote technological breakthroughs, attract global investment, and protect the public from the "wild growth" of AI, and set up the National Artificial Intelligence Research and Development Council, which has allocated $10 billion to support AI research and development. At the same time, the U.S. Senate is also actively promoting AI legislation to achieve fair, transparent and sustainable development of AI technology.

In China, the government likewise attaches great importance to the development of the AI industry, incorporating it into the national strategy. Through the implementation of policies such as the New Generation Artificial Intelligence Development Plan and the Guiding Opinions on Promoting the Deep Integration of Artificial Intelligence and the Real Economy. Promote the deep integration of AI with various fields of the economy and society. As of June 2023, the scale of China's core AI industry had reached 500 billion, and the number of AI enterprises exceeded 4,400, ranking second in the world after the United States. AI technology has been widely used in many fields, such as smart cities, smart manufacturing, and smart agriculture.

# 3. The Impact of Artificial Intelligence on Business and Government Management Efficiency

## 3.1 Automation and Intelligence: Enhancing Operational Efficiency and Quality

Artificial Intelligence (AI) significantly improves the efficiency and quality of business and government operations through automation and intelligent technologies. At the enterprise level, AI can automate a large number of repetitive tasks such as data collection, analysis, and forecasting, thus saving human resources and reducing the error rate. For example, in the manufacturing industry, intelligent robots and automated equipment can work 24/7, which not only improves productivity but also ensures the stability of product quality. At the same time, AI can also achieve automated optimisation of supply chain management through intelligent scheduling systems and optimisation algorithms, reducing operating costs and improving overall operational efficiency. In the field of government management, AI also shows great potential. By introducing an intelligent approval system, the government can automatically analyse application materials, shorten approval time and improve approval efficiency. In addition, AI can help government departments monitor key indicators such as environmental monitoring and public safety in real time to ensure the efficient operation of government services. For example, intelligent surveillance systems can analyse video data in real time to warn of possible criminal activities and improve public safety management.

## 3.2 Data-driven decision-making: enhancing the science and precision of decision-making

The introduction of Artificial Intelligence (AI) enables enterprises and governments to make scientific and accurate decisions based on massive data. In enterprise management, AI digs deep into market trends, customer needs and other information through big data analysis and machine learning technology to develop marketing strategies for enterprises. production plan to provide strong support. For example, by using machine learning algorithms to analyse user behaviour data, companies can personalise product recommendations for users and improve sales conversion rates. Government management also benefits from AI's data-driven decision-making capabilities. AI can analyse historical economic data, demographic data, etc. to provide a scientific basis for policy making. For example, in urban planning, AI can simulate the effects of different development scenarios, predict their possible impacts, and help planners choose the optimal solution. In addition, AI can mine social media data to understand public feedback on policies and provide references for policy adjustments.

## 3.3 Customer service and user experience: achieving personalisation and efficiency

The application of artificial intelligence in the field of customer service has greatly improved user experience and satisfaction. Enterprises can achieve 24-hour uninterrupted customer service through intelligent customer service robots, quickly respond to user needs and reduce user waiting time. Intelligent customer service can not only provide basic Q&A services, but also understand the user's emotions and needs through natural language processing and emotion recognition technology, providing more intimate and personalised services. In government services, AI can likewise optimise the service process and enhance the user experience. For example, government service platforms can introduce intelligent consultation and navigation systems that understand public questions and provide accurate answers, guiding the public to quickly find the services they need. This personalised service recommendation improves the relevance and usefulness of government services and enhances the public's trust and satisfaction with the government.

## 3.4 Risk management and early warning: enhancing risk prevention capabilities

The application of AI in risk management and early warning provides strong support for enterprises and governments. Enterprises can use AI technology for risk assessment and early warning to identify potential market risks, supply chain risks, etc., in a timely manner and formulate corresponding countermeasures. By analysing market data in real time, AI can predict price fluctuation trends and help enterprises adjust their procurement and sales strategies. In terms of government management, by mining and analysing massive data, AI can predict possible social risks and problems and provide a scientific basis for government decision-making. For example, in the field of public health, AI can analyse disease transmission patterns, predict epidemic development trends, and guide the government to take appropriate preventive and control measures. This real-time risk warning and decision support capability significantly improves the government's risk prevention capability.

## 3.5 Human resources management: optimising talent allocation and incentives

The application of artificial intelligence in human resource management has brought new management ideas to enterprises and governments. Enterprises can use AI technology to carry out resume screening, interview assessment and other recruitment work, improving recruitment efficiency and accuracy. At the same time, AI can also help enterprises better

train and motivate personnel and optimise talent allocation through talent prediction and performance analysis. By analysing employees' work data and performance indicators, AI can formulate personalised training plans and development paths for enterprises and enhance employees' career satisfaction and loyalty. As for government management, by introducing an intelligent recruitment system, government departments can select suitable talents more efficiently. In addition, by analysing the work data and performance indicators of civil servants, AI can formulate more scientific and reasonable incentive mechanisms and promotion paths for the government, and enhance the motivation and satisfaction of civil servants.

### 3.6 Sustainable development and environmental protection: promoting green management and innovation

The application of AI in sustainable development and environmental protection brings a new management perspective to enterprises and governments. Enterprises can use AI technology for energy management and optimisation to reduce energy consumption and carbon emissions. By monitoring energy consumption in real time through intelligent monitoring systems, AI can provide enterprises with suggestions and solutions for energy saving and consumption reduction. At the same time, AI can also help enterprises identify environmental problems and risks in a timely manner and formulate corresponding countermeasures through environmental monitoring and risk assessment. In terms of government management, by introducing an intelligent environmental protection system, government departments can monitor the environmental quality index in real time and warn of possible pollution incidents. In addition, AI can predict possible future environmental problems by analysing historical data and environmental change trends, providing a scientific basis for the government to formulate environmental policies. For example, in urban planning, AI can simulate the impact of urban expansion on the environment and help planners choose the most sustainable development path.

## 4. Effective Strategies to Enhance the Management Efficiency of Enterprises and Governments with the Help of Artificial Intelligence

### 4.1 Building an intelligent decision support system to optimise the decision-making process

Decision-making as the core link of enterprise and government management, its quality and speed have a crucial impact on management efficiency. Relevant departments should make use of the big data analysis of artificial intelligence, machine learning and other technologies to build an intelligent decision support system, realize the rapid collection, processing and analysis of data, and provide decision makers with comprehensive and accurate information support. At the same time, AI can simulate multiple decision-making scenarios and predict their possible outcomes, thus helping decision makers make more scientific and reasonable choices. In this way, the decision-making process can be optimised and management efficiency can be significantly improved. For example, in order to optimise traffic management decisions, the government of Zhengzhou Comprehensive Experimental Zone of Airport Economy introduced an intelligent decision support system and installed nearly 6,000 IoT sensor devices. The system collects and analyses data such as traffic flow and road conditions in real time through big data analysis and machine learning technology, providing traffic managers with accurate reports on traffic conditions. At the same time, the system can simulate different traffic management schemes and predict their possible effects, helping managers to make more scientific and reasonable traffic management decisions. This effectively improves the efficiency of urban traffic management.

### 4.2 Implementation of intelligent process management to enhance business execution efficiency

Most of the business processes of enterprises and governments are cumbersome and complex, involving multiple links and departments, and traditional management methods easily lead to the emergence of problems such as lagging information transmission and process obstruction. The introduction of AI technology, especially process mining and automated processing, has made it possible to automate, standardise and make business processes transparent. AI can automatically identify and optimise bottlenecks in business processes, significantly improving business execution efficiency by reducing unnecessary human intervention and waiting time. At the same time, with real-time monitoring capabilities, AI can identify and correct deviations in the execution of business processes in a timely manner to ensure the efficient and accurate execution of business. For example, a government department held a working meeting on the AI control system project (Figure 1) and introduced an intelligent process management system, which automatically identified and optimised bottlenecks in the approval process through AI technology, significantly reducing the approval time. At the same time, the system monitored the progress of the approval in real time, identified and corrected deviations in the process in a timely manner, and significantly improved the management efficiency and service quality of government departments.

**Figure 1. Holding the AI control system project work meeting**

## 4.3 Enhancement of service quality and responsiveness through the use of intelligent customer service systems

Enterprises and governments as service providers, their service quality and response speed are directly related to the management efficiency. With the help of natural language processing, speech recognition and other advanced technologies, enterprises can build intelligent customer service systems to achieve real-time interaction and efficient communication with customers or the public. Not only can it automatically answer common questions and handle simple business, effectively reducing the burden of manual customer service, but also through data analysis and mining, in-depth insight into customer needs and preferences, in order to provide more personalised, Accurate service to lay a solid foundation. For example, a bank introduced an intelligent customer service system, through natural language processing technology, customers can interact with the bank in real time through voice or text, and get fast, accurate service. At the same time, the system can also analyse customer behaviour and provide customers with more personalised financial products and service suggestions, thus improving customer satisfaction and the bank's management efficiency.

## 4.4 Strengthening data security and privacy protection to ensure management robustness

In the process of improving management efficiency with the help of AI, data security and privacy protection are issues that cannot be ignored. As important collectors and processors of data, enterprises and governments must ensure data security and privacy. Artificial intelligence can strengthen data security protection through encryption technology, access control and other means. At the same time, privacy protection techniques such as differential privacy and federated learning are used to ensure that personal or sensitive information is not leaked during data processing and analysis. By strengthening data security and privacy protection, it can ensure the robustness and sustainability of business and government management.

## 4.5 Innovative talent training and incentive mechanisms to stimulate innovative vigour

In the face of the rapid development of artificial intelligence, enterprises and the government must keep abreast of the times and innovate talent training modes and incentive mechanisms to adapt to the new trend of intelligent management. Through the establishment of in-depth partnerships with universities and research institutions (Figure 2), they can jointly cultivate composite AI professionals with both interdisciplinary knowledge and practical ability. At the same time, enterprises and the government should also build flexible and diverse incentive mechanisms, such as the implementation of equity incentives, the establishment of innovation incentives, etc., in order to fully stimulate the innovation potential and work enthusiasm of employees. For example, a leading technology enterprise has set up an AI joint research and development centre through cooperation with top universities, and jointly cultivated a group of high-end AI talents with international vision and innovation ability. At the same time, the enterprise also launched the "Innovation Star" reward programme, which gives generous rewards to employees who have achieved outstanding results in the development and application of AI technology. This has effectively stimulated the team's innovation vitality and injected a strong impetus for the continuous improvement of the enterprise's management efficiency.

**Figure 2. Training site of AI scientific research institutions in Henan Province**

## 5. Conclusion

All in all, artificial intelligence, as a representative of the new quality of productivity, is gradually becoming an important force to promote economic and social development. Driven by global policy focus and market demand, AI will usher in a broader development prospect. In the future, with the continuous progress of technology and the continuous expansion of application scenarios, AI will play an important role in more fields and bring far-reaching impact on the improvement of the management efficiency of enterprises and governments. At the same time, people also need to face up to the challenges it faces and take corresponding countermeasures to ensure the healthy, sustainable and responsible development of AI technology.

## References


[1] Mengyao Wu. Analysis of the integration development and risk challenges of enterprise management in the era of artificial intelligence[J]. Enterprise Technology and Development,2022(4):116-118.

[2] Zhijie Hou,ZHU Chengliang. Research on the technical efficiency of Chinese artificial intelligence enterprises and its influencing factors[J]. Industrial Technology Economy,2018,37(6):9.

[3] Peng Xu,Xiangyi Xu. Logic and analysis framework of enterprise management change in the era of artificial intelligence[J]. Management World,2020,36(1):8.

[4] Jing Zhu. Research on the impact of new technology development on enterprise human resource management[J]. Business Story,2021(2):64-65.

[5] Hua Li. Analysis of the impact of artificial intelligence on modern enterprise management strategy analysis[J]. China Civil Business,2022(2):59-61.