

# The Impact and Response of Artificial Intelligence on the Theory of Enterprise Management

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**ABSTRACT**—In this era of rapid information technology, the development of artificial intelligence affects people's lives and all walks of life, while promoting the improvement of productivity. With the deepening of artificial intelligence technology, the impact on enterprise management theory and practice began to highlight, therefore, enterprise management and decision makers need to correct understanding of artificial intelligence, rationalize the use of decentralized management structure, conform to the trend of the times management thinking, to ensure that artificial intelligence can promote the improvement of enterprise efficiency. This paper studies the influence and impact of artificial intelligence on enterprise management theory, and puts forward practical countermeasures in combination with some problems faced.

**KEYWORDS**—Artificial intelligence, Enterprise management, impact and response

## I. Introduction

Artificial intelligence is a computer science used to simulate and extend the thinking mode of the human brain, including mode recognition, machine learning, data mining, and intelligent algorithm technology. It is based on these technologies that artificial intelligence can be applied in the management process of enterprises.<sup>[1]</sup> Enterprise management refers to the general term of the organization, planning, command, control and other related functions of all the production and operation activities of the enterprise. With the continuous development of information technology, CRM and ERP and other software systems have been generated to help enterprise managers collect data, formulate production and business activities, and control the business process. With the continuous development of network technology, these systems are gradually integrated into larger systems.<sup>[2]</sup> At present, enterprise cloud service systems have emerged in many fields. The management system that used to cost a lot of cost

deployment, now it can be realized as long as regular service fees. These cloud service systems include the enterprises in the industry. Relying on the data of these enterprises, the analysis of the industry data can be completed, which cannot be completed by the traditional enterprise management theory.

## II. Definitions of AI and enterprise management

Artificial intelligence is a new technology science to research and develop theories, methods, technologies and application systems to simulate, extend and extend human intelligence.<sup>[3]</sup> It is a branch of computer science, also known

as mechanical intelligence. The purpose of artificial intelligence is to make the computer to simulate human audio-visual speech, some thinking process and intelligent behavior (such as learning, reasoning, thinking, planning, etc.), make the computer to realize the principle of intelligence, make computers similar to human brain intelligence, so that the computer can achieve a higher level of application, help people to deal with problems in work and life. The development of AI can replace most repetitive work and effectively liberate the labor force.

Enterprise management is the enterprise production and operation activities planning, organization, command, coordination and control of a series of activities such as general term, roughly includes: strategic management, cost management, financial management, capital operation, human resources, enterprise management is the use of enterprise human resources, material resources, financial resources, information and other resources as far as possible to achieve the maximum input-output efficiency. Figure 1 is a model of enterprise management system. The process is the only way for the implementation of enterprise strategy. The process carries and reflects the enterprise control requirements, organizational responsibilities and enterprise business model.<sup>[4]</sup> The process management system is also the foundation and platform to support the business model. Enterprise management greatly enhances operation efficiency; make enterprise have clear development direction; make each employee give full play to their potential; make enterprise financial clarity, reasonable capital structure and appropriate financing; provide satisfactory products and services to customers; establish corporate image and make more practical contributions to society.

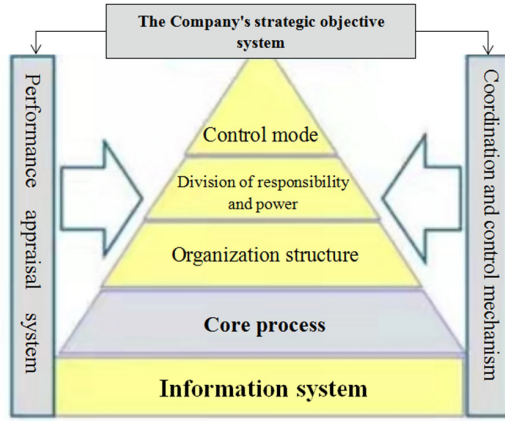


Figure 1: Enterprise management system model diagram

### III. The impact of AI on enterprise management

#### A. The impact of artificial intelligence on enterprise production and operation

##### 1) Reduce enterprise costs

With the development of big data, through the comparative analysis of the material consumption in each link, we can determine the link that needs to be improved, and predict the cost consumption that should be reduced.<sup>[5]</sup> We can also conduct in-depth analysis of the previous sales records and supplier situation, and more accurately predict the established quantity, so as to achieve the balance between supply and demand, and solve the problem of production capacity surplus. At present, artificial intelligence technology can replace part of the need for manual repeated work, the total workload will also lead to the reduction of some employees, will bring labor cost savings to the enterprise, such as can save labor costs, labor management costs, the number of enterprise employees also directly affects the enterprise for employees to pay social insurance and industrial injury insurance.

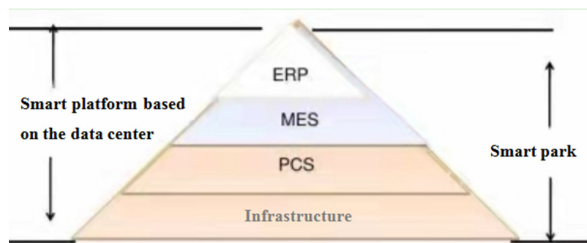


Figure 2: Enterprise intelligence factory architecture diagram

##### 2) Improve production efficiency

Intelligent system realizes the whole process monitoring of each link of the production line, and uses image recognition technology to more accurately identify the problems of products and equipment. The system will automatically and quickly detect abnormal conditions, and then generate judgment and issue prompt sound, which will help to avoid mistakes and overcome contingency, complete the work

process in time, ensure normal operation, and reduce the error rate of the product. This can not only greatly improve the supervision and control ability of product quality, but also greatly improve the work efficiency. A large number of intelligent robot factories can operate for 24 hours, which will greatly increase the amount of operations, and greatly shorten the time used compared to manual use.<sup>[6]</sup> Artificial intelligence is a major innovation in science and technology, which can bring efficient production efficiency and promote economic growth. In the production link of enterprises, artificial intelligence technology has been widely used among them.<sup>[7]</sup>

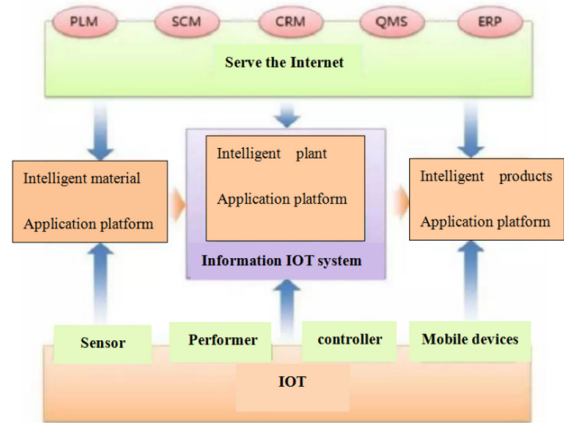


Figure 3: Smart factory flow chart

#### B. AI impact on human management

##### 1) Upgrade the talent structure

In terms of human resources, AI can replace some basic accounting personnel, improving work efficiency and flexibility. In addition, the application of artificial intelligence reduces the degree of human intervention in the accounting process, which is also conducive to realizing accounting independence and improves the true reliability of accounting data. The structural adjustment of enterprise manpower by artificial intelligence is also more scientific.<sup>[8]</sup> Through the comprehensive ability analysis of employees, every employee can match to a suitable position, so as to maximize the value.

##### 2) Support enterprises in making better decisions

Artificial intelligence with expert system, on the basis of rich professional knowledge of expert analysis and solve problems, decompose complex problems to solve, no longer limited to relying on personal limited knowledge and experience, using the huge knowledge base in the expert system to analyze problems, to provide more support for enterprise management and decision-making, which also provides disposable permanent resources, can help enterprises reduce talent training resource expenditure.

#### C. AI impact on financial management

##### 1) Improve the quality of financial information processing

When financial management and artificial intelligence technology has not been used, the traditional financial information management mainly relies on manpower, which will not only lead to more human error, but also may lead to

the generation of information is not authentic, so the credibility degree of applying manual financial information processing is not high.<sup>[9]</sup> With the continuous popularization and development of artificial intelligence, the artificial application of enterprises in financial management is gradually reduced, effectively reducing the error rate, and gradually effectively improving the efficiency of financial management information processing.

#### 2) Improve the professional level of financial information management

In the process of enterprise financial management, artificial intelligence than artificial, in the financial information processing is more professional, the use of artificial intelligence technology and financial personnel, effectively solve the cumbersome financial management information, can promote the formation of professional financial management workflow, and can help the leadership of more scientific decisions. Especially in artificial intelligence has the characteristics of efficient and convenient, which can well improve the professional level of financial management application, and promote the standardization and standardization of financial operations.

### IV. The impact of Artificial Intelligence on Enterprise Management Theory

#### A. AI impact on talent management theory

Artificial intelligence can help human work and improve work efficiency. The promotion effect of artificial intelligence has brought a great impact on the enterprise talent management theory. Artificial intelligence can completely replace repetitive operations, enterprises need more creative and innovative employees, which is not completely consistent with the traditional talent management theory and way, will have a relatively great impact. The focus of enterprise training for employees has gradually changed from standardization and process training to the improvement of innovation and creative ability.<sup>[10]</sup> In addition, the impact of artificial intelligence on the traditional talent management theory is not limited to the enterprise level, but also on the development of talent itself. Only by fully adapting to the development trend of the AI era can we ensure that talents are better integrated into enterprise management and promote the development of enterprises.

#### B. The impact of AI on enterprise decision-making theory

With the development of AI, its maturity will continue to improve, and AI will gradually become the driving force for efficient enterprise work and low-cost operations. Artificial intelligence can not only output data and reports, but also conduct in-depth analysis of data to assist decision makers to make more objective judgments and find relevant content from seemingly messy data. Compared with traditional information management systems, AI platforms are more like the "staff officer" of enterprise managers. Traditional decision-making theory requires enterprise employees through communication with customers to obtain the actual needs of customers, artificial intelligence can rely on face recognition technology and big data technology, understand customer satisfaction, management personnel can collect these data to

modify the past management decisions, so as to make more targeted enterprise decisions.

#### C. AI impact on connection mode

Artificial intelligence not only has an impact on the talent management and decision-making of enterprises, but also changes the connection mode between employees and between employees and enterprises. Because of the constant popularity of smartphones, much of the work that used to be done in the office can now be done on the road. This greatly improves the speed of business processing.<sup>[11]</sup> It used to fax, but now taking a photo can be done. The popularization of artificial intelligence is like providing all people with intelligent "secretaries", which breaks through the limitations of time and space, and significantly improves the efficiency of work.

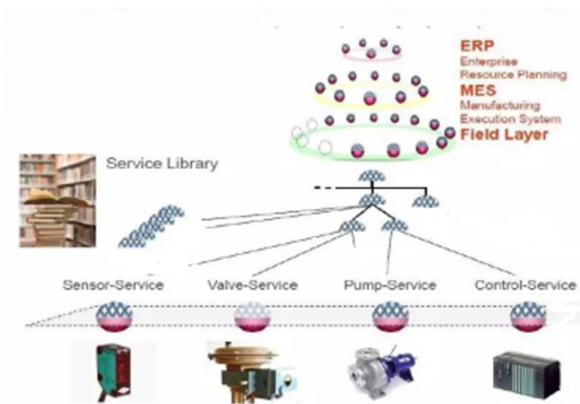


Figure 4: Intelligent factory layout map

### V. Coping Strategies of Enterprise Management Theory to Artificial Intelligence

The accumulation in the Internet age has promoted the development of artificial intelligence, but the impact of artificial intelligence on management practice is different from that in the Internet age. The Internet provides an information transmission mechanism, which can help industries troubled by high information exchange, collection or transaction costs to restructure and optimize. Artificial intelligence technology and derivatives not only change the existing value chain, existing industrial structure and competitive essence of enterprises, but also force enterprises to rethink value proposition, organizational structure and management means, but also provide practical technical support for enterprise management reform. Artificial intelligence dominated by business needs, applied at the level of business model, is a fundamental transformation of existing business processes and business models.<sup>[13]</sup> The practice of enterprise internal management is deeply influenced by artificial intelligence, which also makes the existing enterprise management theory face greater challenges.

#### A. Have a correct understanding of AI

Many business managers think that AI is about deploying some intelligent robots. This is the wrong understanding of artificial intelligence, separate robot can provide expert system

services, although this is a low cost to improve decision quality, but its role for the enterprise development is very small, enterprise need to build a perfect artificial intelligence platform, based on business data, use previous information technology platform to build a new software system, only in this way can give full play to the role of artificial intelligence.

#### *B. Learn to use decentralized management structures*

The non-core enterprise management activity type of employee attendance can be obtained in the form of leasing. This can not only reduce the management cost of enterprises, but also reduce the maintenance cost, improve the efficiency and speed of deployment, and also fully enjoy the benefits brought by enterprises with the help of big data analysis.<sup>[12]</sup>

#### *C. Combined with the characteristics of artificial intelligence, the modern management theory is deeply studied*

First of all, we should fully understand the problems of people, machines and organizations in the era of artificial intelligence, including the "transparency" of people and the "humanization" of machines brought by artificial intelligence. The unstable business environment, the "alliance" relationship between individuals and organizations and the networked information structure make it difficult for bureaucratic management to create value. Accurate performance management and changing human resource demand, the change of industrial competition force enterprises to rethink and integrate values, and integrate artificial intelligence into the overall development strategy of enterprises. It is necessary to analyze the existing enterprise management theory and innovate according to the characteristics of artificial intelligence in order to adapt to modern development.

Professor Chen Chunhua proposed that the four core propositions of organizational management are to solve the problems between individuals and organizational goals, the relationship between individuals and organizations, the relationship between organizations and the environment, and the sustainability of organizations.<sup>[14]</sup> The emergence of artificial intelligence has had a far-reaching impact on these four propositions, and this profound and extensive impact has also promoted the emergence of a new paradigm of management. Some scholars believe that in order to meet the needs of future competition, the paradigm of management needs to change to uncertainty and time irreversibility. Uncertainty shows that management can not identify and solve enterprise organization and management problems through short-term analysis; The irreversibility of time shows that management only has the function of local prediction, but not the function of overall prediction. This change of management paradigm will also help us to explore management theory more suitable for the era of artificial intelligence.

#### *D. Promote exchanges between disciplines and provide new ideas for theoretical innovation*

Artificial intelligence involves computer science, neurophysiology, psychology, cognitive science, philosophy and other disciplines. It is an interdisciplinary subject of natural science and social science. Therefore, when discussing the renewal of management theory in the era of artificial intelligence, we can learn from the views of other disciplines

on a certain phenomenon. For example, when explaining how to stimulate individual creativity in the era of artificial intelligence, quantum management borrows the explanation of the essence and law of micro world movement in quantum physics, which provides a new idea for the development of management theory in the era of artificial intelligence. It is worth mentioning that this interdisciplinary exchange does not completely abandon the traditional management ideas and management methods, but constantly improve the enterprise management theory in the era of coexistence of industrial civilization and information civilization.

## VI. Conclusion

If the past enterprise management is based on information, so the future enterprise management will rely on the implementation of artificial intelligence platform, artificial intelligence for enterprise management theory impact and impact will be more and bigger, therefore, enterprise managers to in-depth analysis of artificial intelligence for the impact of enterprise management theory, comply with the development of artificial intelligence, it into a powerful weapon to promote the rapid development of the enterprise.

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