

Application of Big Data in Enterprise Management

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Abstract. With the continuous development of information technology, enterprises have gradually entered the era of big data. How to analyze the complex data and find out the useful information to promote the development of enterprises is becoming more and more important in the modernization of science and technology. This paper expounds the importance and existing problems of big data application in enterprise management, and briefly analyzes and discusses its application in enterprises and its future development direction and trend.

With the rapid development of Internet of things, cloud computing and other information technology, the world ushered in the era of big data. It has become a trend to promote the deep integration of Internet, big data, artificial intelligence and real economy. Due to the rapid development of economy, the amount of data information generated in the process of consumption and production is very large. Under the traditional management mode, enterprises can not meet the needs of the current social and economic development. However, the application of big data technology in enterprises can achieve better analysis and Research on these data information, so as to provide reliable data basis for enterprises to carry out various business management decisions.

1. Basic Characteristics of Big Data

With the development of economy and information communication era, big data has become an emerging technology which has a far-reaching impact on all walks of life. Big data is changing people's life and the way of understanding the world, and it also occupies a very important position in the impact on enterprise change. Big data usually has three basic characteristics: huge data capacity, fast data processing speed and data diversity. In addition, it also has other characteristics such as low value density, accuracy and viability. Here are three basic features of big data.

1.1. The Data Capacity of Big Data is Huge

The characteristics of big data are first reflected in the big words, and its data volume is extremely large. And with the development of society, relevant data show that in recent years, with the rapid development of science and information technology, the storage capacity of big data has been maintained in a state of continuous growth, and there is still a trend of continuous high-speed growth. Its rapid development directly promotes the commercial value of big data.

1.2. The Processing Speed of Big Data is Fast

The volume of big data is extremely large, which objectively leads to its characteristics of fast information processing, which is mainly determined by the high speed and effectiveness of data flow. Once the massive data cannot be processed quickly and effectively, it will not be able to play the great value of data. It not only emphasizes the characteristics of fast information processing, but also has the characteristics of high processing ability.^[1] For the information of big data, we need to deal with it quickly and effectively, and must achieve the ability to comprehensively and deeply mine valuable information, which is extremely beneficial for enterprises to make accurate judgment and Analysis on relevant matters and take effective measures.

1.3. There are Various Types of Big Data

In an era of rapid development, data are produced all the time, not only in quantity, but also in type.

It includes not only data types generated between people, but also data types generated between machines, including data types generated between people and machines, etc. It covers a relatively wide range, and the forms of data generation are diversified, not only in the form of text, but also in the form of audio, video, charts and other forms. Therefore, we need to first realize the diversity of big data. The emergence of a variety of data types can undoubtedly help enterprises continue to grow.

2. The Importance of Big Data in Enterprise Management

With the wide application and gradual maturity of big data technology, the support and application advantages of big data for enterprise management and other aspects begin to highlight. The application of big data to enterprise management is not limited to enterprises and industries. Enterprises can improve their products or services by analyzing massive user data, while the government can also use big data to improve public services.

2.1. Big Data Technology Activates the Value of Massive Data

Big data technology activates the value of massive data and makes new changes in enterprise management and strategy. Many enterprises use big data technology for value innovation and optimization. Facing massive user data, enterprises make use of the key technology of big data to make the application analysis of massive data possible, which creates new changes for business management and strategic direction of enterprises, and improves the value of enterprises.

2.2. Get User Feedback Quickly

Get user feedback quickly and improve products and services. In modern society, enterprise competition is extremely fierce. No matter they are entrepreneurial enterprises or time-honored enterprises, they all attach importance to users' evaluation and reputation of their products or services. To gain the recognition of users is the core of the survival and development of enterprises.^[2] Using big data technology, enterprises can quickly obtain users' evaluation data of products or services, so as to carry out multi-dimensional modeling analysis and key semantic extraction of the data, and mine users' detailed evaluation and further needs of products or services. According to their own actual situation and the analysis results of big data, enterprises allocate different improvement weights for each production factor, and quickly improve all aspects of products or services. Facts have proved that only by continuously analyzing users' feedback and needs can enterprises improve their products and services and gain a strong competitive position in a competitive market environment.

2.3. Provide Product or Business Correlation Analysis

Provide product or business correlation analysis to promote sales through marketing. In the process of enterprise management, big data technology plays an important role in product or business correlation analysis, which is the most direct and first applied value that big data technology brings to enterprises. The difference between relevance and causality is that there is not such a strong logical relationship that certain results are caused by certain reasons, but rather a relatively mild and imperceptible relationship.

2.4. Integrating Data

Data integration, resource sharing and cost saving. When the amount of data is Pb level or above, how to effectively manage data and bring benefits to the enterprise needs to use big data technology. For enterprises that have been carrying out information construction for many years, the construction of their systems is a "chimney" system mode, that is, most of the systems are constructed by different personnel using different architectures in different periods according to the needs of specific business. The biggest problem of this system construction mode is that the user data of the enterprise is scattered in various business systems, and there is no connection between business systems, so the data resources cannot be used effectively.^[3] Now using big data sharing

technology, enterprises can break the data island between systems, so as to effectively integrate user data and business data, so as to achieve resource sharing and save enterprise costs.

3. Main Problems of Enterprise Management in Big Data Environment

3.1. The Idea of Enterprise Management is Backward

In the big data environment, it is necessary to firmly establish data thinking in enterprise management, but at present, some enterprises have not yet established a strong data thinking, especially the understanding of the development trend of enterprise management in the era of big data is not in place, so the application of big data technology is also greatly limited. For example, in the process of carrying out enterprise management, some enterprises have not studied and explored how to apply big data technology, and at the same time, they have not formulated a relatively perfect big data technology application plan.^[4]Not only the investment is not enough, but also the education and training of management personnel and other personnel have not been strengthened. Although some enterprises are strong in enterprise management informatization, such as the establishment of OA system, and the strengthening of ERP system construction, in the specific application process, the awareness of applying big data technology to expand related system management fields and improve management efficiency is still not strong.

3.2. Enterprises Lack of Innovation in Management

Enterprises lack of innovation in management, especially for the use of big data. According to the above analysis, in the modern enterprise competition, enterprises that can grasp the direction of the times in time will be able to take advantage of the situation, so as to walk in the forefront of enterprise development. Big data technology is the most cutting-edge achievement of current science and technology, but many enterprises do not realize the important role of this technology in enterprise management, and still continue the traditional enterprise management mode. Without the development of technology, the operation efficiency of enterprises will not be improved.

3.3. Single Enterprise Management Platform

The application of big data technology must rely on a certain platform to achieve, otherwise big data can only become empty talk. At present, although some enterprises can process the relevant data, there is still the problem of single enterprise management platform. For example, many enterprises in the process of applying ERP system, although it has a strong resource integration function, but did not build a relatively complete big data module, so in many aspects of data collection, processing, analysis and so on are not in place; for another example, although some enterprises vigorously promote the construction of accounting information, and also emphasize the need to strengthen financial data analysis, but did not integrate big data Technology and cloud technology are effectively combined.^[5]As the enterprise management platform is relatively single, enterprises cannot strengthen the integration and docking of enterprise management in the application of big data. Big data can only play a role in a certain field and can not provide strong support for enterprise management.

3.4. Technical Issues

Compared with other developed countries in the world, China's big data processing technology is relatively backward, so the specific application needs to be improved and supplemented. The application of big data technology is mainly manifested in various data processing aspects of enterprises. It can store various enterprise files and reports in the form of virtual data, and then save them on the network to prevent data loss. At the same time, the use of intelligent network system can also be very convenient to achieve data transfer and transfer. At present, in the aspect of using big data technology, enterprises mainly lack of intelligence and commercialization.

3.5. Lack of Coordination in Enterprise Management

In the process of enterprise management, in order to make big data technology play a positive role,

we need to collect more data, and then we can play the data collection, storage, analysis and many other functions of big data technology. Therefore, we need the coordination of all departments and all aspects of the enterprise. However, from the current situation of some enterprises applying big data technology to carry out enterprise management, there is generally no relatively perfect coordination mechanism, especially the lack of horizontal connection between various departments is very prominent, and each department of the enterprise is fighting on its own, and there is also a lack of effective cooperation consciousness between each other.

4. Application of Big Data in Enterprise Management

4.1. Actively Innovate the Concept Applied to Enterprise Management

If enterprises want to get faster development, they must establish and strengthen "data management", "data awareness" and "data thinking". Only by fully solving the problem of ideological source, can they smoothly enhance the important strategic significance of enterprise management. At present, enterprises must actively build a big data application management system, determine the important development direction of future data management, increase the material and human investment in the application of big data technology, and actively introduce professional big data technical talents, so as to finally actively promote the success of enterprise management and realize the innovation of intelligence and informatization.

4.2. Transformation of Enterprise Marketing Strategy under Big Data Technology

The traditional marketing strategy mainly realizes the sales goal through human resources, which greatly increases the related costs and is not conducive to the long-term development of enterprises. With the development of big data technology, the marketing strategy of enterprises tends to be more scientific, stable and diversified. The concept of people-oriented is fully implemented, and the interests of consumers are put in the first place, so as to seek benefits for consumers. It has opened up the market of enterprises, won market opportunities, and realized the rapid increase of sales volume. In the era of big data, enterprises can understand the sales situation of enterprises through data information, and can also get timely feedback from consumers through data information. These information form a transparent network through collation and analysis.^[6] Enterprises can clearly understand which products are most needed by consumers, so as to better realize the perfect integration of demand and supply, and constantly improve the economic benefits of enterprises.

4.3. Actively Promote the Perfection of Enterprise Management Platform

In order to actively promote the innovation of enterprise management mode, it is necessary to strive to promote enterprise management measures, highly adapt to the needs of the development of big data environment, effectively improve the systematicness, integration and comprehensiveness of enterprise management platform, and realize the deep integration and utilization of big data by using enterprise management platform. For example, ERP system has been widely used in enterprise management, Through the application of the system, the big data processing module can be set up scientifically, so as to smoothly realize the collection of all kinds of business data for enterprises, so as to complete the classification, integration and management application of data. At the same time, many enterprises have actively established "cloud accounting" according to the needs of big data analysis and collection. In this way, data collection and analysis inside and outside enterprises can be completed at the same time.

4.4. Market Forecast Based on Big Data Technology

The market is always changing, and the market is also difficult to predict. However, with the development of big data technology, the enterprise's ability to predict the market has been significantly improved. Enterprises can use a lot of data to analyze the market situation, formulate production plans that meet the market demand, and continuously improve sales. Big data technology simplifies the organizational structure of enterprises, and has become the main development trend of enterprises, which is conducive to enterprises to predict the market.

4.5. Big Data can Help Enterprises Develop Potential Resources

In the process of operation and development, enterprises need to accurately grasp and control all kinds of resources to reduce or even eliminate unnecessary waste of resources. Before big data appeared, it is difficult to fundamentally eliminate waste. However, after the arrival of the era of big data, in-depth analysis and utilization of data will enable more detailed and systematic planning of all types of enterprise resources to give full play to the maximum utilization value of resources, promote the cost reduction of enterprises, so as to enhance the profit margin.

4.6. Reduce Enterprise Cost under Big Data Technology

In the enterprise strategic management, in addition to improving the income of the product, we should also reduce the cost of the product, so as to maximize the profit of the enterprise. Enterprises should make full use of big data technology to reduce the cost of products, so how to effectively apply big data technology becomes the key.^[7] Enterprises should make full use of the data provided by big data technology to analyze the key of cost, so as to continuously reduce the cost of products. The cost structure of the product should form a product cost analysis table to continuously simplify the cost that can be reduced. In addition, enterprises should also research and develop new products to replace the traditional products, so that the performance of products can be optimized and the consumption of products can be continuously reduced, so as to make the best use of the products.

4.7. Big Data can Help Enterprises Better Plan for Product Production

Some enterprises make a living by providing products and some by providing services. Big data is particularly important for the development of the former type of enterprises. On the basis of mobile phone market data and consumer information, enterprises can accurately predict the future market development trend and consumer preferences, adjust the product production structure and production process, and do a good job in long-term product production Planning and enterprise operation layout, which is impossible before the arrival of the era of big data.

5. The Direction and Trend of Future Development

In the future, big data technology will be the driving force to show the core competitiveness of enterprises. At present, the application and development direction and trend of big data in enterprise management will be reflected in the following aspects.

5.1. Improve Enterprise Innovation

The paper uses big data technology to provide correlation analysis for enterprise business, and changes business management and marketing thinking according to the results of correlation analysis, and effectively improves enterprise innovation.

5.2. Reconstruct the Enterprise Organization Structure

Using big data technology, we can mining the relevance between various basic data and business data, so as to judge and analyze the rationality and availability of the existing organizational structure of the enterprise, and provide data support for the reorganization of enterprise architecture.

5.3. Build a Big Data Analysis Management Platform

Internal members shall involve all the heads of key departments of enterprise management, such as finance, marketing, human resources, etc., to negotiate and discuss jointly to ensure that the strategic formulation conforms to the market development and is close to the market development needs. Expanding the scope of data collection involves not only the internal enterprise, but also the data information of market changes, avoiding the bottleneck of data collection, and unilateral analysis causing various disadvantages.

6. Concluding Remarks

To sum up, with the increasingly fierce competition among enterprises, if enterprises want to do a good job in their own management and gain a firm foothold in the market, they should pay more attention to big data and ensure its full play, so as to improve the management level and competitiveness of enterprises, lay a solid foundation for the long-term development of enterprises and promote the further development of big data development.

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