Application of Big Data in Thinking Innovation of Enterprise Management Architecture

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Abstract: In order to effectively improve the innovative management ability of enterprise management architecture thinking, this paper uses the method of factor analysis to explore the influencing factors, development orientation and innovation mode of enterprise management architecture thinking innovation under the background of big data. This paper summarizes the basic connotation of the era of big data and analyzes the innovative factors of current enterprise management structure, and puts forward innovative management methods for enterprises in the era of big data, which provides new ideas for innovative thinking of enterprise management structure.

Keywords: big data; Enterprise management; Architecture innovation; app; application

1 Introduction

With the gradual optimization and upgrading of China's market economy structure, under the era of big data, all kinds of information are flooding in. New technologies and methods bring more reference for the development of enterprises. Enterprises must strengthen their own management, effectively innovate service models, further seize the development opportunities in the era of big data, dig deep into the value behind massive information and various resources, improve their market competitiveness, and gain more economic benefits and commercial value in the development of market competition. Large-scale business in the daily operation of enterprises can not be separated from information management, while some Internet industries can not be separated from the support of big data. Big data technology mainly provides storage and calculation of resources attached to this platform, while data science is a process of value discovery based on data. Modern enterprise thinking thinks that data is value, and borrowing the expanding function of accounting, it thinks that the value discovery of data also includes predicting economic prospects, providing economic decisions, and feeding back operating conditions [1].

Big data technology and data science and technology have never been separated. Especially in the business practice of enterprises in the era of big data, data is the trend, and big data is the support of this set of data-oriented business architecture. Data science, as a service running on the support of big data, uses statistical learning and machine learning methods to mine more valuable business rules, that is, to realize the transformation from data to information. To

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complete this transformation, it is inseparable from the computing power of big data, and it is also inseparable from the sophisticated algorithm model of data science.

2 The connotation of the era of big data

The era of big data mainly relies on the Internet, and carries out extensive data collection and overall data processing and analysis through conventional tools and software. The data is massive, so analyze and compare the data as a whole, and summarize all kinds of relationships in the data, so that the information can be refined more accurately. The speed of information production, acquisition and processing depends on the advanced nature of the Internet. Through comprehensive screening and information collection, the big data system is gradually integrated by using the Internet, so that the data types are rich and diverse.

With the continuous development of information technology, complex data contains rich value in the process of development, and some data can have a positive impact on social and economic development. Therefore, comprehensive analysis and exploration of data has become a favorable support for promoting the progress and development of the industry. In the process of big data development, because it has certain advantages, it has a positive impact on the development of the industry. Therefore, enterprises need to gradually improve their development concepts in the development process, attach importance to the application of big data in enterprise development and operation, and then conduct in-depth exploration and innovation on data collection and analysis channels, and gradually grasp the dynamics and laws of market development [2-3].

The current development of big data has a positive impact on the management of enterprises, and huge resources bring certain risks to data security. Therefore, it is necessary to analyze the data in real time, solve the corresponding practical problems, and reduce the risk of data loss or destruction through data backup. In the process of development, enterprises should establish correct development goals, effectively integrate and apply data, adopt scientific management measures, improve the ability of data analysis and application, and make enterprises obtain greater benefits in production and operation.

3 Characteristics of enterprise resource management in the era of big data

Big data technology and data science technology are rising rapidly, among which big data technology is mainly used for the collection, storage and calculation of high-dimensional massive data. Data science mainly refers to the exploration of data and its inherent laws, that is, the science of in-depth study from data, including data mining, data analysis and other technologies. With the synchronous development of distributed storage, cloud computing, computer network and other technologies, it provides conditions for the service and efficiency improvement of big data technology. With the emergence of open source products in the market, the development threshold and operation and maintenance costs of big data platforms have been significantly reduced. The development of machine learning, deep learning and other technologies provides more abundant support for data science from theory to practice. In

enterprise management, it is generally believed that a modern enterprise has a process before considering the department, and the process precedes the department and the process is greater than the department. Process is the generalization and extraction of daily activities of enterprises, and the refinement of sustainable operation of enterprises. The process generates departments, which are organizations, and all organizations constitute the structure, which is also the thinking of enterprise architecture. Introducing big data thinking into the reform of enterprise management structure, we may wish to start with data thinking from the enterprise operation process. In modern enterprises, big data has an impact on business environment, economic business and business model, and factors such as business environment, economic business and business model have a positive impact on business processes, thus promoting the reform of enterprise management structure [4]. The architecture diagram of enterprise big data management system is shown in Figure 1:

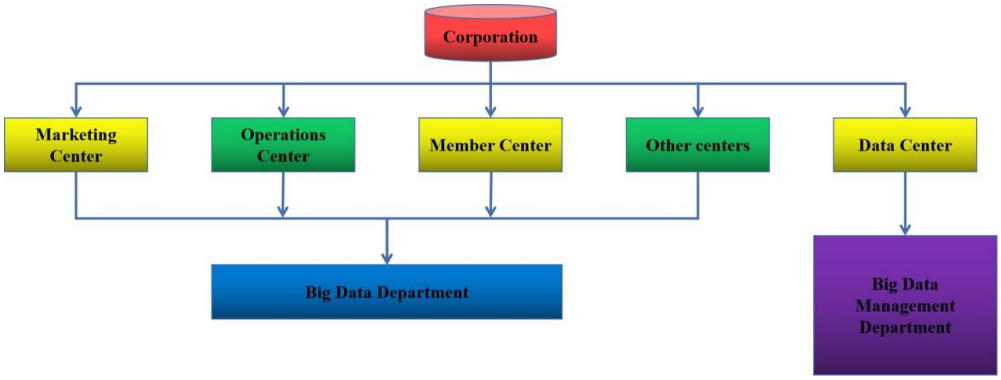

Fig. 1 Architecture diagram of enterprise big data management system

3.1 Organizational structure of this paper

In the first part, this paper explores the role of external economic environment and business model of value chain, and explores the innovation of big data on enterprise management structure. As shown in Figure 2. According to the above research framework and influencing factors, we construct the following codes to comprehensively analyze the impact, change and enlightenment of big data technology on enterprise management architecture.

(1) The impact of big data technology on the business model of enterprises (h1);

(2) The impact of big data technology on the external environment (h2);

(3) The influence of business model on enterprise management structure (h3);

(4) The influence of the external environment on the enterprise management structure (h4);

(5) The impact of big data technology on enterprise management structure (H).

The second part analyzes the development direction and innovation mode of enterprise management architecture under the background of big data according to the influencing factors of the first part [5-6].

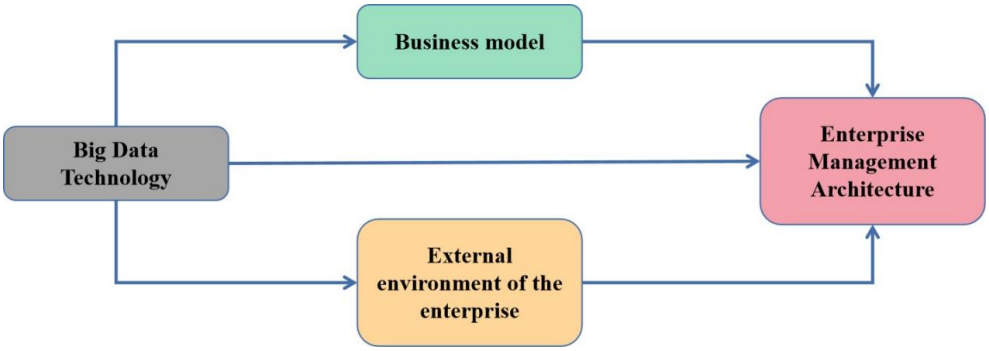

Fig. 2 Organization chart of this paper

4 Analysis of innovation factors of enterprise management structure

Business model provides enterprises with strategic planning, operation plan, profit mode and other contents, and the introduction of big data technology will have a greater impact on business model. Big data technology can provide enterprises with more accurate market demand and target user preferences, and help enterprises to make operational plans. With the support of massive data, enterprises can obtain more accurate and comprehensive information from it. The value proposition reflects the practical significance of the company to consumers, and the division of consumer target groups helps an enterprise to define its own product and service positioning. Enterprises can analyze the needs of target user groups through big data technology, and then seize the core users. Big data technology helps enterprises explore the appropriate profit model. In the era of big data, traffic represents profit. How to retain valuable data, how to explore a profit model suitable for enterprises, how to truly realize traffic and make profits from huge and jumbled data are challenges brought to enterprises in the era of big data. In the era when information exchange is so convenient, users are faced with more and more choices, and the appearance and disappearance of a brand may be in a blink of an eye. Only by better grasping the market and users, and grasping the target group, can enterprises have a chance to stand in the rapidly changing market [7].

Big data technology brings changes to the external environment of enterprises. It is the choice of enterprises themselves to seize opportunities or stick to their duties. Under the operation of the new economic normal, the support of national policies is the basic guarantee for the vigorous development of enterprises. The social environment is positive, the income of residents is improved, and the level of culture and education is gradually improved. Just like the development of new retail, under the influence of big data technology, the technological environment of enterprises has also changed accordingly. It is a choice that enterprises need to adapt to the new technologies of the new era, catch the express train of "Big Data" and moderately improve and innovate their business models.

5 Countermeasures for Innovation of Enterprise Management Mode in Big Data Era

(1) change ideas and improve business value awareness.

Managers of enterprises need to gradually update the concept of operation management and introduce big data as the data source for enterprise development, so that big data systems can systematically mine and process information for enterprise production and operation. Because of the analytical characteristics of big data, enterprises should identify the problems existing in their own development in the operation process, and improve the efficiency of data to commercial operations by in-depth analysis of problems and intuitive guidance by using big data. Relevant leaders of enterprises coordinate employees internally and externally when carrying out big data operations, and adjust their data analysis and management capabilities, thus improving the business value of enterprises [8].

(2) Strengthen training and improve the data integration ability of professionals.

In the process of production and operation, enterprises should not only enhance the concept of big data operation, but also actively introduce high-end computers into the management process of enterprises. High-end management talents explore and expand the integration and analysis of marketing data in all aspects when carrying out information processing. Enterprises should fully strengthen the scientific management of internal talents, and talents with management skills should be fully integrated into the data analysis of enterprises, so as to implement strategic goals in combination with the decision of leaders. In the process of data processing, professional technicians need to process and comprehensively analyze the development status and information of the external market, so as to explore the predictability of enterprise production and operation and bring greater economic benefits to enterprise development [9-10].

6 Conclusion

In the era of data, it is necessary to effectively apply the innovative mode of enterprise management, which is an important trend of market development. The function of enterprise management system is to promote healthy internal competition and operation and form a scientific and reasonable management model. The management mode of enterprises needs to pay more attention to the enthusiasm of active employees and promote their initiative progress and innovation. Large enterprises need to closely fit big data technology, master all kinds of data resources, and at the same time, use data resources to realize scientific development and decision-making management of enterprises, build a high-level management system, realize independent marketing management network, and effectively apply data resources to provide power for enterprise development.

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