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Research on the Influence of New Generation of Information Technology on Contemporary Enterprise Logistics Management Information System

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Abstract. At present, information technology has been widely used in various fields, which has also led to the modernization of logistics information management in China. The new generation of information technology has penetrated into different professional fields, such as mechanical engineering, electronic engineering, communication engineering, image processing and so on. Through the information technology, enterprise logistics management has been moving towards the road of automation and intelligence, which is also the development trend of modern enterprises. At the same time, the new generation of information technology promotes the application of modern logistics management, which will help enterprises to move towards the process of logistics integration. First of all, this paper analyzes the important characteristics of modern logistics management. Then, this paper analyzes the information technology used in logistics management. Finally, some suggestions are put forward.

Keywords: New Generation Information Technology, Logistics Management, Information System

1. Introduction

In recent years, with the deepening of the understanding of the importance of logistics management, the research on logistics of Chinese enterprises has been in-depth to all walks of life. The fundamental purpose of modern logistics is to improve logistics efficiency, reduce logistics costs and meet customer needs, which has shown more needs, such as information, networking, automation, intelligence, standardization, etc ^[1]. Therefore, informatization has become the core of modern logistics. Only by realizing the informatization of logistics management can enterprises continuously improve their comprehensive competitiveness in the tide of network economy.



The development of new generation information has changed the function of enterprise logistics. Therefore, logistics is no longer just the transmission of industrial products, which is also a way of gathering, processing, processing and re dissemination of various transmission information [2]. Logistics informatization is manifested in the following aspects, such as the commercialization, database and coding of logistics information, the electronization, standardization and real-time of logistics information processing, and the digitization of logistics information storage. Traditional industrial logistics is the transmission of goods as the main object. In the information age, the aggregation and diffusion of information transmission is the object, which needs the logistics center to play its own gathering and dispersing function. The new generation of information technology has made logistics a comprehensive service center of social economy.

2. The necessity of logistics management information system

2.1. The needs of modern enterprise development

The rapidity of E-commerce makes logistics management more efficient. Because e-commerce is not limited by space, the scope of logistics space accompanied by e-commerce is much larger than that of traditional logistics, so the socialized logistics system relies more on information technology. Logistics management informatization is the need to enhance the core competitiveness of enterprises [3]. In addition to the investment and construction of logistics distribution infrastructure, the basic direction of modern enterprises to rebuild their core advantages is to enhance the logistics service ability by means of agglomeration, integration and utilization. Logistics management informatization can promote the growth of total logistics sales, improve service quality and improve after-sales service. To realize the real-time control of the network and change its traditional business flow centered operation mode, it puts forward new challenges to the operation and management level and mode of logistics [4].

2.2. Logistics management is an important means to improve economic benefits

In the process of economic development in developed countries, enterprises mainly take reducing the cost of labor and materials as a means to increase profits, so it is called "the first source of profit". When the prices of labor and materials are reduced to a certain limit, enterprises turn their attention to expanding product sales, which is called "the second profit source". With the increasingly fierce market competition, the market share of each enterprise is ultimately limited, so enterprises begin to pay attention to reduce the logistics cost which occupies a considerable proportion in the cost. Therefore, logistics management is called "the third profit source". According to the statistics of the International Monetary Fund, logistics cost plays an important role in the national economy. As for general enterprises, logistics cost often accounts for 5% - 35% of sales volume of enterprises, which is a major item in operating costs. Compared with developed countries, logistics cost in China is much higher. This shows that after greatly improving the logistics efficiency, the logistics cost of China's enterprises will have a larger space for compression, which can bring a larger profit development space [5].

2.3. Logistics management is the driving force of enterprise market innovation

Logistics management is a new management concept, but also a new management technology and means. With the development and change of market, science and technology and economic

environment, the enterprise resources related to logistics are also in the process of continuous adjustment, differentiation, combination and evolution, which will inevitably lead to new demands and opportunities, thus promoting the emergence and formation of new products, new enterprises and even new industries. Through the application of new modern logistics management technology such as supply chain integration, enterprises can improve the internal and external competition environment. Logistics management not only promotes enterprises to develop new markets and meet the needs of more potential markets, but also provides theoretical, technical and service support for the formation and development of new industries, new markets and the expansion of related industries. Many western countries have proved that logistics industry will become a new economic growth point, promote the development of many industries, and create conditions for the emergence of many new industries and markets.

2.4. Break the traditional logistics form

Modern logistics has broken the traditional logistics form of truck receiving, loading and payment directly, which has been transformed into integrated modern logistics management scale. Modern logistics has greatly improved the social demand of modern logistics management industry. The integrated transshipment process of the whole demand goods is the key work flow of modern logistics information management construction, involving a series of procedures according to the regulations, such as acceptance - placing position according to waybill number - loading - in transit - checking and checking goods at the place of arrival - unloading - warehouse signing - delivery of waybill - computer input - notification to the buyer - Logistics Monitoring and supervision - Logistics zoning - distribution- Buyer sign in - logistics service feedback, etc. Logistics can efficiently and reliably transfer goods to designated areas or locations. Through the integration of modern logistics information technology, we can improve the level of national economic development and enrich the goal of people's quality of life.

3. Modern enterprise logistics management information system

3.1. Application of information technology in enterprise logistics management

In order to improve work efficiency, enterprises should unify logistics data platform. By optimizing business processes, enterprises can meet the needs of accounting supervision. At present, the information technology of enterprise logistics management mainly includes: Enterprise Resource Planning System (ERP), management information system (MIS), bar code automatic identification technology (bait), radio frequency technology (RFID), global positioning system (GPS) [6]. By combining various businesses, we can maximize work efficiency, which will provide information support for management and decision-making, as shown in Figure 1.

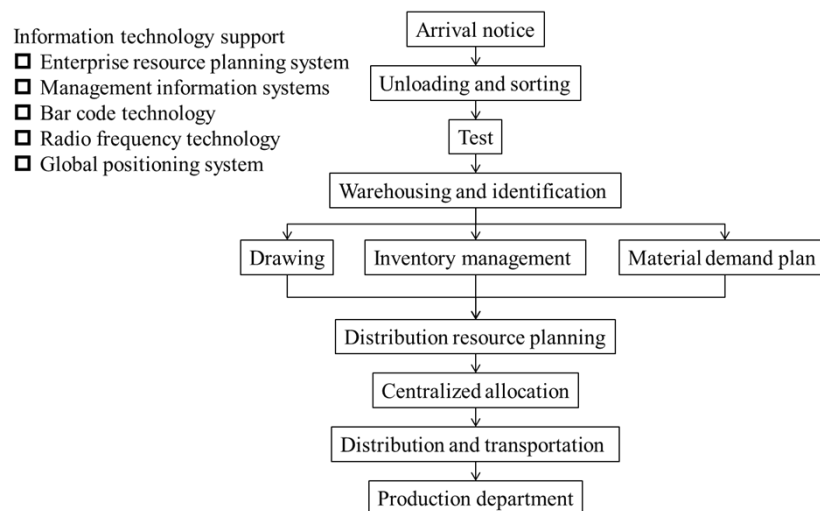


Figure 1. Application of information technology in enterprise logistics management

3.2. Electronic data interchange technology

Under the background of Internet and information technology, the electronic data exchange technology is the most commonly used in modern logistics. It is a high-tech information technology field that transfers all information data into internationally recognized standard format and transfers. Although the electronic data exchange technology has improved the development of logistics enterprise management, there are also many influencing factors, which make the electronic data exchange technology has the necessary limitations. On the one hand, it is the network security hidden trouble of data information transaction. On the other hand, it is the protection of legal rights. Modern logistics is in a steady rising stage. It is difficult for China to formulate a unified process specification, which will lead to only a shipping note without a written proof of the right to explain the differences during the delivery period. Therefore, it is difficult to guarantee the legal effect of the orders of both parties in case of disputes.

3.3. Bar code technology

As early as the 1970s, bar code technology appeared, which has been widely used in various sectors of society. The commonly used barcode in logistics field is 2D barcode. Two dimensional bar code has obvious advantages over ordinary bar code in two aspects. First, the two-dimensional barcode can store a large number of data, images, audio, bills and so on during the logistics configuration. Second, the two-dimensional bar code security and accuracy of the security factor is relatively high, which can avoid personal or enterprise information data leakage or loss.

3.4. Global positioning system

The U.S. military developed the global positioning system in the 1970s. The commonly used geographic information system (GIS) is also developed by the U.S. military. At present, the two technologies are applied to the system management of all walks of life at home and abroad, and logistics is no exception. The global positioning system can be used to monitor and control all goods in real time.

3.5. *RFID Technology*

The main principle of radio frequency identification technology is to use radio frequency signal to obtain product information. In the whole identification process, no human participation is required, which can adapt to various special environments. At present, modern logistics management information technology on the use of scanning bar code gun. Through the construction of logistics integrated management software, enterprises can build the original record framework. By creating a detailed classification of each mode, enterprises can create a logistics integrated management system, which will provide a guarantee for the information technology of the background database. Through the framework, when adding new information data, we only need to scan the bar code gun to identify the relevant information of the original data. By manually filling in the relevant new data, we can be more convenient, fast and accurate logistics information. At present, RFID technology has been scientifically applied in the practical work of modern logistics enterprise management, which has avoided the mutation of modern logistics entry work. By eliminating the traditional manual registration means, enterprises greatly speed up the logistics process.

4. Conclusion

Logistics management informatization can realize the optimal allocation of logistics service resources, which breaks the barriers of traditional regions. By forming an organic flexible system, enterprises can transfer business, financial and market information quickly, which will save a lot of manpower, material resources and financial resources. Under the promotion of e-commerce, logistics management information system reduces inventory backlog and logistics costs, which improves economic and social benefits. Therefore, logistics information is the inevitable requirement of e-commerce. Enterprises should improve the logistics management information system through the following aspects. For example, first, we should raise the awareness of logistics science and technology of the whole people. Second, create a good policy environment, and at the same time strengthen the investment in logistics technology. Third, attach importance to logistics education and introduce logistics professionals. Fourth, strengthen the exchange of logistics science and technology with domestic and foreign countries.

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