

# Fresh Cold Chain Logistics Enterprises to Intelligent Logistics Platform Enterprise Transformation and Upgrading and Innovation Development

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**Abstract:** With the improvement of national living standard, consumers have higher yearning and pursuit for the quality of life. it is the mainstream idea of contemporary consumption to make more consumers eat healthier food by using the logistics mode of fresh cold chain, and the development of intelligent logistics platform has promoted the upgrading and innovation development of enterprises, better completed the development of the current intelligent logistics platform, minimized the cost and improved the transportation efficiency, and promoted the rapid development of fresh cold chain.

## 1. Introduction

Fresh products from production to the hands of consumers, most of the time spent in the process of transportation and distribution, through the intelligent logistics platform to carry out accurate transmission of information, the use of cold chain logistics transportation, greatly ensure the safety and quality of fresh products, effectively reduce the damage to fresh products in the process of transportation, through production, transportation and other links to ensure that fresh products are in a temperature-controlled state, so as to complete the quality control of fresh products transport, fresh to the hands of consumers to achieve better economic and social benefits.

## 2. Strategic Conception of Fresh Cold Chain Logistics



Figure 1 Fresh products out of storage

Fresh products have the characteristics of easy deterioration and easy decay, and their freshness is the important basis for judging fresh products. Therefore, there are many restrictions on the packaging, storage and matching of these foods. In particular, our country is vast and vast. Some foods are transported from west to east or from south to north with great leaps and bounds. Because of the different temperatures and climates, it makes it difficult to transport fresh products.[1]. The traditional mode of transportation of fresh products is to use the normal temperature logistics

system, resulting in fresh products from production to send to the hands of consumers, food in the normal temperature state, when it is possible to send to the hands of consumers, the food has deteriorated, if the consumption of spoiled food will cause great health and safety risks. Based on this, the idea of fresh cold chain logistics came into being, different from the normal temperature logistics transportation system, from production to the hands of consumers, fresh has been in a constant low temperature state, to ensure that consumers in the whole process of buying and eating food is fresh, giving consumers the maximum safety guarantee for consumption (see figure 1).

### **3. Factors Restricting the Development of Fresh Cold Chain Logistics**

#### **3.1. High Cost of Cold Chain Logistics and High Transportation Price**

Based on the logistics equipment of the current enterprise, it is necessary to use a variety of temperature-controlled equipment to cooperate with the fresh cold chain system to complete the strategic conception of fresh cold chain logistics. Some food that is not easy to store can only be transported by cold chain. Moreover, for the transportation of fresh cold chain logistics, its equipment management, capital investment and so on are several times the normal temperature logistics system, although the development space is huge, but the need for professional and capital is also very large, its capital recovery period is also very long, the operation risk is still very big[2].

#### **3.2. Incomplete Cold Chain Logistics System**

Although most logistics platforms have their own cold chain logistics, the lack of certain planning and integration makes logistics lack of the same management in transportation, which affects the development of cold chain logistics. In the case of some small logistics platforms, the original fresh cold chain food for air transportation, logistics platform for the so-called interests, choose to use the road, railway way to operate, during this period will reduce the cold chain quality, and some logistics companies, did not establish their own cold chain warehouse, cold chain products transport to the place, just into the ordinary warehouse, its details affect the quality of cold chain products, some cold chain transport due to the lack of line planning, resulting in increased operating costs and cold chain temperature control, resulting in the deterioration of fresh things. Because there is no unified planning of the cold chain logistics content, different logistics platforms operate the cold chain logistics in their own way, and then reduce the quality of fresh products from the result[3].

#### **3.3. Cold Chain Logistics Infrastructure Construction Lags Behind**

Cold chain logistics from storage to transportation, all need to carry on the cold food insulation treatment work to the fresh product, such cold chain insulation way in our country current control aspect development has the insufficiency, cannot satisfy the fresh product cold meal demand. In particular, the typical characteristics of fresh products are small-scale decentralized operation, through the cold chain of logistics transport year-old to ensure the quality of products but also increase the cost of products. And this will virtually increase the price of fresh products, consumers do not know the door, will choose low-priced fresh products, resulting in the lack of fresh things market. In the process of cold chain development of fresh products, because of the poor information circulation, the cold chain logistics consumption is too large, especially compared with the developed countries, its construction level is far away. The construction level of cold chain infrastructure is not high, the problem of cold storage construction is more prominent, especially in the northern region of our country, the cold storage equipment is close to saturation, but the actual number of cold storage in the central and western regions is poor, the lack of reasonable building structure, and the lack of cold chain transportation equipment in most enterprises, there is neither uniform packaging management standard nor complete transportation equipment, most refrigerated transport vehicles are not professional grade vehicles but modified vehicles, and lack of basic transportation equipment and storage equipment, which will reduce the quality of cold chain transportation freshness invisibly.

## 4. An Effective Strategy for the Transformation of Cold Chain Transport Enterprises to Intelligent Logistics

### 4.1. Improve the Construction of Cold Chain Logistics Infrastructure

According to the development of fresh cold chain logistics in developed countries, it relies on transportation network to a great extent. Based on this, the transformation of fresh cold chain to intelligent logistics in China can also rely on the construction of transportation infrastructure, and the government can increase the investment in municipal construction to ensure the smoothness of fresh products in the transportation process. Based on the old content of fresh products in the logistics and transportation infrastructure, we can use the credit guarantee system to complete the guarantee of low interest loans to the relevant institutions of the cold chain transportation enterprises of fresh products, give these logistics enterprises certain help policies, reduce tax revenue and other ways, encourage enterprises to change the direction of the intelligent logistics platform, increase the investment in the cold chain logistics of fresh products, and update the old transportation equipment and storage equipment. Especially for the establishment of cold storage, cold storage is the key to the storage of fresh products, so it is necessary to strengthen the construction and layout of cold storage, improve the relevant warehousing and distribution, and prevent fresh products from breaking the chain in the process of cold chain transportation (see figure 2).



Figure 2 Distribution of fresh cold chain

### 4.2. Strengthening the Construction of Cold Chain Logistics Network Information for Fresh Products

The development of information technology is the core of the development of modern cold chain transportation and the key to enhance the core competitiveness of enterprises. In the process of the transformation of the phase intelligent logistics platform of the cold chain transportation enterprise, we can carry on the advanced information management work to the fresh product, and use the cold chain logistics base to record the link of the fresh product storage, processing, entering and leaving the warehouse. At the same time, we should install GPS system, thermometer and so on for different cold chain transport vehicles, so that we can grasp the storage state of fresh products at any time, and provide a better way to save fresh products. In addition, we should combine with railway transportation, road transportation and other cold chain transportation platforms to build a shared network information platform, so that all people can quickly find information about goods, share information from different aspects of cargo handling, transportation, tracking and so on, so that the information can be used to the maximum extent during the operation of each logistics, construct intelligent logistics platform, improve the coverage of information, and make logistics distribution more efficient (see figure 3).



Figure 3 Fresh cold chain delivery car

#### **4.3. Focus on Personnel Training and Strengthen Technology Research and Development**

Based on the cold chain logistics of fresh products in our country in the initial stage, so the general colleges and universities do not set up a special field of education and teaching, and based on the effectiveness of propaganda content, many people do not have enough understanding of the major. Based on this, colleges and universities and cold chain logistics enterprises are encouraged to cooperate, increase the research and investment in this field of knowledge, actively integrate with the successful educational and scientific research results of foreign countries, and train a new batch of fresh cold chain compound talents with strong professional quality and ability for the country. At the same time, it is necessary to further explore the logistics storage and transportation technology of fresh cold chain, increase the research and development of production products in low temperature preservation, insurance and local temperature control technology, draw lessons from foreign cold chain transportation mode and management mode, apply it to the cold chain transportation process of our country, realize the diversified intermodal transport state of land, land and air, so as to promote the innovation transformation of fresh product cold chain logistics enterprises to intelligent platform.

#### **4.4. Strengthening Cold Chain Logistics Standards for Fresh Products Chemical Management**

Strengthen the supervision of fresh products, take the safety of fresh products as the premise of cold chain transportation. Build a unified fresh cold chain logistics standardization management to ensure that every link of the enterprise in the transportation process is based on the management requirements. Such as refrigerated vehicle temperature setting, insulation setting, transportation process on the quality of fresh products and so on, but also to carry out random spot check and inspection, to check the unqualified must be severely punished. Make clear the responsibility that the cold chain logistics enterprise should bear in the transportation process of fresh cold chain products, avoid the negligence in the transportation process caused by the pursuit of some enterprises, affect the quality of fresh products, and carry out strict control for the interests of consumers. Relevant enterprises should also combine their own development and conditions to constantly expand the construction of the talent team, guide the relevant staff to play the role of the Internet of things, enhance the construction of logistics enterprises to intelligent logistics platform transformation, expand logistics participants to provide more quality services.

### **5. Conclusion**

Cold chain of fresh products The development of enterprises is the key to the development of China's transportation industry, its effective construction is related to the material life of hundreds of millions of consumers, it is necessary to do a good job in the transformation of cold chain

transportation enterprises to intelligent logistics platform, promote the direction of scientific development of the industry, do a good job in the establishment of industry norms, and create a better social environment for the transportation of fresh products.

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