

Research on Logistics Distribution Management Mode of Beijing CBD Core Area

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Abstract: With the construction of industrial coordinated development system in CBD, strengthening the construction of information infrastructure, providing international standards of public services, new modes of modern logistics industry and new formats of data fusion, the upgrading of logistics wisdom empowerment is imperative. In this paper, Beijing CBD core area logistics management pattern research, field visits Beijing CBD core area logistics management status and meet the problem to be solved at present, research on logistics and distribution mode, explore innovative logistics management mode, put forward suitable for CBD core area of logistics infrastructure and management countermeasures and suggestions, We will further stimulate the vitality and potential of Beijing CBD, and provide strong support for the development of a world-class central business district and better meet people's needs for a better life.

1. Introduction

The biggest foundation, advantage and feature of Beijing CBD construction and development is internationalization. According to a 2017 world business district the global business district attractive report issued by the alliance, ranks the ninth, China first, Beijing CBD has become a world-class international conference destination and destination of foreign institutions stationed in China, information hub of international communication, Chinese fashion culture communication center and international fashion cultural landmark. Relying on the resources of the surrounding embassies in China, international organizations, business associations and international media organizations, Chaoyang District will give full play to the international advantages of Beijing CBD and build an open development pattern [1].

In the Internet Era, retailers interact with customers through various channels to realize the efficient and rapid development of logistics in central business districts. The central business district should establish an authoritative network where orders are executed, bans are banned, and government orders are unblocked. Unified standards should be formulated, and every link should be operated according to standards to ensure the time limit and quality of products. Establish logistics network from the perspective of customers in the region, understand the links of customer concern, especially the receiving and delivery links, and improve customer satisfaction.

So this article to carry out field research activities in Beijing CBD, on-the-spot investigation situation and the problems during the Beijing CBD core area logistics management, the problems to be settled urgently provide resolution strategy, logistics management mode from comprehensive logistics management of new forms, and promote the traditional logistics mode, cultivating new type of logistics mode, further stimulate vitality, releasing potential. It will provide strong support for the development of a world-class central business district and better meet people's needs for a better life.

2. Investigation of logistics management of Beijing CBD core area

2.1. Current situation of logistics management in Beijing CBD core area

Beijing CBD core area is located in Chaoyang District, Beijing, located in the northeast corner of Guomao Bridge, west from east third Ring road, east from Qiaozhi Road, south from Jianguo Road, north to Guanghua road, covers an area of about 30 hectares, accounting for about one-fifth of the entire Beijing CBD area [2]. As one of the six high-end functional areas in Beijing, Beijing CBD core area is a business central area with various service functions such as finance, insurance, information, consulting, business, culture and business office. It is the most important area for economic development, industrial agglomeration and urban construction in the capital.

2.2. Logistics management requirements of Beijing CBD core area

According to the practical investigation of Beijing CBD, logistics demand groups in the core area of Beijing CBD mainly include companies, individuals, businesses and logistics distribution enterprises or organizations. For the company, the logistics demand is mainly focused on document receiving and sending, flowers, office procurement and other logistics needs [3]. CBD office companies are relatively concentrated and in large quantities, and the company has a large demand for logistics. For individual logistics demand is more focused on the delivery and express packages, CBD core area of personal mainly refers to the employees, every day for food and beverage, cold drinks such as real-time logistics demand is bigger, in addition, many employees will be personal daily receipt address set for the company, so the demand of personal charge for express delivery parcel is bigger also. For businesses, businesses in the CBD core area have a certain demand for logistics delivery. Finally, logistics distribution companies are also one of the core logistics demand groups in CBD. For logistics distribution personnel, every successful delivery of a single express will achieve a performance. Logistics distribution needs are two-way [4].

Therefore, according to the current situation of logistics distribution in Beijing CBD, it is still in the development stage and the development prospect is very good. The overall form is presented in the following aspects.

2.2.1. Integration degree of logistics distribution

According to the CCTV building of distribution enterprises, according to a survey of logistics distribution enterprise basic cannot achieve the uniform distribution of the enterprise, enterprise's overall distribution rate at about 50% [5], large logistics enterprise resource waste, at the same time distribution are generally smaller scale, and most of the distribution center has not reached the scale of the economic distribution, cause most of the idle personnel and equipment, This greatly restricts and restricts the development of logistics distribution enterprises.

2.2.2. Distribution center infrastructure

Another major factor that restricts the development of logistics distribution is the technology of distribution center. Many important decision-making problems in logistics, such as the location of distribution center, the plan of goods distribution, the best route of transportation, the optimal inventory control and so on, have entered the stage of high and new technology, which still need to be further used and promoted.

2.2.3. Logistics distribution management mode

At present, due to the lack of standardized service consciousness in the management of many logistics enterprises [6]. At the same time, the coordination and cooperation between logistics practitioners are not in place, which makes it difficult to provide standardized services, making it difficult to rapidly improve the service level of logistics distribution enterprises. Because it is difficult to coordinate between logistics enterprises, and the uncertain grasp of the transport route makes the transport speed relatively slow, which leads to the waste of resources and the rise of costs, so it is necessary to optimize the allocation of resources between the whole business district.

3. Current situation and problems of logistics management and distribution mode in

Beijing CBD core area

3.1. Current situation of logistics management and distribution mode in Beijing CBD core area

The flow of people and goods in the core area of Beijing CBD are relatively concentrated. According to the survey data, Beijing CBD area mainly includes commercial building areas, office building areas and residential areas, and its distribution modes mainly include door-to-door delivery, logistics, joint distribution and self-pickup.

3.1.1. Door-to-Door delivery is mainly aimed at commercial buildings and office buildings.

Personnel in such areas have relatively high requirements for takeout and express delivery. The Courier delivers the goods to various regions in small batches and multiple times through tricycles or bicycles [7]. For users to receive express convenient, better service; For the Courier, the workload is large, the delivery frequency is large, the repetitive workload is large, and the waiting time is sometimes long; For CBD regional management, a large number of express vehicles and express delivery personnel shuttling through the region is not convenient for the management of regional traffic and people flow, which interferes with traffic transportation and occupies the sidewalk.

3.1.2. The crowd sourcing logistics mode integrates public resources.

The workers in the crowd sourcing mode are all voluntary part-time workers according to their own conditions, and can provide door-to-door services such as door-to-door pickup and home delivery to nearby people [8]. This mode is mostly used in distribution and takeout. By integrating resources, logistics express companies reduce personnel costs and improve the efficiency of distribution [9]. But at the same time, there are some security risks in this mode, and the quality of delivery service can not be guaranteed.

3.1.3. Joint distribution is designated by a logistics company to contract for all express delivery services, and unified dispatching and distribution in the distribution center of the logistics company.

It is common in major business districts and office buildings in Beijing CBD. For example, some building areas are unified by SF Express to receive and deliver, reducing the workload of other express companies, reducing the shuttle frequency of express workers in the building area and so on [10]. It is also convenient for users to access express services in a unified manner. However, for some other express companies, due to their own express service requirements, they do not cooperate with other express companies, so the joint delivery mode cannot be well implemented.

3.1.4. The self-service mode is to be picked up by the user to the intelligent express cabinet or express network site, in Beijing CBD area, there are many buildings in the underground level of express network site and intelligent express cabinet.

The setting of express delivery outlets needs to occupy a certain space and configure corresponding staff, and the human cost is high. The utilization rate of express delivery cabinets in CBD areas is low, and the maintenance cost is high, which makes it difficult to carry out intelligent express delivery cabinets in CBD.

3.2. Problems in logistics management and distribution mode of Beijing CBD core area

3.2.1. Express vehicles occupy the road seriously

After investigation, it is found that Beijing CBD has more commercial buildings and office buildings, and the demand for logistics is large, so it serves more express companies, and the frequency of express delivery is high. Express delivery way are mostly cart or trolley parked along the road, sidewalks to temporary parking, wait for the user to the place, business people in and out of the inconvenience caused, and affect the surrounding traffic, the business district of the business activities due to traffic congestion, take-away staff disorderly parking vehicles, disorderly into all

kinds of office buildings, It has certain adverse effect on the standardized management of business district.

3.2.2. Interference with ground traffic order

Through the research of Beijing CBD core area, found that provide express service office logistics enterprises including motion, YunDa, Tmall Supermarkets, Jingdong, etc., on average every Courier companies in an office building to send and receive more than 1 h, the average a Courier company in the office to send and receive delivery quantity for a total of 100 or so, As a result, the repeated labor of express companies increases the overall cost of logistics operations. At the same time, the variety of express vehicles causes a certain degree of traffic congestion, which has a great impact on the development of business and office areas.

3.2.3. The utilization rate of smart express cabinets is low

According to the field survey of Beijing CBD, some buildings in the core area are equipped with smart delivery cabinets or only food delivery cabinets, but the utilization rate is low. The main reason is that the location of the smart delivery cabinet is far away from the user's permanent residence. Compared with the delivery boy or Courier directly to the downstairs, the user is more willing to choose the latter, saving the user's time. At the same time, the smart express cabinet will charge the Courier for the storage of the express, and when the parcel is stored for more than 24 hours, it will charge the user for the detention of the parcel according to a certain mechanism, thus reducing the user's use efficiency.

3.2.4. The order of takeaway delivery is chaotic

In Beijing's CBD area, express delivery generally starts at a fixed time and place, but for the takeaway in CBD area, the distribution phenomenon is more complex and chaotic. Due to the large number of commercial buildings and office buildings in THE CBD area and the large flow of people, the demand for takeout is also high. Every morning, afternoon and evening in the hotel is the peak time of take-out delivery. Take-out boys are delivered to the periphery of the corresponding building in the form of electric vehicles. Generally, they will stop at the roadside in front of the building area and wait for the user to go down to take take-out. Part of the building will be set corresponding delivery location, the building of all take-out focus on the location, the building area of the user to the designated place to takeout, but because of the large amount of outside and recognition degree is not high, so will often appear some wrong delivery, can't find the delivery situation, so Beijing CBD Lou Qu takeout be badly in need of unified planning and chaos.

4. Suggestions on logistics management and distribution mode of Beijing CBD core area

4.1. Realize the sharing mode of terminal distribution

Various express companies, third-party logistics and e-commerce enterprises have more terminal distribution site layout, and the repeated construction of terminal outlets has brought the increase of operating costs. The establishment of terminal distribution sharing can well coordinate the existing resources, optimize the allocation, and form the best use of terminal distribution resources and logistics human resources. In the delivery process in the core business district, there is often no one at home and other reasons leading to secondary delivery. However, with the adoption of third-party collection platform and intelligent express delivery cabinet and other end distribution sharing mode, consumers can pick up the goods themselves at convenient time, which provides great convenience and helps improve customer satisfaction. For express enterprises, it not only avoids the waste of logistics resources brought by the second delivery, but also improves the distribution efficiency.

The emergence of sharing mode of terminal distribution also helps to promote the reform of the whole logistics system and bring more innovation. For example, as an access point of the community, smart delivery cabinets can accumulate a large amount of user data. By analyzing and utilizing these data, businesses can obtain more complete user information and provide more targeted services. For express delivery enterprises, these data also help to further improve the

logistics network layout and distribution task allocation. In addition, the analysis of user data is conducive to the integrated development of online and offline, and relevant Internet financial products can be launched according to the different needs of different consumer groups to further expand the scope of business.

4.2. To realize the integration of logistics in the above ground and underground areas

With the continuous change of the global logistics industry and the gradual development of smart cities, logistics has become a core infrastructure for the development of a city. At present, the overground distribution system in China is relatively perfect, but with the improvement of people's demand for logistics, the overground space is gradually facing problems such as traffic congestion, traffic safety and excessive energy consumption. In order to relieve the above-ground pressure, some cities in China have begun to carry out underground space distribution. The joint distribution form of above-ground and underground space can be built in small pieces repeatedly, avoid the waste of social resources, make the urban environment more green and environmental protection, and bring more quality city life to urban residents.

Just as the Figure1, Tall building of Beijing CBD core area is the commercial center zone area, a core area of the ground buildings dense, more variety of underground space forms, a business, catering, parking lot, Courier station, subway station, command center, underground pipe rack, all kinds of equipment room, etc., high property service management requirements, responsibility heavy, difficult.

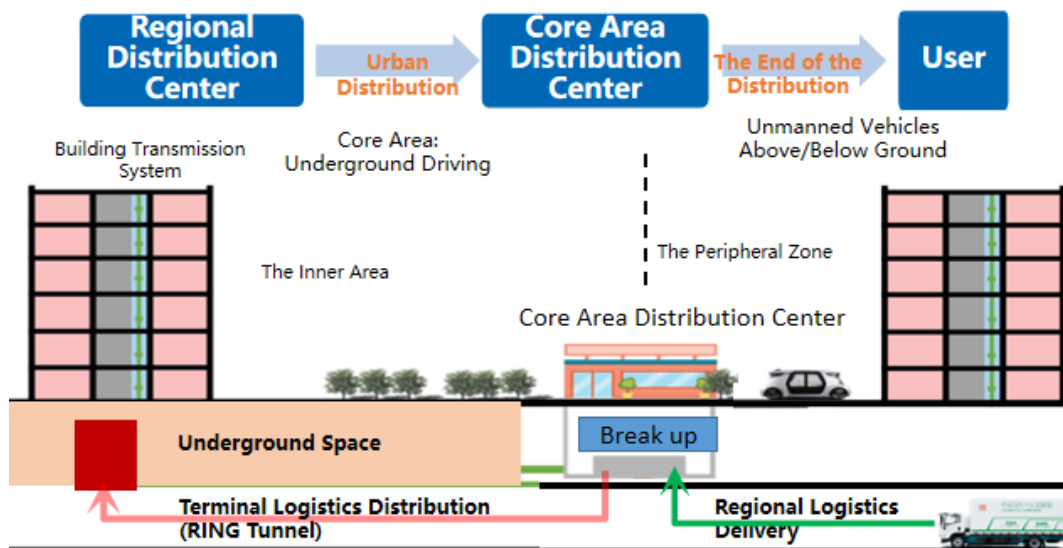


Figure1 Spatial scenario of logistics integration in complex overground and underground regions

Based on the Beijing CBD core area on the ground and underground space form, summarizes the core problem of logistics management problems in practical application and pain points, study new technology application, logistics infrastructure, explore innovative logistics management mode, put forward suitable for CBD core area of logistics infrastructure and management solutions, through the practice, the results form can be copied, can promote management paradigm.

The integrated distribution mode of above-ground and underground logistics is a mode with high security and low transportation cost. Once the urban underground logistics is put into practice, it can well deal with the bottleneck problem of urban logistics distribution. Underground logistics is not affected by traffic control and traffic congestion, and can deliver goods all day long. The intelligent and uninterrupted transportation method can make the effective connection of transportation and ensure the timeliness and efficiency of transportation. Directly delivered to the community, enterprises, office buildings, and even the form of delivery to the home, but also can reduce the occurrence of personnel safety accidents, bring fast experience for users.

4.3. To realize the integrated application of new logistics technologies in multiple scenarios

On July 28, 2020, the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Finance and the People's Bank of China jointly issued the Notice on The Priority Work of Cost Reduction in 2020 to actively promote the adjustment of the transportation structure. We will encourage the application of 5G, the Internet of Things, big data and other new technologies in logistics, and promote the integrated development of logistics with manufacturing, finance, tourism, business and other industries. Vehicle and cargo matching based on artificial intelligence and unmanned driving continuously reduce operating costs and improve transportation efficiency. Intelligent sorting is deeply applied in the field of storage. Big data and cloud computing have played an increasingly important role in logistics investment decisions, such as the location of logistics distribution centers, through their strong predictive power.

The application of new technology in the field of logistics is mainly reflected in the following aspects. First, it has improved operational efficiency and saved operating costs. New technologies such as artificial intelligence, big data and the Internet of Things have improved logistics efficiency in different fields and to varying degrees, especially shortening and optimizing the characteristics of traditional logistics such as long chain and multi-link, and improving fault tolerance. For example, artificial intelligence and the Internet of Things have improved the operation efficiency of warehousing and logistics, saving a lot of operation time; big data improves the accuracy of site selection and transportation routes. Second, the efficiency of decision-making has been improved. New technologies such as artificial intelligence and block chain have replaced the traditional decision-making system based on experience, thus improving the overall efficiency and accuracy of decision-making. Third, it reduces potential risks and losses, improves decision-making accuracy and fault tolerance, reduces operational errors and directional errors in decision-making process, and reduces the occurrence of risk events.

Beijing CBD logistics distribution mode will be from "above-ground logistics + underground logistics", "urban distribution + community distribution", "joint distribution + unmanned distribution", "multiple scenarios + logistics new technology" of intelligent, cutting-edge logistics distribution mode.

5. Conclusion

In view of the current situation of terminal logistics distribution in Beijing CBD, combined with the current geographical environment and development conditions of Beijing CBD, as well as the current distribution mode of logistics and express delivery, this paper takes the core area of Beijing CBD as the main research object to investigate the logistics management and distribution mode in the core area of Beijing CBD. And for Beijing CBD core area logistics management distribution mode to provide a series of countermeasures and suggestions.

The construction of a complex spatial scenario of above ground and underground regional logistics integration and the realization of multi-scenario logistics technology integration are conducive to the effective utilization of regional logistics resources, so as to realize the optimal allocation of logistics resources. As an important node of the international first-class business district, advanced technology, talents, capital and other factors have been flowing into the central business core district of Beijing, which has greatly stimulated the urban vitality of Beijing CBD. The "cost reduction and efficiency increase" of the logistics industry complies with the development trend of The Times, and is the only way for Beijing CBD to enhance the power of sustainable development, and boost the adjustment and upgrading of economic structure.

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