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## Research on the Realization Path of Intelligent Logistics in the "New Retail" Era

(Full Paper)

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### ABSTRACT

"New retail" is the product of innovation and transformation of e-commerce, physical retail and modern logistics. "New retail" relies on omni-channel logistics based on supply chain integration, order-driven precise logistics service and high intensity urban distribution carrying capacity, which has brought huge impacts and development opportunities to the logistics industry. At present, there are limitations in China's intelligent logistics, both in terms of logistics infrastructure construction, logistics information services, and regulatory guarantee systems, which restrict the development of "new retail". In order to realize the high-quality support of "new retail" by intelligent logistics, a trinity of intelligent logistics construction path of "government guidance, market leadership, and social co-governance" is proposed. We should accelerate the construction of intelligent logistics infrastructure under the guidance of the government, give full play to the leading role of the market to build an intelligent logistics information platform, and build a multi-security logistics security system through joint governance of all sectors of society to meet the overall objective of the high-quality support of logistics for "new retail".

*Keywords:* "New retail", intelligent logistics, logistics information

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### INTRODUCTION

The theoretical basis of "new retail" is rooted in the relevant theories of modern marketing, which can be traced back to the early 1960s. Professor Jerome McCarthy put forward the 4Ps theory. Firstly, the marketing factors of enterprises are defined as products, prices, channels, promotions and strategies. In 1984, Professor Philip Kotler added two factors, political power and public relations based on 4Ps theory, forming a large marketing mix. Robert F. Lauterborn put forward the four factors marketing 4Cs theory of customer, cost, convenience and communication, which emphasized the goal of customer satisfaction and attached importance to communication and communication with customers in 1990. When 4Cs marketing theory was put forward, it coincided with the development of Internet companies all over the world. With the vigorous development of the Internet, e-commerce has subverted the dominant position of traditional store sales, supported by the logistics industry and related platforms, and accelerated the transformation of residents' income to consumption. However, in recent years, due to the consumption upgrading and the inherent disadvantages of e-commerce, such as short logistics board, product homogeneity, and poor experience, pure e-commerce is increasingly unable to meet consumer demand. In 2016, Ma Yun first proposed the concept of "new retail" and proposed that only "online and offline + modern logistics" can truly create a "new retail" form. "New retail" is a new kind of intelligent retail, which is the product of the era of e-commerce, physical retail and modern logistics innovation, transformation and formation of joint forces. It has a huge impact on the life of consumers, is closely related to the enterprise and its future development mode and is highly concerned by all sectors of society.

Although the industry has not yet formed a unified standardized expression for the "new retail" form, the proposal of this business form plays an important role in guiding the integration of online, offline and multi-platform, the innovation and development of e-commerce and physical stores, and the transformation and upgrading of the future logistics industry. The basic purpose of "new retail" is to make consumers more convenient and cheaper to buy better goods, which puts forward higher requirements for modern logistics system from the perspective of efficiency and cost. Innovation, transformation and upgrading of logistics business model is an important way to adapt to the "new retail" (Tang & Yang, 2018). The transformation and upgrading trend of the logistics industry is the intelligent logistics integrating the digital technologies such as big data, the Internet of Things, and cloud computing. The definition of intelligent logistics originates from the "intelligent supply chain" proposed by IBM in 2009, emphasizing the use of intelligent technology to improve the automation level of logistics systems. For the understanding of intelligent logistics, scholars have given different views from different perspectives. He (2017) believed that the new ecology based on the Internet of Things and big data, through collaborative sharing of innovation models and advanced artificial intelligence technology, reshapes the division of labor, restructures the industrial structure, and changes the mode of industrial development is defined as smart logistics. The new ecology of structure and transformation of industrial development is defined as intelligent logistics. Lin (2018) proposed that intelligent logistics is the cooperation between humans and machines through data to let the machine complete all the repetitive, non-funny, and machine-solvable things. Zhang (2019) pointed that intelligent logistics is to apply the new generation of information technology to the logistics industry and logistics management in order to play the role of integrating logistics resources, easing the labor shortage and promoting industrial upgrading. It cannot be simply understood as the application of unmanned

warehouse, unmanned vehicle and UAV. Intelligent logistics is the dialectic of dynamic concept and definite mode, which is not only a problem at the technical level, but also a concept of system integration (Wang, 2014). Intelligent logistics presents advanced features such as comprehensive perception, automated execution, intelligent decision-making, and deep collaboration (Zhang, 2019). It emphasizes the innovation of automation, visualization, controllability, intelligence and network of logistics with the fine, dynamic and scientific management mode (Wang, 2016). Foreign scholars have studied intelligent logistics from the perspective of intelligent city. Russo, Rindone, and Panccio (2016) took the urban intelligent logistics solution as a case study and verified the way to implement the European Intelligent City. As a new social infrastructure, intelligent logistics connects consumers and suppliers. Building an efficient intelligent logistics system is of great and far-reaching significance to promote the cost reduction and efficiency improvement of the logistics industry and better serve the national development strategy. At present, clarifying the important limitations in the development process of China's intelligent logistics, recognizing the new requirements of "new retail" on China's intelligent logistics, and constructing a scientific and reasonable implementation path of intelligent logistics, is conducive to promoting the high-quality development of "new retail"

#### **LIMITATIONS OF INTELLIGENT LOGISTICS DEVELOPMENT IN THE "NEW RETAIL" ERA**

At present, some enterprises in China have begun to practice intelligent logistics, and the government has also given policy support in the development of intelligent logistics. However, China's intelligent logistics is far behind developed countries such as Japan and the United States. There are a lot of outstanding problems to be solved in terms of intelligent logistics infrastructure, logistics information standards, information platform services, regulatory and security systems Problem. Yu (2019) pointed out that there are some problems in the development of intelligent logistics, such as slow formulation of industry standards, insufficient enterprise scale, backward infrastructure, imperfect information platform, low level of intelligent terminal logistics and lack of professional talents. In order to vigorously promote the development process of intelligent logistics in China and promote the transformation of modern logistics operation models, it is of great significance to correctly understand the obstacles facing the development of intelligent logistics in China (Wang & Lin, 2019).

#### **Weak Intelligent Logistics Infrastructure**

Compared with developed countries, China's intelligent logistics started late, and the level of intelligent logistics infrastructure and Internet infrastructure is seriously insufficient, which makes it difficult to achieve intelligent matching and operation between all aspects of logistics. The weakness of intelligent logistics infrastructure is mainly manifested in the imperfect layout of national logistics hub, relatively backward regional intelligent logistics distribution center and poor comprehensive service capacity of commercial logistics infrastructure. Although China has invested a lot in the digital transformation of traditional logistics and the construction of national intelligent logistics backbone network, which has contributed to the cost reduction and efficiency increase of the logistics industry, there are still many problems in the overall layout of public logistics infrastructure construction, such as the poor matching of top-level design and planning route, the dislocation of intelligent logistics investment and financing, and the urban-rural distribution system. However, the weakness restricts the development of many high-quality logistics parks in the direction of multi-functional integration, and affects the overall process of intelligent logistics development. Many regional logistics distribution centers are still limited to the storage and self-use stage, and have not completed the intelligent upgrading and transformation, unable to play the social service function. In some cities, especially some small and medium-sized cities, public storage and distribution centers have not been set up in shopping malls and commercial pedestrian streets, and the level of information sharing is still at a low level. The end of public express is constructed repeatedly, and the application scope of self-lifting equipment is small, which has not yet been promoted and opened in many communities and business circles. Due to the lack of efficient logistics information technology in China's logistics enterprises as a support, the lagging of data infrastructure directly leads to higher logistics costs, which seriously affects the quality of logistics services.

#### **Backward Intelligent Logistics Information Platform and Information Standards**

The logistics information platform for users to publish information and share services is an indispensable core competitiveness of logistics enterprises. In 2016, there was a lack of information interconnection between more than 70 million small and medium-sized enterprises and individual businesses across the country. The phenomenon of "Information Island" was prominent. The index value of logistics data infrastructure was only 18.8, which was still in the initial stage of development. Backward information technology, poor information exchange and weak integration of information resources have become important obstacles for logistics enterprises to optimize business process, build credit evaluation system and obtain formal financial resources. The application function of logistics information platform has not been given full play. At present, most enterprises' logistics information platform is mainly used for information release. Few enterprises can use the information platform to realize the application functions of logistics finance, logistics transaction, sharing supervision and supply chain management integrated service. In order to eliminate the barriers of information communication between different enterprises, it is necessary to realize the data exchange and information docking between the logistics enterprise platform and the production system and the circulation system platform, as well as the integration and interaction between the systems (Mao, 2018), and to standardize the relevant codes. At present, there is a general lack of basic standards for logistics information in China. The information system interfaces between logistics enterprise platforms and customer production, transportation systems and other platforms are not consistent. The formulation and modification of relevant business standards and technical standards are also difficult to meet the needs of logistics development. On the one hand, customers are unable to achieve mass business data entry according to standards, on the other hand, many personalized interfaces reduce logistics Operation

efficiency of the enterprise. It is worth noting that the logistics information platform and information system are independent, and the logistics network is not compatible with each other, which will not only make the information exchange, information sharing and business collaboration between enterprise systems in the industrial chain difficult to achieve, but also increase the time and cost of goods from manufacturers to consumers.

### **Imperfect social Supervision and Security System of Intelligent Logistics**

Intelligent logistics is a local market involving multiple departments. The behavior coordination among the participants is different from the direct control of the upper and lower levels within the enterprise, and more emphasis is placed on the cooperation between the networked virtual organizations. The network operation mode of breaking the enterprise boundary and ownership restriction makes the relevant regulatory system, especially the tax system, unable to adapt, which is easy to breed part of the intelligent logistics business model wandering in the gray area (He, 2017). The division of logistics management departments and operating enterprises is a phenomenon that separates the logistics management authority that originally belonged to the same system resources to different departments, restricting the formation of a social logistics distribution system. On the one hand, chaotic multi-part supervision methods are likely to cause regulatory gaps or excessive supervision. In order to cope with the supervision of different administrative departments, enterprises will consume a lot of financial, material and human resources and increase the operating burden of the enterprise. On the other hand, poor service attitudes, unclear complaints agencies, customers unable to dynamically grasp logistics information, difficulties in complaints, etc. will also trouble consumers. Intelligent logistics uses Internet technology to build an industrial ecosystem. The traditional familiar cooperation mode in the past will be broken. The scope of participants in the system will be greatly expanded than in the past. It will maintain many strange relationships and form normal market transactions. It is necessary to pay more attention to the construction of laws and regulations and social integrity system. In addition, most small and medium-sized logistics enterprises are struggling in the construction of intelligent logistics due to the lack of joint support of high-end elements such as scientific and technological innovation, financial resources and human capital. Despite the introduction of intelligent logistics technology, there is no corresponding capital guarantee and the lack of intelligent logistics professionals, which greatly hinders the development of intelligent logistics.

### **REQUIREMENTS OF "NEW RETAIL" ON DEVELOPMENT OF INTELLIGENT LOGISTICS**

As a key element of "new retail", logistics has attracted wide attention of the academic community. Many scholars believe that "new retail" is the subversion and reconstruction of the original retail format and puts forward new requirements for the logistics industry (Ren, 2018). Logistics is indispensable in "new retail" and it also is the support and guarantee of "new retail" (Ma, 2018; Zhang, 2018). Logistics is an important service factor for the competitiveness of the new retail enterprises (Wei & Di, 2018). Under "new retail" mode, the future logistics market will move towards omni-channel logistics, and express companies will focus more on the direction of urban logistics distribution (Shen, 2017). Terminal real-time logistics has become an important part of the development of new logistics (Ma, 2018). "New retail" will fully affect the development model of the logistics industry. Online and offline integration, and service product integration are an inevitable trend. In order to improve the level of management of goods and services in physical stores, better satisfy the consumer experience, and improve the efficiency of business flow configuration, offline entities and channels must develop digitally. At the same time, offline store products will also interact with online data to achieve seamless integration between traditional retail digitalization and online e-commerce offline. Therefore, driven by "new retail", manufacturers' goods will shift from pure e-commerce configuration to offline digital configuration. "New retail" is a new business form to open up "online network ecological economy + offline real community economy". However, the quality and effect of all channel circulation, which is deeply integrated online and offline, depends on the efficient support of logistics links. Therefore, we will consider the limitations of China's intelligent logistics development in the era of "new retail" and analyze the requirements of "new retail" for the development of intelligent logistics on the basis of previous research in this section.

### **Integration of Omni-channel Logistics Relying on the Supply Chain**

Driven by the "Internet +" strategy and the upgrading of consumer spending, major brands are trying to overcome the consumption defects and defects caused by the early pure electronic business operation and try to innovate the "new retail" business form. It is the core demand of "new retail" to meet the user's individual needs and improve the user experience, and the user experience effect is closely related to the logistics service quality. Traditional logistics includes several links, such as shippers, logistics enterprises, transportation companies, end customers, etc. low circulation efficiency and high time cost are the obstacles to the development of "new retail". In recent years, the product supply trend of manufacturers has gradually changed from relying on the distribution of channel providers in the past to the operation mode of direct delivery from production base to cloud warehouse in various regions. In this mode, it is necessary to analyze the sales volume of various regions through big data of the Internet and formulate a complete supply chain plan in advance. Therefore, in the "new retail" era, logistics links not only need to be closely linked with business modules such as enterprise strategy, marketing, demand forecasting, commodity development, but also need to establish cooperation relationship with supply chain partners according to each link of commodity supply, rely on supply chain integration to build Omni channel logistics, and concentrate on each link of Omni channel logistics with partners, so as to adapt to the new situation The requirement of retail reform.

"New retail" requires intelligent logistics to build a highly flexible development management system and requires higher service quality in the supply chain logistics system. With the maturity of new digital technologies such as big data, the Internet of Things and artificial intelligence, and the increasing application of intelligent devices and sensing devices, the nodes in the

intelligent logistics system of the supply chain will be aware of the information in "new retail" sector. It will be more sensitive, and internal companies in the supply chain can change production strategies and development strategies quickly and at any time according to external incentives, and more adapt to the needs of "new retail" market development.

### **Order-driven Precise Logistics Service**

Under the development model of "new retail", intelligent logistics must be upgraded from supply-driven to demand-driven. At present, the asymmetry of information in the logistics system leads to the delay of information transmission in the logistics system, and upstream and downstream companies in the supply chain cannot respond quickly to market demand, resulting in high logistics costs. With the application of the new generation of digital technology, once information can be circulated at high speed between nodes in the supply chain, each enterprise can quickly grasp the market demand and take differentiated measures according to the different needs of consumers. Quick response can be achieved by intelligent logistics services. "New retail" emphasizes the high integration of online and offline and logistics, in which logistics is the media to realize the organic connection between online and offline and an important link for "new retail" to achieve the goal of zero inventory. Therefore, under the "new retail" background, the focus of intelligent logistics is not only to improve speed and efficiency, but also to help operators reduce inventory backlog.

In addition, the core of "new retail" is accurate recording, analysis and prediction of consumer behavior, as well as accurate supply chain logistics services based on customer personalized demand. This requires that logistics can accurately predict sales volume, allocate inventory according to effective orders, accelerate circulation, quickly respond to goods sent to consumers, improve user experience, and reduce inventory costs of businesses. Therefore, the logistics industry needs to reform, innovate, transform and upgrade according to the requirements of the "new retail" business form, and provide timely and accurate logistics services according to the generation of effective orders from users. Specifically, according to the order quantity, it is directly sent from the factory or the place of origin to the logistics of the user's destination area, removing the unnecessary links in the middle, completing the whole operation process with the fastest speed and the least cost, realizing the seamless connection between retail and logistics process, and providing accurate logistics services for businesses and consumers.

### **High-strength Urban Distribution Carrying Capacity**

According to the report of the China Institute of Intelligent Logistics, the average daily express delivery volume of express service companies across the country has exceeded 100 million pieces since May 2017, marking that China has entered the "100 million pieces era" of single-day delivery. With the accelerated development of e-commerce and "new retail", the number of delivery orders for express delivery services will continue to increase. Consumers' individual needs for delivery speed and service quality will place stringent requirements on urban delivery capabilities. After the goods arrive at the distribution center through the logistics trunk line, they are delivered to the target customers through the city distribution enterprises or express companies. Urban distribution business mainly includes distribution center to stores and distribution center to end consumers. With the development of "new retail" business form, the business volume from distribution center to community stores, Business District stores and specialty stores will increase rapidly than in the past, which needs to match the high-strength urban distribution carrying capacity.

At present, the existing urban distribution enterprises and express companies mainly focus on the logistics distribution business from the distribution center to the end consumers, but still need to improve the distribution efficiency. Accordingly, many city distribution enterprises and express companies are less involved in the business from distribution center to stores. With the rapid development of the Internet economy and the continuous acceleration of urbanization, the status of end logistics, which is often referred to as the "last mile" problem, has become increasingly prominent. In January 2018, the General Office of the State Council issued the "Opinions on Promoting the Coordinated Development of E-commerce and Express Logistics", stating that "reinforcement of service innovation and enhancement of end-logistics service capabilities". Express delivery and e-commerce, etc. face the "last mile" of logistics, and in semi-open spaces such as more vertical communities, campuses, and industrial parks, there is also a large demand for express delivery. However, under the background of "new retail" business, the business from the distribution center to the store will be an important market in the field of urban distribution logistics in the future, which requires the existing urban distribution or express companies to seize the opportunity, actively respond, and "implant" Internet technologies such as big data and Internet of Things into the logistics storage system, and improve the logistics response speed and service level through intelligence. In May 2015, the State Council issued a notice on the issuance of "Made in China 2025", which states that it is necessary to coordinate the layout and promote the research and development and industry of intelligent vehicles, intelligent construction machinery, service robots, intelligent appliances, intelligent lighting appliances, wearable devices and other products. Therefore, in order to alleviate the shortcomings of distribution services, intelligent logistics robots will become an important supplement for terminal distribution in the future.

### **REALIZATION PATH OF INTELLIGENT LOGISTICS IN THE "NEW RETAIL" ERA**

In the "new retail" era, intelligent logistics is a mid-leap upgrade of the traditional logistics model, an advanced stage of the development of the logistics industry, and an important extension of the development of integrated logistics. Intelligent logistics should be supported by digital technology, with modern logistics management systems as the core, and achieve high integration of production, processing, sales, and distribution in accordance with "new retail" requirements. In the process of connecting with various subsystems, we must attach importance to the intelligent role of "smart" systems, connect supply chain enterprises in the form of automation and intelligence, and realize the internal resource sharing and information exchange of

the supply chain ecosystem. The development of logistics enterprises is limited, the logistics information standard, information platform, supervision and security system are backward, and the lack of logistics professionals restricts the development of "new retail". The traditional logistics configuration mode obviously cannot bear the demands of "new retail". Therefore, considering the current constraints in the development of logistics, combined with the new requirements of the "new retail" business form for logistics efficiency and service quality, a three in one intelligent logistics realization path of "government guided accelerating the construction of intelligent logistics infrastructure, market led construction of intelligent logistics information platform, and social co governance construction of intelligent logistics security system" is constructed to finally meet the new demands of logistics. The overall goal of retail high-quality support is shown in Figure 1.

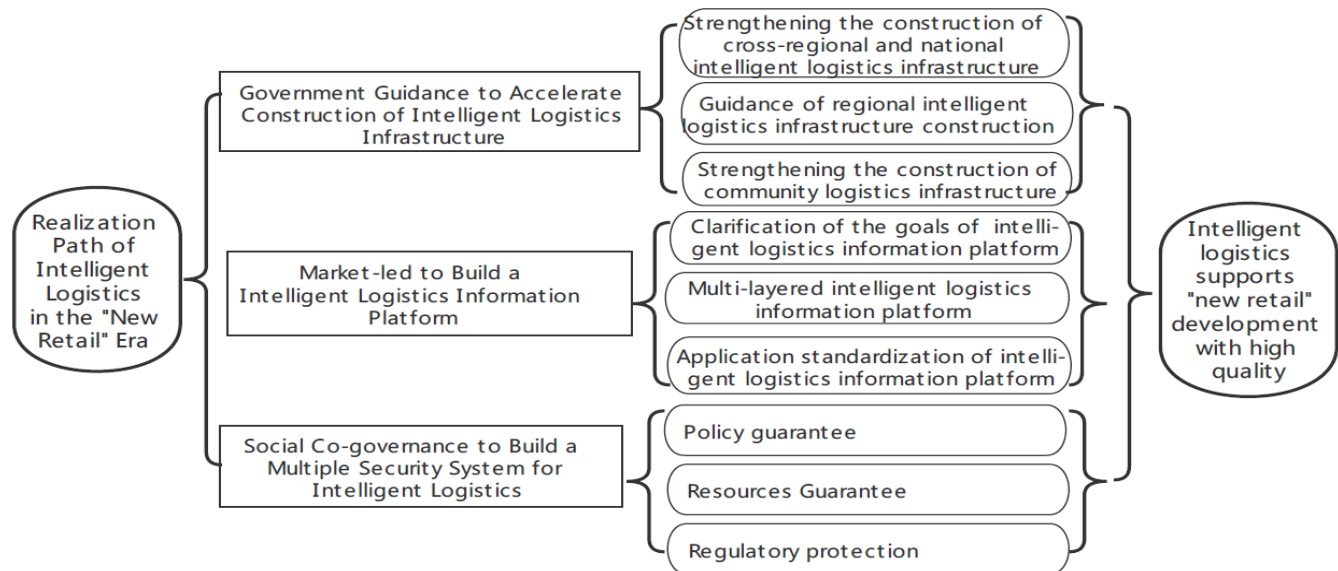


Figure 1: Framework of intelligent logistics implementation path in the era of "new retail".

### Government Guidance to Accelerate Construction of Intelligent Logistics Infrastructure

In 2016, the general office of the State Council clearly pointed out the importance of "Internet +" efficient logistics to the economic development of the whole society in the "Internet plus" efficient logistics implementation opinion. In 2017, the integration and innovation of AI and logistics industry was emphasized in the new generation AI development plan. Under the background of "new retail", intelligent logistics has become the trend of structural reform and innovation and upgrading in China's logistics industry. The construction of intelligent logistics system needs to find the entry point to serve the local economy, and the government promotes and supports a number of major forces in the transformation and upgrading of the logistics field (Yu & Wang, 2015). Although in recent years, China's logistics infrastructure has achieved a leap forward development, and the logistics infrastructure network has been basically formed, there is still a big gap between China's logistics development and the requirements of "new retail" economic development mode. It is necessary to speed up the construction of intelligent logistics infrastructure from multiple levels, such as the layout of cross regional logistics hub, regional logistics distribution and commercial logistics warehousing distribution.

#### *Strengthening the construction of cross-regional and national intelligent logistics infrastructure*

To achieve high-quality logistics support for "new retail", relevant departments must formulate and implement intelligent logistics development strategies, formulate special plans for intelligent logistics, compile a road map for intelligent logistics technology and equipment, and carry out major intelligent technology and equipment technology breakthroughs. From the logistics industry strategic planning, resource allocation and other macro level guidance, speed up the construction of the national intelligent logistics backbone network, synchronously improve the level of logistics modernization software and hardware. He (2019) scientifically planned and implemented the layout of national logistics hubs and strengthened the supporting construction of various hub facilities in inland regions of the central and western regions, large and medium-sized consumer cities, and key manufacturing industrial clusters. At the same time, according to the national consumption upgrade strategy, focus on promoting the development of consumer logistics; in accordance with the strategy of revitalizing the countryside, build an agricultural and rural logistics service system; and rely on the "Belt and Road" to increase investment in the construction of international transport trunk routes, and use cross-border e-commerce to promote international express Development, speed up the layout of overseas warehousing, and use cross-border logistics networks to drive domestic enterprises to expand overseas.

#### *Guidance of regional intelligent logistics infrastructure construction*

Support and cultivate a number of advanced intelligent logistics leading enterprises, creatively use the investment promotion means of logistics industry chain to build intelligent logistics industry cluster and promote the upgrading and transformation of intelligent logistics park, promote the integration of local highway port into Logistics Park. We must attach importance to strengthening the construction of digital logistics infrastructure, build a logistics Internet, guide the development of online and

offline integration of infrastructure, and pay attention to releasing the convergence effect of the park to a greater extent. At the same time, we should encourage the logistics distribution centers around the city to carry out the storage automation transformation, improve the efficiency of urban logistics operation, improve the coverage and accuracy of the logistics Internet, and promote the transformation and upgrading of the logistics park to the supply chain logistics integrator, so as to meet the development requirements of "new retail" relying on the supply chain to build the omni-channel logistics.

#### ***Strengthening the construction of commercial logistics infrastructure***

Facing the market opportunities brought by intelligence, the government should strengthen policy support, encourage enterprises to realize the intelligence of logistics equipment from various fields such as storage equipment, transportation equipment and operating system, and at the same time, promote enterprises to use the new generation technologies such as mobile Internet and big data to accelerate the innovation and development of intelligent logistics terminal products, and encourage community business circles to lay out public warehousing distribution centers To improve the level of information sharing, reduce the waste of repeated construction resources, take the intelligent express of modern high-end industries such as national intelligent logistics backbone network, comprehensively improve efficiency and reduce cost, and truly realize the deep integration of modern logistics, online service and offline experience. At the same time, we should encourage the construction of backbone logistics information platforms, promote the comprehensive connection of logistics elements, and implement digital and intelligent transformation projects for small and medium-sized logistics enterprises.

#### **Market-led to Build an Intelligent Logistics Information Platform**

In order to adapt to the needs of "new retail" market for customer personalized service, the operation basis of logistics service depends on the level of information technology. Only when the logistics information is open, transparent and fully shared, can the seamless connection between retail and logistics be truly realized. According to the needs of "new retail" market, the construction of intelligent logistics information platform needs to consider the design of platform objectives, business architecture and application standards.

#### ***Clarification of the goals of the intelligent logistics information platform***

In July 2016, the National Development and Reform Commission issued the "Internet +" Efficient Logistics Implementation Opinions, which proposed "to form an intelligent logistics ecosystem based on the Internet, open sharing, win-win cooperation, efficient and convenient, green and safe, and the efficiency of logistics efficiency has greatly improved". From the perspective of the goal design of intelligent logistics information platform, we should use new IT technologies such as big data, cloud computing, artificial intelligence, etc. to open up information connectivity channels, establish an open and shared logistics information platform, and provide all kinds of enterprises in the supply chain with omni-channel Logistics problem-solving solutions, so as to achieve service integration, process visualization, electronic transactions and operation standardization and customer service personalized design goal, to meet "new retail" demand for intelligent logistics precision service and efficient operation.

#### ***Multi-layered intelligent logistics information platform***

From the perspective of business architecture of intelligent logistics information platform, we should focus on business construction from multiple levels of industrial management and control, supply chain management and enterprise operation according to market demand, and reasonably and scientifically organize according to the business characteristics of each level. Industrial management and control is based on the design of goods category, flow direction and supply demand from the perspective of brand goods circulation; supply chain management is mainly designed from three aspects of supply, production and marketing; business layer focuses on the design of enterprise warehousing, distribution, transportation and other basic logistics business and process control, decision optimization, information release and other aspects. In addition, the business structure of intelligent logistics can also be expanded from horizontal, vertical, and spatial dimensions according to the type of internal node enterprises to achieve development, transformation and upgrading. Vertically, we can provide customization and R & D services. Horizontally, it can provide services such as supply chain finance, credit evaluation, and risk assessment. In space, global supply chain logistics and global value chain logistics can be built.

#### ***Application standardization of intelligent logistics information platform***

The formulation of intelligent logistics industry standards is conducive to achieving technological and business connections, promoting the direct connection of intelligent logistics systems to the outside world, and smoothly adding external information into the supply chain system. From the standpoint of the application of intelligent logistics information platform, the future logistics industry, manufacturing industry, e-commerce, AI should be highly integrated into the "Internet +". According to the market supply and demand mechanism, price mechanism and incentive mechanism, we should formulate the logistics information collection standards such as barcode, RFID technology, and standardize the docking and information exchange between different links of information systems. In terms of technology, the application standards in all links of logistics business shall be unified, the construction of intelligent logistics standardization system shall be accelerated, and the construction of intelligent logistics information sharing platform shall be promoted At the same time, communication channels are built between users and platform business design through communication devices such as computers, mobile phones, telephones, etc., and intelligent logistics information technology is applied to complete information capture, information preprocessing, data storage and exchange, data analysis and mining, and data prediction, so as to finally realize the intelligent control of brand goods circulation, supply chain management and enterprise management.

### **Social Co-governance to Build a Multiple Security System for Intelligent Logistics**

The infrastructure construction and information sharing platform construction of intelligent logistics are inseparable from the support of modern finance, scientific and technological innovation, human resources and other high-end production factors, and need the extensive support of all sectors of society and all parties. Intelligent logistics has become an important hand in the supply side structural reform of China's logistics industry (He, 2017). Governments at all levels, financial departments, relevant enterprises, social and public services and other relevant institutions should work together to co govern, and provide guarantee for the better development of intelligent logistics from policy, resources, supervision and other aspects.

#### ***Policy guarantee***

The impact of technology on the logistics industry from all aspects of warehousing, transportation and distribution has become a key tool for reducing costs and increasing efficiency in the logistics industry. In recent years, the Chinese government has issued a number of policies to promote logistics cost reduction and efficiency, vigorously promote the innovation of the logistics industry, and will have a profound impact on the development of intelligent logistics. The government should do a good job in the overall layout of the development of intelligent logistics from the strategic level, draw up the overall planning and route design of the development of intelligent logistics, coordinate the work of all functional departments, and comprehensively formulate the relevant management systems and guidelines conducive to the formation of a good incentive mechanism, coordination mechanism and supervision mechanism, so as to create a good policy environment for the development of intelligent logistics. We need to study and formulate new supporting policies in response to emerging situations and problems, carry out digital governance of the platform, and innovate government supervision platforms and platform management companies' supervision methods (He, 2019).

#### ***Resources Guarantee***

The government should introduce fiscal and taxation guidance policies, provide financial support for the development of the intelligent logistics real economy through a multi-pronged approach such as fiscal investment, financial support, and tax incentives, and solve digital governance issues and policy obstacles in new technologies, new models, and new formats. We need to encourage social capital to set up industrial investment funds and promote innovation in intelligent logistics models. We should set up intelligent logistics development and innovation guidance fund, encourage enterprises to innovate and develop intelligent logistics facilities, equipment and information system, promote the construction of intelligent logistics innovation projects and intelligent logistics entrepreneurial park; colleges and universities should actively cooperate with the government, enterprises and logistics associations Training institutions work together to develop intelligent logistics talents training programs suitable for the development of China's current logistics industry in combination with the requirements of the development of "new retail" business forms, so as to make the relevant education and industry demand well connected in talent construction (Fu, 2018), and learn from the advanced successful experience of foreign countries, accelerate the cultivation and introduction of high-end intelligent logistics talents, and improve China's intelligent logistics talents Market mechanism of services.

#### ***Regulatory protection***

The "13th Five-Year Plan" for the development of express delivery industry requires that the application of modern information technologies such as mobile Internet, Internet of Things, big data, cloud computing, virtual reality, artificial intelligence, etc. in enterprise management, market services, and industry supervision be strengthened. Therefore, we need to carry out digital governance of the platform and innovate the supervision method of the government supervision platform and platform management enterprises. In view of the shortcomings of the current development of intelligent logistics which is neglected in supervision, it is necessary to formulate relevant supervision laws as soon as possible, clarify the contents and methods of supervision, build a socialized credit system, prevent and resolve risks, and maintain the market environment of fair competition of intelligent logistics. A professional logistics supervision department should be established to strengthen service supervision in the logistics industry, and relevant functional departments should formulate unified standards to increase investigation and punishment of line violations in the logistics industry. At the same time, we must give full play to the role of industry associations in serving logistics companies and industries, build an indicator system, policy system, standard system, statistical system, performance evaluation system that meets the requirements for high-quality logistics development, and improve the industry supervision system and Governance mechanism.

### **CONCLUSIONS**

The application of intelligent logistics in different scenarios makes it more flexible and more responsive than traditional mature logistics systems in terms of efficiency, cost and user experience. Intelligent logistics has become the guiding force for industrial development, and it is the only way for the development of China's logistics industry. "New retail" is the product of the era when e-commerce, physical retail and modern logistics innovation and transformation are integrated. The development of "new retail" and intelligent logistics integrates business flow, logistics, information flow, and capital flow into a new supply chain. The "retail + supply chain ecosystem" model is the road to future development. "New retail" relies on omni-channel logistics based on supply chain integration, order-driven precision logistics services, and high-strength urban distribution carrying capacity, which has brought huge impacts and development opportunities to the logistics industry. At present, China's intelligent logistics has limitations both in terms of logistics infrastructure construction, logistics information services, and regulatory guarantee systems, which restricts the development process of "new retail". In order to realize the high-quality



support of "new retail" by intelligent logistics, a trinity of intelligent logistics construction path of "government guidance, market leadership, and social co-governance" is proposed. Under the guidance of the government, accelerate the construction of intelligent logistics infrastructure, give full play to the leading role of the market, build an intelligent logistics information platform, and build a multi-system of intelligent logistics through joint governance from all sectors of society to meet the high-quality support of logistics for "new retail".

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