The last mile of distribution deserves reflection

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Abstract. For the logistics industry, the last kilometer in the city distribution is one of the key links to face up to consumers. The service quality of efficiency is directly related to the establishment of enterprise brand image and business expansion. The last kilometer process contains other logistics functions, such as loading, unloading, storage, packaging, etc., which is a combination of multiple functions. It can be said that distribution is a miniature of logistics, or a small range of logistics system. This article expounds the status quo of the last kilometer, analyzes the problems and causes of the last kilometer from four aspects, and finally proposes optimization measures for the last kilometer to build customer satisfaction.

1. Introduction
With the rapid expansion of China's urbanization, the number of urban population has increased rapidly, and the demand for diversified distribution of small batch and multiple batches is increasingly vigorous. From the current situation, China's distribution development is generally good, but the last kilometer of distribution presents problems such as low efficiency of distribution and poor timeliness, which is still some distance from the rapid development of urbanization and increasingly high distribution demand of the people. In addition, distribution, as an integral whole of many business activities, is also closely related to the ordering system. To achieve this, we must rely on modern information system to establish and perfect the entire logistics system and make it a modern operating system.

2. The last kilometer status analysis
Nowadays, consumers are in constant need of personalized and diversified delivery demands, so many express delivery enterprises have launched relevant delivery businesses and occupied a certain market space. Meanwhile, in order to make up for the problems of terminal delivery caused by the shortage of manpower, express counters have also developed rapidly. These express containers hold the goods temporarily for customers who cannot receive the express items in time, and send the delivery information to the customers by SMS, etc., to provide customers with 24-hour self-service pick-up service, which is conducive to meeting the demand of customers at any time and alleviating the bottleneck problem of the last kilometer of e-commerce delivery. In addition, consumers can place orders on the e-commerce platform and the convenience store nearest to them can deliver goods to their doorsteps.

For many logistics enterprises that adopt the mode of crowdsourcing logistics, they break away from the traditional mode and make use of social spare resources to further refine the market. Currently, flash drive has explicitly committed its service time to minute timing, and the ultimate experience of this service has attracted the favor of many investors, and even the industry has seen a
similar pattern across regions. In view of this market opportunity, some industry insiders said that the crowdsourcing model of the last kilometer delivery in the city in the future is the key for express delivery enterprises to compete in the development of similar businesses, and more enterprises will participate, presenting a situation of a hundred flowers in bloom and a hundred schools of thought in contention[1].

According to relevant urban data, the goods delivered in the last kilometer are mainly the daily necessities of residents, which is directly related to residents' vegetable baskets and rice bags, thus becoming the focus of attention. In terms of the last kilometer, many express delivery enterprises have a deep layout, such as the accelerated expansion of smart express cabinets, which makes the current community everywhere. At the same time, the ever-changing distribution needs of consumers have emerged a number of logistics companies providing such services as walk-on shopping. Ticket Monster co-founder and chief executive Shin Hyun-sung has said an integrated ecommerce company can work with South Korea's best convenience stores, where consumers place orders on the e-commerce platform and the nearest convenience store delivers the goods. This model has also been introduced in China, as has Jumei's latest online ordering model. Jumei's latest online order mode enables more enterprises to realize that convenient and rapid convenience stores or shopping malls will become an important hub of logistics distribution in the future. For another example, in 2016, Alibaba launched a new retail store integrating catering, warehousing and retail, covering 5 km of urban communities. Consumers within 3 km of the store can enjoy door-to-door delivery within 30 minutes. All these ecommerce enterprises are sensitive to the realization that the short-time convenient store delivery model may become a new logistics market needs. At present, the demand of consumers for point-to-point quick delivery is indeed increasing. For example, more and more people need to quickly deliver food delivery, such as cakes and flowers, forgotten items, urgent documents, etc., which makes the delivery demand present the characteristics of short distance, high frequency and high time. However, in the traditional express delivery mode, it is necessary to transfer the goods to the transit warehouse and then deliver the goods, no matter how far they travel. The specific mode is: receiving orders, placing orders, receiving goods, transferring goods into the warehouse, transferring goods out of the warehouse. If an item only needs to be delivered across the road and delivered in the traditional express mode, it still needs to be delivered in accordance with the process and the flexibility of delivery is poor, which cannot ensure the timeliness. Therefore, flash delivery Baidu takeout and other enterprises see this market opportunity to start to provide services for this type of consumers. Although they have different development characteristics and different development modes, both express delivery enterprises and urban delivery enterprises that provide operation service for convenience store express counters, their ultimate goal is to seize the commanding height of the last kilometer demand. The traditional express delivery mode is shown in Figure 1[2].

3. Analysis of the problem and cause of the last kilometer
The last kilometer is a special comprehensive activity form, including a business form of most factors in logistics activities. Its problems are mainly reflected in the delivery time, delivery cost and relative
lack of personnel, making the logistics service level unable to satisfy consumers. Therefore, such business should be closely combined with business flow, logistics capital flow and information flow so that enterprises can get expected benefits when expanding such business. [3]

3.1. Analysis the last kilometer from the perspective of commercial flow
In terms of business flow, distribution itself is a form of business. Although the specific implementation of distribution as one of the links of logistics system should be realized in the form of separation of commercial materials, from the perspective of the development trend of distribution, the increasingly close combination of commercial flow and logistics is an important guarantee for the success of distribution. In order to seize the market, takeout platforms such as Meituan takeout, baidu takeout, etc., have spared no expense to provide customers with benefits. In a short time, the market share of which side has more benefits has risen sharply, causing serious damages to enterprises. However, after several games, the local didi taxi and the foreign Uber with a sense of superiority ended up saying goodbye to the Chinese market.

The delivery order is the beginning of the business flow. The seller needs to deliver the products to the final consumers in a timely and accurate manner, and the buyer completes a business activity by paying the seller accordingly. With the development of informatization, the market price is becoming more and more feeble, and no enterprise can dominate the price. It is only temporary for a company to be on the right track to gain market share.

3.2. Analyze the last kilometer from the perspective of logistics
In terms of logistics, the delivery distance is shorter and is at the end of the logistics system. In terms of agricultural products that people often come into contact with, at present, the logistics and transportation cost of agricultural products is always in a high state, while the logistics cost of the last kilometer will be higher. According to the relevant data, the average transportation cost of vegetables from Shouguang in Shandong Province to Beijing is less than 0.06 yuan/kg in the 480 km trunk line, while the distribution and transportation cost of the last kilometer in Beijing is 0.1 yuan/kg, accounting for 29.6% of the logistics cost, which is 1.8 times of the trunk line transportation cost. It can be seen that the excessive last kilometer distribution cost has become an important factor to raise the logistics cost and restrain the development of logistics.

For example, transportation enterprises have been looking for upstream and downstream cooperation, and take similar enterprises as competitors to compete with them for market, price and service, resulting in redundant resource allocation. Some enterprises open up new business areas, regardless of industry personnel dissuasion, but also after enduring investment into the regular period before gradually flat. The new field has been done, I was good at the field is not because of the limited capital and energy stops?

3.3. Analyze the last kilometer from the perspective of capital flow
From the perspective of capital utilization, due to the accelerated pace of the whole process, the funds are fully functioning. In the past, the same amount of funds required a relatively long time to meet certain supply requirements, which can be achieved in a relatively short period after delivery. Good capital operation can promote the rationalization of distribution. Distribution enterprises and upstream and downstream enterprises should not only look at the total benefit of distribution, but also the macro benefit to society and the micro benefit of enterprises.

3.4. Analyze the last kilometer from the perspective of information flow
On June 1, 2017, 14:32 in the afternoon, Cainiao Network issued an official statement: urgently advise merchants to temporarily stop using Shunfeng delivery and switch to other courier services. The reason is that shunfeng unilaterally suspended the data interface, and taobao could not display the logistics data of shunfeng for the time being. Therefore, it is suggested that merchants should switch to other express company services and wait for communication between Cainiao network and Shunfeng.
18:43 Shunfeng official voice, serious expression: the rookie has kicked Shunfeng out, and called on express colleagues to pay attention to the data, provide data unrelated to customer privacy, Shunfeng rejected this request. Although the two sides did not agree with each other, they finally got back together. This incident affected the normal operation of both sides and completed an industry baptism.

4. Create the last mile of customer satisfaction optimization measures
There are many companies providing similar services, and the excellent service and appropriate price are of course slightly better. As a consumer, it is the same for enterprises to choose customers. It is in the cooperation with enterprises to recognize their problems and actively seek solutions. The last kilometer distribution process is shown in Figure 2[4].

![Figure 2. The last kilometer delivery process](image)

4.1. Optimize the last kilometer from the perspective of commercial flow
Commercial competition is the war that does not have gunsmoke, the enterprise strength that can go to war with each other is general and equal, one party loses 800 hundred to change the other a thousand, on the contrary just let consumer sit to reap profit. Therefore, it is better to negotiate in a friendly way than to weaken the strength of each other. When the competition between the two sides is full of holes, the compromise will not only slow down the development of the enterprise, but also reduce the market recognition of both sides. Commercial cooperation and healthy competition can not only purify the market, but also be a healthy interest relationship between enterprises and between enterprises and consumers..

4.2. Optimize the last kilometer from the perspective of logistics
First, we should further establish a standardized service system and a high-quality service team. Secondly, in recent years, the delivery service has been better than the express delivery service in terms of personnel treatment, which has led to the delivery service staff switching to the delivery service. Recently, the large number of staff layoffs of Meituan delivery service have made a great impact again. In the era of almost transparent information, if two independent fields of express delivery and takeaway delivery can be integrated and delivered together from the same starting point to the same destination, infrastructure sharing can be achieved while earning the minimum unit cost, which can maximize the benefits for both enterprises.

4.3. Optimize the last kilometer from the perspective of capital flow
Distribution is an indispensable part of the supply chain, but also a service window for the final consumers separated from transportation. Will supply chain upstream and downstream enterprises closely around together, is no longer a competition between enterprises, but to their expertise in technical service together to create greater profits, and common to assume the risk of the overall
market segment will be the last one kilometer singled out from a certain extent, shows that it is a challenge and opportunity coexist link, is worthy of our research to create new profit source.

Logistics enterprise business sector to expand will need capital input, such as jingdong self-built logistics has built an excellent logistics team, quality of service at the enterprise is the best but the risk is to assume, as a logistics enterprise business is relatively stable, a far cry from what the off-season and busy season which will result in the allocation of resources redundancy, capital turnover is difficult. If we can establish long-term cooperation with professional enterprise can effectively share the risk, long-term cooperation can need not to find customers worry again, reasonable profit allocation to promote trust between enterprises or will open to the public, self-built logistics need outsourcing companies can share resources, not only improves the utilization ratio of infrastructure and shorten the payback period so that in the logistics cost of this plate to make a profit.

4.4. Optimize the last kilometer from the point of view of information flow

In business cooperation, for example, wal-mart collects sales data by satellite and provides them to P&g. P&g can predict sales status in advance and reduce inventory, so that Wal-mart can win the lowest price to attract more customers. In the era of big data, the cooperation between the two sides proves to us that only sharing data can bring greater value to the data. If various express delivery and takeout platforms can share data and complement information, the logistics service will be effectively reduced to further reduce the cost of enterprises and improve the efficiency of service. The flow of information between P & G and Wal-Mart is shown in Figure 3.

![Figure 3. Information flow between p&g and wal-mart](image-url)

The collection, storage and utilization of big data in the Internet era is closely connected with the warehousing and logistics industry in modern society. Whether it is a logistics enterprise or an e-
commerce enterprise, although the generation of user information is only an extra harvest at present, the exploration and utilization of big data has huge imagination space and huge potential commercial value. This unexploited profit margin can bring great value to the enterprise in creating conditions for the few future benefits.

5. Conclusion
The last kilometer is more prominent in the O2O market, which has become another potential competitive market model. However, this market is faced with the C terminal with a huge base and ever-changing demand. How to seize this opportunity should be considered by the enterprises involved. Otherwise, the market space has the demand, but itself is insufficient. As we all know, self-established logistics can guarantee service quality, but it needs capital as support. To provide high quality service, a stable core management team and a stable terminal delivery team are indispensable. Downsizing or a disguised reduction in employee benefits may seem undesirable. From the perspective of the value of logistics data in the Internet business, the value can be infinitely amplified. First, the value of the last kilometer of logistics data is not only the value of the user's address and contact phone number, but also the demand of the user and the data digging of the user's business value. Second, the value of urban distribution logistics data has the value of distribution lines and stowage. Combined with urban consumption, the value of precision marketing in community retail areas is achieved. [5]

Comments
Crowdsourcing Model: The practice of a company or organization outsourcing work previously performed by employees to non-specific (and often large) mass networks in a voluntary manner.

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