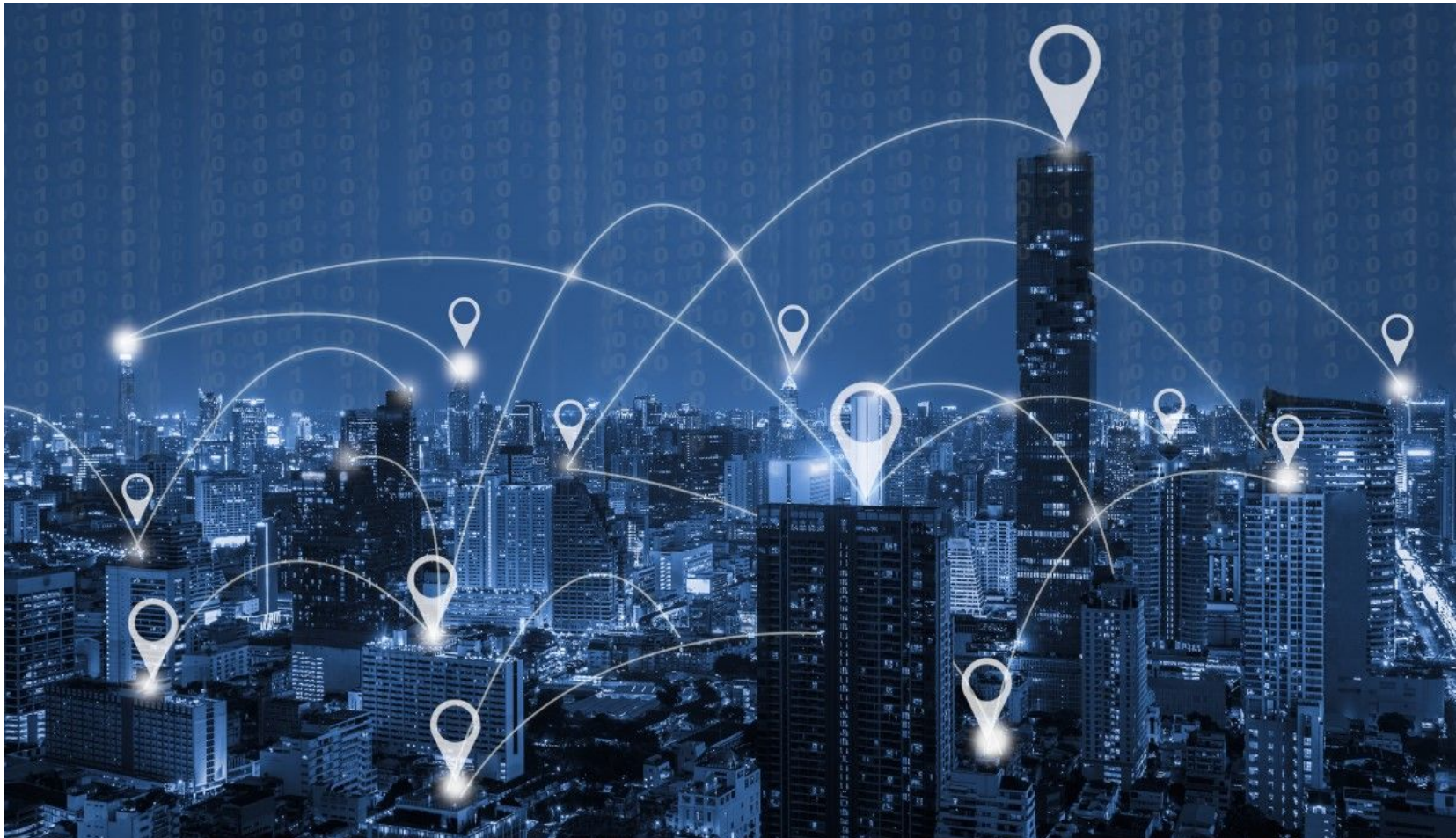


Micro-Fulfillment and Darkstore: The secret weapons of urban logistics

It is known that the evolution of human behavior radically changes consumption patterns and, although these changes were slower and allowed the market to prepare step by step, the reality is that today literally happen from one day to another, without waiting for the industry readiness.



With this premise, the logistics evolution has also had to be done in an agile way, many times without a strategy to support it and in most cases at remarkably high budgetary costs. For this reason, it is essential to understand the social reasons that are key in behavioral changes, because only in this way can we guide the direction and maintain the profitability of the business.

Let us get to know more closely some of the main factors that have formed the new consumer, to better understand the evolution process in logistics and thus envision new paths, and even business models:

- The democratization of technology and information. No more than a couple of decades ago, information belonged to a handful, both its collection and its generation. However, the Internet and the different gadgets that personalize it, such as smartphones, tablets, laptops, wearables and others, have incorporated a large proportion of the population in the world of technology, as well as the delivery and consumption of the same.
- Demand Source. The development of digital platforms, such as marketplace or e-commerce, capable of collaborating with companies to provide consumers with a good shopping experience, just as efficient, safe and enjoyable as the one offered physically.
- Ease of payment. The forms of payment, until recently, were limited to credit cards. The adoption of methods such as cash on delivery, payment at convenience stores and the use of debit cards helped to include the huge percentage of people belonging to the informal economy to digital commerce, and thus accelerate its spread and adoption.
- Urban growth and Smart Cities. By 2030 it is estimated that there will be around 8.5 billion inhabitants on the planet; of these, 5.5 billion will live in large orbs. This will force cities to become Smart Cities, capable of serving this population mass in a clean, efficient and fast way. This premise will be impossible without an important development of AI (Artificial Intelligence), BD (Big Data), IoT (Internet of Things), among others; so, we can expect this unbridled growth of logistics models to remain constant in the following years.

These 4 points are closely related, so progress in one requires improvement in the others. It is precisely in this synergy that we must be alert, to have the necessary answers according to the logistical vanguard.

The world changed and continues to change rapidly; all industries have been affected, each reacting in its own way and with its resources. On the part of commerce, both retail and wholesale, the changes have been substantial and structural; we can expect this trend to continue until things balance out. Meanwhile, as logistics professionals, we must stay at the forefront, adapting to new consumer habits, specifically e-commerce.

The physical store as we traditionally conceive it is evolving to become places where the customer receives a brand experience and is courted or in love; just as Apple has done for years in its stores; or like the Autonomous Stores where AmazonGo is a clear reference that provides ease and speed; Or what to say about Hema Supermarket, from Alibaba, which seeks to transform coexistence with its customers in an interesting way into an Off-line and On-line hybrid.

Transformations in urban logistics

We have become accustomed to the fact that a good part of the Distribution Centers (DC) are typically located on the outskirts of large cities, which has clear advantages, such as the ease of locating large areas at lower costs; interconnection to other logistics nodes; greater access to strategic geographic points; more fluid traffic; among others. However, it also has some considerable disadvantages, for example: it distances them from the final buyer and therefore increases the cost of the last mile; lengthens delivery time; adds operating costs such as transportation for our staff; makes it difficult to attract human talent, which can lead to higher turnover with the consequent hidden costs, among others.

On the other hand, if we consider that for a company, depending on its type and size, the logistics cost ranges between 12 and 15% of sales and, of this percentage, the "picking" or order selection accounts for between 5 and 7%, to this figure we must add the cost of the famous "last mile", which can represent up to a third of the total cost of the product price (naturally depending on various variables).

Of that huge portion, between 28 and 35% corresponds to transportation; and it is here where urban logistics evolves and is nourished by new Omnichannel strategies, where the emergence of Micro-Fulfillment Centers and Dark Stores stands out, which are becoming powerful allies for the optimization of logistics costs.

Micro-Fulfillment & Dark Store Benefits

Both the MFC (Micro-Fulfillment Center) and the Dark Store are relatively new concepts in the market, we can define them as mini logistics hubs strategically located in high-density urban centers, they allow the preparation of orders in a very short period of time.

Both are focused on fulfilling the value promise offered by our brand to our consumers, optimizing or reducing as much as possible 2 strong headaches: the cost per pick and the last mile. This without neglecting the reduction of important costs such as construction, multiple operating expenses from the same staff onwards, which will induce a much more competitive integral logistics cost, in addition to the full satisfaction of our customers.

Although at first glance they could be interpreted as the same concept, in reality we are talking about 2 different logistics strategies, but highly complementary.

This will depend on the type of our products and clients, their geographical location, the value creation that we have committed to providing our growth plans and a long but interesting etcetera to analyze individually.

For example, a company might only have a Dark Store to supplement its logistics; another might well have a hybrid of the two.

Now, to better understand the differences and therefore see how we can integrate them, a CMF is small by definition, being able to occupy areas from 600 or 800 square meters (m²), up to typically 3,000 m².

It is usually highly technical with automation developed to respond optimally to the requirements of e-Commerce, robots and artificial intelligence come together in a very flexible way, which allows virtually any underutilized area within the same traditional DC (which is within area urban), a parking lot, areas close to gas stations, or the physical retail store itself can easily become an order preparation area.

The objective of equipping ourselves with this type of technology is to have the ability to deliver orders in a period of one hour, where only 5 minutes are necessary to fill the order, the remaining time is taken for the last mile journey and delivery at home of the client, although it is also possible to do it at the door of the Micro-Fulfillment Center under a Pick and Collect concept.

CMFs were originally implemented in the Wholesalers & Groceries sector (supermarkets in general), where customers particularly demand instant delivery; However, when noticing the benevolence of the advantages it offered, they began to be adopted in other industrial sectors. On the other hand, the Dark Stores are also mini urban logistics centers created exclusively for the preparation of orders requested on-line. The spaces they occupy, unlike Micro-Fulfillment, are larger, even physical retail stores can optimize their spaces by converting part of them into a Dark Store.

Due to the pandemic, many stores that were left without the possibility of serving customers migrated their facilities to the Dark Store, managing to remain in operation and expand their capacity to respond to the exponential growth of online shopping, in addition to optimizing their square meters.

These centers do not have contact with end consumers, they may or may not have automation, their interior looks very similar to a physical retail store; However, as it does not have a physical presence of end consumers, its conceptual logic is based on 100% assortment of orders, so its layout focuses on a logistics process and not on commercial variables of aesthetics or product sales.

Both the MFC and the Dark Store respond very well to chaotic assortments, which have successfully adapted to the whims of E-Commerce. Both concepts complement each other perfectly with delivery methods such as Click and Collect, Hub Lockers, Trunk Deliveries, Delivery Robots, Crowshipping.

If you wonder if it will be more convenient to opt for a Micro-Fulfillment Center or a Dark Store, the answer will depend a lot on the promise of value that your brand gives to its customers and in what way it seeks to delight them to retain them, as well as of multiple factors that must be carefully analyzed to structure a profitable strategy, congruent with the organizational philosophy, in addition to being optimal, so that it can satisfy commercial attention without overinvesting.

There are turning points that we must analyze to determine the optimal combination of this type of mini logistics hub; However, the most important starting point is to understand our strategy and the urban areas we want to cover, as well as their needs.

Objective of the Micro-Fulfillment & Dark Store: New consumer satisfaction

Let us consider the data that the study “Deutsche Bank. Food Fight: Convenience & Digital Grocery Options at Tipping Point”, where they assure us that 76% of consumers want to receive their product the same day, in addition to increasing the pressure exerted by other brands in terms of almost instant deliveries, such as from Amazon Prime that seeks to do it in two hours; so these 2 new logistics modalities can be highly useful, profitable and provide us with business competitiveness.

Behavioral strategies, technology, processes, even new products, in different presentations, at different times, are satisfactorily resolved by Micro-Fulfillment Centers and Dark Stores, taking into consideration their objective: the satisfaction of the new consumer.

If we seek to preserve the brand promise, let us delve into implementations of this level, society is not willing to receive less.

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