



## LOGISTICS PERFORMANCE AT THE SERVICE OF IMPROVING E-COMMERCE.

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### **ABSTRACT :**

*During the last decades we are witnessing the dazzling development of Internet exchanges, and the emergence of the concept of "New Economy". The interest in e-commerce is due to the fact that with the spread of the Internet, the boundaries of commerce have changed. Unfortunately, those who embarked on this adventure of the global market, faced a major difficulty: the dematerialization of trade has a limit, that precisely the character "material" products and therefore the need to resort to logistics to route the product from the provider (web-merchant) to the customer. Faced with the growing interest in logistics as a key success factor for a merchant website, a new concept is developing: e-logistics. One can then wonder whether this is really a new logistics, specific to e-commerce, or simply a generalization of current practices. What are the specificities of e-logistics? What are its issues and strategies? What about his constraints? So many questions to which we will try to bring elements of answers.*

**KEYWORDS :** Electronic Commerce, Logistics, Management, Distance Selling, New Economy.

### **INTRODUCTION**

Since 2000, we have witnessed the rapid development of Internet exchanges and the emergence of the concept of "New Economy". The interest in e-commerce is due to the fact that with the spread of the Internet, the boundaries of commerce have changed. Unfortunately, those who embarked on this adventure of the global market, faced a major difficulty: the dematerialization of trade has a limit, that precisely the character "material" products and therefore the need to resort to logistics to route the product from the provider (web-merchant) to the customer. Faced with the growing interest in logistics as a key success



factor for a merchant website, a new concept is developing: e-logistics. One can then wonder whether this is really a new logistics, specific to e-commerce, or simply a generalization of current practices. What are the specificities of e-logistics? What are its issues and strategies? What about his constraints? So many questions to which we will try to bring elements of answers.

### **I- E-commerce and SCM:**

If we look closely at the failures most observed in the practice of e-commerce, we realize that (Logistics magazine, 2000a, 2000b):

- the announced delays are either too long (a customer who orders in a few clicks can feel frustrated to have to wait several days to be delivered) or short but unreliable;
- the products are unavailable;
- delivery costs are considered too high;
- the information given to the customer on the progress of his order is insufficient or incomplete.

As we can see, all of these dysfunctions are the problem of logistics. The problem here is that: the customer is not a business but millions of people; the conditions of efficiency of the logistics perceived by the customer can be completely different from one individual to another according to his own constraints.

The difficulties of e-commerce logistics are related to both order preparation and physical distribution. They emanate mainly from the characteristics of the Internet user, which are as described below (Dornier, 2000):

- it is an end customer, hence the multiplicity of the order lines compared to an order made by an industrialist or a distributor;
- it is a universal customer who wants to be delivered at home;



- it is finally, a customer who generates returns for which he wishes that a suitable solution is proposed to him.

Thus, customers are at the heart of a service problem whose answers are largely the responsibility of logistics. Concerning order preparation constraints, if we consider, for example, the problem of order preparation among cyber-grocers, we can easily illustrate the difference between the order preparation model. in traditional logistics and "new logistics". In fact, in the traditional model, the trader obtains supplies from his suppliers to stock shops and to supply (in large volume) shelves from which a customer picks up his products, and to carry them, by his own means, to his home. In the e-commerce model, it is the order picker (of the cyber-merchant or the service provider to whom he has entrusted this activity) who will collect the products, individually, in the shelves of the warehouse. This new offer induces the following changes:

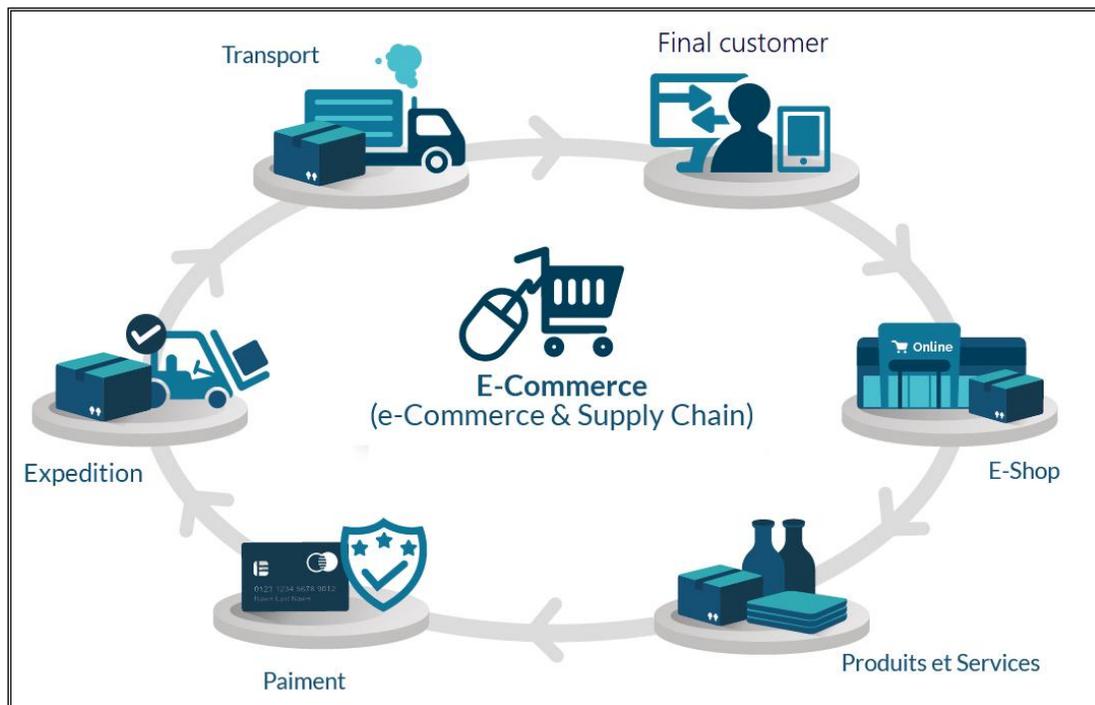


Figure 1: organization of an e-commerce sales logistics circuit



- Modification of the processed logistics unit: we move from pallets / cartons packaging to cartons / units packaging. This constraint is all the more important as the number of references processed is important. Some sites choose to voluntarily reduce the number of references offered, at least at the start of their activity (Logistics magazine, 2000c). The counterpart of this choice is surely the risk of losing customers, diversity being a criterion of differentiation or attractiveness of the site for the customer.

- The problem of splitting orders: in most cases, orders are composed of several different items. Some of them may have very long availability times. The cyber-merchant can, for obvious reasons of customer service, choose to deliver part of the order. He may also choose to reserve the products available to avoid additional delays. In the logistics system, information of a new nature is born, orders "partially served" and "stocks held in detention". The proliferation of these particular cases tends to interfere with the order picking system and cause errors due to the co-existence of several order picking spaces and the management of the same order successively. by several preparers.

Concerning the difficulties related to final distribution, the main characteristic of B to C is the need to deliver individual end customers. E-commerce introduces new constraints: order splitting, downstream atomization, high service requirements, difficulties in approaching home delivery by individuals (Manzella, 2001). The difficulties associated with this new form of distribution can be summarized in the following points:

- Delivery at home: the delivery of packages to the customer's home poses several specific problems, namely the window of limited time where the customer is at home; the difficulties of access to the home; the impossibility to deliver in case of absence of the customer.

- Order splitting: when it comes to deliveries to end customers, and even more so when the activity is starting up, the volumes to be delivered are relatively small and require Express delivery, whereas companies were used to culture of the "complete truck". The company



has to manage a much larger fleet of smaller vehicles, adapted to specific delivery conditions.

- Geographical scope: the geographic scope of the market open to cyber-traders is, a priori, global. In this sense, the Internet has changed the rules of competition, insofar as "the spatial framework of competition no longer acts as a constraint" (Marouseau, 2001). Nevertheless, this evolution of the catchment area does not mean that cyber-merchants occupy all the space that is now open to them. Indeed, as in this type of commerce, it is necessary to deliver a unit customer, most sites limit their delivery offer to national or regional geographical areas. Thus, as Marouseau (2001) points out, "the geographical presence of a cyber-merchant is expressed in terms of logistical proximity".

- Service requirement: In e-commerce, the Internet customer is waiting for a particularly privileged service relationship. The majority of its expectations are the control, by the merchant site, of its logistics and the information flows associated with it. Indeed, the customer often wants the delivery time is in line with the urgency of the need he has the product; that this delay is reliable; to know at every moment the progress of the taking into account of his order; and be informed, at the time of placing an order, of the availability of the product.

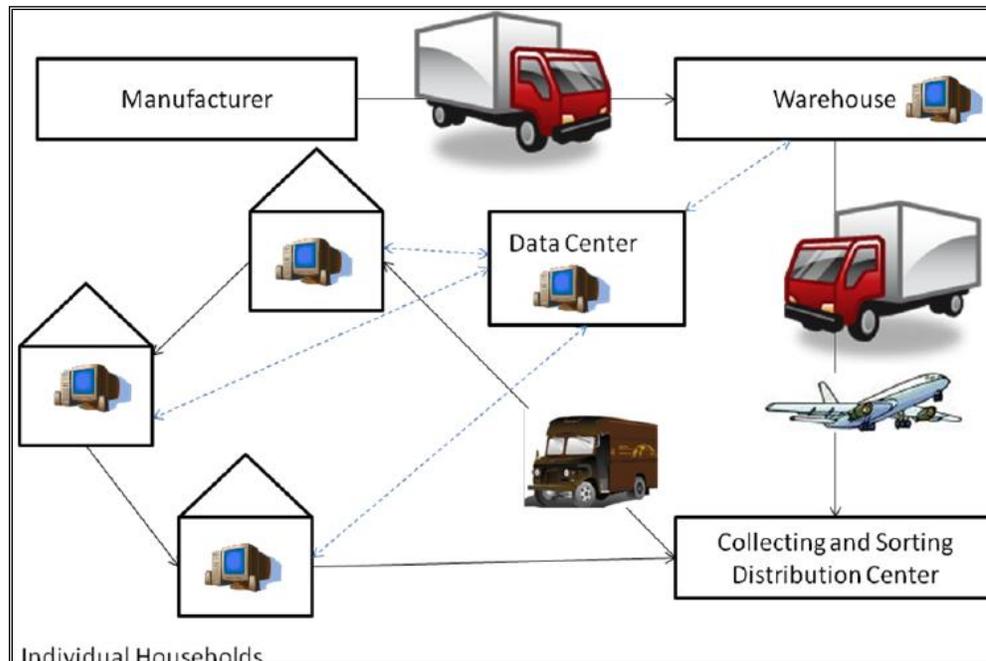
As a result, the merchant site must invest in information systems and acquire a real expertise in "infogistics". This new term specifies that beyond logistics services, e-commerce requires the development of information integration services, whether it be integration: downstream through tracking systems (monitoring real time) orders; or upstream for making available to customers information on product availability from inventory management systems. All in all, if the logistics performance is an important element in the construction of the web-merchant service offer, it is not an exclusive criterion for assessing the quality of a site, let alone customer loyalty. . It is part of a complete service and is balanced with other criteria (Bacus-Montfort et al, 2002). According to these authors, the distribution e-mix at online retailers is situated on a continuum between two opposing models: the first model favors a narrow assortment and a proximity strategy on some



privileged catchment areas, which makes it possible to bring important logistical guarantees (reduction of delays and reliability of deliveries); the second model is represented by a wide and deep assortment with a large geographical coverage, which makes the logistic performance more difficult to guarantee but at the same time, maybe the customer is less sensitive. Aurifeille et al. (1997) believe that the consumer generally does not have any particular satisfaction when the logistics service is successful but anger and frustration if the logistics are counter-productive. To answer the question, from the contribution of logistics to customer loyalty, Lote (2002) estimates that the criteria of reliability of delivery, speed of delivery, choice of the place of delivery, delivery charges and the extent of the assortment, are decisive in its decision to renew or increase its purchases.

## **II- Product logistics at the service of improving E-commerce**

The characterization of the logistics offer is at the level of the organization of the delivery (mode of delivery and time promised to the customer) and the price charged to the customer. The delivery offer concerns both the delivery time promised to the customer and the mode (place and time) of delivery. The delivery time depends mainly on the geographical and logistical proximity, as well as the responsiveness of the order picking system. In other words, it depends on the organization set up in the back office. As for the delivery method, it is characterized by: the possibility of being delivered at home or at a delivery point (merchant, warehouse, post office); delivery appointment schedules that are set by the customer or by the merchant.



**Figure 2 : E-commerce Product Flow Diagram**

The delivery price is one of the most sensitive criteria for the customer. Indeed, a delivery price deemed too high can dissuade a purchase and whatever the interest in the product. Conscious of this weight and in an obvious desire to "popularize" the online business, several cyber-merchants had started by offering a free delivery. However, the potential of e-commerce to revolutionize traditional trade has been over-sized and the reasoning behind the shift in the value chain by removing all middlemen and leading to a substantial price decline (Benjamin and Wigand , 1995), all these arguments proved to be too optimistic. Every cyber-shopkeeper knows today that the suppression of the stores did not induce the savings supposed to cover the cost of the preparation of order and the "last mile", therefore, the choice of free delivery is not viable long-term. This practice, however, continues to exist, but it concerns more particularly the sites marketing high margin products. On the other hand, knowing the impact of the "delivery price" factor on the realization or not of the sale, the cyber-traders have no other resource than to propose acceptable prices by the customers, who in the majority of cases are well below the actual cost and generate significant



operating losses. The setting of this price is all the more problematic because, as Marouseau (2001) points out, the customer is not really aware of the cost of his own trips to shop in the store. The author proposes a synthesis of the offers of different cyber-grocers which shows quite clearly the disparity of the tariffs practiced according to several criteria among which the number of references treated, the geographical area and the promised deadlines.



## **CONCLUSION**

In light of these developments, the following lessons can be drawn:

- First, it is clear that e-logistics, there is no "one best way". Faced with the multiplicity of sales situations on the Internet, themselves determined in particular by the diversity of products, geographical proximity, service policy, etc., we can reason this performance only from a typological point of view.
- On the other hand, all the experiences in the field of the sale of material goods have shown that logistics is part of e-commerce trades and must be integrated into the company's strategy when designing its offer. and its customer service policy.
- Similarly, we can emphasize that this notion of service encompasses many performance criteria that are sometimes contradictory, ranging from the choice offered to the customer, the security of payments, to the delivery in short time. A cyber-merchant can not pretend to play on all the boards and jointly optimize all the criteria. What matters is that the construction of its IT and logistics infrastructure is consistent with its strategic objectives and business model.

Finally, it should be noted that time will certainly benefit e-merchants to structure themselves, to organize their activity and especially to develop a know-how allowing them to reach the expected levels of profitability. Net companies will progressively build both organizational and logistical solutions that correctly address the specificities of e-commerce.

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