

## PROCEDURAL ORGANIZATION IN eFULFILLMENT

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**Abstract:** The paper addresses the problem of the eFulfillment process developed as a direct consequence of the development of e-commerce. Following an introduction to e-commerce, the concept of eFulfillment is presented as it appears in the literature. Most of the work is assigned to the way in which the procedural organization in eFulfillment is done starting from the storage of the products, the integration with the customer's virtual store, the way of taking the orders, managing the online store, invoicing, packaging, delivering the products, tracking the orders and possibly the return of some of the products. I concluded the work by presenting the eFulfillment services at international level, within the most important companies operating with this technological system.

**Keywords:** eFulfillment, eCommerce, logistics system

### 1. INTRODUCTION

Since its emergence, the internet has changed and will continue to change the way we organize, operate and conduct economic and social life. In the new economy, information and communication technology (ICT) has become the generator of economic and social transformations [1], information - the main resource, and Internet technologies - the most efficient communication and business network.

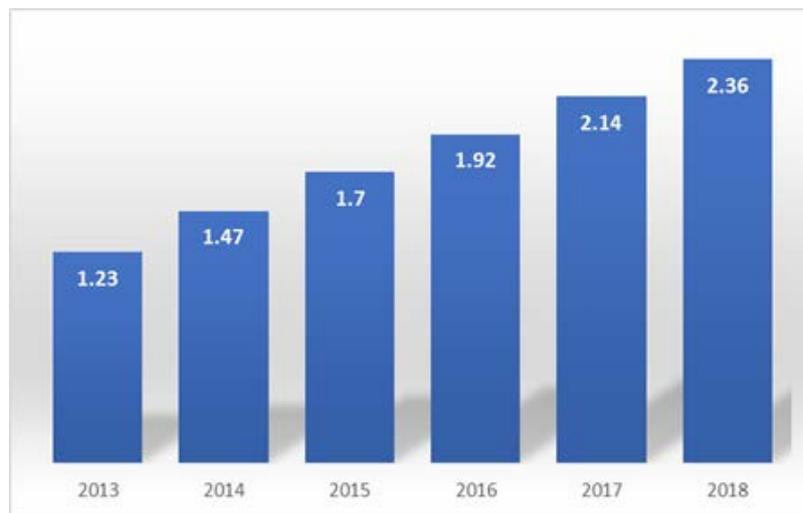
Generally speaking, "e-commerce" encompasses all online shopping, on the World Wide Web and represents more than the process of buying/selling products and services, it also includes many other activities, such as: exchanges and negotiations between companies, internal processes of the companies that they carry out in support of the activities of buying/supplying, selling, hiring, planning the transfer of documents - from contracts or orders, to images or voice recordings [5].

Electronic commerce is the key to the competitiveness of companies in the context of developing the information economy due to its ability to cross time and space borders [6].

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The impact of e-commerce on companies and on society is tremendous, both in extent and intensity, and this statement is supported by statistical data on worldwide sales. Thus, in figure 1 shows a continuous increase in the value generated by e-commerce, with percentages close to 20% in the period 2013-2014, an average annual growth rate for the whole analysed period of 14.73% and a maximum reached in 2018 of \$ 2.36 trillion.



**Fig. 1.** The value of global e-commerce sales between 2013 and 2018 [10]

Therefore, as shown in figure 1, the E-commerce market is growing, which is why it can be said about the owners of e-shops that they are increasingly open to the idea of eFulfillment, a service that makes their day-to-day activity more efficient and that allows, at a fixed cost, to focus exclusively on increasing the turnover, marketing and portfolio of commercialized products.

Most small online stores find it quite difficult to invest in a modern warehouse and logistics department consisting of specialists or to support a business, for example, when sales have seasonal fluctuations [7].

Another extremely important advantage of outsourcing through eFulfillment is the significant reduction of the operational costs, which automatically decrease by up to 50% and at the same time the transformation of the indirect operational costs, such as storing, taking orders, managing the goods, invoicing, packaging, delivery or even managing the site at a direct cost, related to the number of orders placed and the quantity of merchandise in stock.

## **2. eFULFILLMENT AND THE LOGISTICS OPERATIONS**

Thus, starting from the operating mode, eFulfillment can be defined as a logistics service for online stores to take over their operations [2]. In other words,

eFulfillment means the sum of the logistical processes by which a product ordered in an online store is packaged and turned over to the courier for delivery to the consumer.

Considering the gradual growth of e-commerce sales and increasing interest in omni-channel (OC) eFulfillment trading (fig.2), it is a powerful logistics system [4] and which allows the implementation of efficient and quality services [3].

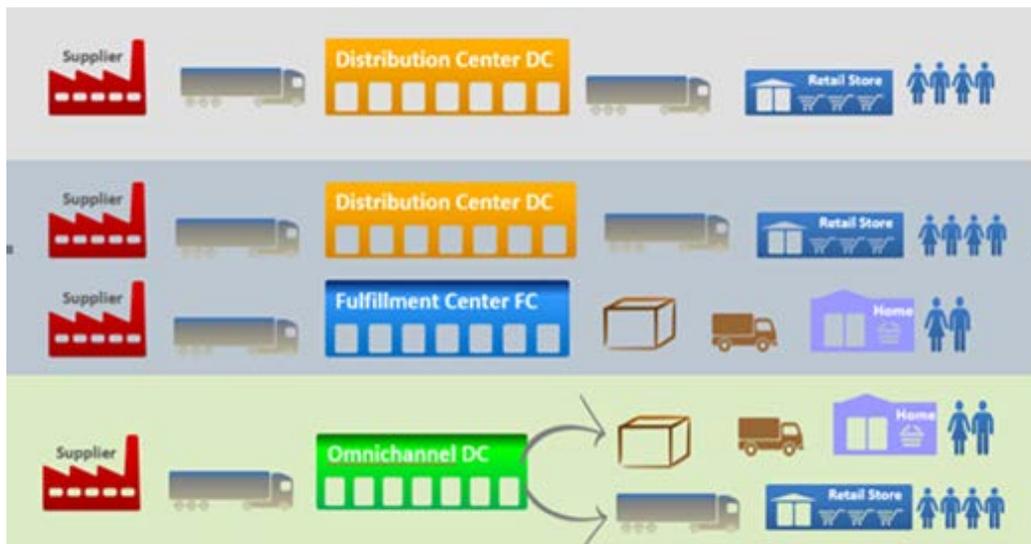


Fig. 2. Departments and documents flow in the eFulfillment process [18], [20]

The procedural operations that are carried out in the eFulfillment system are given by the definition of the service itself, in the sense that through eFulfillment "the storage, processing, assembly and delivery of orders is outsourced".[4]

However, the way of presenting and detailing the operations offered to customers is different from one eFulfillment platform to another, each trying to be as original and attractive as possible to existing customers and especially to potential ones [8].

In brief, such operations take into account the following [9]:

- a) **Storage of products** - the products are safely taken over. All products that are stored are verified upon receipt and registered in a database. Details on the quantity, quality, size and weight of the products are entered in the system and can be checked later.

At the same time the company:

- Keeps the products according to their specifications and all the rules regarding the packaging and storage of the different types of products are obeyed;
- Handles storage related operations such as inventory, sorting, grouping, and so on;
- Provides optimal transport conditions;

- Synchronizes orders to optimize the order time and costs to the maximum;
  - Stores the products in the safest conditions. The stored goods are insured and the hall complies with all safety regulations.
- b) **Integration with the customer's virtual store**, which allows the company to do the following:
- Confirmation of delivery. A personalized email with the details of the delivery is sent automatically to both the store owner and the customer who places an order for a product from the virtual store;
  - Any package may contain promotional materials. This way you can run direct mailing campaigns even through the delivered packages;
  - Send to the store owners details regarding the identification codes of the orders that go to the customers and their status;
  - There is the possibility to personalize the packages with the store's emblems or any other identification elements;
  - Customers can be offered the opportunity to choose themselves the way in which they prefer to have their orders delivered, as well as the time when these arrive at their destination;
- c) **Direct order taking**, providing a system that streamlines and optimizes the connection between the virtual store and customers through:
- Dedicated telephone lines;
  - A customer service team ready to take orders via email or phone on behalf of the store;
  - Flexible schedule for taking orders, even in the evenings or Saturdays;
  - Processing of orders according to instructions and preparation of delivery;
  - Permanent feedback to ensure that the information provided to customers is accurate and valuable;
- d) **Managing the online store** , through:
- Organizing the homepage: placing products on the homepage is a dynamic process based on analyses and good e-commerce practices;
  - The periodic import of products and data on the site, their modification or deletion;
  - Applying promotions or marketing campaigns;
  - Creating and sending Newsletters;
  - Making and sending transactional emails (e.g.: order confirmation, account making, incomplete basket, etc.);
  - Specific performance reports and indicators for all of the above.
- e) **Invoicing, packaging, delivery and return** (fig.3):
- The invoicing is done from the ERP cloud system and is then sent to the management system of the store served for registration;
  - When invoicing, stocks automatically decrease, generating possible supply alerts;
  - Preparation of all documents required for delivery (picking document, packing list) ;

- Rapid assembly of packages due to the management system that allows to identify the place where the product is in the warehouse;
- We deliver through the approved courier service.
- Return management.

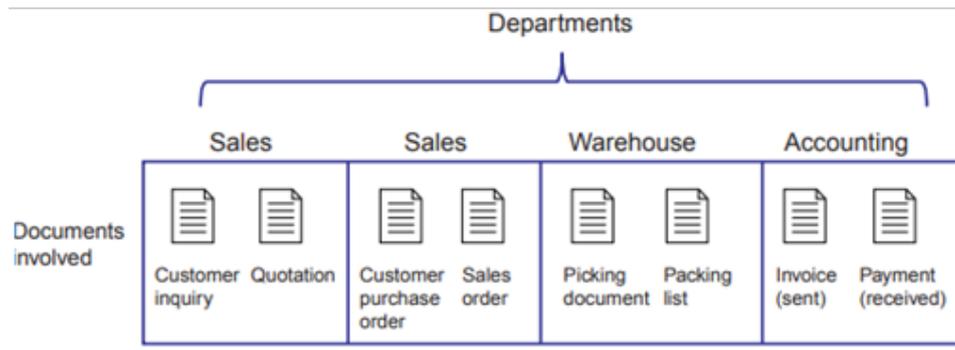


Fig. 3. Functionality of the e-fulfillment service [19]

- f) **Tracking orders and activity.** Every Frisbo client has user and password access to an ERP system and secure Business Intelligence cloud, which allows:
- To always have access to the stocks of the store knowing exactly how much quantity is available in each position;
  - To have access to the order stage, seeing in real time their evolution through the processing and delivery steps;
  - Receive aggregate data and reports on online store performance, orders, returns and stocks
  - Receive stock feed alerts when needed.

The best thing about operations within the eFulfillment service is that you can try the company's integrated management system - and future customers can see what awaits them if they conclude collaboration with the eFulfillment service generating company (fig.4).

### 3. GENERATION OF eFULFILLMENT SERVICES

Fulfillment services are a big business, and the entire industry, including warehousing and delivery processes, will be worth \$ 27 billion in 2019, according to an IBISWorld study [11]. The U.S. Storage Industry has almost one million employees, and most of this workforce works in fulfillment and distribution centres. Worldwide, in 2018 the best 10 fulfillment services were:

On the 1st place is Rakuten Super Logistics which provides order pick-up services hosted in the cloud for merchants in the e-commerce network with high speed and high speed delivery requirements in the USA or outside it. The e-fulfillment company that ranks first has 12 logistics centres from where it can deliver orders to its customers through maritime, local and international transport [12].

The second place is held by the Fulfillment Amazon FBA company, which allows anyone to sell their products on the Amazon platform. Because the fees are determined by the size and weight of the item, the platform is advantageous for those who sell small items.



**Fig. 4.** Operations within the eFulfillment service

Whether you only sell a few products or your portfolio contains thousands of products, you can use Amazon's US logistics capabilities as well as a global network of over 140 warehouses that will take over the processing and shipping of products to customers and services for payments, refunds and 24/7 logistics services for customers [13].

In 3rd place is FedEx Fulfillment Company, which was launched in early 2017 to help small and medium-sized companies deliver orders through the integrated supply chain system, which is highlighted by an easy-to-use platform and a logistics solution that offers customer storage, packaging, labelling and transport services. With the support of FedEx infrastructure, customers can outsource their direct relationship with suppliers and focus on expanding their business [14].

The 4th place is owned by Shipwire, a company that has branches with several warehouses in the US, China, Europe, Australia and Asia. The services are based on an enterprise warehouse management system (WMS) that offers customers a secure and secured warehouse for their items, shipping services and special handling procedures. Its intelligent transport platform is able to efficiently choose the best routes for the courier, safe packaging options and helps reduce shipping and delivery costs [15].

In 5th place is ShipBob, which is one of the special eFulfillment services with same day deliveries for orders placed in Los Angeles, New York, San Francisco, Dallas and Chicago. In addition, the distributor offers 2-day shipping in mainland America. The advantages of using this platform refer to: the use of a free software solution that companies can use to manage inventory and orders; integration with e-commerce

platforms; direct connection with commodity exchanges. Its competitive advantage is that it is close to traders and final consumers in the largest metro areas in the U.S. [16]

Next, in a consecutive order up to the 10th place including specialized e-fulfillment companies, come companies such as Red Stag Fulfillment, FulfillmentCompanies, Fulfillify, IDS Fulfillment, VelocityShip [17]. Regardless of the geographical area and the company used, e-fulfillment services represent an opportunity through the many advantages it offers, materialized in reducing costs and transforming fixed costs into variable costs, flexibility and speed in the storage, management, recovery and delivery of goods.

#### 4. CONCLUSIONS

In conclusion, given the accelerated increase in sales volume and cross-border trade, I considered that the product distribution and the e-Fulfillment are some of the essential pillars of this type of business and efficient warehouse management is essential in the mechanism of transactions. In this case, because e-commerce is one of the fastest growing sectors and a market that will exceed 3.5 trillion euros by 2020, my opinion is that eFulfillment has all the strengths of developing in parallel with the increase of sales through electronic commerce.

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