



Optimising supply chain management in the context of E-commerce in Algeria: Jumia's perspectives and best practices

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Abstract :

According to the annual report of the UN Conference on Trade and Development (UNCTAD), Algeria has risen 29 places in the global e-commerce rankings. Our study focuses on the development of supply chain management (SCM) within Algerian e-commerce companies, using Jumia as an example. This last effectively implements the three essential SCM flows: physical flows, information flows, and financial flows. To maintain competitiveness, the company relies on technological integration, collaboration with partners, sustainable management, and data analysis. Optimizing stocks, well-organized warehouses, and data-driven decision-making are among the best SCM practices at Jumia. These approaches aim to maintain its leadership in the Algerian e-commerce market while enhancing the customer experience.

Key Words: E-commerce, SCM, logistics, Jumia, Algeria.

JEL Classification: L81, M21.

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Introduction :

The role of e-commerce in supply chain management mainly affects order taking for specific companies. With the rapid development of the Internet, e-commerce is not just a matter of transactions taking place over the Internet, but a process of operating physical, information and financial flows (Liu 2008).

Logistics, increasingly integrated, an economic pillar of tomorrow's world... Indeed, at the end of the 1960s, companies began to pay greater attention to the logistics function (Sheffi 1997).

Supply chain management is undergoing a metamorphosis, offering greater flexibility to the end consumer. After several years, digital commerce, whose prospects are still favourable, could enter a phase of more moderate but certainly enviable growth in developing countries.



Jumia, one of Algeria's leading e-commerce companies, is an interesting example of the application of Supply Chain Management (SCM) in the e-commerce sector. The company has adopted a strategic approach to optimising its supply chain and meeting consumer needs efficiently. That's where this article comes in: **"How to optimise SCM in Algeria's e-commerce sector"**.

I. Literature review :

1. The growth of e-commerce :

The emergence and growth of e-commerce are closely linked to the technological advances of the Internet. Between 1997 and 2002, the Internet took shape and a quarter of all households had access to this network.

In the 2010s, with the advent of smartphones, m-commerce made its entry and new merchant sites made their presence felt, contributing to the boom in e-commerce. However, as volumes increase, a certain slowdown becomes inevitable. Retailers are forecasting a rapid expansion in the share of e-commerce in retail trade, from less than 5% in 2010 to 24% in 2020.

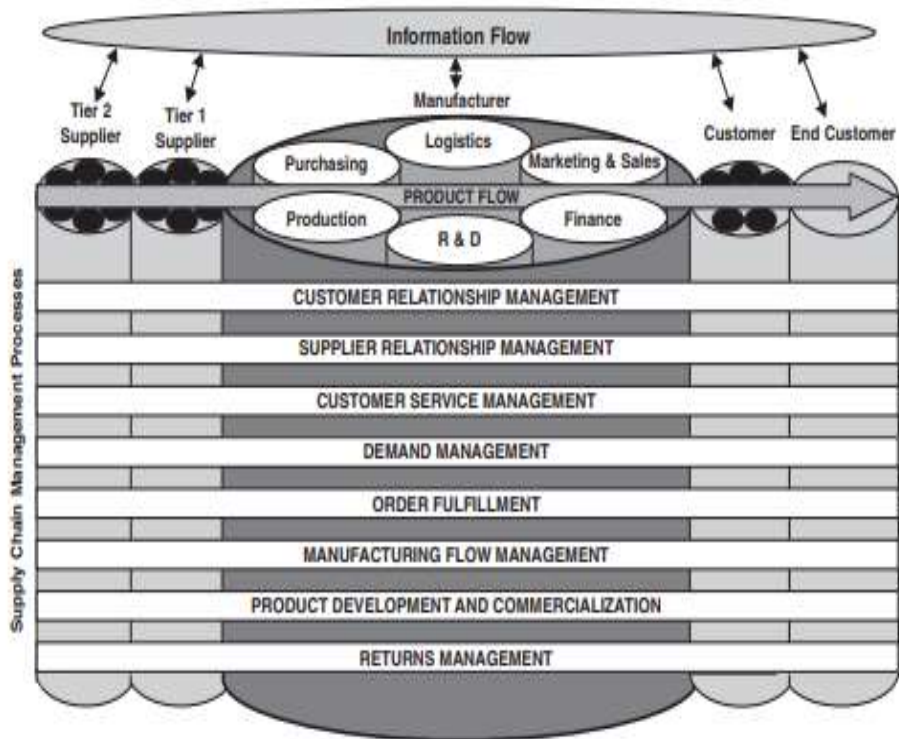
E-commerce, initially presented as a favourite area for start-up (Thomas Stenger 2011). The global e-commerce growth rate for 2022 is estimated at 9.7%, bringing global e-commerce revenues to \$5.7 trillion. However, this growth represents a significant drop on last year's growth rate. This truly silent revolution, including the emergence of online shops (Eben 2015) such as Amazon, eBay, Google and now the famous Open AI...etc.

2.The SCM concept :

The Supply Chain (SC) brings together all the tasks and players involved in the physical and information flows required to transform goods from the state of raw material to that of a finished, marketed product. The management tools and methods used to optimise this chain are referred to as "Supply Chain Management". The approach consists of refocusing the organisation, essentially, on the needs of the customer.

SCM has become a strategic priority (Richard A Larcioni 2000) for a growing number of companies. Out of a sample of 300 large American and European companies, 68% consider that improving their SC is one of their strategic priorities. In fact, the integrating aspect of SC (Ballou 1999) high lights two dimensions: one strategic, focusing on the optimal composition of the chain, in terms of players and the distribution of roles in the performance of activities; the other operational, focusing on the most effective possible implementation of the resources needed to co-ordinate the company's various functions and activities, in particular thanks to NTIC.

Figure 01: Supply Chain Management Integrating and Managing Business Processes across the supply chain



Source: (Lambert 2017), p03

The SCM is therefore a set of approaches designed to satisfy the demand of a customer or end user, in the light of a strategy based on the three pillars of sustainable development, in particular at the lowest cost for the targeted level of service, through the effective integration of suppliers, producers, distributors, service providers and sometimes even the end customer. (Chapdaniel 2010) The various SCM flows include :

a. Physical flows:

This refers to the physical movement of raw materials, semi-finished products and finished products throughout the supply chain. It begins with the purchase of raw materials and ends with the delivery of the finished product to the end customer.

b. Information flows:

Global coordination constitutes the information exchanged between each entity (factors, purchase orders, delivery schedules, etc.), which is necessary for the supply chain to function. It will be included in the study of financial and physical flows.



c. Financial flows:

This concerns the movement of funds throughout the supply chain. It includes activities such as the purchase of raw materials, inventory management, production, distribution and sales. Effective cash flow management is essential to maintain a healthy financial balance and optimum profitability.

Supply chain management involves coordinating these different flows to ensure fast, efficient delivery of high-quality products at reasonable cost.

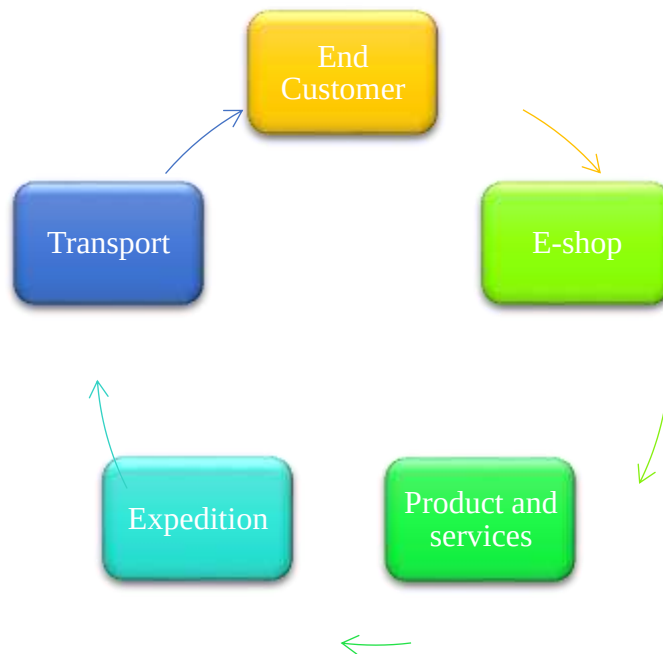
3. Supply chain management : a strategic challenge for e-commerce :

As early as November 1999, when the Internet had barely begun to take off, Levis, one of the pioneers of e-commerce, announced its withdrawal from direct online sales to consumers (Philippe-Pierre Dornier 2013). The main argument put forward was the difficulty of controlling logistics operations for delivery to end consumers. In the second half of 1999, Amazon decided to add a physical dimension to its business model by building 7 warehouses in the United States, and continued to do so in the following years in Germany, the UK and France.

The launch in 2000 of Houra, a Cora subsidiary specialising in online hypermarkets, revealed the difficulties resulting from an undersized logistics system in the face of a commercial success that was largely underestimated by forecasts. While many online retailers did not consider supply chain management to be an essential part of their business plan, it turned out to be a crucial dimension at operational, tactical and strategic levels.

E-commerce marks the emergence of a new distribution channel that has a direct impact on the supply chain processes that support it, and therefore requires specific design of the responses dedicated to it. The particularities of e-commerce are such that end-consumer behaviour is creating new constraints on flow management. As a result, it is not enough to simply adapt existing supply chain responses to this new context: we need to completely rethink the logic behind the circulation of physical flows, and the management tools, information systems and decision-making tools that support them.

In all booming industries, companies that want to stay in business must strive to regularly develop strategies to keep up with changes in customer behaviour. Online sales have continued to grow strongly for several years now, especially during the pandemic period. Some platforms have developed commercial features that allow users to buy products directly on social networks.

**Figure 02 : E-commerce & SCM**

Source: Established by the author

II. Practical study:

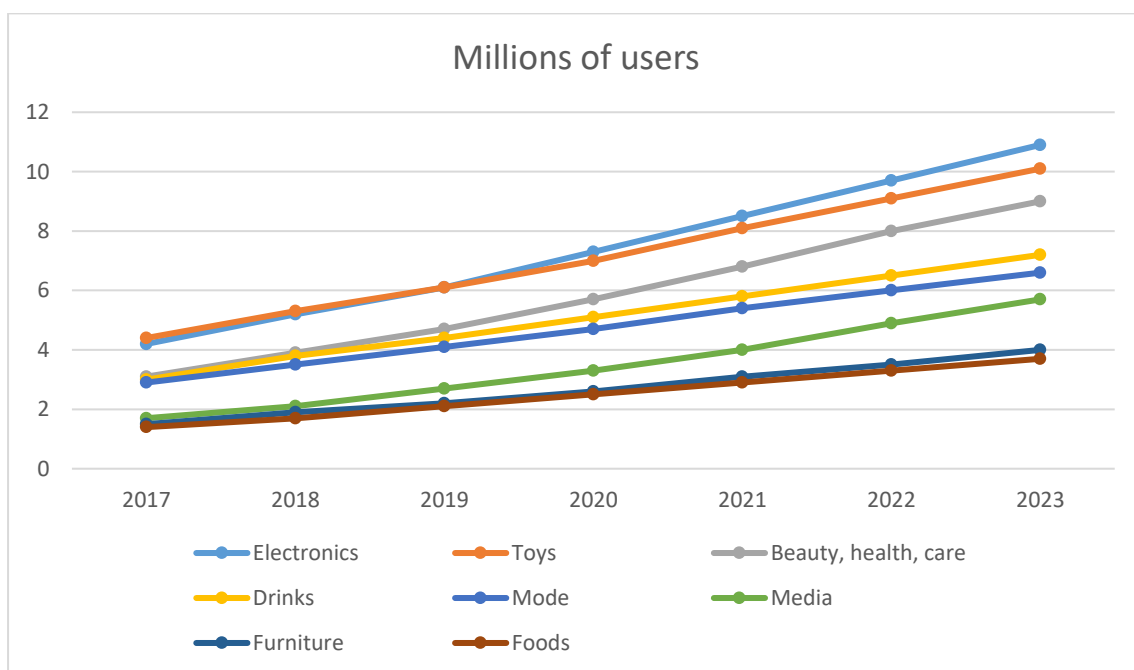
1. E-commerce in Algeria:

E-commerce in Algeria has seen remarkable growth in recent years, particularly with the boom in online sales and the emergence of specialist platforms. This development has been amplified by factors such as widespread Internet access, the increase in the number of smartphones and changes in consumer purchasing behaviour. As a developing country, Algeria faces a number of challenges when it comes to e-commerce, such as limited logistical infrastructure, regulatory constraints and traditional payment habits. However, despite these obstacles, the e-commerce sector continues to grow, offering new opportunities for entrepreneurs, merchants and consumers.

The Algerian government recognises the importance of e-commerce as a driver of economic growth and has put in place initiatives to promote its development. Public-private partnerships, training programmes and measures to facilitate online transactions have been implemented to stimulate the sector.



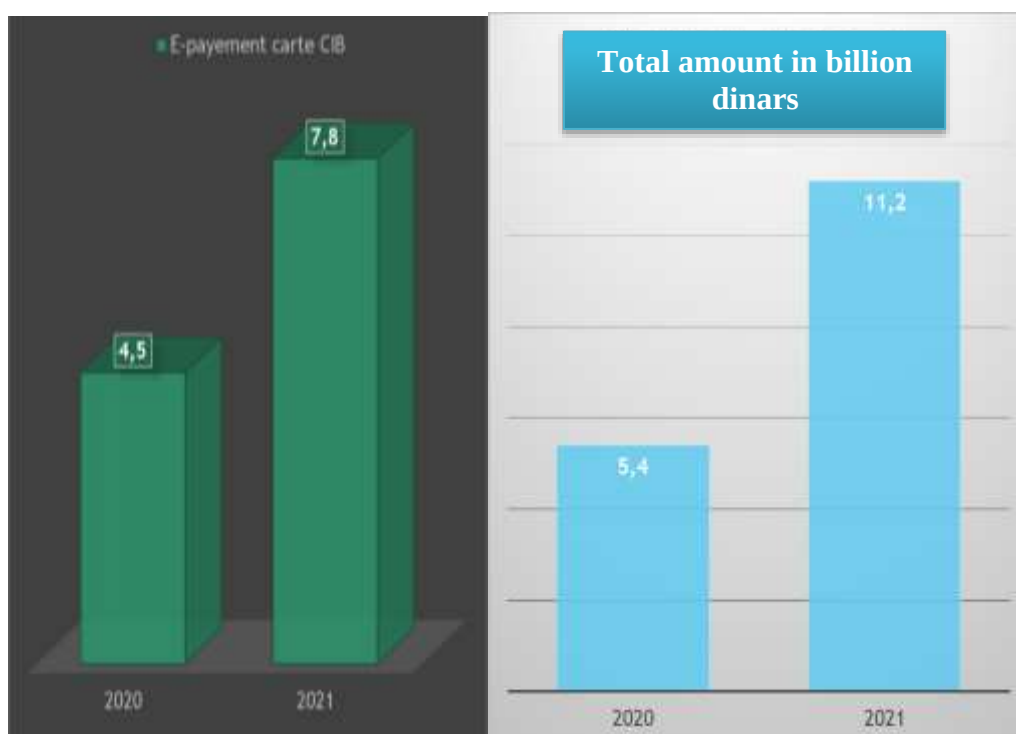
Figure 03 : Number of e-commerce users by segment in Algeria from 2017 to 2023



Source: Established by the author, inspired with (Statista, 2023).

In 2022, the electronics sector was the main e-commerce segment in Algeria, with almost 10 million users. Other key segments of the country's online shopping market were fashion, as well as toys, leisure and DIY. By 2025, it is estimated that the number of users will range from 4.3 million in the food sector to 12.3 million in the electronics sector. This substantial growth of e-commerce in these key segments reflects the changing consumer habits of Algerians, who are increasingly embracing online shopping for their everyday needs. The surge in the electronics sector can be attributed to the rising demand for electronic products such as smartphones, consumer electronics, and computer-related items.

These figures indicate a promising trend for e-commerce in Algeria, presenting opportunities for both local and international businesses to tap into this thriving market. To meet the growing demand, companies need to focus on optimizing their supply chain management (SCM) by enhancing logistics efficiency, inventory management, and delivery speed.

**Figure 04 : The development of electronic payments in Algeria**

Source: Established by the author

Payment transactions and operations carried out via the Internet in Algeria grew significantly in 2021. Holders of interbank cards (CIB) and E-dahabia cards from Algérie Poste contributed to this growth, totalling around 7.8 million transactions. This upward trend in online transactions reflects the growing adoption of e-commerce by Algerian consumers. The advantages of online payment, such as convenience, speed and security, are encouraging more and more people to make transactions via the Internet.

The growth in electronic transactions is also supported by the efforts made by financial institutions and service providers to improve the online payment infrastructure in Algeria. Investments have been made to enhance transaction security and develop more reliable and efficient online payment systems.



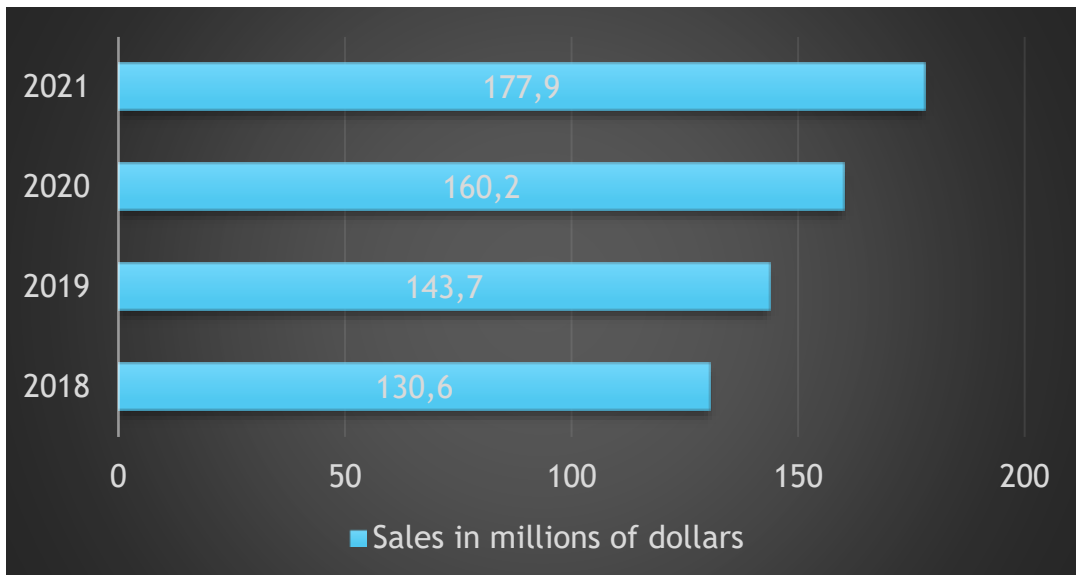
2. JUMIA Case Study :

« JUMIA » is a pioneering e-commerce company in Africa, which was established in 2012. It operates in more than 10 African countries, including Algeria, and offers a wide range of products, such as clothing, electronics, household goods, beauty items and more. Sometimes referred to as 'the Amazon of Africa', Jumia was first launched in Kenya in 2012 and has been growing ever since, now operating in Nigeria, Egypt, Morocco, Ivory Coast, South Africa, Tunisia, Algeria, Ghana, Senegal and Uganda (Fleck 2022).

JUMIA has a particular approach to Supply Chain Management (SCM) in Algeria, being the only e-commerce company to practice this systematically. The company has a sophisticated stock management system, which enables it to monitor stock levels in real time and ensure that products are available for sale online. JUMIA has also established partnerships with local carriers to ensure fast and reliable deliveries, and has set up a returns management system to offer its customers a pleasant shopping experience (Releases 2022).

JUMIA's approach to SCM has been studied in detail through qualitative and empirical research to assess the effectiveness of this practice in Algeria. The results showed that JUMIA's approach to SCM is considered effective and innovative, enabling the company to deliver a quality customer experience and improve its competitiveness in the e-commerce market (Batache 2020).

Jumia's logistics marketplace is uniquely adapted to Africa and is based on two main pillars. The first is its proprietary technology, which aggregates demand and matches it with supply capacity on the basis of a number of parameters such as service quality, network accessibility and delivery cost. The second pillar is its logistics network, which includes among its physical locations more than 20 warehouses (110,000 m² in the north) and more than 1,300 drop-off and pick-up stations, spread across Jumia's market in 11 countries, including remote areas. In 2019, Jumia handled more than 20 million parcels, thanks to the seamless integration of more than 300 logistics partners of all sizes. In addition, partnerships with players such as Total, Vivo Energy and Posta Kenya enable an even broader presence across the 11 countries where Jumia operates on the continent (C. News 2020).

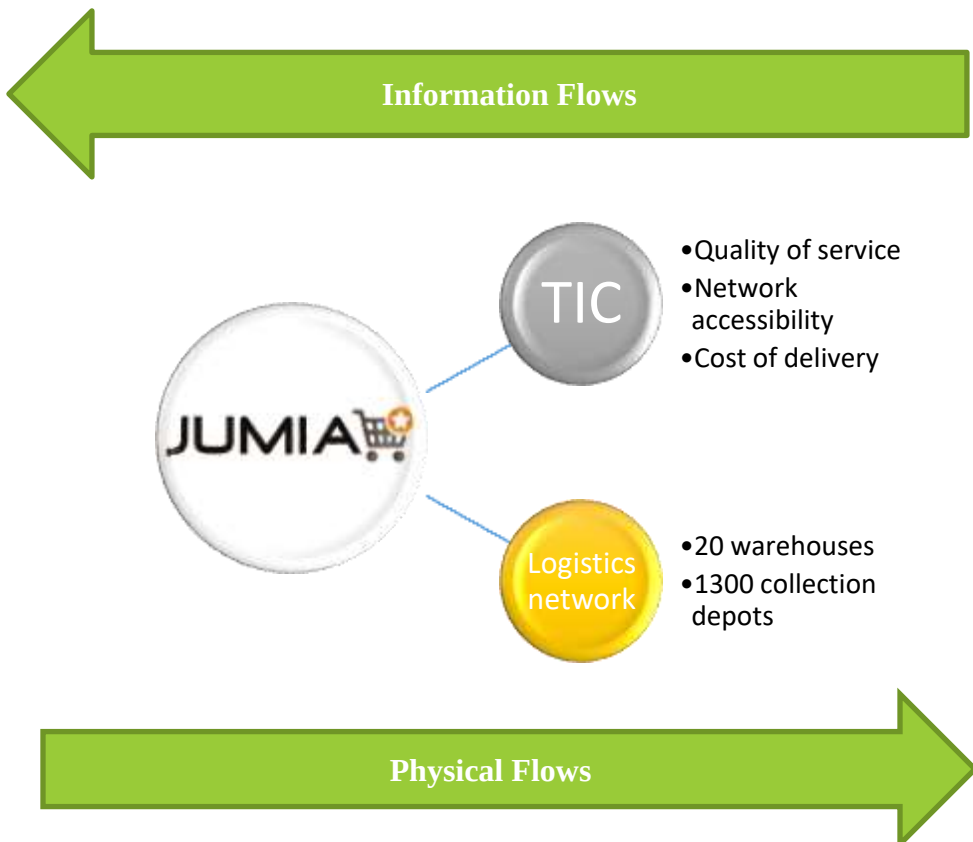
**Figure 05 : Growth in JUMIA's turnover**

Source : Established by the author

According to financial data provided by Jumia (Exclusive 2022) the pan-African e-commerce unicorn, the company posted sales of 177.9 million US dollars in the 2021 financial year. This performance represents growth of 12% on the previous year. Jumia attributes this increase in revenue to the rise in orders, which increased by 22% to 34 million, and the 10.6% decrease in commissions, which stood at 35.3 million dollars in 2021. Thanks to these sales, gross profit exceeded \$110 million for the same period, recording annual growth of 4.3%. However, despite Jumia's dynamic commercial activity, the company failed to generate a profit. Indeed, the full-year results for 2021 showed an operating loss of \$240.9 million, up 41.4% on FY2020. Nevertheless, Jumia had 3.8 million active customers at the end of September 2021, demonstrating the platform's appeal to consumers. This situation highlights the challenges Jumia faces in achieving profitability, despite its growth in terms of sales and number of customers. The company will need to continue to optimise its operations, reduce costs and explore new strategies to achieve financial balance and maximise its performance in the African e-commerce market. According to Jumia's latest report, the company recorded sales of \$47.6 million in the first quarter of 2022, representing an increase of 44% on the same period last year (Onukwue 2022).



Figure 06 : SCM processes in the JUMIA digital company



Source: Established by the author

This figure addresses the three essential flows of SCM at Jumia. Regarding physical flows, Jumia places particular importance on efficient inventory management, well-organized warehousing, and fast and reliable logistics to optimize stock levels and reduce delivery times.

For information flows, Jumia utilizes real-time tracking, data-driven decision-making, and system integration to enhance visibility, respond to disruptions, and make informed decisions based on customer behavior and supply chain performance. Concerning financial flows, Jumia ensures transparent financial transactions, effective cost management, and prompt payments to suppliers to maintain trust, control expenses, and foster healthy supplier relationships.

By establishing and optimizing these essential flows, Jumia aims to maintain its leadership position in the Algerian e-commerce market while delivering exceptional customer experiences.



3. Perspectives and best practices of SCM at Jumia :

Jumia is a pan-African e-commerce company operating in several African countries. It offers a wide range of products, including clothing, electronics, beauty products, food and much more. Here's how Jumia uses supply chain management in its operations:

- **Sourcing:** Jumia sources the products it offers on its platform from local and international suppliers. It establishes partnerships with manufacturers, distributors and wholesalers to guarantee a regular supply of products.
- **Storage and warehousing:** Jumia has warehouses and distribution centres strategically located in various African countries. These warehouses are equipped with warehouse management systems (WMS) to optimise storage, stock management and order preparation.
- **Stock management:** Jumia uses computerised tools and systems to monitor stock levels, stock rotation, demand trends and product performance in real time. This enables the company to optimise purchasing, prevent stock-outs and avoid overstocking.
- **Order picking:** When an order is placed on the Jumia website, the corresponding items are retrieved from the warehouses, appropriately packaged and labelled for shipment. Jumia uses order management systems to efficiently track and coordinate the order preparation process.
- **Shipping:** Jumia works with a number of carriers and logistics service providers to deliver parcels to customers. Depending on the destination, size and weight of the parcels, Jumia selects the appropriate carrier to ensure fast and reliable deliveries.
- **Shipment tracking:** Jumia provides customers with real-time tracking information, allowing them to follow the status of their order from the warehouse to final delivery. This helps to improve transparency and customer satisfaction.
- **Delivery and returns:** Jumia strives to offer flexible delivery options tailored to customers' needs, including home delivery, drop-off or in-store collection. In the event of a return, Jumia facilitates the returns process by providing clear instructions and handling refunds efficiently.
- **Customer service:** Jumia has a dedicated customer service team to address customer queries and concerns, deal with order issues and provide general assistance. Communication channels such as live chat, email and phone calls are used to ensure responsive customer service.

By using supply chain management, Jumia aims to optimise the efficiency of its operations, reduce delivery times, maintain appropriate stock levels and offer



a pleasant online shopping experience to its customers across the African continent

Conclusion :

With the boom in Internet sales, e-commerce players are now faced with a twofold challenge. The first is to improve the quality of service offered to increasingly demanding e-buyers. Another important aspect is the implementation of an effective logistics solution, which includes stock and supply management as well as delivery and returns management. In order to respond to the given problem, and to conclude this study, perspectives and recommendations for the optimisation of SCM in E-commerce in Algeria:

- Integration of real-time inventory tracking technologies.
- Working with reliable local logistics partners.
- Using data analysis to optimise the supply chain.
- Adoption of sustainable practices in SCM management.
- Staff training and skills development.

By following these recommendations, e-commerce companies in Algeria will be able to improve their operational efficiency, reduce delivery times, optimise stock levels and meet customer expectations more effectively.

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