кибербезопасностей. Актуальность темы показывает что последние десятелия все больше идет речи в области нейронных сетей и машинного обучения. Данные алгоритмы улучшают работу интеллуктуальных систем и программных продуктов, а также инженерных технологий и сооружений. В этой статье рассмотрены базовые понятия источников информаций и больших данных. Какие направления прогрессируют в наши дни и за какими будет строиться будущее.

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LOGISTICS PLANNING BASIS IN STORAGE ROOM

Abstract. This article analyzes the features of planning logistics operations with a focus on warehouse processes. The main factors that distinguish the planning of logistics operations and storage facilities are highlighted. The basic principles of planning logistics operations, which provide high indicators of logistics efficiency, are described. The important types of planning of logistics operations have been identified. The mechanism of the sequence of actions for effective planning of warehouse processes is described in detail.

Key words: logistics operations, planning, commodity circulation, material resources, warehouse, products.

Introduction

A logistics operation is an independent part of the logistics process, performed at one workplace and (or) using one technical device; a separate set of actions aimed at transforming the material and (or) information flow.

Distinguish between complex and elementary operations. In turn, complex operations are basic, key and auxiliary.

Basic operations are purchase (supply), production, sales.

Key operations are related to order procedure management, purchasing, inventory, manufacturing procedures, physical distribution.0

Ancillary operations are the operations of warehousing, cargo handling and packaging, ensuring the return of goods, collection of returnable waste, information and computer information and other service services [1].

Elementary operations are loading, unloading, packing, transportation, acceptance and release from the warehouse, storage, reloading, sorting, labeling, etc.

In other words, logistics operations include such actions as loading, unloading, packing, transportation, acceptance and release from the warehouse, storage, reloading from one mode of transport to another, picking, sorting, consolidation, unbundling, etc. Logistic operations, related to information and financial flows accompanying the material, can be collection, storage, transmission of information about the material flow, receipt and transmission of an order through information channels, settlements with suppliers, buyers of goods and logistics intermediaries, cargo insurance, customs clearance operations, etc.

Problem, relevance

The object of the study is the process of search selection and evaluation of personnel in the labor market, carried out by HR specialists. The subject of the research is mathematical and instrumental methods for objectification of managerial decision - making in the field of recruitment. HR management does not stand still and to improve the productivity of employees use more modern methods of adaptation, training, stimulation and motivation, [1, 2] but do not underestimate the hiring system, the importance of planning the selection process of candidates. Nevertheless, in any company it is important to replace those who have been fired by productive and competitive employees, so first you need to build methods of selection and selection in the most effective way. I. B. Durakova argues that hiring is a complex procedure for attracting staff to vacant positions, offering to find the right candidates, determine their suitability, conclude a contract or make a decision on refusal [1]. If you classify the methods of recruitment for the target audience, their composition will look as follows: recruiting (recruiting); Exclusive or direct search; Selection of managers by luring them from an existing place of work (recruiting); Preliminary. Having considered the above methods of personnel evaluation, the project would like to point out that there is no "right" and "wrong" methods, as there are suitable and inappropriate methods for each particular organization. The project also considers it important to abandon the generally accepted, but ineffective methods for this particular organization, the introduction instead of qualitatively new, that is, innovative ways of assessing personnel, which is associated with the development of individual computer programs that are able to identify the presence or absence of the necessary qualities of a candidate for successful selection, as well as to make a final decision on the admission or refusal to work. That is why the development of special methods of personnel evaluation and service issuing a response regarding the adoption of staff is currently relevant.

Basic concepts

In the context of economic globalization of the modern world, logistics processes are being updated at a higher level. This is due to the rapid growth in the movement of goods, services, technology and capital between suppliers and consumers within the same country, as well as between economic operators located in different countries.

Competent logistics processes allow you to receive goods and services from different parts of the country and the world in order to obtain benefits in costs and quality. It is logistics, in a broad sense that is the main factor that allows stimulating the development of trade and the economy as a whole, thanks to planning taking into account the length of logistics operations in time and space [3]. Consider the main logistics processes in figure 1.



Figure 1 - Basic logistics processes

The set of the above processes should be characterized by feasibility and timeliness. To achieve this, planning with a miscalculation of certain types of risks plays a key role. Quality planning in logistics was a utopian concept without structured information coming to the target logistics organization from external sources and documentary support. Thanks to the standardization of the latter, the coordination of planned calculations and their control made logistics planning a little less difficult. The direct types of planning of logistics processes are classified according to the timing, the degree of detailing of the decisions made and the functional areas. A more detailed classification is shown in figure 2.



Figure 2 - Types of planning of logistics operations

Planning models

Looking for the degree of concretization of the types of logistics planning, it is necessary to clearly and reasonably determine the accuracy of measuring the characteristics of planning objects, while taking into account their consistency at various levels. It is necessary to align the means and actions of key decision-makers through the prism of the degree of necessity, urgency and consistency. Before starting planning a logistic operation of any type, it is necessary to clearly identify the object, the subject of planning, taking into account the length of the procedure and the optimal amount of costs for its implementation. After that, all that remains is to agree on plans and monitor their implementation [4].

Let us take a closer look at the planning and management of logistics operations using the example of warehouses. The hierarchy of the sequence of actions for effective planning of warehouse processes can be represented in the form of figure 3.



Figure 3 - Sequence of actions for effective planning of warehouse processes

It is not important that, when assessing the level of activity of workers in the warehouse, it is necessary to streamline the decision-making stages: operational (decisions are made instantly), short-term (day / shift), medium-term (week) and long-term (approximate planning period - a month).

A feature of planning the logistics operations of warehouses is that the primacy belongs to the internal, initial aspects of their work [5]. These are the area, technical inventory and technological solutions taken at the warehouse. These factors project the movement of commodity flow, referring to the speed of commodity turnover, product quality and the preservation of its properties, economy during storage and movement of products. It is appropriate to consider in detail the principles, adhering to which the planning of warehouse logistics shows high performance indicators (figure 4).

Parallelism	It involves the simultaneous execution of several stages of work, thereby increasing the effectiveness
Compliance	•Each element taking part in a logical operation must be equal to the other in speed and performance
The rhythm of the workflow	• The actions of the warehouse staff must be repeated at regular intervals
Continuity	• Continuity of logistics operations leads to the highest quality work of warehouses
Interconnectedness	•By the time the end of this or that logistic operation is approaching the beginning, the next
Straightforwardness and precision	Moving around the warehouse implies the presence of direct and easy routes for moving material flows

Figure 4 - Principles of planning logistics operations

Based on the above principles, the receipt of goods, their shipment and packaging, as the main warehouse operations (excluding the inventory of warehouse premises), are interconnected in a single chain with non-stop operation, because, despite the number of separate stages of planning logistics operations, they are all synchronistic in the process work [6].

Conclusion

This paper discusses the main models of the logistics process. The mechanisms and principles of logistics operations have been reproduced. Now, there are many different and effective models. Each company or organization chooses the best, necessary, and effective method from these options.

However, now, advanced enterprises have traditional functional areas of logistics: procurement and inventory management, transportation, production planning, warehousing, sales, etc. integrated based on a common software and information platform and form the basis of the corporate information system. Information technology is a key resource for any integration. Thus, the introduction of logistics management methods into business practice allows enterprises to significantly reduce inventories, accelerate the turnover of working capital, reduce product costs and logistics costs, and ensure customer satisfaction in product quality and related services.

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