

CONSTRUCTION AND OPERATION OF INFORMATION SYSTEMS AS THE GOAL OF INFORMATION LOGISTICS

Vinnitsia National Technical University

Анотація

Це дослідження розглядає ключову роль інформаційної логістики у сучасному бізнесі. З розширенням економічної активності та зростаючою складністю управління виробництвом, значення ефективних інформаційних систем стає надзвичайно важливим.

Ключові слова: інформаційна логістика, господарська діяльність, управління виробництвом, інформаційні системи, потік даних, прийняття рішень, масштабованість, розподіл.

Abstract

This research discusses the crucial role of information logistics in contemporary business operations. With the expansion of economic activities and the growing complexity of production management, efficient information systems have become essential.

Keywords: information logistics, economic activities, production management, information systems, data flow, decision-making, scalability, distribution.

Introduction

In today's fast-paced business landscape, effective management of information is essential for success. This is particularly true in logistics, where the construction and operation of information systems play a crucial role in streamlining operations and improving decision-making.

This research explores the importance of information logistics in modern businesses and examines how information systems (IS) are built and used in this context. By analyzing key principles and practices, we aim to highlight the significant impact of information logistics on improving operational efficiency and enabling better decision-making.

Through this research, we aim to provide a practical understanding of the role of information systems in the transformation of supply chain management and organizational processes. Ultimately, our goal is to offer actionable guidance for companies seeking to harness the power of information logistics for sustainable growth and competitive advantage.

Research Results

The significant expansion of economic activities at the present stage, as well as the growing need to strengthen all types of relationships in the processes of managing material and financial flows, have led to fundamental requirements for new forms and methods associated with increasing the efficiency of production management. In this context, a particularly important role is played by the scientific discipline of logistics, the forms and methods of which most fully meet the tasks of deep and comprehensive integration of production and economic activity, as well as the search for optimal management solutions at its various stages, and production management levels.

The basis of the management process is the processing of information circulating in logistics systems. One of the most important conditions for the successful operation of production as a whole is the existence of an information system that would allow for the integration of all activities and their management based on the principles of unity. Information logistics organizes the flow of data, dealing with the creation and management of information systems that technically and programmatically facilitate the transmission and processing of logistical information.

The goal of information logistics is the construction and operation of information systems that ensure the availability of the following:

- necessary information;
- in the right place,

- at the right time;
- with the necessary content (for decision-makers);
- with minimal costs.

The organization of relationships within information systems of logistics may be significantly different from the organization of traditional information systems. This is because in logistics, information systems must ensure comprehensive integration of all elements of material flow management, their operational and reliable interaction. The definition of a logistical information system can be formulated as follows: a logistical information system is a flexible structure consisting of personnel, production facilities, computing equipment, necessary directories, computer programs, various interfaces, and procedures (technologies) united by interconnected information used in organizational management for planning, control, analysis, and regulation of the logistics system.

Information logistics systems must meet the following requirements: scalability, distribution, modularity, openness.

Scalability – is the system’s ability to support both individual users and multiple users.

Distribution – is the system’s ability to provide joint processing of documents by several territorially dispersed departments of the enterprise or by several remote workplaces.

Openness – is the automation system integrated into other information systems, it has open interfaces for developing new applications and integration with other systems.

Modularity – is the system’s ability to provide users with the opportunity to add and select system functions based on the specificity and complexity of the enterprise’s activities, i.e., the automation system is flexible and consists of separate modules integrated with each other (sales, warehouse, procurement, production, personnel, finance, transport).

The prospects for the application of information systems in logistics are quite significant, since the enterprise as a system by definition needs the interconnection between its parts to form a complex integrated whole. Therefore, a modern logistician must know and be able to use advanced information technologies in everyday work. The rapid development and widespread use of computer technology determine the requirements for the training of a modern logistician, who, through the implementation and use of information systems, must be able to analyze complex logistics processes at the enterprise.

Conclusion

In conclusion, information logistics plays an important role in modern business operations, facilitating streamlined processes and informed decision-making. By investing in robust information systems, businesses can optimize their supply chains, improve efficiency, and stay competitive in dynamic markets. Looking ahead, future advancements in technology will only enhance the transformative potential of information logistics, making it essential for organizations to prioritize investments in this area to ensure long-term success.

REFERENCES

1. Information Systems in Logistics: Tutorial / Yatsenko R.M., Nikolaev I.V. – Kharkiv: Publishing House of HNEU, 2012. P. 232.
2. Krykavskiy Ye.V., Chornopysska N.V. Logistic Systems: Tutorial. – Lviv: Publishing House of the National University “Lviv Polytechnic”, 2009. P. 264.
3. Lotysh O. Management of Logistic Costs at the Enterprise / O. Lotysh // Economic Analysis. 2008. No. 2. P. 240-243.
4. StudLancer. Логістика. URL : <https://stud.com.ua/14244/logistika/logistika> (дата звернення: 07.03.2024)
5. Wikipedia. Enterprise Resource Planning. URL : https://en.wikipedia.org/wiki/Enterprise_resource_planning (дата звернення: 08.03.2024)

Слободян Христина Олександрівна – студентка групи 1Л-22б, факультет менеджменту та інформаційної безпеки, Вінницький національний технічний університет, м. Вінниця, e-mail : kristinkaslobodan@gmail.com

Науковий керівник: Слободянюк Алла Анатоліївна – старший викладач кафедри іноземних мов, Вінницький національний технічний університет, м.Вінниця, e-mail: a.allavin@gmail.com

Slobodian Khrystyna O. – student, Faculty of Management and Information Security, Vinnytsia National Technical University, Vinnytsia, e-mail: kristinkaslobodan@gmail.com

Scientific Supervisor: Slobodianiuk Alla A. – Senior Lecturer of the Foreign Languages Department, Vinnytsia National Technical University, Vinnytsia, e-mail: a.allavin@gmail.com

GOV.UA. Інформаційні матеріали щодо стану інноваційної діяльності. URL :
<https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=69b9a9bf-5fbc-4035-8c0f-ac26b853c0eb&title=InformatsiiniMaterialiSchodoStanuInnovatsiinoiDiialnosti&isSpecial> (дата звернення: 06.03.2024)