

Research Article

Open Access

Determine the Modern Requirements for Architectural Design, depending on the Logistic Center

Safwan Al Salaimeh

Professor of Software Engineering Department, Aqaba University of Technology, Aqaba, Jordan

ABSTRACT

Introduction: Logistics depends on a set of features that are related to the nature of its work, whether it is at the level of a country, an establishment, or a small business environment, and the most important of these features: a study of the proximity of important places, which contribute to providing resources to the company, or the state. Identify potential means of communication and transportation that can be used to communicate with other parties, or to obtain appropriate resources.

Materials and Methods: When studying the design and the mechanism for forming the architectural environment of the logistic centers associated with the process of developing types of food supplies taking into account modern considerations of the market economy, then the scientific and theoretical approaches, methodologies and practical recommendations necessary for this matter must be studied such as : analysis of scientific, normative, methodological and design studies; Conducting a full study of the mechanism of work of the agricultural logistics centers Modeling agricultural projects, taking into consideration innovative techniques.

Results: This research was provided an architectural design based on the use of a logistic center. This is to represent the logistics center itself in global practice, which proposes to provide a local business-oriented logistics center with its own guiding method.

*Corresponding author

Safwan Al Salaimeh, Professor of Software Engineering Department, Aqaba University of Technology, Aqaba, Jordan.

Received: July 05, 2024; Accepted: July 08, 2024; Published: July 20, 2024

Keywords: Guiding Method, Economy, Architecture, Mechanism, Logistic, Global

Introduction

Productive companies direct all their capabilities to designing and developing computer networks within the company to keep pace with technology to control accounting and control processes for expenses, and by using computer information and networks systems, some expenses can be recovered within a period of approximately three or four months.

Therefore, the problem of designing computerized information systems for control and control on the basis of accounting concepts plays an important role in all economic activities.

And in order to be able to build accounting information systems that can be used in solving practical and economic issues, you need the following stages:

- Data and information necessary for the uses of accounting information systems.
- Designing a mathematical model that enables the use of accounting information systems.
- Building a simulation and demonstration system to conduct the necessary applications and reach the desired results.
- User interfaces.

The use of information technology is considered to be very effective in the implementation of some operations within the institutions, including agricultural ones, by making some assessments of the effectiveness of information technology. The cost-effectiveness of implementing IT is the ratio of profits to the total costs of the enterprise.

Logistics depends on a set of features that are related to the nature of its work, whether it is at the level of a country, an establishment, or a small business environment, and the most important of these features: a study of the proximity of important places, which contribute to providing resources to the company, or the state. Identify potential means of communication and transportation that can be used to communicate with other parties, or to obtain appropriate resources. Contributes to the preparation of a study on the economic ability to implement a task, or work. Participates in developing possible ways to obtain information.

Administrative logistics is the new type of logistics, which is widely used in all sectors of business and service, as companies and institutions in these sectors are interested in providing a set of logistics that ensure the proper application of their work, which helps them to achieve appropriate profit in the labor market that exists in it. Administrative logistics depends on the application of management assistance in following up the internal procedures in

the establishment, then on following up all matters related to the nature of its work, from clients, sales representatives, suppliers, and others. Therefore, administrative logistics contributed to the growth of many companies that relied on a set of appropriate marketing and professional policies In managing her work.

Scientific, theoretical and methodological approaches and practical recommendations on the design, the mechanism for the formation and design of the architectural environment of logistics centers related to the development of new types of food supply taking into account the requirements of the modern market economy are considered.

Relevance

Industrial logistics centers are an integral part of the Jordanian economy as they play an important role in the country. Currently, architectural organization and optimal planning are considered one of the main factors in developing innovative agricultural centers that guarantee the sustainable development of the agricultural sector.

The Mission

- Study the architectural and planning organization of agricultural production and define its global and local role;
- Defining the main principles in the formation of the architectural and industrial environment for the institutions of industrial and agricultural logistics centers;
- Building a conceptual model for the architectural and planning organization of innovative agricultural logistics centers in Jordan.

Research Methods

Analysis of scientific, normative, methodological and design studies; Conducting a full study of the mechanism of work of the agricultural logistics centers Modeling agricultural projects, taking into consideration innovative techniques.

Object of Study

Foreign companies and agro-industrial logistics centers Jordan.

Subject of Research

Principles of architectural and planning organization of innovative agro-industrial enterprises and logistics centers.

Scientific Novelty

Recommendations on the development of the principles of architectural and planning organization of innovative agricultural logistics centers in Jordan and the design of modern agricultural facilities to increase social productivity and create additional jobs that satisfy the material and social needs of the population.

The importance of Logistical Information Systems

In recent times information systems have been widely used, and among these systems, logistical systems, as such systems are built for the purpose of arranging economic activities and providing support for economic decision-making and information service for a group of departments within the facility or organization.

The logistical systems include ideal subsystems, such as:

- Providing material and technical support
- Storage of raw materials
- Production and processing of goods
- Transferring products to warehouses
- Export and consumption of goods.

Such subsystems may sometimes be called logistic loops.

The possibility of raising the productive work depends on the reduction of production expenses to account for the effective processing of the information received on the status of the components of the managed project.

This approach allows looking at the problems of computerization of activities within the project, and it is known that the majority of commercial projects can be viewed as sequential operations of subsystems such as material procurement / material storage / transportation of materials within warehouses / material processing and manufacturing / final marketing of manufactured goods.

Then part of the commodity manufacturing processes that are difficult to compute are few in number.

In most cases, these operations are similar in study and implementation with material storage operations.

At the same time, the existing models for designing and implementing information systems are not intended for use in the design and implementation of logistical information systems. Therefore, the issue of formulating (developing) a set of models of design processes and performing the work of appropriate and stable systems according to the relationship to the project is a very important process.

The Problem of Designing Logistical Information Systems

It can be said that logistics is a system that contains the following functional areas:

- Procurement logistics
- Transportation logistics
- Warehousing logistics
- Production logistics
- Sales logistics and
- Information logistics

This development gives a basis for the aforementioned operations (purchasing of raw materials, manufacturing, and sales) as a single logistical link, and in which the following main nodes can appear:

Supply of raw materials, storage of materials, manufacture, distribution and dispatch of goods and consumption of finished goods.

The design of such systems needs to solve the organizational, technical, informational and other issues that fall within the framework of designing data processing systems that meet the user's need.

These logistical systems that are designed according to logistical methods must be taken into account as a single unit, and for this it is necessary, at the beginning of the design, to set the desired objectives and project work standards [1-3]

In order to solve the main logistical problem, there must be an effective and integrated company management system, and this system will be called the logistics system. Where several methods are used for this purpose, and one of these methods is the PERT (Program Evaluation Review Technique) method, which is concerned with the process of program evaluation and review of projects that are under construction, or goods under manufacture, and the analysis and coordination of related activities. This method has characteristics including:

1. That the project can be divided into a set of events (events) and into a group of activities (ACTIVITIES).
2. This method is characterized by the presence of a business network.
3. It exists in three estimated times to accomplish the various facts, namely:
 - _ Optimistic time, which is an estimate of the minimum period of time necessary to carry out various activities.
 - Pessimistic time, which is an estimate of the longest possible period of time that related activities take.
 - The very likely time, which is the regular estimate of the length of time required for various activities.
4. When designing a business network, the time probabilities referred to are taken into consideration when estimating the average time required to carry out the activities necessary for the project.
5. In it, the early start times, early completion, late start, late completion and extra time are calculated for the different events within the network.
6. This method is characterized by its contribution to the process of calculating the standard deviation of activity times within the network, and then calculating the average standard deviation at the time of project completion [4].

Scientific and Practical Significance of the Study

The results of the study can be used to study the architecture of agro-industrial logistics centers, as a methodological basis for the training of future architects, designers, urban planners for various purposes, as well as in the design of agricultural enterprises in the educational process.

In recent years, significant changes have occurred in the sphere of trade in some countries. In economic practice, new methods and technologies for the delivery of goods began to be used.

Thus, in countries with market economies, the idea of coordinating supply and production distribution systems related to the supply of materials and raw materials, production, storage and distribution of goods produced in the 1930s was transferred to specific areas of scientific research and economic practice, i.e. in logistics [1-3].

For this reason, many Western countries put logistics at the center of economic efficiency in managing material flows. Initially, it was formed as a new type of theory of sales management, and then management of the movement of inventory in production [5].

Given the concept of a logistics center, this is an area in which a corporation, company and factory are engaged in the delivery of products from one point to another. This includes processes such as transportation, storage, packaging and product safety [4,6,7].

In the field of architecture and urban planning, it is of great interest to study the pressing problems of Jordan agro-industrial logistics centers: the imperfection of normative documentation on design and construction, rational planning, and the placement of new-type agro-industrial towns; capital repairs of settlements; compositional and aesthetic interaction of agro-industrial logistics centers in a residential, social and natural environment; energy efficiency, design of innovative facilities (farms, greenhouses).

The creation of innovative agricultural and logistics centers in the country's socio-economic system will allow Jordan to raise a new technological level in agriculture, create additional jobs, increase the volume of social goods and satisfy the material and

social needs of the population. Developed agro-industrial logistics centers are a factor of state security of the country, providing the population and industry with the necessary products.

“The agricultural sector should become a new economic driver. Jordan agribusiness centers have a promising future. In many cases, we can be one of the largest agricultural producers in the world. Especially for food.

The problem of ensuring high quality and availability of food in the main city of the country was put on the agenda of the year when Astana became the capital. King Abdulla II at that time set the task for the government, the Ministry of Agriculture, to create the “Jordan food belt”. In his Address to the people, the head of state outlined the strategic objectives for ensuring the country's food security. In this regard, the Ministry of Agriculture has developed the first program to create a food belt around Jordan.

Today, in order to provide the population of the capital with domestic food, the task is to create the necessary production in the food belt zone, to create conditions for the regular delivery of products from other regions of the republic and the development of the Jordan trade infrastructure.

The construction of high-tech industries and warehouses for the agricultural sector, the development of a distribution system for raw materials, trade and transport, food and almost all of the above are key tasks:

- growth in the production and processing of agricultural products and an increase in the capacity of modern storage facilities;
- ensuring food security of the state;
- the growth of rural incomes and the improvement of the quality of life of agricultural producers;
- an increase in rural employment, the maintenance of new high-tech jobs;
- Organization of a competitive agro-industrial sector through the introduction of international standards and advanced technologies, consistent with the growing competitiveness of agricultural and food products produced in the domestic and foreign markets;
- an increase in the supply of agricultural products and products by domestic market for its processing and meeting the demand for food all year round;
- increased exports and opportunities for road, rail and air transit to an effective geopolitical location and accessibility;

It should also be noted that environmental objects have a more complex structure than other types of design. Internal and external space interact. The living environment is organized with the help of various object-spatial structures and can carry out all kinds of aesthetic relations, which in some way make up the features of a person's attitude to the environment.

Architectural design is based on three components: strength, profit and beauty. There are many architects in the world who have built many amazing buildings that surprise us.

Modernity seeks to master the art of designing not only practical, but also externally attractive objects. Each time they have their originality and style. Therefore, architectural design must be different and meet these requirements.

To create an aesthetically complete environment, it is necessary to diversify not only individual structures, but also their interaction with each other and with infrastructure, as well as combine the architectural and design ensemble with other elements of the city and the natural environment [8-11].

You cannot surprise anyone at the moment, because everything has already been prepared and done for us. I think that we can only distinguish ourselves with our style and innovation and novelty. That is why everyone is trying to be different. One solution to this is to create a model design.

Architects began to implement more ambitious ideas that have not yet been implemented. Looking at all these projects of modern buildings: they are beautiful, modern, original and unique, I think that something is missing in them - the boldness of architectural ideas. That is why this issue requires the use of a new design in modern logistics centers [12-20].

Scientific-theoretical and methodological approaches and practical recommendations on the design, the mechanism for the formation and design of the architectural environment of logistics centers related to the development of new types of food supply taking into account the requirements of a modern market economy are considered.

The Results

In this paper, an architectural design based on the use of a logistic center oriented to entrepreneurial work with a guiding method of its own was presented.

Conclusion

The scientific, theoretical and methodological approaches and practical recommendations related to this design, and the mechanism for shaping and designing the architectural environment of logistic centers related to developing new types of food supplies have been studied taking into account the requirements of the modern market economy. Where this research presented an architectural design based on the logistic center. Representing the logistics center itself in global activities, and providing a local business-oriented logistics center with its own guiding method [21-27].

References

1. Bandy H (2011) Modeling Trading System Performance. Blue Owl Press https://books.google.co.in/books/about/Modeling_Trading_System_Performance.html?id=rKI6YgEACAAJ&redir_esc=y.
2. Houmin Y, George Y, Qing Z (2006) Stochastic Processes, Optimization, and Control Theory: Applications in Financial Engineering, Queuing Networks, and Manufacturing Systems. Springer <https://link.springer.com/book/10.1007/0-387-33815-2>.
3. Guernsey GY (2003) Process Dynamics: Modeling, Analysis, and Simulation. Prentice Hall.
4. Grishin VV (2010) Management of innovation in the modernization of the national economy: textbook. allowance.
5. Bretscher O (2008) Linear Algebra with Applications. Prentice Hall https://people.math.harvard.edu/~knill/teaching/math19b_2011/handouts/bretscher.pdf.
6. Acuña ST, Juristo N (2005) Software processing modeling. Springer <https://link.springer.com/book/10.1007/b104986>.
7. Grishin VV (2009) Innovative administration at the enterprise: goals and methods // Problems of management theory and practice.
8. Grishin VV, Grishina VG (2009) We develop a business strategy of the company: practical. allowance.
9. Salameh SA, Batiha K, (2006) Business Process Simulation with Algebra Event Regular Expression. Information Technology Journal 5: 583-589.
10. Besoul KA, Salameh SA (2007) The Structure of logistics organizational technological system. Journal information society 4.
11. Salameh SA (2017) A new model for information logistics system Architecture. Journal of Theoretical and Applied Information Technology 28.
12. Mancini T, Massini A, Tronci E (2017) Parallelization of Cycle-Based Logic Simulation Parallel Processing Letters 27: 1750003.
13. Akuna ST (2005) Software processing modeling. Springer <https://www.amazon.com/Software-Process-Modeling-International-Engineering/dp/0387242619>.
14. Hossein Bidgoli (2009) Modern Information Systems for Managers. Academic Press.
15. Bedritsky AV (2008) Information war: concepts and their implementation in the USA. M: RISI 187.
16. Baudrillard J (1970) Consumer Society. His myths and structures / Transl. with fr. E.A. Samara. M: Republic; The Cultural Revolution https://monoskop.org/images/d/de/Baudrillard_Jean_The_consumer_society_myths_and_structures_1970.pdf.
17. (2015) Briefing by Russian Foreign Ministry Spokesman MV Zakharova. Moscow, October 29, 2015. The Ministry of Foreign Affairs of the Russian Federation https://www.mid.ru/en/foreign_policy/news/1517908/.
18. Guy Debord (2011) Performance Society. M. Ravager https://monoskop.org/images/e/e4/Debord_Guy_Society_of_the_Spectacle_1970.pdf.
19. Grachev MN (2004) Political communication: theoretical concepts, models, development vectors: Monograph. M.: Prometheus 328.
20. (2021) Governor of Kunduz: Doctors Without Borders covered the Taliban. <https://www.doctorswithoutborders.org/latest/will-we-talk-taliban>.
21. Lukanina MV (2006) Media text and convergence. Political linguistics 208.
22. Moth A (2008) Sociodynamics of culture. M: LCI.
23. Fedorov VA (2006) Methodological principles of forecasting and management of scientific and technological innovations: Monograph. M: Publishing House of RUDN.
24. Higgins E (2021) Bellingcat, for and by Citizen Investigative Journalists. <https://www.bellingcat.com/book/>.
25. Forster TA (2022) Walter Lippmann and Public Opinion. American Journalism 40: 51-79.
26. Safwan Al Salameh (2017) Informational and technical support for the decision making in enterprise management. Journal of Economics Sciences: Theory and Practice 72: 32-42.
27. Safwan Al Salameh (2017) The Optimization Problems of Informational Servicing Logistics Systems by Using Queuing Theory. International Journal of Scientific Research in Computer Science, Engineering and Information Technology 2: 273-277.

Copyright: ©2024 Safwan Al Salameh. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.