

Modern approaches to enterprise logistics management

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Logistics is the process of getting the goods or services from the manufacturer, the mines, or even a farm to arrive safely and securely to the receiver's warehouse or front door or store. The actual logistics management system starts before the material is prepared for shipping, and the shipping freight rates will depend on the creative manipulation of the delivery schedules that are suitable for the shipper and the receiver, as well as the best modes of transportation and the best routes for delivery. With the increase in population around the world, the demand for the distribution of a mass amount of goods and merchandise challenged corporations and organizations to look at ways to be more efficient and cost effective.

Supply chain digitalization is at the top of the list in using logistics to build customer satisfaction and save companies money. This concept is based on the idea of using the latest tech programs to mesh with other physical and digital technologies to redesign their logistic formula.

It is not enough in this modern era to add more hardware and software to the existing system. There has to be a complete redesign of the approach to the logistics question to be prepared for the future.

The Internet of things is the new terminology for the transfer of data from one source to another without the use of human input. It helps companies manage the warehouse, keep track of the inventory, preview delivery routes, and reduce dead mileage. This becomes a critical element of reducing shipping freight rates and is a direct benefit to the customer.

There are many ways to implement AI into the supply chain and into the logistics sector. It improves logistics processes and reduces costs. It

Секція 1. Стратегічне управління конкурентоспроможністю та інноваційною діяльністю

also plays a major role in automating routine tasks to improve the speed and accuracy in numerous back office applications.

Artificial Intelligence

The logistic management system must redesign their practices to stay competitive. The use of AI (Artificial Intelligence) has many uses in the modern approach. This thinking includes the use of gesture recognition instead of a keyboard and mouse, and autonomous vehicles (self-driving cars). All of this is designed to eliminate human error in locating shipments and moving the cargo from one place to another.

Artificial intelligence technology changes many warehousing operations, e.g. data collection, inventory processes, and more. As a result, companies can increase revenues. AI in warehouse automation is being used for predicting the demand for particular products. Based on this data, orders can be modified and the in-demand items can be delivered to the local warehouse. This predicting of demand, and planning of logistics well in advance, means lower transportation costs.

Another AI use case in logistics is smart roads. Examples of this technology include highways with solar panels powered LED lights. Solar panels assist in producing the electricity while LED lights are used to alert drivers about the road conditions. Additionally, solar panels prevent the road from being slippery in winter. Another application is fiber optic sensors that can sense traffic volumes and patterns and alert drivers to road conditions ahead. They can also sense when vehicles leave the road or are involved in accidents, and alert the appropriate emergency services and authorities. This makes for faster deliveries and safer road conditions.

Circular Supply Chain

The traditional logistics connected to moving goods was the linear track from the raw material to the manufacturing plant to the consumer. A more modern approach will be to use previously used products as raw materials. This system is known a reverse logistics, and it helps companies

reduce administrative and transportation costs, create better customer loyalty, and conserve resources.

Wearable Devices

Another modern trend in logistics is the use of wearable devices by employees to take inventory and maintain data in real time. Incorporated with the use of the Cloud technology, this allows companies to keep on top of the stock, track the shipments that keep the goods moving to the right locations, and stay in touch with product demand.

The devices increase productivity within warehouses and around the business-strategy table. They offer three main advantages to today's supply-chain managers: they minimize manual labor, provide comprehensive data, and offer real-time feedback. Companies with logistics operations should evaluate whether these use cases can add value to their business.

With the advent of technology and the streamlining of logistic systems, nearly half the work in this area includes complex analytics, planning, and procurement. As businesses go global, this innovation of technology will allow knowledge to work in the supply chain to also go global. Companies headquartered in one part of the world will be able to handle logistics and procurement in a completely different part of the world.

Literature

1. Ballou R. H. Revenue Estimation for Logistics Customer Service Offerings. *The International Journal of Logistics Management*. 2006. Vol. 17. No. 1. P. 21–37.
2. Ballou R. H., Gilbert St., Mukerjee A. New Managerial Challenges from Supply Chain Opportunities. *Industrial Marketing Management*. 2000. Vol. 29. No. 1. P. 7–18.
3. Fawcett St. E., Magnan G. M. The Rhetoric and Reality of Supply Chain Integration. *International Journal of Physical Distribution & Logistics Management*. 2002. Vol. 32. No. 5. P. 339–361.

