ЦЕНТР СОЦИАЛЬНО-ЭКОНОМИЧЕСКИХ ИССЛЕДОВАНИЙ – ФИЛИАЛ ИНСТИТУТА ЭКОНОМИКИ КОМИТЕТА НАУКИ МНВО РК В Г.АСТАНА ЕВРАЗИЙСКИЙ НАЦИОНАЛЬНЫЙ УНИВЕРСИТЕТ ИМ..Л.Н.ГУМИЛЕВА

ӘЛЕУМЕТТІК-ЭКОНОМИКАЛЫҚ ЗЕРТТЕУЛЕР ОРТАЛЫҒЫ-ҚР ҒЖБМ ҒЫЛЫМ КОМИТЕТІ ЭКОНОМИКА ИНСТИТУТЫНЫҢ АСТАНА ҚАЛАСЫНДАҒЫ ФИЛИАЛЫ Л.Н. ГУМИЛЕВ АТЫНДАҒЫ ЕУРАЗИЯ ҰЛТТЫҚ УНИВЕРСИТЕТІ

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of the international scientific- practical conference
«THE DEVELOPMENT OF DIGITALIZATION AND THE FORMATION OF THE INSTITUTIONAL ENVIRONMENT OF E-COMMERCE: TRENDS, PROBLEMS AND SOLUTIONS»
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В сборник включены научные доклады отечественных и зарубежных экономистов-исследователей, вузовских работников, специалистов-практиков, докторантов и магистрантов, представленные на международнойой научно-практической конференции «Развитие цифровизации и формирование институциональной среды электронной коммерции: тренды, проблемы и пути решения». Конференция проведена в рамках реализации научных исследований по проекту грантового финансирования МНВО РК «Формирование институциональной среды рынка электронной коммерции в Казахстане, ее оценка и разработка механизма развития» (ИРН: AP14871419).

Материалы и рекомендации конференции предназначены для практического использования субъектами бизнеса, государственными органами, научными работниками, преподавателями и обучающимися высших учебных заведений.

Жинаққа «Цифрландыруды дамыту және электрондық коммерцияның институционалдық ортасын қалыптастыру: трендтер, мәселелері және шешу жолдары» атты халықаралық ғылыми-тәжірибелік конференциясына ұсынылған отандық және шет елдік экономист-зерттеушілердің, жоғарғы оқу орындары қызметкерлерінің, маман-практиктердің, докторанттардың және магистранттардың ғылыми баяндамалары мен ұсыныстары енгізілген. Конференция ҚР ҒЖБМ «Қазақстандағы электрондық коммерция нарығының институционалдық ортасын қалыптастыру, оны бағалау және дамыту тетігін әзірлеу» гранттық қаржыландыру жобасы бойынша (ЖТН: AP14871419) ғылыми зерттеулерді жүзеге асыру шеңберінде өткізілді.

Конференцияның материалдары мен ұсыныстары бизнес субъектілерінің, мемлекеттік органдардың, ғылыми қызметкерлердің, жоғары оқу орындарының оқытушылары мен студенттерінің тәжірибелік пайдалануына арналған.

The collection includes scientific reports by domestic and foreign economists-researchers, university employees, practitioners, PhD students and undergraduates, presented at the international scientific and practical conference «Development of digitalization and the formation of an institutional environment for e-commerce: trends, problems and solutions».

The conference was held as part of the implementation of scientific research under the grant funding project of the MSHE RK «Formation of the institutional environment of the e-commerce market in Kazakhstan, its assessment and development of a development mechanism» (IRN: AP14871419).

INTEGRATION OF DIGITAL TECHNOLOGIES INTO THE LOGISTICS INFRASTRUCTURE OF KAZAKHSTAN: CURRENT TRENDS AND DEVELOPMENT STRATEGIES

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The transition to digital manufacturing and online commerce requires a new look at logistics and supply chain management as tools for managing value chains and determining the focus of changes that should occur in them under the influence of the transition to cyber production [1].

If we take into account the changes already caused by IT technologies, changes in the structure of companies, sectors of the economy, a set of key competencies, business models and business strategies, then electronic digital control center in these realities acquires strategic importance for combining business processes into a single infrastructure of the digital economy of our country.

In general, the literature review allowed us to identify the main digital technologies that are actively used in logistics:

Internet of Things (IoT) - allows you to connect physical objects to the Internet and exchange data between them. In logistics, IoT is used to track and monitor cargo, vehicles, and inventory [2]. With the help of sensors and IoT devices, it is possible to obtain information about the location of goods, transportation conditions (temperature, humidity), as well as the condition of vehicles;

Data analysis allows you to identify patterns, trends and patterns in large amounts of information. In logistics, data analytics is used to predict demand, optimize delivery routes, manage inventory, and optimize warehousing processes;

Blockchain is a distributed database in which information is stored in the form of blocks connected by a chain. In logistics, blockchain is used to ensure transparency and reliability of the supply chain. It allows you to track every stage of the movement of goods from the manufacturer to the consumer and guarantee the authenticity of the goods [3].

Artificial intelligence in logistics is used to automate processes, make decisions and optimize operations. Using machine learning algorithms and neural networks, AI can analyze large amounts of data, determine optimal delivery routes, predict time delays, and solve other tasks.

Robots and automated systems are used in logistics to perform various tasks such as sorting goods in a warehouse, packing and loading cargo. This allows you to increase productivity, reduce labor costs and improve the accuracy of operations.

These technologies bring significant changes to logistics processes, increasing the efficiency and competitiveness of companies in a modern business environment.

In recent years, the introduction of digital technologies into the logistics industry in Kazakhstan has become increasingly active, which makes it possible to optimize logistics processes, improve cargo traceability and provide a higher level of customer service.

Kazakhstan is a key transit hub on the route from China to Europe and back. Cargo transportation through the territory of Kazakhstan is of strategic importance for trade and transport corridors.
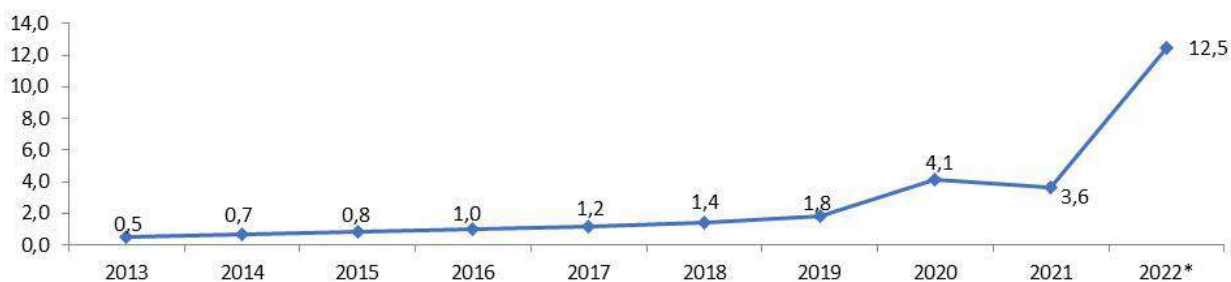
Note - Source: Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan https://stat.gov.kz/ [4].

Figure - 1 Share of e-commerce in total retail trade in 2013-2022

Logistics platforms can be adapted to the needs of e-commerce and domestic delivery tasks. Since they work on a cloud model, there is no need to expand the IT infrastructure and staff of IT specialists, buy expensive specialized solutions and engage in their implementation and integration with corporate systems. It is unlikely to be possible to ensure high speed of delivery without the introduction of digital tools.

Cloud-based collaboration solutions covering the entire supply chain will become one of the drivers of the global digital logistics market, which will grow by 8% annually until 2025 [5]. Similar trends are typical for Kazakhstan: with the development of e-commerce, the market will move to digital logistics models, and there is no alternative to this path.

The following strategies and recommendations are proposed for the successful integration of digital technologies into the logistics infrastructure of Kazakhstan:

The introduction of modern digital technologies requires appropriate infrastructure, including high-speed Internet connections, cloud data storage and information security systems. Therefore, it is necessary to continue the development of digital infrastructure throughout the country.

Training and retraining of personnel in the field of digital technologies are key factors for successful integration. It is necessary to develop educational programs and courses for logisticians, operators and other specialists so that they can use new technologies in their work.

To ensure the effective operation of digital technologies, it is necessary to establish standards and protocols for interaction between various systems and platforms. This will avoid compatibility problems and ensure effective integration of various components of the logistics infrastructure.

The support of innovations and the development of startups in the field of digital technologies contribute to the development of the logistics sector. It is necessary to create a favorable ecosystem for innovative companies by providing access to financing, infrastructure and expert support.

Government organizations, academic institutions and private companies should actively cooperate to develop and implement digital solutions in the logistics sector. Partnerships between different stakeholders will help pool resources and expertise to achieve common goals.

The development of digital technologies should be focused on improving customer service. It is necessary to create convenient online platforms and applications for ordering and tracking goods, as well as to ensure the availability of information about the status of delivery and services.

Since digital technologies can be vulnerable to cyber attacks, it is necessary to ensure data protection and information security. The development and implementation of appropriate information security measures should be a priority when integrating digital technologies into the logistics infrastructure.

The application of these strategies and recommendations will help to make the integration of digital technologies into the logistics infrastructure of Kazakhstan more efficient and successful, contributing to the development of a modern and competitive logistics system.

Overall, the logistics infrastructure in Kazakhstan is gradually developing and improving, but there is potential for further improvements in efficiency and competitiveness, especially through the integration of digital technologies and improved coordination between different modes of transport.

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