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THE USE OF SMART SYSTEMS IN THE ZANGEZUR TRANSPORT CORRIDOR  
TO INCREASE THE TRANSIT POTENTIAL OF AZERBAIJAN

ИСПОЛЬЗОВАНИЕ ИНТЕЛЛЕКТУАЛЬНЫХ СИСТЕМ В ЗАНГЕЗУРСКОМ  
ТРАНСПОРТНОМ КОРИДОРЕ ДЛЯ УВЕЛИЧЕНИЯ ТРАНЗИТНОГО  
ПОТЕНЦИАЛА АЗЕРБАЙДЖАНА

ӘЗІРБАЙЖАННЫҢ ТРАНЗИТТІК ӘЛЕУЕТІН АРТТЫРУ ҮШІН ЗАНГЕЗУР  
КӨЛІК ДӘЛІЗІНДЕ ИНТЕЛЛЕКТУАЛДЫ ЖҮЙЕЛЕРДІ ПАЙДАЛАНУ

**Abstract.** This article discusses the importance of the need to digitalize the processes of logistics systems in international transport corridors on the example of the future Zangezur project.

The main goal of any transport corridor is to provide communication (both economic and political) between states and increase the share of supply turnover (export and import). Today, it is the digitalization of traffic flows that seems to be one of the most important and priority tasks in the framework of the development and creation of new routes for international corridors.

Considering that the Zangezur corridor has a huge potential to become the key to the One Belt One Road project, the introduction of smart logistics systems is more relevant than ever.

**Keywords:** International transport corridors, smart logistics systems, digitalization, emerging technologies.

**Аннотация.** В данной статье рассматривается важность необходимости цифровизации процессов логистических систем в международных транспортных коридорах на примере будущего Зангезурского проекта.

Основной целью любого транспортного коридора является обеспечение связи (как экономической, так и политической) между государствами и увеличение доли товарооборота (экспорта и импорта). Сегодня именно цифровизация транспортных потоков представляется одной из важнейших и приоритетных задач в рамках разработки и создания новых маршрутов для международных коридоров.

Учитывая, что Зангезурский коридор обладает огромным потенциалом стать ключом к проекту "Один пояс - один путь", внедрение интеллектуальных логистических систем актуально как никогда.

**Ключевые слова:** Международные транспортные коридоры, интеллектуальные логистические системы, цифровизация, новые технологии.

**Аңдатпа.** Бұл мақалада Болашақ Зангезур жобасының мысалында халықаралық көлік дәліздеріндегі логистикалық жүйелердің процестерін цифрландыру қажеттілігінің маңыздылығы қарастырылады.

Кез келген көлік дәлізінің негізгі мақсаты мемлекеттер арасындағы байланысты (экономикалық және саяси) қамтамасыз ету және тауар айналымының (экспорт пен импорт) үлесін ұлғайту болып табылады. Бүгінгі таңда көлік ағындарын цифрландыру халықаралық дәліздер үшін жаңа маршруттарды әзірлеу және құру шеңберіндегі маңызды және басым міндеттердің бірі болып табылады.

Зангезур дәлізінің "бір белдеу-бір жол" жобасының кілті болуға зор әлеуеті бар екенін ескере отырып, зияткерлік логистикалық жүйелерді енгізу бұрынғыдан да өзекті.

**Түйін сөздер:** Халықаралық көлік дәліздері, зияткерлік логистикалық жүйелер, цифрландыру, жаңа технологиялар.

In the context of the dynamic development of the world economy, the transport sector has rapidly developed emerging as an important infrastructure and become the most relevant topic of the economy as a whole. The transport sector, which is one of the most dynamic structures in the globalized world, is perceived as a key factor in terms of protecting independence and plays an important role in the development of integration processes. The development of the transport system is of great importance to the Republic of Azerbaijan. Due to its favorable geostrategic location at the junction of Europe and Asia, the state has opportunities for the development of all types of transport communications, as well as becoming a kind of hub. It should be noted that in terms of economic indicators, the use of the territory of Azerbaijan in trade relations between the EU and China amounted to €530.6 billion in 2018, €561.2 billion in 2019 and €586 billion in 2020, respectively. On the basis of statistical data, it can be said that trade relations between the West and the East are developing. This is facilitated by the fact that such international transport corridors as North-South and TRACECA pass through the territory of Azerbaijan.

The transport map of the world is rapidly changing. In that vein, one of the crucial points after the signing of the agreement on the Nagorno-Karabakh conflict was the unblocking of transport routes passing through the territory of previously occupied lands. Their liberation made it possible, first of all for Azerbaijan and neighboring countries, to open a new international route: the Zangezur corridor. In our opinion, despite the fact that the Zangezur corridor project where Azerbaijan is the initiator, is at the investment stage, it is of great importance both for the region and for Europe and Asia. The implementation of the Zangezur corridor will make it possible to create a new route through the Caspian Sea, which will make it possible to establish the fastest delivery of goods between Turkey and the countries of Central Asia using the territories of Azerbaijan as transit.

Such transport artery can become a rising star of the Turkic world. However, in order to unlock its potential, it is necessary to develop multilateral cooperation and provide the project with a "long-term foundation" [1].

Azerbaijan has begun construction of its section of the railway from Horadiz to Aghband and has already laid 23 out of 110.4 kilometers of railway.

According to the Center for Analysis of Economic Reforms and Communications of the Republic of Azerbaijan, the unblocking of transport communications between the main territory of Azerbaijan and the Nakhchivan Autonomous Republic will help the country increase exports by \$710 million, as well as boost the transit and logistics potential of the region, the implementation of which

will lead to the launch of new transport routes, boost Azerbaijan’s economic power and enhance regional cooperation and stability [2].



**Fig. 1** Map of the Zangezur corridor

While in the past the main requirement for the development of transport corridors was the construction of roads, railways, bridges and logistics centers that met international standards, now scientific and technological progress dictates its own rules. Thus, along with the quality of the roads, the issue of the digitalization of corridors using smart (or information) transport systems arises.

International practice shows that the digitalization of processes within the Eurasian Economic Union was recognized as one of the most significant projects for the development of post-Soviet integration a few years ago. The use of modern information technologies is also relevant in our region.

As current practice shows, the digitalization of traffic flows seems to be one of the most important and priority tasks within the framework of the EAEU. Azerbaijan is economically closely interconnected with the EAEU countries. Therefore, the process of creating a barrier-free trading system and economic security fully depends on digitalization.

Digitalization is a process that is aimed at integrating modern information, communication and management technologies and is designed for automated search and adoption for implementation of the most effective scenarios for managing the region's transport system.

The global goal is to create a system for real-time monitoring and managing of the transport system in order to improve the quality of transport services, reduce transport costs and improve the environment and safety [3].

A wide range of information technologies used in transport systems requires a high-speed digital information transfer, which necessitates the improvement of our region’s communication system. The transition of the countries of the Zangezur transport corridor to modern 5G technologies will have a great effect on the electronic information exchange between participants of the supply chain. Along with facilitating the process of monitoring transportation and making traffic flows transparent, such a connection can also increase cargo traffic by instantly responding to current

circumstances, emergencies and market changes. These technologies have already been applied in the international transport corridors of the European Union and brought significant results.

Such systems are capable of providing the shortest transcontinental links between Europe and Asia, so their integration will not only lead to an increase in transit traffic, but will also actively promote the development of all countries of the Eurasian continent.

It should be noted that the emergence of digital transport corridors in the Eurasian space can be considered one of the most promising areas of development in the region.

Thus, we would like to note that the introduction of such a system in the Zangezur corridor project will increase the export and transit potential of Azerbaijan, as well as make the country a part of future international transport projects.

### **References**

1. <https://www.aa.com.tr>
2. [wikipedia.org](https://wikipedia.org)
3. [revolution.allbest.ru](https://revolution.allbest.ru)

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