

promising, because it combines the advantages of different modes and strikes a good balance between cost and delivery quality.

3. The economic efficiency of logistics decisions can be assessed by comparing alternative delivery options, taking into account all cost components and the time factor.

4. Transport logistics in Ukraine is undergoing a deep transformation due to the war. The main challenges include the port blockade, increased pressure on land corridors, a driver shortage, and the need to modernize railway infrastructure.

5. Promising directions for development include process digitalization (implementing TMS, e CMR), expanding container shipping, and building modern logistics hubs – which is one of the priority research areas at the Department of Transport Technologies of KhNAHU.

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MILITARY LOGISTICS IN UKRAINE

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Today I would like to talk about military logistics in Ukraine, especially in the context of modern warfare.

Military logistics is the system that ensures an army can function effectively. It includes the transportation of soldiers, weapons, fuel, food, medical supplies, and equipment. Without strong logistics, even the most powerful army cannot operate successfully.

Since 2022, Ukraine has faced large-scale military challenges. One of the key factors in its defense has been the ability to organize and adapt its logistics system

quickly. Ukrainian logistics combines traditional military supply chains with modern technology and international support.

First, transportation plays a critical role. Ukraine uses railways, trucks, and sometimes civilian infrastructure to move supplies to the front lines. Railways are especially important because they allow large quantities of equipment and ammunition to be transported efficiently over long distances.

Second, flexibility is essential. Unlike older wars with stable front lines, modern warfare in Ukraine is dynamic. This means supply routes must constantly change to avoid attacks. Ukrainian forces often use decentralized logistics, where smaller units receive supplies independently rather than relying on one central system.

Third, international support is a major factor. Ukraine receives military aid from many countries. This includes weapons, vehicles, and medical equipment. Managing and distributing this aid requires coordination, planning, and trained specialists.

Another important aspect is technology. Ukraine actively uses drones, satellite communication, and digital systems to track supplies and improve coordination. This helps reduce delays and increases efficiency.

Finally, volunteers also play a unique role. Civilian volunteers help deliver equipment, repair vehicles, and support soldiers. This creates a strong connection between the army and society.

In conclusion, military logistics in Ukraine is a combination of traditional methods, modern technology, and strong international cooperation. Its flexibility and adaptability have become key factors in the country's ability to defend itself.

RESEARCH ON THE PATTERN OF PASSENGER TRAFFIC DISTRIBUTION ALONG TROLLEYBUS ROUTES IN THE CITY OF SUMY

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This article presents a comprehensive analysis of passenger traffic distribution along the trolleybus network in Sumy, a regional center in northeastern Ukraine with a population of approximately 275,000 residents. Drawing on municipal transportation studies, academic research, and route network modeling conducted using the VISUM