

potential for decentralized production of spare parts at the front, while creating new requirements for raw material supply chains.

Transport infrastructure operates as both enabler and target. Modern militaries require complex multi-modal systems integrating sea, land, air, and space domains. The control of strategic chokepoints—straits, canals, and railway hubs—becomes as important as controlling territory. Resilient logistics networks now feature redundancy, alternative routes, and dispersed storage to withstand attacks, making logistics planning a central component of military strategy rather than a support function.

The human dimension remains equally critical. Effective logistics requires specialized expertise in supply chain management, maintenance, and distribution under extreme conditions. The proficiency of logistics personnel directly influences operational readiness, with training and experience determining the ability to sustain forces in diverse environments from arctic to desert warfare.

Ultimately, military logistics has evolved from a tactical concern to a strategic imperative. It represents the crucial link between national economic power and combat effectiveness, determining not just initial military capability but long-term endurance. In contemporary conflict, victory frequently belongs not to the army that strikes first, but to the one that can sustain operations longest, making logistics the ultimate arbiter of military success.

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ANALYSIS OF THE MAIN CAUSES OF ROAD TRAFFIC ACCIDENTS AND WAYS TO PREVENT THEM

A. Zaporozhtsev, student

Voronova Ye.M., Associate professor

Kharkiv National Automobile and Highway University

Introduction Road traffic accidents represent a critical global public health and safety issue, causing approximately 1.35 million fatalities annually according to World Health Organization statistics. Understanding the fundamental causes of traffic accidents and developing effective prevention strategies remains crucial for reducing morbidity, mortality, and associated economic costs worldwide. This comprehensive analysis examines the primary factors contributing to road accidents and proposes evidence-based solutions to enhance road safety.

Human Factors: The Predominant Cause Human error constitutes the most significant contributor to traffic accidents, responsible for approximately 90% of all crashes. This category encompasses multiple dimensions of driver behavior and capability:

Distracted driving has emerged as a particularly concerning issue in the digital age. The proliferation of mobile devices has dramatically increased incidents of texting, phone calls, and smartphone use while driving. Research indicates that drivers using mobile phones are four times more likely to be involved in accidents, with texting creating a crash risk twenty-three times higher than non-distracted driving. Beyond electronic distractions, activities like eating, adjusting vehicle controls, and interacting with passengers similarly compromise driver attention and reaction times.

Impaired driving represents another major human factor. Alcohol consumption significantly reduces coordination, impairs judgment, and slows reaction speeds. The Centers for Disease Control and Prevention reports that alcohol-impaired driving accounts for nearly one-third of all traffic-related deaths in the United States. Similarly, drug use—both illicit and prescription medications with warning labels—contributes substantially to accident statistics. Furthermore, driver fatigue creates impairment comparable to alcohol intoxication, with sleep-deprived operators demonstrating reduced attention spans and increased likelihood of micro-sleep episodes behind the wheel.

Speeding persists as a deeply entrenched contributor to accident severity and frequency. Excessive velocity reduces a driver's ability to negotiate curves or avoid unexpected obstacles, increases stopping distance requirements, and amplifies crash energy exponentially. The relationship between speed and accident fatality follows fundamental laws of physics—even small speed reductions yield significant improvements in survival probabilities. Despite widespread awareness campaigns, speeding remains culturally embedded in many driving populations.

Additional behavioral factors include aggressive driving manifestations like tailgating, improper lane changes, and failure to yield right-of-way. Psychological elements such as stress, emotional distress, and road rage further compromise decision-making capabilities. Collectively, these human factors create a complex web of preventable behaviors that form the foundation of most traffic accidents.

Environmental and Infrastructure Factors Road design and conditions significantly influence accident probabilities. Poorly designed intersections, inadequate signage, insufficient lighting, and confusing road markings create ambiguous situations that challenge even attentive drivers. The absence of appropriate safety features like guardrails, crash cushions, and pedestrian crossings further exacerbates accident risks.

Weather conditions introduce additional complexities. Rain, snow, ice, and fog reduce visibility and tire traction, requiring adjusted driving behaviors that many operators fail to implement. Seasonal variations demonstrate clear correlations with accident rates, with winter months producing disproportionately high incidents in northern climates despite reduced traffic volumes.

Vehicle-Related Factors While technological advancements have substantially improved vehicle safety, mechanical failures continue to contribute to accident causation. Brake system malfunctions, tire blowouts, steering component failures, and lighting system defects can precipitate otherwise unavoidable crashes. Regular vehicle maintenance and inspection programs provide critical safeguards against these mechanical deficiencies.

Prevention Strategies: A Multi-Dimensional Approach Addressing the complex challenge of road accidents requires integrated interventions across multiple domains:

Legislative and Enforcement Measures Strengthened traffic laws and consistent enforcement represent foundational prevention strategies. Evidence confirms that implementing and enforcing seat belt laws significantly reduces traffic fatalities. Similarly, strict drunk driving legislation—including random breath testing and severe penalties—has demonstrated remarkable effectiveness in reducing alcohol-related crashes.

Speed management through appropriate limit setting, coupled with automated enforcement technologies like speed cameras, produces substantial safety benefits. Recent innovations include intelligent speed adaptation systems that use GPS and digital mapping to automatically limit vehicle speeds in designated zones.

Graduated driver licensing systems for novice drivers have proven particularly effective by gradually introducing driving privileges while restricting high-risk situations like nighttime driving and peer passenger transport during initial licensure periods.

Technological Solutions Modern vehicle safety technologies offer promising accident reduction potential. Electronic stability control systems prevent skidding and loss of control, while autonomous emergency braking detects imminent collisions and automatically applies brakes. Lane departure warnings, blind spot detection, and adaptive headlights represent additional technologies that compensate for human limitations.

Emerging connected vehicle technologies enable communication between vehicles and infrastructure, providing advance warnings about hazardous conditions, traffic congestion, and potential collision scenarios. The progressive development toward fully autonomous vehicles promises eventual transformation of road safety paradigms.

Educational and Awareness Programs Comprehensive driver education extending beyond basic operational skills to risk awareness and hazard perception creates more competent drivers. Public awareness campaigns targeting specific behaviors like drunk driving, distracted driving, and speeding reinforce social norms against these dangerous practices.

Corporate responsibility programs encouraging fleet safety policies and responsible employee driving behaviors further extend safety messaging into professional contexts.

Infrastructure Improvements Road engineering enhancements substantially reduce accident risks. Implementing roundabouts instead of traditional intersections, constructing median barriers, adding rumble strips, and improving street lighting have all demonstrated significant safety benefits.

Traffic calming measures like speed humps, chicanes, and road narrowing effectively reduce vehicle speeds in residential areas and pedestrian zones. Separate facilities for vulnerable road users—including bicycle lanes and pedestrian pathways—minimize conflict points with motor vehicles.

Conclusion Road traffic accidents stem from interconnected human, environmental, and vehicular factors. Successful prevention requires integrated strategies combining legislation, enforcement, technology, education, and infrastructure improvements. While absolute zero accidents may represent an unattainable ideal, systematic implementation of evidence-based countermeasures can substantially reduce the devastating personal, social, and economic costs associated with road traffic accidents. The continued development and application of comprehensive road safety approaches remains essential for creating sustainable transportation systems that prioritize human life and wellbeing.

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SECURITY ISSUES IN LOGISTICS ENTERPRISES AND WAREHOUSES AND METHODS FOR THEIR SOLUTION

A. Rezyk, student

T.V. Gerasymchuk, PhD, Associate Professor

Kharkiv National Automobile and Highway University

Introduction The global logistics and warehousing sector forms the backbone of international trade and commerce, with an estimated market value exceeding \$10 trillion annually. This complex network, while essential for economic growth, faces increasingly sophisticated security challenges that threaten supply chain integrity, corporate profitability, and consumer safety. From multinational corporations to small-scale distributors, security breaches can result in catastrophic financial losses, reputational damage, and operational disruptions. This comprehensive analysis examines the multifaceted security challenges confronting logistics enterprises and warehouses while proposing innovative, technology-driven solutions to address these vulnerabilities.

Critical Security Challenges Cargo Theft and Pilferage

Cargo theft represents one of the most persistent and costly security issues, with global losses estimated at \$50 billion annually. Modern criminals employ increasingly sophisticated methods, including identity theft, cyber-enabled tracking, and insider collaboration. High-value electronics, pharmaceuticals, and luxury goods remain primary targets, with thefts often occurring during transit or through coordinated attacks on warehouse facilities. The problem is particularly acute in regions with