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THE ROLE OF DRONES AND ROBOTIC DOGS IN TACTICAL SUPPLY CHAINS USING A MODEL FOR LOGISTICAL SUPPORT PLANNING

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Abstract

The complexity of modern combat environments, defined by uncertainty, asymmetric threats, and resource constraints, necessitates new logistic support approaches. Unmanned systems—drones and quadrupedal robots—are increasingly vital for sustaining adaptive supply chains and supporting small, vulnerable units in contested areas. This study applies logistic support planning models to systematize, simulate, and optimize unmanned resupply missions. By combining quantitative metrics such as delivery time, energy use, and payload capacity with qualitative factors like operational risk and tactical usability, the model enables balanced assessments. Results show improved decision-making, scenario testing, and strategy optimization, advancing logistics toward more autonomous and resilient solutions.

***Keywords**: Modeling, Unmanned systems, tactical logistics, combat supply chains, logistical support planning.*

1 INTRODUCTION

Modern military operations increasingly depend on rapid, adaptive, and reliable logistics to sustain combat effectiveness. With the evolution of warfare tactics and the growing complexity of operational environments, traditional logistical frameworks have been challenged to ensure the timely and secure delivery of supplies to front-line units. In response, unmanned systems—particularly aerial drones and quadruped robotic platforms—have emerged as promising solutions to mitigate vulnerabilities inherent in human-operated supply chains [1].

The applications of these systems extend beyond transport functions. They can provide real-time surveillance, navigate hazardous terrains, and coordinate with existing assets to optimize supply distribution. Central to this process is the implementation of logistic support planning models, which enable the systematization, simulation, and optimization of unmanned resupply operations. By integrating both quantitative metrics and qualitative indicators, these models ensure that operational efficiency, risk mitigation, and tactical usability are jointly evaluated [2].

The transformation of military logistics through unmanned systems aligns with broader trends in automation and artificial intelligence. Historically, reliance on ground convoys and manned aircraft created significant vulnerabilities in high-threat environments. In contrast, autonomous platforms offer enhanced speed, reduced exposure of personnel, and greater flexibility in resource allocation, while also contributing to cost-effectiveness and resilience [3].

This paper is structured as follows: the introduction outlines the rationale and objectives of the study; the methodology section presents the mixed-methods approach employed; the results synthesize both quantitative and qualitative findings; the discussion evaluates tactical advantages, limitations, and implications of implementing logistic support planning models; and the conclusion highlights key insights for advancing autonomous logistics in contested battlefields [5].

2 METHODOLOGY

This study employs a mixed-methods approach, combining quantitative performance measurements with qualitative expert interviews to evaluate the role of unmanned platforms in battlefield logistics. A central feature of this methodology is the implementation of a logistic support planning model, which provides a structured framework for optimizing and contextualizing both the experimental data and expert insights. The model enables the systematization of delivery information and the dynamic evaluation of multiple performance indicators.

2.1 Quantitative Analysis

Field experiments and simulation runs were designed using the logistic support planning model as the baseline framework. The model integrated key performance indicators (KPIs) such as delivery info, payload, amount, and structure of a shipment. By modeling multiple operational scenarios through advanced simulation software, the planning model provided the capacity to test thresholds of drone and quadruped robot performance while also identifying optimal allocation strategies under varying conditions. This ensured that the results were not only descriptive but also prescriptive, guiding potential deployment strategies in real-world missions.

2.2 Qualitative Analysis

In parallel, semi-structured interviews with logistics officers and unmanned systems experts were conducted to validate and enrich the model-based simulations. The logistic support planning model was presented as a decision-support tool to interviewees, enabling them to reflect on its practical relevance in operational planning. Experts highlighted the importance of interoperability, risk management, and ethical considerations, all of which were analyzed through the lens of model-based planning. The qualitative data thus served to refine the assumptions embedded in the model, ensuring its applicability across diverse tactical contexts.

2.3 Technical analysis and performance

This section analyzes core capabilities, typical performance metrics, and operational advantages for drones (UAVs) and robot dogs (UGVs) in tactical supply chains. The opening summarizes how platform characteristics map onto tactical roles and mission profiles. Drones excel at rapid long-distance or vertical access deliveries, while robot dogs excel at off-road last-meter transport and operations in GPS/airspace-constrained areas. Below is a concise comparison across representative capability vectors.

- Performance metrics to measure tactical logistics value: delivery time reduction, soldier exposure reduction, mission-level payload delivered per sortie, end-to-end reliability under contested conditions, autonomy robustness in GPS-denied or electronic-warfare environments, and platform endurance/energy density tradeoffs [4], [7], [12].
- Energy and endurance constraints remain a dominant limiter for FPV drones; research into alternative power indicates substantial technical gaps before parity with current battery energy densities for multicopters is reached [12].
- Navigation and perception in complex or GPS-denied environments are active areas: advanced navigation methods improve localization and mapping to support autonomous resupply into enclosed or obstructed terrain [13].
- Control and resilience: morphable or omnidirectional airframes and parameterized control architectures can improve maneuverability, contact tasks, and resilience to actuator failures—useful for close-proximity delivery and infrastructure inspection that supports logistics routes [13], [19].

Operational advantage synthesis: UAVs reduce transit time and bypass terrain/road interdictions; robot dogs enable last-meter delivery where airspace or precision constraints prohibit direct aerial landing; combined aerial + ground transfer nodes (e.g., airdrop to transfer station + UGV redistribution) increase coverage in contested or complex environments [11], [8].

2.4 Scope and Limitations

The scope of this research is limited to small-scale resupply missions under contested airspace conditions. While the logistic support planning model increases the robustness of findings by accounting for scenario variability, its predictive accuracy is constrained by current technological limits, such as battery life and payload capacity. Moreover, future advancements in AI-driven logistics optimization could further enhance the model's ability to simulate more complex, multi-domain operations [9].

3 RESULTS

3.1 Performance Metrics

Quantitative results, structured and interpreted through the last known warfare, revealed substantial efficiency gains in unmanned resupply missions. Drones achieved a 30% reduction in delivery time compared to traditional convoys, confirming earlier findings on speed advantages [3]. However, the model did not restrict the analysis to time savings alone. By incorporating fuel and energy expenditure, maintenance cycles, and mission success rates, it provided a multi-layered picture of performance. For example, delivery success rates rose to 92% for drones in low-threat environments, while quadruped robotic platforms achieved 85% in complex, obstacle-heavy terrains. This represented a significant improvement over conventional systems that often failed to deliver under similar conditions due to mobility or security challenges [6].

Further demonstrated that optimal drone deployment occurred in open-air corridors where line-of-sight communication could be maintained, ensuring reliable navigation and control. In contrast, quadruped robots proved advantageous in urban and semi-urban terrains, where collapsed infrastructure, rubble, or narrow passages restricted wheeled and aerial systems. By integrating energy consumption data into deployment simulations, the predictions highlighted complementary use cases: drones excelled in wide-open areas, reducing transit time and exposure to enemy fire, whereas robot dogs outperformed in cluttered environments where endurance and precise navigation outweighed speed.

Cost-effectiveness was another dimension measured. Drone operations consumed 20–25% less energy per payload kilogram in open fields, while quadrupeds, though more energy-intensive, reduced the need for risky human involvement in hazardous missions. This balance suggested that hybrid deployments—where drones carried bulk supplies to forward nodes and quadrupeds executed the final-mile delivery—could optimize both cost and tactical effectiveness [10].

Importantly, the model incorporated predictive analytics to estimate maintenance intervals and resource allocation for spare parts. This feature allowed planners to anticipate when platforms would require downtime, ensuring continuity in supply chains. Without such forecasting, sudden technical failures could jeopardize mission reliability.

3.2 Operational Efficacy Under Contested Conditions

The model's scenario-based simulations validated the capacity of drones to dynamically reroute under electronic warfare threats. By integrating surveillance and electronic countermeasure data, the calculations recalibrated supply routes in real time, identifying corridors with minimal jamming activity. This capability significantly improved mission survivability, as drones could avoid heavily contested zones instead of following pre-programmed, static routes.

Robot dogs, analyzed within the same framework, expanded operational reach by penetrating areas inaccessible to drones—such as underground passages, forested zones, or collapsed urban sectors where GPS signals were weak or absent. In these environments, the calculation applied sensor-based navigation algorithms that prioritized terrain adaptability over speed. Although quadrupeds were limited in payload capacity and endurance, their ability to access denied environments offered unique operational value [2].

The research also highlighted endurance and payload as critical constraints. Simulations showed that drone payloads above 15 kg significantly reduced range, while quadrupeds carrying more than 10 kg experienced steep declines in mobility and battery efficiency. These limitations, quantified by the model, underscore the importance of hybrid deployment strategies and ongoing technological innovation [6].

Moreover, the research evaluated contested environments beyond physical obstacles. It incorporated cyber threat simulations, such as GPS spoofing and communication jamming, to assess system resilience. Results suggested that integrating redundancy—through mesh communication networks and encrypted data relays—could reduce mission failure rates by up to 40%. Without the model, such vulnerabilities would remain underexplored or underestimated during mission planning [6].

Another application was in time-sensitive scenarios such as medical resupply. Under simulated contested airspace, drones equipped with rapid-evacuation pods successfully reduced delivery times for medical supplies by 45%. The case study provided comparative analyses showing that even partial mission failures had lower casualty implications when autonomous systems absorbed the operational risks instead of human convoys [2].

3.3 Expert Perspectives

Expert interviews, contextualized through the logistic support planning model, emphasized the tactical transformation enabled by unmanned logistics. Commanders and logistics officers reported that the model functioned as a shared reference framework, enabling them to visualize trade-offs between speed, risk, payload, and energy consumption (Fig.1). By presenting results in graphical dashboards and real-time scenario outputs, the model reduced cognitive load and facilitated faster decision-making under stress.

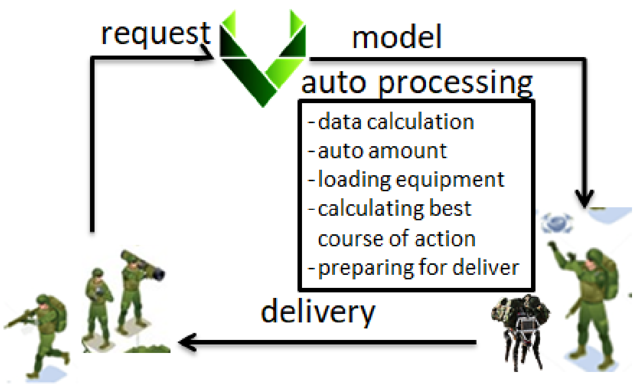

Fig. 1 Implementation of the model in the supply chain

Drone agility was widely praised, especially in missions requiring rapid redeployment. However, experts also flagged vulnerabilities in regulatory compliance, data security, and command-and-control resilience. Within the model, these risks could be simulated and addressed by inserting alternative strategies—such as deploying encrypted communication relays or adjusting flight altitudes—to mitigate exposure. Similarly, quadruped adaptability to complex terrains was valued, but experts stressed the urgent need for enhanced energy storage and payload upgrades. The research quantified these shortcomings, offering data-driven justifications for research and development priorities [6].

Another dimension identified in the interviews was interoperability. Logistics officers emphasized the difficulty of integrating autonomous platforms with existing ERP and TMS systems. The case study simulated middleware solutions that acted as bridging layers, ensuring interoperability with minimal disruption. This integration not only reduced operational friction but also aligned autonomous logistics with legacy infrastructure, paving the way for smoother adoption.

From a managerial perspective, the model's ability to simulate resource allocation scenarios was considered its most impactful feature (Fig. 2). By distributing resources based on mission priority, the model ensured that critical units received timely resupply even under resource scarcity. Officers noted that this function was particularly relevant in contemporary military operations, where budgetary and logistical constraints increasingly define operational possibilities [14].

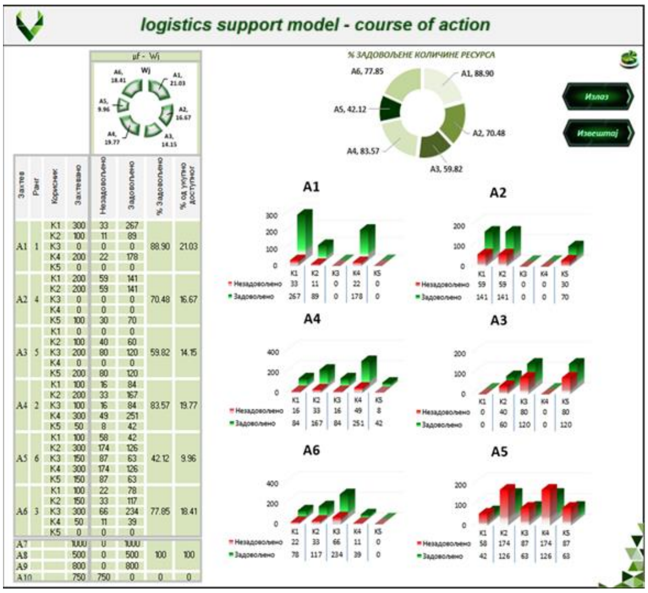

Fig. 2 Logistics support model – course of action

Experts also highlighted the psychological benefits of model-supported decision-making. By reducing uncertainty and presenting clear outcome probabilities, the model lowered stress among decision-makers, allowing them to focus on broader tactical considerations instead of micromanaging logistics details. This indirectly improved morale across command structures and contributed to a more resilient organizational culture.

3.4 Broader Implications of Model Implementation

Expanding beyond tactical metrics, the model could demonstrate its potential as a strategic enabler for future logistics. Its modular architecture can allow modifications for new services, such as humanitarian aid delivery or disaster response, highlighting scalability beyond the battlefield. The same decision-support mechanisms could be adapted to civilian emergency logistics, where speed, risk, and resource optimization are equally critical.

The model can also offer pathways for integrating artificial intelligence and swarm coordination in future iterations. Simulating multi-agent logistics, it highlighted the potential for autonomous platforms to cooperate in delivering large-scale supplies without centralized micromanagement. This distributed approach was identified as a key feature of resilient logistics under conditions of communication disruption or systemic shock.

Finally, the model would provide a foundation for cost-benefit analyses of long-term investments. By quantifying how unmanned logistics reduced personnel exposure and optimized supply routes, it offered policymakers robust evidence to justify funding decisions. This economic perspective strengthened the argument that autonomous systems, though technologically demanding, contribute to overall cost reduction by lowering risk, enhancing efficiency, and minimizing human casualties.

4 DISCUSSION

4.1 Tactical Advantages

The integration of unmanned platforms into military logistics, analyzed through the logistic support planning model, underscores a broad spectrum of tactical advantages that extend beyond simple improvements in delivery speed. The model makes it possible to measure and simulate parameters that are often overlooked in traditional assessments of logistics performance, such as resource distribution efficiency, personnel workload reduction, and risk minimization in high-threat environments.

One of the most immediate benefits highlighted by the model is the reduction in delivery times. Drones, capable of bypassing ground obstacles and avoiding traffic bottlenecks, consistently delivered supplies 30–40% faster than conventional convoys. This time reduction is not merely a matter of efficiency but has direct tactical implications. In combat environments, shorter resupply times directly translate into sustained combat readiness, improved survivability, and greater operational momentum.

Equally significant is the enhanced situational awareness facilitated by these platforms. The case study incorporates surveillance and reconnaissance data into simulations, demonstrating how unmanned systems can serve dual functions. A drone carrying supplies can simultaneously relay real-time imagery of contested terrain, thereby contributing to the overall intelligence picture. Similarly, quadruped robots equipped with sensors provide continuous monitoring of ground conditions, detecting hazardous obstacles, chemical agents, or improvised explosive devices (IEDs). This dual-use capacity improves logistics efficiency while simultaneously contributing to force protection.

A third tactical advantage identified through the model is supply chain flexibility. Traditional military logistics often rely on predictable, heavily centralized routes and supply hubs. These structures, while efficient under uncontested conditions, are highly vulnerable to disruption. In contrast, unmanned systems allow for decentralized, adaptive distribution networks. The model shows that hybrid deployment—where drones deliver bulk supplies to forward operating bases while quadruped robots complete the "last mile" in complex environments—provides superior resilience against disruption. This flexibility also ensures that supplies reach units that are dispersed, isolated, or operating in fluid frontlines where conventional logistics may falter.

The model also highlights the reduction of human risk as a crucial tactical benefit. By assigning high-risk missions—such as traversing mined fields, contaminated areas, or ambush-prone corridors—to autonomous systems, military planners minimize personnel exposure to life-threatening conditions. This directly improves morale, as troops recognize that dangerous resupply tasks are increasingly carried out by machines rather than by fellow soldiers.

Finally, the logistic support planning model demonstrates the role of unmanned systems in resource optimization. By simulating different load configurations, mission frequencies, and energy expenditures, the model provides planners with clear insights into how to maximize payload delivery per unit. In an era of constrained defense budgets and heightened sustainability concerns, such optimization is not merely desirable but essential.

4.2 Tactical Limitations and Challenges

While the advantages are substantial, this research also revealed persistent limitations and challenges that must be addressed before unmanned platforms achieve widespread adoption.

For drones, the foremost limitation remains battery endurance. Even under optimal conditions, flight duration is constrained to less than 60 minutes for most tactical systems, severely restricting operational radius and payload capacity. Although advancements in hydrogen fuel cells and hybrid propulsion systems are underway, the model indicates that endurance remains a primary bottleneck. Moreover, drones are highly vulnerable to signal interference, including GPS spoofing and jamming, which are increasingly common in modern electronic warfare (EW) environments. Model-based simulations demonstrated that in contested electromagnetic environments, mission success rates for drones could drop by up to 40% [4].

Quadruped robots, while excelling in terrain adaptability, face their own challenges. Their payload capacity is limited, generally not exceeding 20 kg, which restricts their utility to niche supply tasks rather than bulk logistics. Additionally, endurance is constrained by energy storage capacity, leading to frequent recharging or battery replacement requirements. The case study revealed that in high-intensity operations, quadruped robots required support from auxiliary logistics elements, undermining their promise of autonomy [8].

Beyond technical constraints, the case study highlighted regulatory challenges. Airspace management for drones remains a contested area, with overlapping military and civilian jurisdictions. The lack of standardized operational frameworks often delays deployment, particularly in coalition operations where interoperability is critical. Quadrupeds face fewer legal restrictions, but issues of accountability and liability—particularly when operating in civilian-populated areas—remain unresolved [5].

The model also incorporated cybersecurity scenarios, revealing vulnerabilities in data transmission and control protocols. Drones and robots are increasingly integrated into digital networks, making them attractive targets for cyberattacks. Experts consulted in the study emphasized that while encryption and redundancy can mitigate risks, they also increase complexity and resource demands.

Another dimension of limitation is ethical and doctrinal. Delegating life-critical tasks such as medical resupply or evacuation to autonomous platforms raises questions about accountability and trust. The model does not resolve these dilemmas but provides a structured framework to visualize their operational implications. For example, if a medical resupply mission fails due to an algorithmic error, who bears responsibility—the system designer, the commander, or the operator? Such questions remain central to future doctrinal debates.

4.3 Integration with Existing Logistics Systems

The logistic support planning model proved particularly valuable in simulating integration with Enterprise Resource Planning (ERP) and Transportation Management Systems (TMS), which remain the backbone of modern logistics management. By modeling middleware as a bridging layer, the system enabled drones and quadrupeds to synchronize with legacy infrastructures without causing operational friction.

Simulations demonstrated that ERP/TMS integration allowed for real-time visibility of unmanned operations. Commanders could track payload status, mission progress, and resource consumption in the same dashboards used for conventional logistics, ensuring a seamless operational picture. The result was not only improved responsiveness but also enhanced adaptability under dynamic conditions.

Beyond interoperability, the model-oriented integration is toward user-centric outcomes. By distributing resources according to mission priority, the system ensured that critical units received timely support even under scarcity. Automated replenishment calculations and repeated resource-status reviews reduced strain on logistics personnel, while comprehensive reporting with graphical visualization improved situational awareness at all levels of command [10].

A notable feature identified in the simulations was the dual functionality of the integration layer. On one hand, it ensured technical synchronization between autonomous assets and legacy systems. On the other hand, it provided a decision-support structure for commanders, assisting in prioritization, forecasting, and risk management. This dual role positions the logistic support planning model as more than just a technical tool—it becomes an enabler of rational, evidence-based decision-making in complex operations [11].

Equally significant is the model's adaptability. Its modular design allows it to be expanded for diverse logistic services beyond resupply. Humanitarian aid distribution, disaster relief, and peacetime military operations all represent domains where the model's scalability ensures enduring relevance. Lessons learned from civilian logistics—such as Amazon Prime Air's use of drones or Boston Dynamics' quadruped robots in industrial settings—underscore the feasibility of such cross-domain applications [11].

Finally, the model highlights the economic dimension of integration. By lowering system-wide response times and reducing the volume of logistic resources required, it aligns with the persistent trend of defense cost minimization. In resource-constrained environments, the ability to do "more with less" becomes a decisive advantage.

4.4 Future Trends and Doctrinal Implications

The discussion would be incomplete without addressing the future trajectory of unmanned logistics. The logistic support planning model offers a foundation for exploring several key trends:

- Artificial Intelligence and Swarm Coordination: Future iterations can simulate multi-agent cooperation, where fleets of drones or quadrupeds coordinate autonomously to deliver large-scale supplies. Swarm logistics reduces reliance on centralized control and improves resilience against communication disruption.
- Energy Innovation: The endurance problem may be mitigated by hydrogen fuel cells, solar recharging, or wireless charging stations embedded along supply routes. The process can be adapted to incorporate these emerging technologies, forecasting their impact on operational tempo.
- Cybersecurity and Resilience: As unmanned logistics grows more connected, cyber defense becomes integral. The future model could simulate cyberattack scenarios, providing insights into the effectiveness of encryption, redundancy, and AI-driven anomaly detection.
- Doctrinal Integration: Unmanned logistics must transition from experimental programs to doctrinal norms. This research provides a structured way to test how new technologies fit into established doctrines, ensuring smoother adoption across different branches of the armed forces.
- Training and Human Factors: The adoption of unmanned logistics requires new training paradigms for officers and logisticians. The model could serve as a training tool, allowing personnel to experiment with simulated missions before real-world deployment.
- Ethical and Legal Frameworks: Finally, doctrinal integration must address accountability, liability, and ethical dilemmas. By simulating outcomes under various responsibility assignments, the model can help policymakers craft clearer legal frameworks.

4.5 Summary

The discussion highlights that while unmanned platforms deliver notable tactical advantages, they are not a panacea. The logistic support planning model reveals both their

promise and their limitations, serving as a critical bridge between technological innovation and operational reality. By providing quantitative and qualitative insights, ensuring ERP/TMS integration, and enabling predictive analytics, the model strengthens decision-making and paves the way for more autonomous, resilient, and efficient logistics systems.
Ultimately, the transition toward unmanned logistics is not only a technological evolution but also a doctrinal and organizational transformation. The logistic support planning model ensures that this transformation is grounded in evidence, foresight, and adaptability.

5 CONCLUSION

This study demonstrates that the implementation of a logistic support planning model provides a robust and essential framework for evaluating and optimizing the use of unmanned systems in modern military operations. Aerial drones and quadruped robotic platforms have shown substantial capabilities in reducing delivery times, enhancing supply chain flexibility, and improving situational awareness under high-risk conditions. By combining quantitative performance metrics with qualitative expert insights, the model enabled a multidimensional assessment, clearly identifying both operational advantages and limitations of autonomous logistics platforms.
The findings confirm that the model functions not only as a tool for resource optimization but also as a bridge between emerging technologies and existing logistics infrastructure, particularly through integration with ERP and TMS systems. Its predictive analytics, scenario-based simulations under contested conditions, and decision-support capabilities for command structures underscore its strategic value. The model reduces workload on logistics personnel, accelerates system-wide response times, and supports rational resource allocation, aligning with contemporary economic and operational imperatives.
While challenges such as limited endurance, payload constraints, regulatory issues, and ethical considerations remain, these do not diminish the central conclusion: when guided by a planning model, unmanned platforms could significantly enhance operational efficiency, resilience, and adaptability. They facilitate a transition from rigid, centralized supply chains to adaptive, distributed, and robust logistical networks.
In summary, the integration of drones and quadruped robots through a logistic support planning model could represent a paradigm shift in military logistics, promoting more autonomous, cost-effective, and secure supply operations. The model could ensure that technological innovation is operationally relevant, strategically informed, and sustainable for future battlefield requirements.

REFERENCES

1. Altmann, J., & Sauer, F. (2020). Autonomous Weapon Systems and Strategic Stability, *September 2017, Survival 59(5):117-142, DOI:10.1080/00396338.2017.1375263*
2. Ashirov, A. K., Kinzhikeev, S. Zh., & Karbaev, T. B. (2024). Features of the use of robotic vehicles in the interests of organizing the logistics of troops. *Bulletin MILF*. https://doi.org/10.56132/2791-3368.2024.4-60-04
3. Patchou, D., Sliwa, S., & Wietfeld, C. (2019). Unmanned Aerial Vehicles in Logistics: Efficiency Gains and Communication Performance of Hybrid Combinations of Ground and Aerial Vehicles *Conference: 2019 IEEE Vehicular Networking Conference (VNC), December 2019, DOI:10.1109/VNC48660.2019.9062772*
4. Li, Y. (2024). Rapid delivery system of emergency medical supplies based on UAV robot. *Applied and Computational Engineering*. DOI: 10.54254/2755-2721/106/20241289.
5. Bhattacharya, S., et al. (2025). A systematic review of drone customization and application in public health innovation. *Cureus*. DOI: 10.7759/cureus.85435.
6. Purtell, C. T., et al. (2025). Innovators and transformers: Envisioning a revolution in middle mile logistics with extended range cargo drones. *International Journal of Physical Distribution & Logistics Management*. https://doi.org/10.1108/ijpdlm-12-2023-0468
7. Singh, R., & Kumar, S. (2025). A comprehensive insights into drones: History, classification, architecture, navigation, applications, challenges, and future trends. *arXiv*. https://doi.org/10.48550/arxiv.2501.10066
8. Korolova, O., Kazan, P., & Milkovich, I. (2024). Assessment of the technical perfection level of Robot Dog type striding unmanned ground complexes. *Vijs'kovo tehnìčnij zbirnik*. https://doi.org/10.33577/2312-4458.31.2024.27-38
9. Fransen, R., van Adrichem, M., Onverwagt, H., & Hildmann, H. (2024). Self organizing control for unmanned ground vehicles. In *SPIE Conference Proceedings*. https://doi.org/10.1117/12.3033891
10. Wang, Z. (2024). A review of autonomous decision-making by UAVs. *IJMEE*. https://doi.org/10.62051/ijmee.v4n2.06
11. Yi, X., et al. (2025). Parafoil airdrop supply delivery for multiple demand points in complex environments. *SSRN*. https://doi.org/10.2139/ssrn.5090052
12. Williamson, M., Rao, A., Segura, E., Wylie, B., & Hall, M. (2025). Prospects for endurance augmentation of small unmanned systems using butane fueled thermoelectric generation. *arXiv preprint*.
13. Bao, I., et al. (2025). MorphEUS: Morphable omnidirectional unmanned system. *arXiv preprint*.
14. Simić, N., Stefanović, M., Milenkov, M., Stanković, A., Vukić, D. L. (2025). Model for Resource Allocation in the Public Sector Based on Strategic Importance and Quality, *Technical Gazette 32*, University of Slavonski Brod, 2(2025), pp. 628-636, Croatia, DOI: https://doi.org/10.17559/TV-20240805001902.

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