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INTEGRATION OF INTELLIGENT LOGISTICS AND AUTONOMOUS FLEET MANAGEMENT FOR INDUSTRIAL EFFICIENCY

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Summary: This paper presents the integration of two innovative logistics solutions: a fully autonomous electric vehicle for industrial transport and an optimized fleet management system for AGVs (Autonomous Guided Vehicle). The convergence of these two technologies enables seamless logistics operations across indoor and outdoor environments, significantly improving efficiency, safety, and sustainability. The proposed system combines autonomous navigation with real-time mission allocation, leveraging artificial intelligence (AI) and Industrial Internet of Things (IIoT) to optimize material flow. The demonstration at CME's industrial costumer site, within the Produtech R3 project, aims to validate the impact of these advancements on reducing logistics costs, increasing flexibility, and minimizing the carbon footprint of industrial transportation [1].