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**IMPACT OF TECHNOLOGICAL ADVANCEMENTS IN THE
ROAD GOODS TRANSPORT INDUSTRY**

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ABSTRACT

Technological advancements are significantly reshaping the road goods transport industry, driving improvements in efficiency, safety, and sustainability. Innovations such as telematics, Internet of Things (IoT) devices, and advanced driver-assistance systems (ADAS) are optimizing logistics operations. Telematics and IoT enable real-time tracking of vehicles, cargo, and environmental conditions, providing valuable data to improve route planning, reduce fuel consumption, and monitor driver behavior. This enhances fleet management and predictive maintenance, minimizing downtime and operational costs. ADAS technologies, including adaptive cruise control, collision avoidance, and lane departure warnings, contribute to safer driving conditions, helping reduce accidents caused by human error. The push towards electric and hybrid trucks, supported by advancements in battery technology, is transforming the industry's sustainability profile by reducing greenhouse gas emissions. Additionally, digital platforms for freight matching and automated logistics solutions streamline operations by connecting shippers with carriers more efficiently, enhancing load optimization and reducing empty miles. However, these technological advancements bring challenges, such as the need for up skilling the workforce, addressing cyber security risks associated with connected systems, and managing the high costs of adopting new technologies. Despite these hurdles, the on-going innovations promise to transform road goods transport into a more connected, intelligent, and sustainable sector.