

Smart Transportation Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025-2034

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Abstracts

The Global Smart Transportation Market was valued at USD 124.6 billion in 2024 and is expected to grow at a CAGR of 12.8% from 2025 to 2034. Rapid urbanization and rising traffic congestion are key factors driving market expansion as cities worldwide seek advanced mobility solutions to reduce delays, lower emissions, and enhance overall transportation efficiency. The growing adoption of connected and autonomous vehicles (CAVs) is significantly influencing market growth, with technologies like AI, IoT, and 5G playing a crucial role in real-time traffic management and vehicle-to-everything (V2X) communication.

These advancements help optimize road safety, streamline traffic flow, and enhance transport networks by integrating with smart city infrastructure. Governments and transport authorities are heavily investing in intelligent transportation systems (ITS), supporting initiatives such as smart signals, automated tolling, and vehicle tracking. As self-driving and electric vehicles become more mainstream, demand for AI-powered mobility solutions continues to rise, reinforcing the expansion of the smart transportation industry.

The market is segmented based on components into hardware, software, and services. The hardware segment led in 2024, generating USD 59 billion in revenue, and is projected to grow at a CAGR of approximately 13.2% during the forecast period. Key hardware elements include GPS, IoT sensors, RFID chips, surveillance cameras, automated fare collection systems, and V2X communication devices. These technologies are critical for real-time traffic monitoring, connected vehicle systems, and intelligent transport solutions. Investment in embedded systems for urban mobility, including electronic toll collection and AI-driven traffic management, is further

strengthening the demand for hardware solutions.

By transportation mode, the market is divided into roadways, railways, airways, and maritime. Roadways accounted for 53% of the market share in 2024 and are anticipated to grow at a CAGR of over 13% through 2034. Expanding urban road networks and the increasing adoption of electric and autonomous vehicles are boosting the need for advanced traffic control and forecasting systems. Ride-hailing services and shared mobility platforms are also accelerating the development of smart roadway solutions, contributing to the sector's growth.

In terms of solutions, the market is segmented into traffic management, smart ticketing, parking management, passenger information systems, and freight management. The traffic management segment dominates due to the rising number of vehicles on roads, increasing urban congestion, and the need for effective mobility solutions. AI-driven traffic control, adaptive signaling, and congestion pricing strategies are being implemented to optimize road performance while minimizing delays and environmental impact. Real-time traffic tracking, automatic incident detection, and predictive analytics are further enhancing road safety and efficiency.

Regionally, North America led the market in 2024, accounting for around 33% of the global share and generating USD 42 billion in revenue. The United States remains at the forefront, with strong government initiatives, technological advancements, and urban development fueling market expansion. Federal funding programs and policies promoting ITS, connected mobility, and AI-powered transportation solutions are accelerating the adoption of smart transport infrastructure across major metropolitan areas.

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