

Intelligent Transportation System (ITS) Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025-2034

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Abstracts

The Global Intelligent Transportation System (ITS) Market reached a valuation of USD 47.2 billion in 2024 and is projected to expand at a CAGR of 10.3% from 2025 to 2034. The increasing focus on smart city development is a significant driver as urbanization continues to rise at an unprecedented rate. Cities worldwide are experiencing heightened demand for sustainable, efficient, and safer mobility solutions. As the global population shifts towards urban areas, digital advancements in transportation infrastructure are essential for optimizing traffic flow, reducing congestion, and improving public transit efficiency.

ITS solutions integrate advanced traffic management, real-time data analytics, interconnectivity, and public transit operations to streamline urban mobility. With growing environmental concerns, new technologies are being incorporated to support electric vehicles, shared transportation, and lower emissions. Urban expansion is expected to add millions of new vehicles to roads, challenging existing transport systems and requiring innovative solutions to maintain sustainability. The adoption of smart IoT, AI, and analytical technologies is redefining urban mobility by integrating multiple modes of transportation into seamless, multimodal networks. Real-time information systems allow travelers to access schedules, traffic updates, and alternate routes, enhancing efficiency and convenience. As cities implement policies promoting digital mobility ecosystems, investments in ITS continue to grow, driving the demand for safer and more sustainable urban transportation solutions.

The market is segmented by mode of transportation, including rail, road, air, and marine. In 2024, the rail sector accounted for over 40% of the market share, while the road segment is forecast to exceed USD 25 billion by 2034. Governments are issuing

high-value tenders for roadway enhancements, prioritizing infrastructure upgrades to accommodate increasing traffic volumes. These projects focus on improving intersections, rehabilitating roadways, and deploying real-time monitoring systems to enhance traffic management and mitigate congestion.

Within the railway segment, applications include smart ticketing, passenger information management, operations, security, emergency notifications, and collision avoidance. Passenger information management accounted for a 27.9% market share in 2024, while smart ticketing is projected to grow at a CAGR of 13% by 2034. Enhanced digital transformation efforts in transportation are leveraging real-time communication technologies, in-train computing systems, GPS tracking, and cloud-based information platforms to improve passenger experience and operational efficiency.

The air transportation segment includes information display systems, tracking and monitoring systems, self-service baggage solutions, kiosks, communication networks, and smart gates. Tracking and monitoring solutions led the market in 2024 with a valuation of USD 2 billion. The integration of GPS and IoT has revolutionized aviation by enabling real-time tracking of aircraft, passengers, and baggage. Enhanced situational awareness improves safety, operational efficiency, and asset management, ensuring seamless airline and airport operations.

The road transportation market is categorized into hardware, software, and services. In 2024, the hardware segment dominated, with a market share exceeding 55%. The adoption of GPS units, sensors, high-definition cameras, and ruggedized IoT devices has improved connectivity and operational reliability. Edge computing enables data processing within vehicles, enhancing efficiency and passenger safety.

In North America, the United States led the ITS market with a revenue of USD 10.6 billion in 2024. Public transit systems are increasingly adopting shared mobility services, integrating bike-sharing, e-scooters, and ride-sharing into multimodal transport networks. Contactless ticketing systems have been widely implemented, enabling seamless fare payments through smartphones, smart cards, and digital wallets. These advancements are enhancing urban mobility by reducing congestion, improving transit efficiency, and providing a more connected transportation experience.

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