

MOBILITY TRENDS BRIEF TECHNOLOGY



U.S. Department
of Transportation

Federal Highway
Administration



TRENDING

2025

Advances in technology are having a multifaceted impact on the transportation system. Technologies that change how the system is managed and operated are influencing travel demand, traffic flow, traveler decisionmaking, and modal demand.

Technology and Infrastructure

Intelligent transportation systems (ITS) are advanced technologies that improve transportation network efficiency, safety, and sustainability. They include adaptive signal systems, variable speed limits, and dynamic ramp metering, among many others. ITS technologies enable operators to adapt to changing conditions in real time by proactively optimizing traffic flow, managing congestion, and enhancing safety. Nearly all freeway agencies (97 percent) plan to expand or upgrade their ITS deployments in the next 3 years.¹

Congestion management strategies that leverage ITS have been shown to increase overall capacity by up to 22 percent and throughput by up to 7 percent. These strategies also improve safety by reducing crashes by up to 30 percent and secondary incidents by up to 50 percent.²

Technology and Travel Options

Automated and autonomous vehicle technologies are expanding rapidly. These technologies include lane departure warning, blind spot detection, and rear-view cameras, among others. For example, as shown below, automatic emergency braking has shown a number of safety benefits:³



**50 percent
reduction in
front-to-rear
crashes.**



**56 percent
reduction in
front-to-rear
crashes with
injuries.**



**41 percent
reduction in
large truck
front-to-rear
crashes.**

Technology and Freight

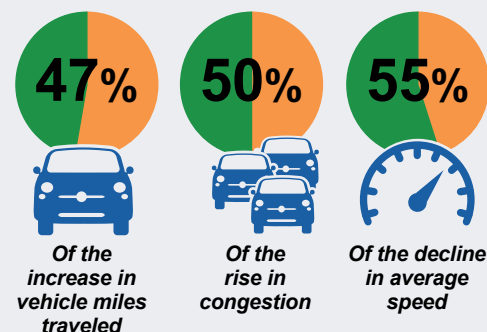
Innovative technologies like automated trucking, autonomous delivery robots, drone package delivery, and e-commerce are changing how households receive goods and services. In 2022, trucks with in-vehicle technologies such as adaptive cruise control and lane departure warning represented 94.7 percent of the global autonomous truck market share.⁴



Adoption of connected vehicle technology could prevent more than 600,000 crashes over 40 years.⁵

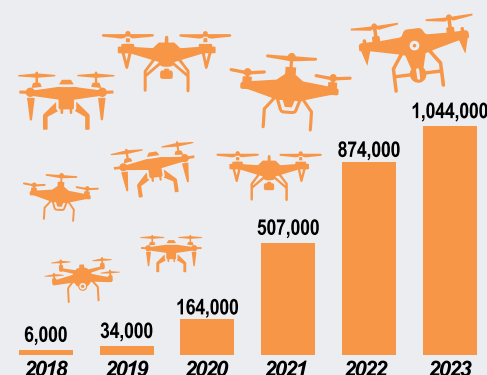
TRANSPORTATION NETWORK COMPANIES (TNCs)

TNCs, also known as ridehailing companies, provide on-demand transportation services for passengers, and their impact the transportation system is pronounced. For example, in one large city,⁶ between 2010 and 2016, transportation network companies accounted for:



DRONES

In just 5 years, drone package delivery has grown substantially. Between 2018 and 2023, the number of drone deliveries grew from a few thousand to more than a million.⁷



Notes and Sources

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3. Insurance Institute for Highway Safety and Highway Loss Data Institute, *Crash Avoidance Technology: Real-World Benefits* (Arlington, VA: IIHS-HLDI, July 2025), accessed June 25, 2025, <https://www.iihs.org/media/290e24fd-a8ab-4f07-9d92-737b909a4b5e/oOlxAw/Topics/ADVANCED%20DRIVER%20ASSISTANCE/IIHS-HLDI-CA-benefits.pdf>.
4. Fortune Business Insights, *Autonomous Truck Market Size, Share & Industry Analysis, By Level of Autonomy (Level 1, Level 2, Level 3, and Level 4), By Propulsion Type (IC Engine and Electric), By Truck Type (Light-Duty Trucks, Medium-Duty Trucks, and Heavy-Duty Trucks), By Industry (Manufacturing, Construction & Mining, FMCG, Military, and Others), and Regional Forecasts, 2026-2034*, report ID FBI103590 (Pune, India: Fortune Business Insights, 2024), accessed March 10, 2026, <https://www.fortunebusinessinsights.com/autonomous-truck-market-103590>.
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7. Andrea Cornell, Robin Riedel, and Sarina Mahan, "Commercial Drone Deliveries Are Demonstrating Continued Momentum in 2023," *Future Air Mobility* (blog), McKinsey & Company, October 6, 2023, accessed March 10, 2026, <https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/future-air-mobility-blog/commercial-drone-deliveries-are-demonstrating-continued-momentum-in-2023>.

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