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Overview: Autonomous driving technology has been a lightning rod for debate amongst the private sector, policymakers, safety advocates and consumers in recent years. However, the rubber is just starting to meet the road regarding its implementation within the retail industry.



Retail Perspective

As the growth of e-commerce and the digital marketplace continues to grow, different types of autonomous vehicles can be used alongside human workers to improve efficiency within distribution centers and along delivery routes. While fully autonomous vehicle technology is still years away, today's consumers expect fast and cheap delivery of goods, and retailers are beginning to identify ways to meet these expectations.

Key Takeaways

- Google, Tesla, and other auto makers are developing autonomous vehicles to bolster efficiency in commercial trucking fleets, driving down costs for consumers.
- Autonomous vehicles can enhance “last mile” delivery capabilities, which is often considered the [least efficient and most expensive step of the delivery process](#), particularly in urban areas where congestion is prevalent.
- When autonomous vehicles can rapidly deliver goods, retail stores can become “showrooms” rather than local inventory distribution points.

Retail Use Cases

Commercial Trucking: Otto, the self-driving truck subsidiary of Uber, performed the first real-world commercial use of autonomous trucking when it shipped a truckload of 45,000 Budweiser cans on a two-hour, 120 highway-mile trek on Colorado highways in October 2016 ([Reuters](#)).

Warehouse Logistics: In 2012, Amazon purchased Kiva Systems, a robotics firm that invented the flat, toaster-like warehouse robots. Today, over 45,000 of these robots populate 20 of Amazon's fulfillment centers across the U.S. There are also other kinds of automated technology, including large robotic arms that can move pallets of Amazon inventory, but most of the stowing and picking of items is still completed via human labor ([Business Insider](#)).

“Last Mile” Delivery: In February 2016, Google obtained a patent for an autonomous delivery vehicle designed for last mile terrain. The vehicle will have multiple compartments equipped with credit card slots or chip readers for payment and could be unlocked by the customer with a unique code. Once the customer retrieves their items, the vehicle would drive to its next destination or back to its origin point to load additional items for delivery ([Stanford](#)).

Customer Service: Autonomous cars can also provide extraordinary new levels of customer service by picking up customers from their home for a visit to a brick-and-mortar storefront and returning them back home. This would result in unprecedented opportunities to bolster brand awareness by creating commitment to the store before, during, and after the ride ([Deloitte](#)).

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