An *automated* future for logistics ?

JLL®

70% of all freight tonnage is moved by trucks in the US

As of Q1 2018, **1 truck** is available for **every 12 loads** needing to be shipped

39 BILLION gallons of diesel fuel are required to move US freight annually

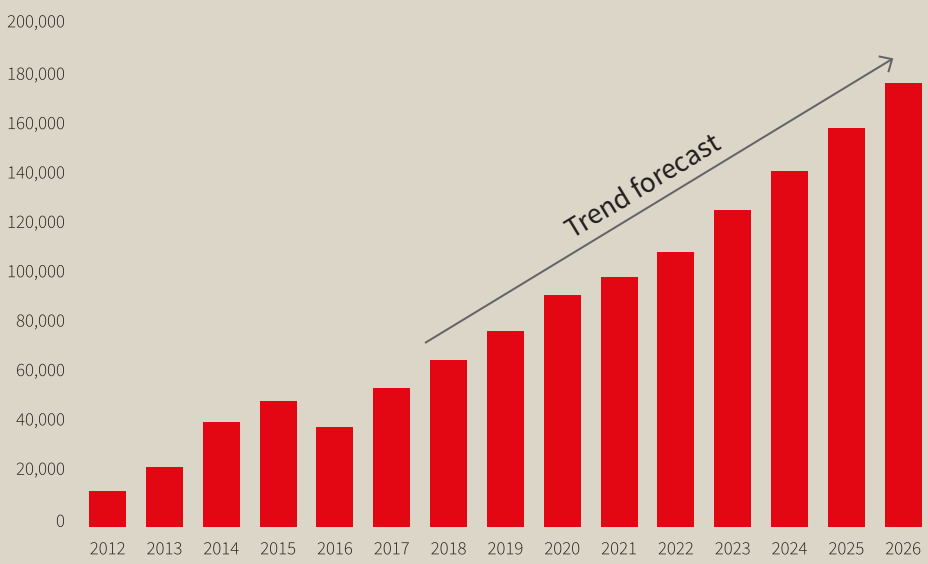
Factors driving automated trucking adoption

In a classic case of supply vs. demand, driver shortage in the wake of ever-growing consumer demand is leading to increased prices. Rising costs are forcing companies to look into cost-saving advancements such as automated trucking.

Driver **supply**

An aging fleet of drivers partnered with a less-than-ideal lifestyle is creating a significant shortage of truck operators.

Driver shortage



New safety regulations require electronic logging devices (ELDs) to record drivers' hours. Paired with an aging trucking workforce, this limited schedule flexibility is further constraining supply.

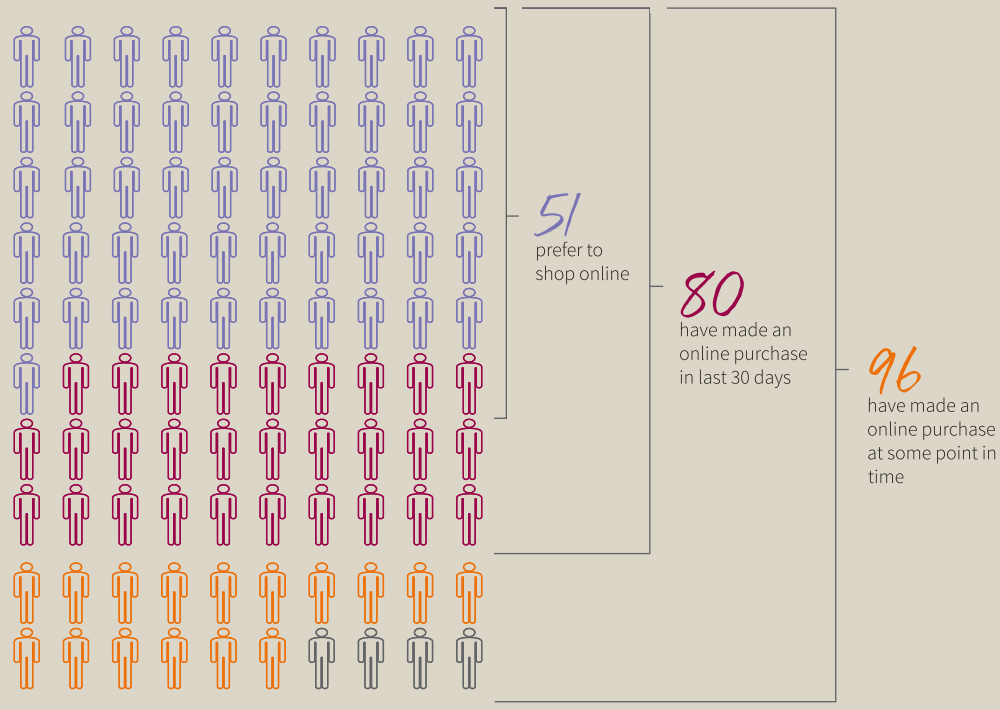
65% of ELD truckers were forced to drive fewer miles

55 is the average age for today's truck driver

Consumer **demand**

In response to today's on-demand economy, consumers are expecting a seamless, faster purchasing journey.

Of 100 Americans with Internet Access,



78% of logistics companies expect to provide same-day delivery by 2023

40% of deliveries are expected within a 2-hour window by 2028

Levels of automated driving

Operating at Level 1, **driver assistive truck platooning (DATP)** will likely be the first widespread application of automated vehicle technology. Through vehicle-to-vehicle communication software, trucks can follow one another at extremely short distances. The coordinated maneuvers can reduce highway congestion and minimize the space trucks need for safe operation.

	Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
Definition	No Automation	Driver Assistance	Partial Automation	Conditional Automation	High Automation	Full Automation
Function	No technological assistance	Automated assistance in driving operations	Driving software handles basic operations	Basic operations and navigation controlled by software	Automated system controls all operations and tactical decisions	Can handle all driving tasks, including failsafe
Human responsibility	Fully controlled by driver	Monitoring road and maintaining steering control	Watching traffic and responding to system prompts	Ready to resume control when instructed	None, vehicle may stop without human intervention if failsafe is triggered	No driver required

Greater regulation & infrastructure investment required

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