

Sky-high costs and complex manufacturing are driving consolidation in the AV market

Article



Toyota subsidiary Woven Planet **announced** plans to purchase Lyft's autonomous vehicle division for \$550 million, **per** The Wall Street Journal. With the purchase, Toyota—the world's

largest carmaker by shipments—gains access to Lyft’s fleet of Level 5 driverless vehicles along with its team of engineers and research scientists. Toyota has been quietly working on its own self-driving cars for several years, and previously **invested** \$500 million in Uber to jointly develop autonomous cars. The Lyft acquisition will put Toyota more in line to compete with other automotive heavyweights like **Volkswagen** and **General Motors** that have spent big to acquire AV startups.

Toyota’s acquisition marks the latest instance of the rapid consolidation sweeping the AV industry. Here are some of the other major AV acquisitions in recent years:

- Last year, Intel **acquired** mobility as a service startup Moovit to buttress Mobileye, the AV computer vision company Intel **purchased** in 2017 for a whopping \$15.3 billion.
- Amazon **purchased** Zoox in July 2020 for around \$1.2 billion.
- Last summer, Volkswagen **closed** a \$2.6 billion deal which saw Pittsburgh-based Argo AI take over Volkswagen’s European self-driving unit.
- Late last year, Aurora **purchased** Advanced Technologies Group, Uber’s **embattled** self-driving vehicle division.
- Cruise, which was itself **purchased** by General Motors in 2016 for more than \$1 billion, reportedly agreed last month to **acquire** AV startup Voyage.

Consolidation will likely continue since many AV startups lack the deep pockets and extensive resources needed to successfully bring their driverless cars to market.

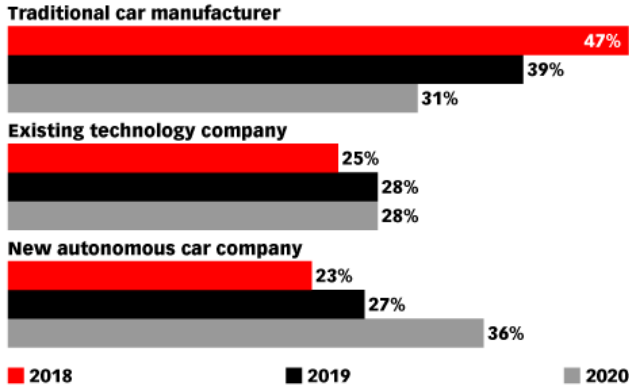
Autonomous vehicles are a complex, capital-intensive technology that’s **proven** to require more money and research to develop than many startups had anticipated. That reality was amplified during the pandemic: Last May, Aurora Innovation CEO Chris Urmson **predicted** that a decrease in VC spending would accelerate AV consolidation even further, a sentiment echoed by Mobileye CEO Amnon Shashua’s **warning** of an impending “great consolidation” on the horizon. Startups simply lack the resources and engineering talent of automotive giants like Toyota, which have decades of experience researching and manufacturing at a global scale, and navigating regulatory and consumer safety frameworks.

Aside from gaining the technology and talent from these companies, AV acquisitions also increasingly provide traditional automakers with a trusted brand name. Consumer preferences for autonomous vehicles are undergoing a shift. According to a 2020 **Deloitte study**, just 23% of US internet users in 2018 said they trusted new AV companies to offer fully

autonomous vehicles, compared with 47% who trusted traditional car manufacturers. Those responses reversed considerably by 2020, with 36% of resp

Types of Companies that US Internet Users Would Trust to Offer Fully Autonomous Vehicles, 2018-2020

% of respondents



Note: ages 18+; n=1,730 in 2018; n=1,720 in 2019; n=3,006 in 2020
Source: Deloitte, "2020 Global Automotive Consumer Study," Jan 6, 2020
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