APR 28

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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