With countless changes forced upon our day-to-day lives by the COVID-19 pandemic, the automotive and transportation industries are on the lookout for how changes in consumer behavior may affect the adoption of autonomous vehicles (AV) technologies across all facets of the economy and day-to-day life. As we highlighted in our recent blog post, *Top Impacts of the Pandemic on Autonomous Vehicle Research and Development*, COVID-19 has impacted the operations of many OEMs, from production to R&D. While industry participants might see short-term disruption to AV development and roll-outs, this disruption may create new opportunities for adoption of AV technology within the consumer segments and accelerate adoption in various commercial segments as AV technology is seen as a vital component of responding in times of emergencies and uncertainty.

While much of the press and fanfare surrounding AV technology has been focused on consumer vehicles, particularly at the high end of the market, AV technology is not
limited to mini-vans, sedans, and SUVs consumers use for our day-to-day lives. As communities around the world have shifted to a more home-based living and working environment, the need to move goods and services without human interaction is more important than ever before. AV technology has the potential to fundamentally change the way goods move from warehouse to storefront, meals from restaurants to our front door, and how our packages get from retailers to our mailboxes. While COVID-19 may have interrupted the development of AV technology and slowed consumer purchasing of new vehicles, it has also increased the potential for further adoption of this technology in other spaces.

COVID-19 also is reshaping consumer attitudes to public transit in ways that may benefit AV technology in the longer-term. As the pandemic has progressed around the world, consumers, either by choice or local mandate, have largely stayed home. As a result, transit ridership has seen a steep decline from all but the most essential of workers. August ridership numbers in New York, Washington, D.C., and San Francisco as of August 8th are between 70 and 90% below the same time in 2019. While the drop in ridership has been affected by increased trends of working from home, closed schools, and local travel restrictions, consumers are also seeing the appeal of personal car ownership more than ever before. A recent McKinsey survey noted a “third of consumers value constant access to a private vehicle more than they did before COVID-19, and half say they are open to extending their use of private vehicles beyond traveling in order to connect with the outside world in a safe way, such as for drive-in movie theaters.” While new vehicle purchases have suffered steep declines as many economies went on pause, new and used car sales are starting to see recoveries from the spring lows although they stubbornly remain far below pre-pandemic levels. While the traditional car buyer might be putting new purchases on pause, McKinsey noted that “20% of people in the United States who do not currently own a vehicle, are now considering purchasing one” and this group largely includes city dwellers who often move around town on buses, trains, and through taxi-cabs or rideshares. In response to lagging consumer car sales, a precipitous drop in fleet sales, and uncertain economic times, many automotive companies are predicted to delay and slow AV development in the consumer segment as they strengthen their financial footing and reign in R&D spending, according to a recent Automotive IQ survey.

While consumer’s hesitation towards new car purchases might be driving OEMs to pause AV development, the potential for AV adoption by logistics companies, delivery companies, and the food service industry might provide the OEMs and other AV participants with the market need to propel AV technology to the next level. In a world where staying healthy currently means staying far from our fellow citizens, the appeal of self-driving long-haul trucks, cross town delivery vehicles, and robotic food delivery seems more appealing than ever.

Realizing the benefit of contactless and driverless delivery in a world of physical distancing, autonomous delivery company Nuro, who in February 2020 was the first to receive an exemption from the National Highway Traffic Safety Administration under the Federal Motor Vehicle Safety Standards to operate its driverless grocery delivery vehicle on public roadways. As COVID-19 accelerated the use of grocery delivery, a 2019 partnership between Nuro and a national grocery chain has resulted in more widespread adoption of their autonomous delivery vehicles in Houston. At
the same time, Nuro has adapted its vehicle system to deliver medical supplies to a temporary COVID-19 hospitals in Sacramento and a temporary medical facility in San Mateo County. Similarly, Pony.ai has utilized their AVs to deliver groceries in Irvine, CA from local e-commerce platform Yamibuy and work with the City of Fremont to deliver meals to a local emergency shelter program and GM’s Cruise has been using their AVs to deliver food from SF-Marin Food Bank and SF New Deal to seniors in need around the San Francisco area where they are currently testing their AV system.

As COVID-19 put the human side of transporting goods into the spotlight, logistic companies are seeing the need to implement self-driving systems in real time. While cost savings and non-stop transit of goods are factors, the ability of COVID-19 to pause the shipment of goods has spotlighted the human factor of transporting goods as a weak link in our national supply chain for goods. Unlike humans, AV systems can run all day and night, are not susceptible to 14-day quarantines and do not face driver shortages due to illness. In times of emergencies, the ability to efficiently and reliably transport goods throughout the supply chain is more important than ever before, especially in times of panic buying and supply constraints. Additionally, the automotive sector’s reliance on just-in-time delivery cannot afford supply disruption due to trucking and logistics disruptions.

While consumer demand for new and used car buying may have momentarily delayed the adoption of AV systems in the consumer segment, the COVID-19 pandemic has highlighted how important AV is throughout day-to-day commerce and the logistics industry. Street-ready AV systems are in many respects years away from street-ready testing and commercialization in any form or format. That said, the weaknesses identified by COVID-19 in our day-to-day lives and the potential for AV to be a component of the national response to emergencies may accelerate the adoption of AV systems in ways often on the fringe of the AV discussion. Time will tell if COVID-19’s impact will accelerate or postpone timelines for AV’s adoption, but many of the issues and risks highlighted by COVID-19 are problems that AV technology is primed to help solve.

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