The Sensor:
Legal Insights into Autonomous Vehicles

APRIL 2020

Autonomous transportation in the time of COVID-19

As society and the economy navigate through the turbulent waters ushered by the COVID-19 pandemic, robotics and autonomous modalities of transportation highlight a promising area of development.

In the short term, physical distancing and other restrictions have forced the closure of some vehicle and robotic manufacturing, adversely impacting connected and autonomous vehicle (CAV) development. In the long term, however, the COVID-19 pandemic may propel the industry forward, by recasting our focus on the use of robotics and automated forms of service delivery, along with infrastructural and city planning aspects. Though a number of CAV companies have had to halt development and testing due to COVID-19, CAVs are carving out a role for themselves in a global community that is shifting priorities, altering habits, and becoming preoccupied with reducing human involvement in everyday tasks.

CAVs at the frontlines

In the medical field, for example, robots are proving valuable in disinfecting spaces, delivering medical supplies, and even monitoring health conditions and conducting medical tests. At the epicentre of the pandemic in Wuhan, acute needs and vacant streets allowed JD Logistics to implement self-driving delivery vehicles that transported medical supplies to the Wuhan Ninth Hospital. At the Wuchang Field Hospital, 5G-powered robots take patients' temperatures, disinfect facilities, deliver meals and medication, perform "robo-dances" to entertain patients, and allow doctors to monitor patient vitals remotely. This project was the result of collaboration between the Chinese Academy of Sciences and government officials in Hubei. In Florida, the Mayo Clinic partnered with the Jacksonville Transportation Authority, Beep, and NAVYA to implement autonomous vehicles that transport test specimens from drive-through test sites to a processing laboratory. Not only does driverless transport remove the human element from the potential infection transmission chain, but it also allows healthcare workers to be allocated to other, more productive, roles.

Logistics

In the retail context, autonomous vehicles, already appearing as fixtures in short-haul logistics, are becoming ever more attractive options as safety, cost and liability considerations take on a new dynamic. KiwiBot's autonomous delivery robots began delivering sanitary supplies and hygiene products in Berkeley and Denver in mid-March and are now commencing service in Colombia. Beijing-based Neolix has seen a spike in orders for its driverless delivery vehicles, thanks to the Chinese government's offer to subsidize up to 60 per cent of the cost per vehicle. Neolix also raised the equivalent of $29 million in February, which it plans to use for mass production of self-driving vehicles. And in mid-February, autonomous delivery start-up Nuro received the second permit ever granted by the state of California for its R2 driverless delivery vehicles to begin testing on public roads. Though initiation is

temporarily stalled due to stay-at-home orders issued by the Governor, the company is engaged in logistical planning with a view to launching formal delivery service in partnership with local retailers as soon as possible. Nuro's Chief Legal and Policy Officer commented, "We have always believed in the transformative power of autonomous vehicles, and in the climate of COVID-19 we understand their potential even more deeply."

Maritime

In the maritime context, the use of crewless vessels has been somewhat hampered by outdated legislation and regulations, which are ripe for updating in the wake of COVID-19. Given the global supply chain disruption and the fact that ships are dangerous fertile ground for COVID-19 transmission, leading to, among other things, port closures, unmanned vessels would provide a compelling alternative to safely advance international commerce and bridge essential supply chains in a time of a global pandemic and human physical distancing directives. The COVID-19 pandemic eloquently discloses yet another concrete need for unmanned vessels in the context of an intricately interconnected trading world.

UAVs and containment

Another multimodal CAV application in the time of COVID-19 can be found in the aviation realm. Law enforcement around the globe are turning to the efficiency and expediency of drones to enforce physical distancing in parts of the UK, Australia, France, Spain, Malaysia, the United Arab Emirates, Italy, the United States, and China. In Spain, the military is also using DJI agricultural drones to spray disinfectant. In China, industrial drones are being repurposed and MicroMultiCopter Aero Technology deployed more than 100 drones to patrol crowds and traffic, identify individuals not wearing masks and, through thermal sensing, identify individuals with elevated body temperatures. The Chairman of the Shenzhen-based company stated, "The coronavirus outbreak has led to a deeper understanding of the application of drones by society and government…It's an excellent catalyst for our company's development that will fast-track our growth."

Gig economy

The proliferation of CAV applications and robotics in the gig economy – couriers in general and food delivery in particular – is another concrete application that will likely be catapulted into a reality soon. Prior to the onslaught of the COVID-19 pandemic, a company in Ann Arbor, Michigan, Refraction AI, was testing self-driving food delivery vehicles delivering food from a number of restaurants in downtown Ann Arbor. The CAVs were essentially robots, equipped with wheels and fuselage for carrying delivery bags. Given the sobering context of what constitutes an "essential business" or "essential workplace" in the era of physical distancing, it would not be surprising to see that companies other than food delivery or supply chain will be looking into such applications, motivated by twin propositions of efficiency and economy.

COVID-19 and the advancement of CAVs

It is accordingly clear, in our estimation, that COVID-19 may provide the impetus for advancing CAVs in a number of areas, particularly as the following considerations begin to crystallize:

1. the role and function of CAVs (particularly in modalities other than automobiles) and their versatility in supporting essential transportation infrastructure and supply chain logistics becomes better understood;

2. the infrastructure required for CAV operation in a variety of modalities becomes better understood in the context of physical distancing realities (whether related to a pandemic or other causes not yet experienced);

3. governments become more motivated to modernize the legislative framework and resolve regulatory hurdles, including gap considerations of insurance, risk management (*e.g.* liability), and privacy, among others;

4. funding is allocated to CAV development, whether privately, publicly, or through public-private partnership as the COVID-19 pandemic highlights new opportunities and prompts innovative use cases; and

5. training and education in the safe and efficient use and operation of CAVs are prioritized and accessible..

Authors:
Martin Abadi
Erin VanderVeer

Monthly articles provided in The Sensor: Legal Insights into Autonomous Vehicles explore how autonomous vehicles are impacting industry sectors across the board and are written with the objective of helping to ensure our clients are well-positioned to deal with the related legal and regulatory challenges.

Your feedback is appreciated. Please email us at AVs@blg.com with suggestions or comments.

About BLG

Borden Ladner Gervais LLP (BLG) is a leading, national, full-service Canadian law firm focusing on business law, commercial litigation and arbitration, and intellectual property solutions for our clients. BLG is one of the country's largest law firms with more than 700 lawyers, intellectual property agents and other professionals in five cities across Canada. We assist clients with their legal needs, from major litigation to financing to trademark and patent registration.

blg.com/av

BLG Offices

Calgary

Centennial Place, East Tower
520 3rd Avenue S.W.
Calgary, AB, Canada
T2P 0R3

T +1.403.232.9500
F +1.403.266.1395

Montréal

1000 De La Gauchetière Street West
Suite 900
Montréal, QC, Canada
H3B 5H4

T +1.514.954.2555
F +1.514.879.9015

Ottawa

World Exchange Plaza
100 Queen Street
Ottawa, ON, Canada
K1P 1J9

T +1.613.237.5160
F +1.613.230.8842

Toronto

Bay Adelaide Centre, East Tower
22 Adelaide Street West
Toronto, ON, Canada
M5H 4E3

T 416.367.6000
F 416.367.6749

Vancouver

1200 Waterfront Centre
200 Burrard Street
Vancouver, BC, Canada
V7X 1T2

T 604.687.5744
F 604.687.1415