Autonomous vehicles: Key 2022 industry hotspots

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In 2022, spurred by the realities of the ongoing COVID-19 pandemic, deepening capital investment, and greater public acceptance, we expect that the pace of development within the autonomous vehicle (AV) industry will likely accelerate while continuing to gain popularity in North America.

We expect to see higher levels of autonomy deployed on public roads, further synergies between segments of the transportation industry like mass transit and delivery services with AVs, and increased investment from major automobile sector participants. AV sector analysts predict that this decade will lay the groundwork for what analysts expect will turn into a market of some 30 million driverless cars by 2040. In this article, we highlight key trends we expect will shape developments in the AV industry this year.

Sector hotspot: March toward level 4 autonomy

Software developers, automobile manufacturers and suppliers expect that there will be early, albeit limited, level 4 AV use on public roads as early as 2023. They also expect robo-taxis could begin operating as early as 2026.

Part of the reason for increased optimism about level 4 AVs stems from increased competition in the AV industry. If 2021 was a year of consolidation, then 2022 is shaping up to be a year of fierce competition between legacy automobile OEMs, tech companies entering the AV sector, emerging and established electric vehicle OEMs, and AV start-ups. This uptick in competition and the corresponding increase in AV technology investment will likely culminate in limited deployment of level 4 AVs in Pan-Pacific, North American and European markets by 2023.

From a regulatory perspective, Ontario is the only Canadian jurisdiction actively preparing to permit level 4 and 5 testing on public roads. Canadian and international jurisdictions may need to accelerate legislative plans in order to ensure that, in the event that level 4 AV consumer applications are ready to be deployed in Canada, that the appropriate federal, provincial, and municipal governing frameworks are in place to balance safety with the need to foster innovation.

Technology hotspot: Increased reliance on AV for deliveries & robo-taxis

In 2022, we anticipate that continued reliance on ecommerce will generate even greater demand for transport and deliveries of goods. We expect that an increasing number of businesses will launch pilot projects to test the benefits and feasibility of automating deliveries.

In the United States, large and small retailers have begun testing the benefits of autonomous delivery, including the recent launch of fully driverless trucking to fulfil online grocery orders. While developing AVs capable of completing the "last mile" of a delivery is a focus for some of the industry, the AV sector appears poised to disrupt segments of the commercial transport industry sooner than expected.

As the development and commercialization of AVs accelerates, we anticipate that the digital transformation of the automotive industry will also accelerate. Traditional OEMs and tech-companies are expected to continue developing passenger and driver interfaces with entertainment features that reflect an expectation that vehicles will not require a human driver. These user interface developments lay the groundwork for what consumers may experience when they step into an AV robo-taxi for the first time. These infotainment features focus on convenience, ease of use and safety, but can also display ads or other third-party information.

A key driver in the development of robo-taxis is the impact they may have on the traditional taxi and ride hailing market. Autonomous ride hailing services like robo-taxis could supercharge the broader ride-hailing market into a $6 to $11 trillion market globally by 2030.

From a regulatory perspective, provincial and federal legislatures will need to update or reconsider amendments to applicable delivery, traffic, and insurance legislation as the public becomes more comfortable with the idea of AVs, whether it be a robo-taxi or delivery vehicle. To avoid experiencing the same disruption and growing pains that governments and municipalities experienced when ride hailing services began to compete with traditional taxi services, governments need to take proactive steps to set out policy goals regarding how robo-taxis will fit into insurance, traffic and ride-hail licensing frameworks.

Industry hotspot: Supply chain integration

The pandemic both highlighted weak points in the global supply chain and strained traditionally stable commodities like steel and other critical minerals. In response, industry and governments have begun taking steps to secure supply chains and access to critical resources. With respect to AVs, we anticipate a continued focus by governments to shore up supply of critical minerals needed to produce electric vehicles and, by extension, electrically powered AVs. The Government of Canada recently announced it will invest at least $2 billion to accelerate the production and processing of critical minerals needed for electric vehicle production. Construction of Canada's first electric vehicle battery gigafactory is underway, with the project slated for completion in 2024.

The examples above highlight that governments are alive to the need for deeper supply chain integration between minerals producers and components manufacturers. As a result, in addition to expecting greater levels of private and public partnerships, we anticipate that OEMs and established AV companies alike may take steps to integrate their supply chains to include mineral production in order to ensure they can meet demand as well as meet ESG expectations set by governments and investors.

Policy hotspot: Mitigating the impact of AVs on Canada's insurance structure

As level 3 autonomy becomes more ubiquitous and AV companies move toward the deployment of level 4 AVs, Canada will need to address potential disruption that AVs may cause from an insurance perspective.

As discussed in our article on business insurance trends, current legislation does not adequately consider accidents involving level 3 automation and will likely fail to address considerations around even higher levels of autonomy. While the Insurance Bureau of Canada recommends a single policy approach, provinces and territories have jurisdiction to develop highway traffic laws and insurance legislation covering property.

Given that insurance legislation and case law is complex, the sooner provincial legislatures can update applicable insurance legislation to account for risks associated with AVs, the less impactful increasing levels of autonomy will be on courts and both private and public insurance programs.

BLG's Autonomous Vehicles Group

If you have any questions or would like to learn more about anticipated changes in the autonomous vehicles industry, please reach out to your BLG lawyer or any of the key contacts listed below.

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