

AUTONOMOUS VEHICLES

CURRENT AND FUTURE REGULATORY CHALLENGES

AUTONOMOUS VEHICLES

CURRENT AND FUTURE REGULATORY CHALLENGES

According to the first material of this series, autonomous vehicles are not just vehicles with missing pedals, steering wheel, and driver. Different driving automation levels are already available in the automobile market, while more futuristic models are already being tested to be released in the automobile market.

Even though these vehicles are already a reality or will become available soon, analyzing the regulation is key to understand the regulations underlying the issues regarding the various levels of driving automation.

We summarized below the experience from California to assess potential regulatory challenges facing autonomous vehicles in Brazil.

FIRST STAGE: RESEARCH

Sound thinking about new technologies begins with good and consistent research. In the case of autonomous vehicles, we may already face regulatory challenges in this first phase. The research engaged in this topic was of a practical nature, raising issues that include possible collisions, other damages, and, consequently, liabilities for those involved.

While some may believe that the absence of a transparent liability regime may discourage research initiatives in this area, others argue that we should assess the liability on the same basis as the current liability regime.

SECOND STAGE: TESTING

The same concerns from the research phase persist in commercial testing. In this stage, we have noticed several U.S. regulatory efforts that have driven many companies into developing testing of autonomous vehicles.

The California Regulation, for example, has already robust regulations implemented on autonomous vehicle testing. It is interesting to delve deeper into the provisions of this standard.



1. WHAT ARE THE LEVELS OF DRIVING AUTOMATION CALIFORNIA IS CONCERNED WITH?

California regulates vehicle testing from level 3 onwards, which range from cars that can drive with no human interference for many miles to driving under all conditions, as provided in the first material of this series.

2. WHAT ARE THE REQUIREMENTS FOR TESTING SELF-DRIVING CARS IN CALIFORNIA?

We are applying to the department for a testing permit and submitting a fee for processing the application. In addition, we must have previously participated in the Employer Pull Notice Program.

3. WHAT ARE THE REQUIREMENTS FOR STARTING A TEST?

Manufacturers must test vehicles under controlled conditions that simulate the intended operational design domain ("ODD") and reasonably determine that it is safe to operate in this domain.

In addition, a human driver must monitor the car while driving and be able to take over control of the vehicle in the event of a technology failure or other types of emergencies.

A manufacturer desiring to conduct driverless testing must apply for a specific driverless testing permit. It must also certify that vehicles can operate with no driver inside the car. The self-driving technology must meet the description of a level 4 or level 5 automated driving system, as seen in the first material in this series.

4. CAN I EARN REVENUES DURING TESTING?

Fees are not permitted during tests for both the delivery of goods and passenger transportation.

The regulations do not forbid charging customers for the good or product being delivered or compensating third parties for their costs associated with participating in the testing. However, the regulation prohibits a manufacturer from receiving compensation for transporting goods during testing.

An individual may ride as a passenger in a test vehicle if there are no fees charged to the passenger or compensation received by the manufacturer.

5. WHAT DO I NEED TO REPORT TO U.S. AUTHORITIES DURING TESTING?

The National Highway Traffic Safety Administration (NHTSA) encourages all U.S. states to establish reporting requirements to monitor the performance of self-driving technology during testing.



In the state of California, manufacturers must provide a summary of their autonomous technology testing in the ODD, including (i) the number of vehicle test miles driven on public roads, test tracks, or other private roads; (ii) description of testing methods used to validate the performance of the vehicle tested; (iii) the number of collisions originating from the operation of autonomous test vehicles, including details of any incidents.

The department's regulations require that reporting makes no distinction between transporting passengers or delivering goods.

6. DO I NEED TO CONTRACT INSURANCE FOR ALL VEHICLES UNDER TESTING?

Manufacturers must provide evidence of financial soundness to the department as a precondition to conducting autonomous vehicle testing on public roads by submitting proof of insurance.

7. WHAT TYPES OF VEHICLES CANNOT YET BE TESTED?

Tests involving trailers, motorcycles, vehicles with interstate operating authority, and vehicles weighing more than 10,001 pounds are subject to specific regulation, still to be defined.

THIRD STAGE MARKETING

There are regulatory challenges on several fronts regarding the marketing of autonomous vehicles in Brazil.

TRAFFIC LAWS

Brazil has several traffic laws that presuppose the existence of a human driver, who must remain in control of the car at all times. This poses challenges to the marketing of autonomous vehicles, even if the technology provides only momentary assistance to drivers, as in Level 1 driving automation technology, as shown in the first material of this series.

On the other hand, the regulation on autonomous vehicles is already included in the Regulatory Agenda of the Brazilian Traffic Department ("DENATRAN"), among the regulatory issues to be assessed in 2021-2022.

In addition, in 2016, the Convention on Road Traffic, which was ratified by Brazil, requires all moving vehicles to have a human driver; it and was subsequently amended to allow driving by autonomous vehicles. However, Brazil still needs to ratify the amendment.



• **Administrative Authorizations**

According to the testing phase in California, manufacturers must not test autonomous vehicles on public roads in California without having applied to the department for a permit to conduct such testing. Other countries may also require this application.

If Brazil adopted a validation process, Brazilian researchers consider that as vehicles learn from experience and modify their competencies, they should be submitted to a new validation process.

• **Financial Capacity to Operate**

As in the testing phase in California, manufacturers must provide evidence of financial capacity to respond to damages caused by autonomous vehicles by establishing insurance, providing a surety bond, or proof of self-insurance.

POST MARKETING:

• **Data Protection**

Brazil already has robust regulations in place to protect personal data, including the Brazilian General Data Protection Law (LGPD). The complexity involving the collection and processing of personal data in the context of autonomous car driving poses challenges in adapting to the LGPD.

The United States Department of Transportation (US DOT) encouraged stakeholders to work with government agencies in exchanging data. This could provide mutual benefits and help accelerate the secure integration of automation.

Responsibilities

- **Causal Connection**

Considering the Brazilian law, it is difficult to identify a causal link in technologies that make decisions in situations not foreseen by manufacturers or parties involved, such as users or owners.

The European Parliament resolution, with recommendations on Civil Law Rules on Robotics, warns of this autonomy of technology, capable of making decisions on its own. Therefore, this resolution points to a possible solution to this complexity of assigning liability for damages caused by increasingly autonomous robots, which could be a mandatory insurance scheme.

There is already a mandatory insurance system in place in Brazil, called DPVAT, but it was not designed to cover damages caused by autonomous vehicles.

- **Severed Liability**

There is a degree of complexity involved in determining the origin of a failure (sensors, algorithm, systemic integrations, support systems, users, among others) and, consequently, the severed liability of each party involved.

For example, the California Regulation requires manufacturers to equip autonomous vehicles with a data recorder for all vehicle functions controlled by autonomous technology that store at least 30 seconds prior to colliding with another car, person, or object. A sort of a car "black box".



- Joint Liability

It is speculated whether driverless cars would encourage shared ownership and, consequently, joint liability.

Updates:

Per the California Regulation, manufacturers must provide updates regarding autonomous technology at least annually or on the date any changes to the California Vehicle Code and applicable local regulations take place.

Safety:

According to California regulations, in order to ensure that autonomous vehicles move safely, manufacturers must:

- Demonstrate vehicle test results.
- Defend against cyber-attacks, unauthorized intrusions, or false vehicle control commands.
- Update information pertaining to location and mapping information utilized or referenced by autonomous technology for safe vehicle operation within the operational design domain (ODD). Considering the changes to the physical environment captured by mapping sensors or other information.
- Inform users about any restrictions of autonomous technology, as well as offer guidance on its use

Sources: Testing of Autonomous Vehicles; Final Statement of Reasons, Autonomous vehicles; Vehicle code; Autonomous Smart Vehicles and Civil Liability in Traffic Accidents in Brazil.



Our recognitions



Análise
Advocacia (2021)



Chambers & Partners
Brazil (2021 & 2022)



Leaders League
(2021 & 2022)



Transactional
Track Record
(2021 & 2022)



The Legal
500 (2022)

Meet our Partners



Alan Campos Thomaz

Partner

Technology & Digital Business, Privacy and Data
Protection, Fintechs and Intellectual Property

at@camposthomaz.com

+55 11 9 8375.2627 +1 (650) 6436652



Sérgio Meirelles

Partner

Corporate, M&A, Venture Capital
and Wealth

sergio@camposthomaz.com

+55 11 9 7551.9865



Filipe Starzynski

Partner

Litigation & Law Enforcement, Civil,
Real State, Labor and Family

filipe@camposthomaz.com

+55 11 9 7151.9639



Juliana Sene Ikeda

Partner

Intellectual Property, Technology,
Agreement and Life Sciences

juliana@camposthomaz.com

+55 11 9 8644.1613



Follow us



Subscribe to our newsletter