

Autonomous Vehicles: Is Our Infrastructure Ready?

Panel Discussion on May 18, 2017

Overall Summary

Our fifth discussion on autonomous vehicles focused on the infrastructure that will be required to make this technology a reality. The panelists discussed that for the foreseeable future there will be a mixed fleet of vehicles on our roadways, including conventional, semi-autonomous and, ultimately, fully autonomous level 5 vehicles. As a result, it will be important to maintain flexibility as to both planning and policy to allow for adaptability to technological and cultural changes as they occur. This is not an easy task when it comes to infrastructure, given the cost and time it takes to make adjustments. It will also be necessary for federal, state and city governments to have effective coordination of laws regulating autonomous vehicles that will cross jurisdictional lines.

The gradual proliferation of autonomous vehicles will ultimately result in a profound change in how communities design transportation infrastructure and plan their urban environments. Some state and local governments are already beginning to analyze how to prepare for and address that change. The key infrastructure issues that need to be coordinated as this technology evolves include the following:

- **Communication** – There are complex implications of autonomous vehicles and connectivity, the coordination of which will be critical for autonomous vehicles to communicate with each other, as well as with central control systems, such as traffic lights. The panelists recommended that communities focus first on their big picture transportation goals, and then adopt technologies that are designed to help them achieve those goals. The increased need for wireless infrastructure to support this communication will rely heavily on the deployment of 5G technology in the short term, and ever increasing bandwidth in the future.
- **Design of Infrastructure** – The way we think about infrastructure today will need to change due to the mixture of vehicles that will be on the road and how they will operate. For example, the ability of autonomous vehicles to park themselves and to continuously operate will likely change both the physical need for parking and the location of such parking within urban areas. Reliance on curbside drop off for ride share is changing how planners design sidewalks and curbs.

- **Roadway Geometry** – It may be possible to have smaller roadway lanes due to a smaller margin of error being required with autonomous vehicles due the refinement of timing algorithms. Regulations governing the painting and striping of lanes vary across jurisdictions.
- **Infrastructure Policy** – Some states have taken a prescriptive approach to regulating autonomous vehicles and the infrastructure that supports them. Other states, such as Arizona, have attempted to remove overly burdensome regulatory impediments to the testing and operation of AV, giving the industry time to settle on the most efficient, effective and safe technologies. Whichever approach is desired, the panelists recommended that the public sector remain flexible as technology evolves.

Moderator

Bradley Wright, Of Counsel, Squire Patton Boggs

Speakers

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